



# The National Red List 2012 of Sri Lanka

Conservation status of the Fauna and Flora



**BDS**  
BIODIVERSITY  
SECRETARIAT



Department  
Of  
National  
Botanic  
Gardens  
Peradeniya - Sri Lanka



# **The National Red List 2012 of Sri Lanka**

## **Conservation Status of the Fauna and Flora**

This publication has been prepared by the Biodiversity Secretariat of the Ministry of Environment in collaboration with the National Herbarium, Department of National Botanic Gardens.

Published by: Biodiversity Secretariat of the Ministry of Environment and National Herbarium,  
Department of National Botanic Gardens

Amended Version

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**Citation:**

**1. For citing the threatened list**

MOE 2012. The National Red List 2012 of Sri Lanka; Conservation Status of the Fauna and Flora. Ministry of Environment, Colombo, Sri Lanka. viii + 476pp

**2. For citing an article**

Author name 2012. Title of the paper. In: *The National Red List 2012 of Sri Lanka; Conservation Status of the Fauna and Flora*. Weerakoon, D.K. & S. Wijesundara Eds., Ministry of Environment, Colombo, Sri Lanka. x-y pp

ISBN Number : : 978-955-0033-55-3

Printed by : Karunarathne and Sons Pvt (Ltd)  
67, UDA Industrial Estate  
Katuwana Road,  
Homagama.

Available from : Biodiversity Secretariat,  
Ministry of Environment.

National Herbarium,  
Department of National Botanic Gardens.

Cover page photos: George Van der Poorten  
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**Printed with VOC free, non toxic vegetable oil-based environmentally-friendly ink, printed on FSC™ certified paper eliminating fiber from high conservation value forests and controversial sources.**

**Printed by Karunarathne & Sons (Pvt) Ltd. ([www.karuseons.com](http://www.karuseons.com))**

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## List of Abbreviations

ARROS	Amphibian & Reptile Research Organization of Sri Lanka
BDS	Biodiversity Secretariat
BEAR	Biodiversity Education & Research Organization
CABRE	Center for Applied Biodiversity Research and Education
CEA	Central Environmental Authority
CR	Critically Endangered
CR(PE)	Critically Endangered Possibly Extinct
DD	Data Deficient
E	English name
EN	Endangered
EW	Extinct in Wild
EX	Extinct
FAO	Food and Agriculture Organization of UN
FNCP	Foundation for Nature Conservation & Preservation
GCS	Global Conservation Status
IFS	Institute of Fundamental Studies
IUCN	World Conservation Union
LC	Least Concerned
LORRIS	Land Owners Restore Rainforests in Sri Lanka
MOE	Ministry of Environment
NARA	National Aquatic Resources & Research Development Agency
NCS	National Conservation Status
NE	Not Evaluated
NSCAC	National Species Conservation Advisory Committee
NT	Near Threatened
ORCA	Ocean Resources Conservation Association
PGIS	Post Graduate Institute of Science
RFLP	Regional Fisheries Livelihood Programme for South and Southeast Asia
S	Sinhala name
SEALS	Spirit & Eco Adventure Living Squad
SNR	Strict Nature Reserve
T	Tamil name
VU	Vulnerable

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## **Acknowledgements**

The National Red List of Threatened Fauna and Flora 2012, is compiled and presented as a result of great teamwork.

We wish to thank Mr. B.M.U.D. Basnayaka, Secretary of the Ministry of Environment and Mr. N.K.G.K.Nammewatta, Additional Secretary of Ministry of Environment, for the encouragement and support provided.

Former Director of Biodiversity Secretariat, Mr. Gamini Gamage, played a key role in initiating the 2012 National Red List. His successors, Mr. Ajith Silva and Mrs. Padma Abeykoon too provided all the support required to carry the project forward.

The contributors and experts, who provided the key information necessary for the compilation of 2012 National Red List, are acknowledged with highest gratitude.

We would also like to acknowledge the Global Red Listing Team for the training and logistical support they have provided throughout the red listing process.

We wish to thank Dr. Suranjan Fernando for providing the initial training on Red Listing criteria and for volunteering as one of the editors for the flora section, Dr. R.H.G. Ranil and Mr. Pradeep Jayatunga for the editorial assistance provided for the pteridophyte and fauna section respectively and Mr. Sampath de Alwis Goonatilake for all the support provided.

We wish to thank Mr. Sanjeewa Lelwala for voluntarily helping us with the cover design and page layout.

All the Staff of Biodiversity Secretariat and National Herbarium are acknowledged for various support provided without reservation, in order to make this project a success.

In addition, we like to acknowledge the management and staff of Karunarathne and Sons Printers, for going beyond their call of duty to print this book on time.

Finally, we wish to thank, all the contributors and their respective organizations for making the National Red List of 2012, a reality.

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## **Message of the Minister of Environment**

According to the 1978 Constitution of the Democratic Socialist Republic of Sri Lanka, it is the duty of the state and every person in Sri Lanka to protect, preserve and improve the environment for the benefit of the community. The Ministry of Environment has taken the responsibility of implementing the constitution in sustainable management of the environment.

Sri Lanka is considered as a biodiversity hotspot due to its richness in Flora and Fauna and threats to their survival. As the policy makers of the country it is very important to identify and prioritize the species for conservation activities. I believe the National Red List 2012 has provided a solid base in this aspect by evaluating all flowering plants, ferns, all terrestrial vertebrates and major groups of invertebrates of the country.

Together with the National Herbarium of the Department of Botanic Gardens, the Biodiversity Secretariat of the Ministry has taken the leading role in preparation of National Red List 2012.

I wish to thank the Fauna and Flora coordinators, the staff of National Herbarium and the members of the expert committees for their voluntary collaboration in successfully achieving this nationally important activity. I also congratulate the Director and the staff of the Biodiversity Secretariat of my Ministry for their effort in completing this event.

I hope this document will be taken as an important tool in future development activities in becoming the immerging Wonder of Asia in a sustainable manner while conserving the biodiversity of the country for the generations to come.

Anura Priyadharshana Yapa,  
Minister of Environment.

## **Message of the Secretary, Ministry of Environment**

After completion of the National Red List 2007, the Species Conservation Unit was established under the Biodiversity Secretariat and all the literature and the Red List database was handed over to this unit by IUCN for updating the Red List. Preparation of 2012 Red List is one of the major activities of BDS for year 2012

With the contribution of the members of the expert groups established by the National Species Conservation Advisory Committee, the Biodiversity Secretariat of the Ministry has completed the evaluation of flora and fauna of the country. The National Herbarium of the Department of Botanic Gardens collaborated in evaluation of Flora.

Significance of the National Red List 2012 is the evaluation of all species by collaboration of two government institutions using government funds by building capacity of the government officers. The database established by this activity will facilitate future research and provide guidance to the policy and legislations related to biodiversity.

I wish to thank all the taxonomists, naturalist, researchers and other resource persons who contributed in providing data and comments in preparation of this publication. I also thank the Red Listing team for completing this publication successfully.

I believe we as the Ministry of Environment has the responsibility in implementing the targets of the way forward for conservation of the priority species and area selected.

B.M.U.D.Basnayake,  
Secretary,  
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## A Brief Overview of the Biodiversity of Sri Lanka

Devaka Weerakoon  
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Sri Lanka, with a total land area of 65,610 km<sup>2</sup> is a tropical island situated in the Indian Ocean. The southwestern region of Sri Lanka, encompassing approximately 20,000 km<sup>2</sup>, is the only aseasonal ever wet region in the whole of South Asia (Ashton & Gunatilleke, 1987; Gunatilleke *et al.*, 2005). This region is referred to as the wet zone of Sri Lanka and receives up to 3000 mm of rainfall annually. Wet-zone of Sri Lanka along with the Western Ghats of India is designated as one of the world's biodiversity hotspots, in demand of extensive conservation investment (Myers *et al.*, 2000; Brookes *et al.*, 2002). This high biodiversity seen in Sri Lanka can be attributed to a wide variety of climatic, topographic and soil conditions that exist in the island that has resulted in a diverse array of aquatic and terrestrial habitats (detailed descriptions of the natural terrestrial and aquatic natural habitats are given in the flora section).

Sri Lanka was part of the ancient Gondwanaland and was located adjacent to the African continent. Around 160 million years ago, the Deccan plate which comprised of India and Sri Lanka, broke away from the Gondwanaland, drifted northwards and collided with the Asian plate around 55 million years ago. Thereafter, Sri Lanka separated from India due to submersion of the land bridge between the two countries about 20 million years ago. These zoogeographic, climatic, topographic and edaphic factors have shaped the faunal and floral assemblage seen in Sri Lanka. During the last 2 to 3 thousand years land-use changes brought about by humans have been instrumental in large scale habitat changes that have had both positive and negative influences on Sri Lanka's flora and fauna.

Sri Lanka's biodiversity is significantly important both in a regional and global scale. Sri Lanka has the highest species density (number of species present per 10,000 sq. km) for flowering plants, amphibians, reptiles, and mammals in the Asian region (NARESA, 1991). The currently recognized statistics of the major plant and animal taxa treated in this book are given in Table 1. However, it should be noted that there are many other taxonomic groups in Sri Lanka that are excluded from this table due to lack of clear data on their current status.

Table 1. Species richness of selected faunal and floral groups of Sri Lanka

Taxonomic Group	Number of Species	Number of Endemic Species
Angiosperms	3,154	894
Gymnosperms	2	0
Pteridophytes	336	49
Soft corals	35	
Hard corals	208	
Spiders	501	256
Centipedes	19	
Marine crustaceans	742	
Fresh water crabs	51	50
Dragonflies	118	47
Ants	194	33
Bees	130	
Butterflies	245	26
Leafhoppers	257	

Dung beetles	103	21
Bivalves	287	
Gastropods (marine)	469	
Land snails	253	205
Echinoderms	190	
Marine fish	1377	
Fresh water fish	91	50
Amphibians	111	95
Reptiles	211	125
Resident birds	240	27 + 6 Proposed
Mammals	125	21

Even though the above table indicates that Sri Lanka is endowed with a rich biodiversity, at present only a small fraction of Sri Lanka's biodiversity is known to science. For instance, higher plants and vertebrates are the only taxa that have been studied in sufficient detail to date. Lower plants and invertebrates are largely neglected except for few selected groups such as butterflies, dragonflies, land snails, pteridophytes and algae. Even the vertebrates and, for that matter, higher plants are not completely listed, as during the last two decade alone large number of new species have been discovered (Table 2). Even among the birds, which have been studied quite exhaustively, a new species of owl has been discovered recently (Warakagoda & Rasmussen, 2004).

**Table 2.** How the number of species have changed over the last decade.

Taxonomic group	1993	2012
Fresh water shrimps	21	23
Freshwater crabs	7	51
Freshwater fish	51	91
Amphibians	39	111
Reptiles	155	211
Mammals	90	125

The statistics shown in Tables 1 & 2 clearly indicate that most of the information available for flora and fauna of Sri Lanka is on higher plants or vertebrates. However, one must keep in mind that higher plants and vertebrates make up only about 3% of all the species described to date while Order Insecta alone make up about 54%. There is no doubt that large number of insect species are awaiting to be discovered in Sri Lanka. It will be rather unfortunate if some of these organisms would perish even before we discover them. Furthermore, so far very little attention has been given to species that inhabit the forest canopy. Studies in Australia and South America have shown that the forest canopy is home to large number of living organisms that will not be detected by the traditional sampling techniques used (Russell-Smith & Stork, 1995; Stork *et al.*, 1997a; Stork *et al.*, 1997b).

Therefore, it is safe to say that one of the biggest drawbacks in conserving the biodiversity of Sri Lanka is the lack of knowledge about what we actually have. This state of affairs has arisen mainly due to lack of trained taxonomists as well as lack of initiative to explore the biodiversity of the country. The state agencies that are responsible for carrying out these activities have failed to address this issue appreciably due to funding constraints as well as lack of a clear

leadership to achieve this daunting task. On the contrary, few local and foreign academics and Non Governmental Organizations have been in the forefront of such exploration in the recent times. Their work led to the discovery of number of new species of plants and animals over the past decade as indicated in Table 2.

Even if we manage to fully inventorize the biodiversity of Sri Lanka, it will be impossible to conserve all of them. Therefore, we will have to choose those species that require our immediate attention. Thus the conservation status of each species has to be determined. Based on such an evaluation a list of species is compiled with their present conservation status. Such lists are referred to as Red Lists or Threatened Lists and can be done at national, regional or global scale. These lists will help us to prioritize conservation action as well as to plan national and international legislature. However, listing the conservation status is only the first step towards conserving threatened species. This should be followed with three other important steps which are planning, implementation, and monitoring. It appears that we have failed to address these issues appreciably. This clearly indicates that even though the need to conserve threatened species has been recognized, the necessary steps to conserve them have not been taken.

Sri Lanka has a rich history of conserving biodiversity, which dates back to the ancient kings. Furthermore, Sri Lanka has a biodiversity that is worthy of conservation. There is also a great deal of enthusiasm among our people to conserve the biodiversity of this country. Now is the time to harness this enthusiasm and provide the right kind of leadership to the conservation movement of this country as there is still time to save the biodiversity of Sri Lanka. However, one must bear in mind that this is a race against time and time lost will also result in loss of species.

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## Preparation of the 2012 Red List

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The first list of threatened flora of Sri Lanka was prepared by Prof. B.A. Abeywickrama in 1987. This list was reproduced by Wijesinghe *et al.*, in 1987 which also included a list of nationally threatened fauna. This list was updated by Wijesinghe *et al.*, in 1993, using the data gathered from National Conservation Review of the natural forests of Sri Lanka. Although these lists were used widely by the scientific community as well as policy makers, they were not accepted at a global scale as all these lists were prepared in a subjective manner by a few experts using their personal experience.

In 1996 IUCN International introduced a new set of criteria for assessing the conservation status of a species based on an objective methodology as compared to the subjective process that was followed before that. International Union for Conservation of Nature (IUCN) has formulated a group of scientists to carry out a fresh assessment of Sri Lankan species based on the new criteria that has been introduced by IUCN International. This group, having analyzed the available information, has come to the conclusion that the information available in Sri Lanka is inadequate to assess the conservation status of Sri Lankan species based on the new criteria. Therefore, they have proposed a scientifically accepted set of National Criteria developed along the same conceptual framework used by IUCN International, but applicable to the type of data available for Sri Lankan species. These criteria were used in the preparation of the 1999 threatened list of Fauna and Flora of Sri Lanka. Altogether, 807 species of flowering plants and 1,243 species of fauna represented by dragonflies, butterflies, land snails, freshwater shrimps, freshwater crabs, freshwater fish, amphibians, reptiles, birds and mammals were evaluated. The main drawback faced in this list was that it was prepared using national criteria and therefore, could not be compared with the global list.

In 2004, the National Species Conservation Advisory Committee of the Ministry of Environment, requested that IUCN Sri Lanka, in collaboration with the Biodiversity Secretariat of the Ministry of Environment, to establish a digital database containing information on all the Sri Lankan species as well as to update the conservation status of Sri Lankan species. This led to the publication of 2007 list of threatened fauna and flora of Sri Lanka, where species were evaluated using Global Redlist Categories and Criteria (version 3.1) and categories adapted at the regional level. In this list, altogether 1,099 flowering plants and 1,064 animals represented by freshwater fish, reptiles, birds, mammals, butterflies, land snails and Mygalomorph spiders were evaluated. Further, the conservation status of amphibians, dragonflies and freshwater crabs that has already been evaluated at a global scale has been included in this list making the total number of faunal species listed to 1,341.

During this exercise GIS technology was used for the first time in order to prepare distribution maps for each evaluated species and calculate their Extent of Occurrence and Area of Occupancy. Following the preparation of this Red List, a Species Conservation Unit was established under the Biodiversity Secretariat of the Ministry of Environment in order to institutionalize the Red Listing Process in Sri Lanka. The Species Conservation Unit has been given the responsibility of updating the literature collection on Sri Lankan biodiversity, the

National Species Database and coordinating all matters pertaining to species conservation including periodic updating of the National Red List.

In 2009, the Biodiversity Secretariat started updating the National Red List. The updating of flora has been done in collaboration with the National Herbarium of the Department of National Botanical Gardens to evaluate the flora of the country. For this purpose an expert group was established for higher plants and pteridophytes. The task of data compiling for the evaluation of plants was handed over to the National Herbarium, which gathered data from all published literature and herbarium sheets. As only 1,099 species had been evaluated during the preparation of 2007 Red List, a decision was taken to enter all relevant information available for flowering plants and pteridophytes in to the National Species Database. Preparing the distribution maps of each of the species and draft evaluations were done by the Species Conservation Unit of the Biodiversity Secretariat and presented to the expert committee for the final evaluation. All the native higher plants and pteridophytes were evaluated under this project. When one species has more than one sub species or varieties species assessment was done first and the sub species/variety assessment was done subsequently if data were available and/or subspecies/variety is more threatened than the species. When both cultivated and wild varieties are present assessment was done based on the wild variety. Nomenclature of the flora was done following the most recent published literature. In the preparation of species list the most updated nomenclatura available was used unless otherwise stated.

For the fauna, expert committees were established for freshwater crabs, spiders, dragonflies, butterflies, ants, bees, land snails, freshwater fish, amphibians, reptiles, birds and mammals. In addition, an expert group was formed for marine organisms. The data compilation, preparation of maps and draft evaluations were carried out by the Species Conservation Unit and presented to the individual expert groups for final evaluation. For each taxonomic group two expert committee meetings were held. Comments received at the first meeting were included and presented at the final meeting where the lists and conservation status were finalized. Nomenclature of the fauna was done according to the latest published literature available.

All the species related data were entered into excel sheets that were used for the preparation of species distribution maps using Arc view 3.2 software package. In most of the publications only the name of the location was given with province or district, but no geographic information. To overcome the problem a database was created using coordinates obtained from 1:50,000 scale maps of the Survey Department and geographic coordinates presented in the National Gazetteer. The species distribution maps were used to calculate the Extent of Occurrence (EOO) and Area of Occupancy (AOO) and to clarify the distribution points of the species. In calculation of the AOO 2 x 2 Km grid was used. District boundary maps, climatic zone maps, river basins and protected area network maps were overlaid for each species distribution map presented at the expert meetings.

In application of Red List criteria, criteria B was used in most cases and criteria A and C were used in cases where the population data is available. As a precautionary measure, Category Critically Endangered possibly extinct CR(PE) was given to species with no distribution records in last 60 years as no comprehensive surveys has been conducted during recent past.





# The Taxonomy and Conservation Status of the Dragonfly Fauna (Insecta: Odonata) of Sri Lanka

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## Introduction

Members of the order Odonata belong to one of two suborders: the Zygoptera (damselflies) and the Anisoptera (dragonflies). The life of an odonate revolves around water: eggs are laid in water; the larva spends its life in water feeding on aquatic prey; and adults usually court and mate near the oviposition site. Because of this intimate connection to water, odonates have been used as indicators of water quality and environmental quality for conservation work and biodiversity studies. Odonates are also used to monitor the effects of climate change.

The odonate fauna of Sri Lanka has been studied since the mid-1800s. H. A. Hagen published the first list of odonates from the island (then called Ceylon) in 1858-1859. He published several more works describing the island's species with E. de Sélys Longchamps, one of the world's foremost authorities on Odonata. Further studies by several well-known odonatologists including W. F. Kirby, F. F. Laidlaw, F. C. Fraser and M. A. Lieftnick continued up to about 1970. F. C. Fraser authored three volumes on the Odonata in the series The Fauna of British India including Ceylon and Burma (1933, 1934, 1936). de Fonseca (2000) updated the taxonomy and included information on distribution, habitat, larvae and adults. This book has been invaluable in furthering interest and research. In the past 15 years, additional studies carried out primarily by M. Bedjanič and the authors have advanced our knowledge of the species and their distributions.

Worldwide there are about 5700 described species of odonates. The current list for Sri Lanka includes 118 species in 12 families with a high degree of endemism: there are 47 endemic species and an additional 8 endemic subspecies. Three new endemic species are in the process of description. Since the last IUCN Red List publication (2007), five new endemic species have been described: *Drepanosticta bine*, *D. anamia*, *D. mojca* (Bedjanič, M., 2010), *Lyriothemis defonsekai* (van der Poorten, 2009a) and *Libellago corbeti* (van der Poorten, 2009b).

The odonate fauna of Sri Lanka includes many common Oriental species and is similar to the fauna of south India with which Sri Lanka is zoogeographically related. There are, however, several interesting exceptions and the high degree of endemism is noteworthy. All members of the following families are endemic: Chlorocyphidae (4 species), Euphaeidae (1 species), Protoneuridae (6 species), Platystictidae (18 species), Corduliidae (2 species), and Gomphidae (all except for 3 species). Some of the endemic species seem to be taxonomically isolated (e.g. *Sinhalestes orientalis*, *Cyclogomphus gynostylus* and *Microgomphus wijaya*).

## Taxonomy

Since the last IUCN Red List publication (2007), several synonymies have been documented (Bedjanič, 2011; Bedjanič, 2009; Bedjanič, 2008) through careful reading of the literature and study of original specimens and newly available material. Two species have been removed from the list of

Sri Lankan odonates because of lack of supporting evidence for their occurrence: *Libellago indica* (Hämäläinen *et al.*, 2009) and *Palpopleura s. sexmaculata* (van der Poorten, 2011).

## Distribution

The biology of odonates is intimately tied to water and each species has a requirement for a specific type of water (e.g. fast- or slow-flowing streams, stagnant water, marshland). In Sri Lanka, the majority of the common Oriental species are found at lowland tanks (reservoirs) in the dry zone (e.g. *Ictinogomphus rapax*, *Crocothemis s. servilia*). One species is restricted to coastal areas (*Macrodiplox cora*). Several other common species are widespread in the wet lowlands and mid-hills, in marshes, streams and seeps (e.g. *Orthetrum luzonicum*). A few species are restricted to the higher elevations (e.g. *Indothemis g. gracilis*, *Sympetrum fonscolombii*). The endemics, however, tend to be localized to specialized habitats within the wet zone rainforest. These habitats can be compared to small islands; they often have highly specialized flora and fauna and it can be difficult for an individual to move to another habitat if conditions become unfavorable. The habitat is fragile and easily disrupted. For example, the 15 species of *Drepanosticta* are almost all found in very restricted habitats, usually small shady streams within a forest patch. Two endemic species (*Lyriothemis defonseikai* and a yet-to-be-described species) are found only within a restricted area in the Sinharaja Forest Reserve near a heavily shaded, well-vegetated stream. *Elatoneura leucostigma* is found only in small well-vegetated streams in the dense montane forests. Several species of the Gomphidae family (e.g. *Microgomphus wijaya*) require well-shaded fast-flowing streams that have dense vegetation on the edges. By contrast, *Mortonagrion ceylonicum* requires well-shaded scrub areas at the edge of still water or ditches.

## Threats

Deforestation leading to disruption of the habitat and changes in water sources is probably the most pressing threat because a number of Sri Lanka's endemic species (e.g. *Drepanosticta*, *Platysticta*, *Libellago* and members of the Gomphidae) are found in small patches of rainforest. Forests have been logged to extract timber, to allow for expansion of plantations and villages and, in some areas, to maintain security during the conflict period. Cutting of the undergrowth by villagers for firewood produces changes in the habitat that impact unfavorably on the water sources on which the odonates rely. For example, the thinning of the forest at Dombagaskanda (Bodhinagala) has resulted in increased drying of the soils and streamlets between rains, adversely affecting the *Platysticta* species found there.

Water pollution is also a serious threat. As a result of agricultural production, many chemicals end up in the drains and streams where odonates breed. The increasing human population also puts pressure on water sources, causing increased extraction and use of water and increased pollution from soap products and other human pollutants. This is detrimental to the odonates not only directly but also indirectly: other freshwater fauna which odonate larvae eat are also affected negatively. For example, at Balangoda, in the past 5 years, the stream has become filled with soap and algae due to the increased human population. The Gomphids and *Macromia* that used to be seen here are no longer found.

Changes in water sources, such as damming of streams or cutting of canals, also affect odonates. For example, the Mahaweli project has reduced the Mahaweli River to a stagnant, slow-flowing river in many places, leading to the disappearance of the riverine species (e.g. *Libellago adami*). Tanks that are not rehabilitated properly also lose their native odonate fauna. Other irrigation schemes, such as the Uda Walawe scheme, do great damage to the landscape as trees are cut, canals are built and rivers dammed. The large scale conversion of wetlands to other uses also adversely affects the constituent odonate fauna. For example, the Muthurajawela Wetland Sanctuary is being illegally developed with consequent detrimental changes in odonate habitats.

## Conservation

### 1. Enforce existing conservation measures in protected areas

For example, Sinharaja Forest Reserve, which is the only known location for three endemic species should be protected from removal of vegetation so that the streams and seeps on which the odonates rely are not damaged. Another example is Talangama Lake near Colombo; it has protective legislation from various levels of government but still continues to be subject to gross destruction of the habitat with the consequent loss of species.

### 2. Establish new protected areas in the wet zone and montane areas

The lake and shores around the Parliament in Sri Jayawardenapura is a rich habitat for odonates including some less common ones but it is being destroyed by the cutting of vegetation and development activities including the installation of a major roadway. Similarly, the habitat around Water's Edge in Battaramulla (Diyawannana ) was home to *Mortonagrion ceylonicum* and *Agriocnemis femina*, two uncommon species and was shown to have a very high diversity index. Due to dredging of the wetlands for flood control, this habitat has been damaged. The lake and shores around the Parliament is an ideal candidate for designation as a protected area. However, establishing protected areas must be done with a view to protecting the fauna therein. Even though Diyawannana is apparently designated as a sanctuary, this has not provided any protection for the odonate fauna.

### 3. Legislate additional protection for streams, rivulets and forest corridors in the wet zone

In many places (e.g. Nuwara Eliya), streams are cut illegally to obtain water and vegetation is cleared right to the edge, destroying the habitat. Streams, rivulets and forest corridors need legislation to prohibit the diversion of streams and clear-cutting of the edges.

### 4. Restore already degraded areas in key locations

For example, at Hiyare Reservoir, much habitat degradation has occurred due to illegal activities in the area but this could be reversed at this time with simple measures.

### 5. Limit agricultural expansion in forest areas

For example, Morapitiya Forest Reserve is slowly being encroached upon and its undergrowth is being cut. This will cause the river to become stagnant and will affect the species that depend on a fast-flowing river (e.g. *Macromia zeylanica* and *Libellago corbeti*).

### 6. Enforce existing legislation regarding corridors and reservations

In many places, the reservations around tanks and rivers are being cut despite legislative protection. This not only impacts the health of the tank and river but also removes the surrounding vegetation that is so important to odonates: newly emerged adults need to spend a few days in a protected area until they mature, and the forested edges of rivers and tanks are ideal for this.

7. Conduct comprehensive faunistic work to study the distribution and biology of the odonate species. Without this baseline information, conservation measures cannot be undertaken.

## Research gaps

Though the odonates of the island are comparatively well-studied, there are still many gaps in our knowledge. In 10 taxa, only one sex has been described (usually the male). In about 75 taxa, the larval stage and exuvia have not yet been described. The distribution of most species is not well-known, particularly those found in the north and east. Several species have not been seen for more than 50 years (e.g. *Sinhalestes orientalis*, *Heliogomphus nietneri*). There are only one or two records for a few species that are not rare in other countries (e.g. *Lestes malabaricum* and *Pseudagrion decorum* which are both northern species). Habitat requirements for the adult and larval stages of most species have not been well-documented.

## Conclusions and recommendations

1. Do comprehensive surveys in order to map the distributions of all species
2. Do studies to determine flight times and breeding times, habitat requirements for adults and larval stages, and behavioural needs especially with regards to courtship, mating and oviposition
3. Complete descriptions of both males and females for each species
4. Build up a scientifically managed specimen collection in the museum
5. Encourage high quality research by facilitating the granting of research permits
4. Encourage and fund research at the university level for Masters and PhD studies
5. Primary education in schools about the overall importance of biodiversity for the island's fauna

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**Table 01: List of Dragonflies in Sri Lanka**

Scientific Name	Common Name	NSG	Criteria	GCS	Criteria
<b>Family: Calopterygidae</b>					
<i>Neurobasis chinensis</i> (Linnaeus, 1758)	E: Oriental Green-wing	VU	B1ab(iii)	LC	
<i>Vestalis apicalis</i> Selys, 1873	E: Black-tipped Flashwing	VU	B1ab(iii)	LC	
<b>Family: Chlorocyphidae</b>					
<i>Libellago adami</i> Fraser, 1939	E: Sri Lanka Adam's Gem	VU	B1ab(iii)		
<i>Libellago finalis</i> (Hagen in Selys, 1869)	E: Sri Lanka Ultima Gem	VU	B1ab(iii)		
<i>Libellago greeni</i> (Laidlaw, 1924)	E: Sri Lanka Green's Gem	EN	B2ab(iii)		
<i>Libellago corbeti</i> van der Poorten, 2009	E: Sri Lanka Ebony Gem	CR	B2ab(iii)		
<b>Family: Euphaeidae</b>					
<i>Euphaea splendens</i> Hagen in Selys, 1853	E: Sri Lanka Shining Gossamerwing	NT			
<b>Family: Lestidae</b>					
<i>Lestes praemorsus</i> Hagen in Selys, 1862	E: Scalloped Spreadwing	NT			
<i>Lestes elatus</i> Hagen in Selys, 1862	E: White Tipped Spreadwing	LC		LC	
<i>Lestes malabaricus</i> Fraser, 1929	E: Malabar Spreadwing	DD			
<i>Sinhalestes orientalis</i> (Hagen in Selys, 1859)	E: Sri Lanka Emerald Spreadwing	DD		CR	B1ab(iii)+ 2ab(iii)
<i>Indolestes divisus</i> (Hagen in Selys, 1862)	E: Sri Lanka E: Metallic-backed Reedling	EN	B1ab(iii)+ 2ab(iii)		
<i>Indolestes gracilis</i> (Hagen in Selys, 1862)	E: Mountain Reedling	VU	B1ab(iii)	LC	
<b>Family: Coenagrionidae</b>					
<i>Agriocnemis femina</i> (Brauer, 1868)	E: White-backed Wisp	CR	B2ab(iii)	LC	
<i>Agriocnemis pygmaea</i> (Rambur, 1842)	E: Wandering Wisp	LC		LC	
<i>Mortonagrion ceylonicum</i> Lieftinck, 1971	E: Sri Lanka Midget	EN	B1ab(iii)+2ab(iii)	DD	
<i>Onychargia atrocyana</i> Selys, 1865	E: Marsh Dancer	VU	B1ab(iii)	LC	
<i>Paracercion malayanum</i> (Selys, 1876)	E: Malay Lilysquatter	LC		LC	
<i>Enallagma parvum</i> Selys, 1876	E: Little Blue	DD		LC	
<i>Aciagrion occidentale</i> Laidlaw, 1919	E: Asian Slim	VU	B1ab(iii)	LC	
<i>Ischnura aurora</i> (Brauer, 1865)	E: Dawn Bluetail	NT		LC	

Scientific Name	Common Name	NSG	Criteria	GCS	Criteria
<i>Ischnura senegalensis</i> (Rambur, 1842)	E: Common Bluetail, Marsh Bluetail	LC		LC	
<i>Ceriagrion cerinorubellum</i> (Brauer, 1865)	E: Painted Waxtail	VU	B1ab(iii)	LC	
<i>Ceriagrion coromandelianum</i> (Fabricius, 1798)	E: Yellow Waxtail	LC		LC	
<i>Pseudagrion decorum</i> (Rambur, 1842)	E: Azure Sprite	DD			
<i>Pseudagrion malabaricum</i> Fraser, 1924	E: Malabar Sprite	LC		LC	
<i>Pseudagrion microcephalum</i> (Rambur, 1842)	E: Blue Sprite	LC			
<i>Pseudagrion rubriceps</i> Selys, 1876	E: Sri Lanka Orange-faced Sprite	LC			
<b>Family: Platycnemididae</b>					
<i>Copera marginipes</i> (Rambur, 1842)	E: Yellow Featherleg	LC		LC	
<b>Family: Platystictidae</b>					
<i>Drepanosticta adami</i> (Fraser, 1933)	E: Sri Lanka Adam's Shadowdamsel	CR	B1ab(iii)+2ab(iii)	CR	B1ab(ii,iii)+ 2ab(ii,iii)
<i>Drepanosticta austeni</i> Lieftinck, 1940	E: Sri Lanka Austin's Shadowdamsel	CR	B2ab(iii)	CR	B1ab(ii,iii)+ 2ab(ii,iii)
<i>Drepanosticta brincki</i> Lieftinck, 1971	E: Sri Lanka Brinck's Shadowdamsel	CR	B2ab(iii)		
<i>Drepanosticta digna</i> (Hagen in Selys, 1860)	E: Sri Lanka Nobel Shadowdamsel	CR	B1ab(iii)+2ab(iii)		
<i>Drepanosticta hilaris</i> (Hagen in Selys, 1860)	E: Sri Lanka Merry Shadowdamsel	CR	B2ab(iii)	CR	B1ab(iii)+ 2ab(iii)
<i>Drepanosticta lankanensis</i> (Fraser, 1931)	E: Sri Lanka Drooping Shadowdamsel	CR	B2ab(iii)		
<i>Drepanosticta montana</i> (Hagen in Selys, 1860)	E: Sri Lanka Dark Knob-tipped Shadowdamsel	CR	B2ab(iii)	CR	B1ab(iii)+ 2ab(iii)
<i>Drepanosticta nietneri</i> (Fraser, 1931)	E: Sri Lanka Nietner's Shadowdamsel	CR	B2ab(iii)		
<i>Drepanosticta submontana</i> (Fraser, 1933)	E: Sri Lanka Bordered Knob-tipped Shadowdamsel	CR	B2ab(iii)	CR	B1ab(ii,iii)+ 2ab(ii,iii)
<i>Drepanosticta tropica</i> (Hagen in Selys, 1860)	E: Sri Lanka Dark-shouldered Cornuted Shadowdamsel	CR	B1ab(iii)+2ab(iii)		

Scientific Name	Common Name	NSG	Criteria	GCS	Criteria
<i>Drepanosticta subtropica</i> (Fraser, 1933)	E: Sri Lanka Blue-shouldered Cornuted Shadowdamsel	CR	B2ab(iii)		
<i>Drepanosticta walli</i> (Fraser, 1931)	E: Sri Lanka Wall's Shadowdamsel	CR	B2ab(iii)	DD	
<i>Drepanosticta anamia</i> Bedjanić, 2010		CR	B2ab(iii)		
<i>Drepanosticta bine</i> Bedjanić, 2010		CR	B2ab(iii)		
<i>Drepanosticta mojca</i> Bedjanić, 2010		CR	B2ab(iii)		
<i>Platysticta apicalis</i> Kirby, 1894	E: Sri Lanka Dark E: Forestdamsel	EN	B2ab(iii)		
<i>Platysticta maculata</i> Selys, 1860	E: Sri Lanka Blurry Forestdamsel	EN	B2ab(iii)		
<i>Platysticta greeni</i> Kirby, 1891		CR	B1ab(iii)+2ab(iii)		
<b>Family: Protoneuridae</b>					
<i>Ellatoneura oculata</i> (Kirby, 1894)	E: Sri Lanka Two- spotted Threadtail	EN	B1ab(iii)+2ab(iii)	EN	B1ab(ii,iii)+ 2ab(ii,iii)
<i>Elattonera caesia</i> (Hagen in Selys, 1860)	E: Sri Lanka Jungle Threadtail	VU	B1ab(iii)	EN	B1ab(ii,iii)+ 2ab(ii,iii)
<i>Elattonera centralis</i> (Hagen in Selys, 1860)	E: Sri Lanka Dark-glittering Threadtail	VU	B1ab(iii)		
<i>Elattonera leucostigma</i> (Fraser, 1933)	E: Sri Lanka Smoky-winged Threadtail	CR	B2ab(iii)	CR	B1ab(ii,iii)+ 2ab(ii,iii)
<i>Elattonera tenax</i> (Hagen in Selys, 1860)	E: Sri Lanka Red- striped Threadtail	EN	B2ab(iii)		
<i>Prodasineura sita</i> (Kirby, 1894)	E: Sri Lanka Stripe-headed Threadtail	LC			
<b>Family: Gomphidae</b>					
<i>Anisogomphus solitaris</i> Lieftinck, 1971	E: Sri Lanka Solitaire Clubtail	DD		CR	B1ab(iii)+ 2ab(iii)
<i>Burmagomphus pyramidalis</i> Laidlaw, 1922	E: Sinuate Clubtail	CR	B2ab(iii)		
<i>Cyclogomphus gynostylus</i> Fraser, 1926	E: Sri Lanka Transvestite Clubtail	CR	B2ab(iii)	VU	B1ab(iii)+ 2ab(iii)
<i>Megalogomphus ceylonicus</i> (Laidlaw, 1922)	E: Sri Lanka Sabretail	EN	B2ab(iii)		
<i>Paragomphus henryi</i> (Campion and Laidlaw, 1928)	E: Sri Lanka Brook Hooktail	EN	B2ab(iii)	NT	
<i>Heliogomphus ceylonicus</i> (Hagen in Selys, 1878)	E: Sri Lanka Grappletail	DD		CR	B1ab(iii)+ 2ab(iii)
<i>Heliogomphus lyratus</i> Fraser, 1933	E: Sri Lanka Lyrate Grappletail	CR	B2ab(iii)	CR	B1ab(iii)+ 2ab(iii)

Scientific Name	Common Name	NSG	Criteria	GCS	Criteria
<i>Heliogomphus nietneri</i> (Hagen in Selys, 1878)	E: Sri Lanka Nietner's Grappletail	DD		CR	B1ab(iii)+ 2ab(iii)
<i>Heliogomphus walli</i> Fraser, 1925	E: Sri Lanka Wall's Grappletail	EN	B2ab(iii)	NT	
<i>Macrogomphus lankanensis</i> Fraser, 1933	E: Sri Lanka Forktail	EN	B2ab(iii)	VU	B1ab(iii)+ 2ab(iii)
<i>Macrogomphus annulatus</i> (Selys, 1854)	E: Keiser's Forktail	DD		DD	
<i>Microgomphus wijaya</i> Lieftinck, 1940	E: Sri Lanka Wijaya's Scissortail	EN	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<i>Gomphidia pearsoni</i> Fraser, 1933	E: Sri Lanka Rivulet Tiger	EN	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<i>Ictinogomphus rapax</i> (Rambur, 1842)	E: Rapacious Flangetail	LC		LC	
<b>Family: Aeshnidae</b>					
<i>Anax gutattus</i> (Burmeister, 1839)	E: Pale-spotted Emperor	LC		LC	
<i>Anax immaculifrons</i> Rambur, 1842	E: Fiery Emperor	VU	B1ab(iii)	LC	
<i>Anax indicus</i> Lieftinck, 1942	Elephant Emperor	LC		LC	
<i>Anax tristis</i> Hagen, 1867		DD			
<i>Hemianax ephippiger</i> (Burmeister, 1839)	E: Vagrant Emperor	DD		LC	
<i>Gynacantha dravida</i> Lieftinck, 1960	E: Indian Duskhawker	NT			
<i>Anaciaeschna donaldi</i> Fraser, 1922	E: Dark Hawker	CR	B2ab(iii)	LC	
<b>Family: Corduliidae</b>					
<i>Epophthalmia vittata</i> Burmeister, 1839	E: Blue-eyed Pondcruiser	NT		LC	
<i>Macromia flinti</i> Lieftinck, 1977	E: Sri Lanka Flint's Cruiser	DD		CR	B1ab(iii)+ 2ab(iii)
<i>Macromia zeylanica</i> Fraser, 1927	E: Sri Lanka Cruiser	CR	B2ab(iii)		
<b>Family: Libellulidae</b>					
<i>Hylaeothemis fruhstorferi</i> (Karsch, 1889)	E: Fruhstorfer's Junglewatcher	CR	B1ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<i>Tetrathemis yerburii</i> Kirby, 1893	E: Sri Lanka Yerbury's Elf	EN	B1ab(iii)+2ab(iii)	EN	B2ab(iii)
<i>Brachydiplax sobrina</i> (Rambur, 1842)	E: Sombre Lieutenant	LC		LC	
<i>Cratilla lineata</i> (Brauer, 1878)	E: Pale-faced Forestskimmer	EN	B1ab(iii)+2ab(iii)	LC	
<i>Lathrecista asiatica</i> (Fabricius, 1798)	E: Pruinosed Bloodtail	NT			
<i>Lyriothemis defonsekai</i> van der Poorten, 2008	E: Sri Lanka Vermilion Forester	CR	B1ab(iii)		
<i>Orthetrum chrysis</i> (Selys, 1891)	E: Spine-tufted Skimmer	VU	B1ab(iii)	LC	
<i>Orthetrum glaucum</i> (Brauer, 1865)	E: Asian Skimmer	NT		LC	



Scientific Name	Common Name	NSG	Criteria	GCS	Criteria
<i>Orthetrum luzonicum</i> (Brauer, 1868)	E: Marsh Skimmer	NT		LC	
<i>Orthetrum pruinosum</i> (Burmeister, 1839)	E: Pink Skimmer	NT		LC	
<i>Orthetrum sabina</i> (Drury, 1770)	E: Green Skimmer	LC		LC	
<i>Orthetrum triangulare</i> (Selys, 1878)	E: Triangle Skimmer	EN	B1ab(iii)+2ab(iii)	LC	
<i>Potamarcha congener</i> (Rambur, 1842)	E: Blue Pursuer	LC		LC	
<i>Acisoma panorpoides</i> Rambur, 1842	E: Asian Pintail	LC		LC	
<i>Brachythemis contaminata</i> (Fabricius, 1793)	E: Asian Groundling	LC		LC	
<i>Bradinopyga geminata</i> (Rambur, 1842)	E: Indian Rockdweller	LC		LC	
<i>Crocothemis servilia</i> (Drury, 1770)	E: Oriental Scarlet	LC		LC	
<i>Diplacodes nebulosa</i> (Fabricius, 1793)	E: Black-tipped Percher	NT		LC	
<i>Diplacodes trivialis</i> (Rambur, 1842)	E: Blue Percher	LC		LC	
<i>Indothemis carnatica</i> (Fabricius, 1798)	E: Light-tipped Demon	NT		NT	
<i>Indothemis limbata</i> (Selys, 1891)	E: Restless Demon	NT		LC	
<i>Neurothemis intermedia</i> (Rambur, 1842)	E: Paddyfield Parasol	NT		LC	
<i>Neurothemis tullia</i> (Drury, 1773)	E: Pied Parasol	LC		LC	
<i>Rhodothemis rufa</i> (Rambur, 1842)	E: Spine-legged Redbolt	NT		LC	
<i>Sympetrum fonscolombii</i> (Selys, 1840)	E: Red-veined Darter	EN	B1ab(iii)+2ab(iii)		
<i>Trithemis aurora</i> (Burmeister, 1839)	E: Crimson Dropwing	LC		LC	
<i>Trithemis festiva</i> (Rambur, 1842)	E: Indigo Dropwing	VU	B1ab(iii)	LC	
<i>Trithemis pallidervis</i> (Kirby, 1889)	E: Dancing Dropwing	NT		LC	
<i>Onychothemis tonkinensis</i> Martin, 1904	E: Aggressive Riverhawk	EN	B1ab(iii)+2ab(iii)	LC	
<i>Rhyothemis triangularis</i> Kirby, 1889	E: Sapphire Flutterer	VU	B1ab(iii)	LC	
<i>Rhyothemis variegata</i> (Linnaeus, 1763)	E: Variegate Flutterer	LC		LC	
<i>Hydrobasileus croceus</i> (Brauer, 1867)	E: Amber-winged Glider	NT		LC	
<i>Pantala flavescens</i> (Fabricius, 1798)	E: Globe Skimmer, Wandering Glider	LC		LC	
<i>Tamea basilaris</i> (Palisot de Beauvois, 1805))	E: Keyhole Glider, Wheeling Glider	VU	B1ab(iii)	LC	

Scientific Name	Common Name	NSG	Criteria	GCS	Criteria
<i>Tramea limbata</i> (Desjardins, 1832)	E: Sociable Glider	LC		LC	
<i>Tholymis tillarga</i> (Fabricius, 1798)	E: Foggy-winged Twister	LC		LC	
<i>Zygomma petiolatum</i> Rambur, 1842	E: Dingy Duskflyer	NT		LC	
<i>Aethriamanta brevipennis</i> (Rambur, 1842)	E: Elusive Adjutant	LC		LC	
<i>Macrodiplax cora</i> (Kaup in Brauer, 1867)	E: Costal Pennant	VU	B1ab(iii)	LC	
<i>Urothemis signata</i> (Rambur, 1842)	E: Scarlet Basker	LC		LC	
<i>Zygonyx iris</i> Selys, 1869	E: Cascader	VU		LC	

## **The Taxonomy and Conservation Status of Ants (Order: Hymenoptera, Family: Formicidae) in Sri Lanka**

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### **Introduction**

Ants are a common group of insects in most terrestrial habitats in Sri Lanka. Their habitats vary from highly disturbed urbanized areas to undisturbed forests. Further, the ants occupy a wide variety of microhabitats ranging from soil (up to a depth of about 20 cm) decaying wood, plants, trees, litter, termite nests *etc.* Bingham (1903) was the first to attempt documenting of the ant species in Sri Lanka. For the next 50 years, ants of Sri Lanka have received little attention. During the past five decades several taxonomic works on ants of Sri Lanka have been published (Bolton & Belshaw, 1987; Dorow & Kohout, 1995; Jayasooriya & Traniello, 1985; Wilson, 1964; Wilson, *et al.*, 1956). A revival of taxonomic work on ants of Sri Lanka in recent times began with the work initiated by the author in 2000. A preliminary taxonomic study of the ants collected from the premises of the Kelaniya University (Gampaha District) was carried out (Dias & Chaminda, 2000; Dias, *et al.*, 2001) and this work was later extended to other Districts such as Colombo, Ratnapura and Galle (Dias & Chaminda, 2001; Chaminda & Dias, 2001). Books and articles that are relevant to systematics of ants published up to 2003 has been summarised by Dias (2005, 2006). Classification of ants has been revised by Bolton (2003) and the recent revisions are presented in Bolton, *et al.*, (2006, 2012). In addition, several websites are available on world ants ([www.antbase.org](http://www.antbase.org)) and the ants of several countries (Japanese ants colour image database, Ants of India, Ants of Papua New Guinea *etc.*). The website on ants of Sri Lanka has been launched in 2011.

### **Current taxonomic status and taxonomic issues**

According to the currently valid classification (Bolton, 2003; Bolton, *et al.*, 2006), ants belonging to twelve subfamilies, sixty three genera and, two hundred and fifteen species and morphospecies have been recorded from Sri Lanka (Table A).

The provisional checklist of ants is based on Bolton (1995), specimens deposited at National Museum, Colombo, the collections of the first author from the wet and dry zones during 2000 - 2011 and the collection from dry, intermediate and arid zone districts, namely, Anuradhapura, Polonnaruwa, Kurunegala and Puttalam, by the other two authors for their postgraduate studies. *Solenopsis geminata*, *Oecophylla smaragdina*, *Meranoplus bicolor*, *Paratrechina longicornis* and *Tapinoma melanocephalum* have been listed from Vantharumoolai region in Batticaloa District (Vinobaba L., personal communication). Based on the IUCN criteria, nineteen 'Endangered' and thirty three 'Critically Endangered' species have been identified. The Sri Lankan Relict Ant, *Aneuretus simoni* Emery is currently included in the 'Endangered' category.

**Table A. Number of genera and species in each of the twelve ant subfamilies recorded from Sri Lanka.**

Subfamily	Genera	Species	Morpho-species
Aenictinae	1	5	
Amblyoponinae	2	1	3
Aneuretinae	1	1	
Cerapachyinae	1	6	1
Dolichoderinae	5	8	4
Dorylinae	1	3	
Ectatomminae	1	1	
Formicinae	12	54	3
Leptanillinae	2	01	3
Myrmicinae	23	79	1
Ponerinae	11	31	6
Pseudomyrmecinae	1	4	
	61	194	21

In addition to the generic and species level classification, a number of ant genera have been classified to subgenera, subspecies and varieties (Bolton et al. 2006) but the generic name and species name of any ant is presented in Appendix Table 1. Also, *Carebara* is the currently valid generic name of *Oligomyrmex* (Fernandez, 2004; Bolton et al. 2006). Among the ant genera listed in Appendix Table 1 the following ant genera, *Acanthomyrmex*, *Anillomyrma*, *Gnamptogenys*, *Metapone*, *Paratopula*, *Rophalomastix*, *Myopias* and *Myopopone* were never observed during 2000 to 2011 period. Therefore, they are included in the ‘Data Deficient (DD)’ category. Inadequate research on ant systematics, lack of funding for accessing foreign ant repositories and lack of morphological descriptions for identification to the species levels are the major taxonomic issues in ant systematics. Also, identification to the species level requires the collection of major and minor workers (at the same time) of certain ant genera such as *Pheidole* but the sampling methods did not fulfil this need. Sampling methods that were suitable for ground ants and ground-foraging ants were employed for our research and therefore, ant species that occupy other microhabitats (e.g. arboreal – *Polyrhachis* spp., *Tetraopone* spp.) and forage elsewhere had a very low representation in this collection.

### Distribution

In order to determine the distribution pattern of ants in Sri Lanka an extensive survey was conducted in Gampaha, Colombo, Galle and Kalutara Districts and intensive surveys conducted in other Districts from 2000-2011. Two new records, the presence of *Aneuretus simoni* Emery (Sri Lankan Relict Ant) in “Kirikanda” forest (Dias, et al., 2011 in press) and “Kalugala Kanda” forest in Kalutara District (by the first author), were reported in 2010 and 2011 respectively. Members of Ectatomminae were never observed in our collection.

### Threats

Due to the lack of adequate research on individual ant species very little is evident as threats to the ant fauna. Lack of ground vegetation and leaf litter seems to be the reason for the absence of leaf litter ants, mostly common ponerines, in cultivated lands when compared with the ant

fauna in the nearby forests. Further, setting fire to land before cultivating or to promote grass growth in pasture lands, which is a common practice in most parts of Sri Lanka has been identified as a major threat to many species of ground dwelling ant fauna.

## **Conservation**

Awareness programmes on the ecological and economic (where applicable) importance, general biology and distribution of ants should be conducted at schools, universities and through media. Ants that are considered as agricultural pests (e.g. *Solenopsis geminata*, *Meranoplus bicolor*, *Acropyga acutiventris*), nuisance insects or household pests (tramp species) and the medically important species (Dias, 2011) should be recognized and excluded from the list. Habitats that are critically important for endemic and threatened ant species (e.g. *Aneuretus simoni*, *Stereomyrmex horni*) that do not come within the protected area network must be identified and actions should be taken to ensure that these habitats are maintained to ensure the survival of these species.

## **Research gaps and research needs**

The inadequacy of research that focuses on forest ants of Sri Lanka (except for Perera 2003, Dias and Perera, 2011, Gunawardene et al., 2008, Kosgamage, 2011, Peiris, 2012) with only a few sporadic publications by foreign researchers is a major barrier for the development of myrmecology in Sri Lanka. Available information on ants in Sri Lanka is restricted to few Districts of Sri Lanka. Therefore, the survey on ants should be extended to natural and man made habitats in all other Districts of Sri Lanka that are under different levels of disturbance. Research projects on ant systematics, biology and ecology of individual species and distribution of endemic species should be encouraged among undergraduate and postgraduate students. One of the main reasons for lack of research on ants of Sri Lanka can be attributed to lack of trained personnel in this field of specialization. Therefore, the curricula in the Universities should be revised in order to enhance the theoretical knowledge and practical skills required in ant systematics. Further, short training workshops should be conducted to field biologists who are currently engaged in entomology research to encourage more research on ant fauna

## **Conclusions and recommendations**

Current Red Listing of ant species has been based on the existing information (1960 - 2011) and a detailed check list including the conservation status of species that were evaluated is given in Appendix 1. *Aneuretus simoni*, *Cardiocondyla nuda*, *Centromyrmex feae*, *Cerapachys aitkini*, *Cerapachys fossulatus*, *Cerapachys fragosus*, *Cerapachys typhlus*, *Ochetellus glaber*, *Polyrhachis illaudatus*, *Polyrhachis rastellata*, *Pseudolasius isabellae*, *Stereomyrmex horni*, *Technomyrmex brunneus*, *Technomyrmex elatior*, *Prenolepis naorojii*, *Myrmecina striata* and *Dorylus labiatus* could especially be considered as Critically Endangered among them. Lack of adequate surveys on ants in various microhabitats and taxonomic issues pertaining to ant identification are the major reasons identified for the current scarcity of information on ants of Sri Lanka. Therefore, the ant list given in this paper may not include all the species that are present in Sri Lanka today and therefore, needs to be improved in the future. In order to achieve this goal, more surveys on ants should be conducted with the participation of university students and other enthusiasts. Further, a book on the ants of Sri Lanka, giving morphological descriptions and colour photographs (where possible), should be published to encourage people to work on this lesser known yet common group of insects.

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**Table 02: List of Ants in Sri Lanka**

Scientific Name	Common Name	NCS	Criteria
<b>Subfamily: Aenictinae</b>			
<i>Aenictus biroi</i> Forel		DD	
<i>Aenictus ceylonicus</i> (Mayr)	E: Asian Reddish Brown Army Ant	DD	
<i>Aenictus fergusonii</i> (Karavaive)		EN	B2ab(iii)
<i>Aenictus pachycerus</i> (Dalla Torre)	E: Army Ant	EN	B1ab(iii)
<i>Aenictus porizonoides</i> Walker		DD	
<b>Subfamily: Aneuretinae</b>			
<i>Aneuretus simoni</i> Emery	E: Sri Lankan Relict Ant	EN	B1+2ab(iii)
<b>Subfamily: Myrmicinae</b>			
<i>Myrmecina striata</i> Emery		CR	B2ab(iii)
<i>Acanthomyrmex luciolae</i> Emery		DD	
<i>Anillomyrma decamera</i> Emery		DD	
<b><i>Calyptomyrmex tamil</i></b> Baroni Urbani		DD	
<b><i>Calyptomyrmex vedda</i></b> Baroni Urbani		DD	
<b><i>Calyptomyrmex singalensis</i></b> Baroni Urbani		DD	
<i>Cardiocondyla nuda</i> (Mayr)		CR	B2ab(iii)
<i>Cataulacus simoni</i> Emery		DD	
<b><i>Cataulacus taprobanæ</i></b> Smith F.		DD	
<i>Crematogaster anthracina</i> Smith F.		DD	
<i>Crematogaster biroi</i> Mayr		EN	B2ab(iii)
<i>Crematogaster apicalis</i> Motchoulsky		DD	
<i>Crematogaster brunnescens</i> Motchoulsky		DD	
<i>Crematogaster dohrni</i> Mayr	S: Kodaya	VU	B1ab(iii)
<i>Crematogaster pellens</i> Walker		DD	
<i>Crematogaster politula</i> Forel		CR	B1+2ab(iii)
<i>Crematogaster ransonneti</i> Mayr		DD	
<i>Crematogaster rogenhoferi</i> Mayr	E: Thai Tree Ant	CR	B2ab(iii)
<i>Crematogaster rogeri</i> Mayr		DD	
<i>Crematogaster rothneyi</i> Forel	S: Kodaya	LC	
<i>Lophomyrmex quadrispinosus</i> (Jerdon)		LC	
<i>Meranoplus bicolor</i> (Guerin-Meneville)		LC	
<b><i>Metapone greeni</i></b> Forel		DD	
<b><i>Metapone johni</i></b> Karavaiev		DD	
<i>Monomorium floricola</i> (Jerdon)	E: Flower Ant S: Thel Koombiya	LC	
<i>Monomorium subopacum</i> (Smith F.)		DD	
<b><i>Monomorium taprobanæ</i></b> Forel	E: Sri Lanka Flower Ant	DD	
<i>Monomorium latinode</i> Mayr		DD	
<i>Monomorium criniceps</i> (Mayr)		EN	B1+2ab(iii)
<i>Monomorium destructor</i> (Jerdon)	E: Singapore Ant S: Rathu Koombiya	LC	
<i>Monomorium mayri</i> Forel		DD	
<i>Monomorium pharaonis</i> (L.)	E: Pharaoh Ant	LC	
<i>Monomorium rogeri</i> (Mayr)		DD	

Scientific Name	Common Name	NCS	Criteria
<i>Myrmicaria brunnea</i> Saunders		LC	
<i>Carebara bruni</i> (Forel)		DD	
<i>Carebara butteli</i> (Forel)		DD	
<i>Carebara deponens</i> (Walker)		DD	
<b><i>Carebara taprobanae</i></b> (Forel)		DD	
<i>Carebara escherichi</i> (Forel)		DD	
<i>Paratopula ceylonica</i> (Emery)		DD	
<i>Pheidole latinoda</i> Roger		DD	
<i>Pheidole nietneri</i> Emery		DD	
<i>Pheidole sulcaticeps</i> Roger		DD	
<i>Pheidole barreleti</i> Forel		DD	
<b><i>Pheidole ceylonica</i></b> (Motchoulsky)		DD	
<i>Pheidole diffidens</i> (Walker)		DD	
<i>Pheidole gracilipes</i> (Motschoulsky)		DD	
<i>Pheidole horni</i> Emery		DD	
<i>Pheidole malinsii</i> Forel		DD	
<i>Pheidole megacephala</i> Forel	E: Big Head Ant	DD	
<i>Pheidole noda</i> Forel		DD	
<i>Pheidole parva</i> Mayr		DD	
<i>Pheidole pronotalis</i> Forel		DD	
<i>Pheidole rhombinoda</i> Mayr		CR	B2ab(iii)
<i>Pheidole rugosa</i> Smith F.		DD	
<i>Pheidole spathifera</i> Forel		DD	
<i>Pheidole templaria</i> Forel		DD	
<b><i>Pheidologeton ceylonensis</i></b> Forel		DD	
<i>Pheidologeton diversus</i> (Smith F.)	E: East Indian Harvesting Ant	VU	B1ab(iii)
<i>Pheidologeton pygmaeus</i> Forel		DD	
<b><i>Recurvidris pickburni</i></b> Bolton		DD	
<i>Recurvidris recurvispinosa</i> (Forel)		VU	B1ab(iii)
<b><i>Rophalomastix escherichi</i></b> Forel		DD	
<i>Solenopsis geminata</i> (Fabricius)	E: Red Tropical Fire Ant S: Nayi Koombiya	LC	
<i>Solenopsis nitens</i> Bingham	E: Fire Ant	DD	
<b><i>Stereomyrmex horni</i></b> Emery		CR	B2ab(iii)
<i>Strumigenys godeffroyi</i> Mayr		DD	
<i>Strumigenys lyroessa</i> (Roger)		EN	B1+2ab(iii)
<i>Tetramorium bicarinatum</i> (Nylander)		LC	
<i>Tetramorium pacificum</i> Mayr		DD	
<i>Tetramorium simillimum</i> (Smith)		DD	
<i>Tetramorium curvispinosum</i> Mayr		DD	
<i>Tetramorium pilosum</i> Emery		DD	
<i>Tetramorium smithi</i> Mayr		VU	B1ab(iii)
<i>Tetramorium tortuosum</i> Roger		VU	B1ab(iii)
<i>Tetramorium transversarium</i> Roger		DD	
<i>Tetramorium walshi</i> (Forel)		VU	B1ab(iii)



Scientific Name	Common Name	NCS	Criteria
<i>Tetramorium yerburyi</i> Forel		DD	
<b><i>Vollenhovia escherichi</i></b> Forel		DD	
<b>Subfamily: Cerapachyinae</b>			
<b><i>Cerapachys fossulatus</i></b> Forel		CR	B2ab(iii)
<b><i>Cerapachys luteoviger</i></b> Brown		DD	
<b><i>Cerapachys coecus</i></b> (Mayr)		DD	
<b><i>Cerapachys fragosus</i></b> (Roger)		CR	B2ab(iii)
<b><i>Cerapachys typhlus</i></b> (Roger)		CR	B2ab(iii)
<i>Cerapachys aitkenii</i> Forel		CR	B1+2ab(iii)
<b>Subfamily: Dolichoderinae</b>			
<i>Dolichoderus taprobanae</i> (Smith F.)		CR	B2ab(iii)
<i>Ochetellus glaber</i> (Mayr)	E: Black House Ant	CR	B2ab(iii)
<i>Tapinoma indicum</i> Forel		LC	
<i>Tapinoma melanocephalum</i> (Fabricius)	E: Ghost Ant S: Hini Koombiya	LC	
<i>Technomyrmex bicolor</i> Forel		VU	B1ab(iii)
<i>Technomyrmex albipes</i> (Smith F.)	S: Kalu Koombiya	LC	
<i>Technomyrmex detorquens</i> (Walker)		DD	
<i>Technomyrmex elatior</i> Forel		CR	B1+2ab(iii)
<b>Subfamily: Dorylinae</b>			
<i>Dorylus labiatus</i> Shuckard		CR	B2ab(iii)
<i>Dorylus laevigatus</i> (Smith F.)	E: Driver Ant	EN	B1+2ab(iii)
<i>Dorylus orientalis</i> Westwood	E: Red Ant	EN	B1+2ab(iii)
<b>Subfamily: Ectatomminae</b>			
<b><i>Gnamptogenys coxalis</i></b> Brown		DD	
<b>Subfamily: Ponerinae</b>			
<i>Anochetus consultans</i> (Walker)		DD	
<i>Anochetus graeffei</i> Mayr		VU	B1ab(iii)
<i>Anochetus longifossatus</i> Mayr		EN	B1ab(iii)
<i>Anochetus madaraszi</i> Mayr		DD	
<i>Anochetus nietneri</i> (Roger)		CR	B2ab(iii)
<i>Anochetus yerburyi</i> Forel		DD	
<i>Centromyrmex feae</i> (Emery)		EN	B1+2ab(iii)
<b><i>Cryptopone testacea</i></b> Emery		DD	
<b><i>Diacamma ceylonense</i></b> Emery	S: Kadiya	EN	B1+2ab(iii)
<i>Diacamma rugosum</i> Forel	E: Queenless Ponerine Ant S: Kadiya	EN	B1+2ab(iii)
<i>Harpegnathos saltator</i> Jerdon	E: Jerdon's Jumping Ant	EN	B1+2ab(iii)
<b><i>Hypoponera ceylonensis</i></b> (Mayr)		DD	
<i>Hypoponera confinis</i> (Roger)		CR	B2ab(iii)
<b><i>Hypoponera taprobanae</i></b> (Forel)		DD	
<i>Leptogenys exudans</i> (Walker)		DD	
<i>Leptogenys hysterica</i> Forel		DD	
<i>Leptogenys processionalis</i> (Jerdon)		LC	
<i>Leptogenys pruinosa</i> Forel		EN	B2ab(iii)
<i>Leptogenys yerburyi</i> Forel		DD	

Scientific Name	Common Name	NCS	Criteria
<i>Leptogenys diminuta</i> (Smith F.)		DD	
<i>Leptogenys falcigera</i> Roger		DD	
<i>Leptogenys meritans</i> (Walker)		DD	
<i>Leptogenys peuqueti</i> (Andre)		CR	B2ab(iii)
<b><i>Myopias amblyops</i></b> Roger		DD	
<i>Odontomachus simillimus</i> Smith F.	E: Indian Trap-jaw Ant S: Dala Kadiya	LC	
<i>Pachycondyla luteipes</i> (Mayr)		LC	
<i>Pachycondyla rubiginosa</i> (Emery)		CR	B2ab(iii)
<i>Pachycondyla sulcata</i> (Forel)		CR	B2ab(iii)
<i>Pachycondyla tesseronoda</i> (Emery)		LC	
<i>Platythyrea clypeata</i> Forel		DD	
<i>Platythyrea parallela</i> (Smith F.)		VU	B1ab(iii)
<b>Subfamily: Amblyoponinae</b>			
<b><i>Myopopone maculata</i></b>		DD	
<b>Subfamily: Leptanillinae</b>			
<b><i>Leptanilla besucheti</i></b> Baroni Urbani		DD	
<b>Subfamily: Pseudomyrmecinae</b>			
<i>Tetraponera allaborans</i> (Walker, 1859)		VU	B2ab(iii)
<i>Tetraponera nigra</i> (Jerdon)		DD	
<i>Tetraponera petiolata</i> (Smith F.)		DD	
<i>Tetraponera rufonigra</i> (Jerdon)	E: Arboreal Bicolored Ant S: Hathpolaya	LC	
<b>Subfamily: Formicinae</b>			
<i>Acropyga acutiventris</i> Roger		LC	
<i>Anoplolepis gracilipes</i> (Smith F.)	E: Yellow Crazy Ant S: Ambalaya	LC	
<i>Camponotus compressus</i> Fabricius		LC	
<i>Camponotus irritans</i> (Smith F.)		LC	
<i>Camponotus latebrosus</i> Donisthorpe		DD	
<i>Camponotus mitis</i> (Smith F.)		DD	
<i>Camponotus ominusus</i> Forel		DD	
<i>Camponotus simoni</i> Emery		DD	
<i>Camponotus thraso</i> Forel		DD	
<b><i>Camponotus wedda</i></b> Forel		DD	
<i>Camponotus albipes</i> Emery		DD	
<i>Camponotus auriculatus</i> Mayr		DD	
<i>Camponotus barbatus</i> Roger		DD	
<i>Camponotus fletcheri</i> Donisthorpe		DD	
<i>Camponotus greeni</i> Forel		DD	
<i>Camponotus indeflexus</i> (Walker)		DD	
<i>Camponotus isabellae</i> Forel		DD	
<i>Camponotus mendax</i> Forel		DD	
<i>Camponotus oblongus</i> Forel		EN	B1+2ab(iii)
<i>Camponotus reticulatus</i> Roger		LC	
<i>Camponotus rufoglaucus</i> (Jerdon)		VU	B1ab(iii)

Scientific Name	Common Name	NCS	Criteria
<i>Camponotus sericeus</i> (Fabricius)	E: Golden Backed Carpenter Ant	LC	
<i>Camponotus sesquipedalis</i> Roger		DD	
<i>Camponotus varians</i> Roger		DD	
<i>Camponotus variegatus</i> (Smith F.)		CR	B2ab(iii)
<i>Lepisiota capensis</i> (Mayr)	E: Black Sugar Ant	CR	B2ab(iii)
<i>Lepisiota frauenfeldi</i> (Mayr)		VU	B1ab(iii)
<i>Lepisiota opaca</i> (Mayr)		VU	B1ab(iii)
<b><i>Myrmoteras ceylonica</i></b> Gregg		DD	
<i>Oecophylla smaragdina</i> (Fabricius)	E: Weaver ant S: Dimiya	LC	
<i>Paratrechina longicornis</i> (Latrielle)	E: Longhorn Crazy Ant S: Kalu Koombiya	LC	
<i>Paratrechina indica</i> Forel		EN	B1+2ab(iii)
<i>Paratrechina taylori</i> (Forel)		DD	
<i>Nylanderia yerburyi</i> (Forel)		LC	
<i>Plagiolepis jerdonii</i> Forel		VU	B1ab(iii)
<i>Plagiolepis pissina</i> Roger		DD	
<b><i>Polyrhachis bugnioni</i></b> Forel		DD	
<i>Polyrhachis exercita</i> (Walker)		DD	
<i>Polyrhachis horni</i> Emery		DD	
<i>Polyrhachis jerdonii</i> Forel		EN	B1+2ab(iii)
<i>Polyrhachis nigra</i> Mayr		DD	
<i>Polyrhachis rupicapra</i> Roger		DD	
<i>Polyrhachis thrinax</i> Roger		DD	
<i>Polyrhachis tibialis</i> Santschi		DD	
<i>Polyrhachis xanthippe</i> Forel		DD	
<i>Polyrhachis yerburyi</i> Forel		DD	
<i>Polyrhachis convexa</i> Roger		VU	B1ab(iii)
<i>Polyrhachis illaudata</i> Walker		CR	B1+2ab(iii)
<i>Polyrhachis punctillata</i> Roger		VU	B1ab(iii)
<i>Polyrhachis rastellata</i> (Latreille)		CR	B2ab(iii)
<b><i>Polyrhachis scissa</i></b> (Roger)		EN	B2ab(iii)
<i>Polyrhachis sophocles</i> Forel		DD	
<i>Prenolepis naorojii</i> Forel		CR	B2ab(iii)
<b><i>Pseudolasius isabellae</i></b> Forel		CR	B1+2ab(iii)

No of species: 194 (Due to the recent revisions in the ant taxonomy and removal of morphospecies this number has gone down)

No of endemics: 33 (based on "so far recorded from Sri Lanka only")

Global list contains only *Aneuretus simoni* as CR (B1+2c)

## **The Taxonomy and Conservation Status of the Bees (Hymenoptera: Apoidea) in Sri Lanka**

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### **Introduction**

Bees (Hymenoptera: Apoidea: Apiformes) are the most important pollinators of flowering plants including agricultural crops resulting in fruits and seed production. Most of the world's crops are pollinated by bees comprising more than 20,000 identified species and a similar number of species awaiting identification. The distribution of bees depends on climate and their ability to disperse to suitable areas (Michener, 2000). The highest bee diversity has been recorded from warm temperate desert regions of the world.

The earliest work on bees of Sri Lanka dates back to the British Colonial period where Dalla Torre (1896) listed 17 species of bees and Bingham (1897) recorded and described 42 species of bees from Sri Lanka. During the post-colonial period Sakagami and Ebmer (1987), Schwarz (1990), Sakagami (1978 & 1991), Sakagami, Ebmer and Tadauchi (1996 and 1998), Snelling (1980) and Baker (1996) worked on bees of Sri Lanka. The Smithsonian - Sri Lanka Insect Survey conducted from 1969 through 1975 up to 1987 resulted in the identification of several more bee species and led to several publications. Duplicate specimens of bees identified through this survey have been deposited in two locations: the Sri Lanka National Museums, Colombo (58 spp.) and in the Department of Zoology, University of Peradeniya (42 spp.). Through a survey of published literature on bees of Sri Lanka, Wijesekara (2001) compiled an annotated list of bees of Sri Lanka documenting 132 bee species belonging to 25 genera and 4 families. The landmark publication on the '*Bees of the world*' by Michener (2000) includes 29 genera and several subgenera of bees from Sri Lanka. Later surveys conducted by local scientists resulted in the updating of the checklist of bees of Sri Lanka with the addition of 5 new genera and 15 new species including one species new to Science (Karunaratne, Edirisinghe & Pauly, 2005).

### **Taxonomy**

Difficulty in accessing the published keys and descriptions of selected bee groups in the region and the lack of an expert identified reference bee collection in the country are the major impediments to the advancement of bee taxonomy. Further, lack of cooperation between bee specialists in the region and the absence of a forum for exchanging scientific/research findings are also major constraints faced by bee taxonomists in Sri Lanka. As a result there are many morpho-species awaiting proper identification. The need for revising the bee taxa of Sri Lanka is a major requirement as evidenced by the recent upgrading of the subfamily Nomiinae in Sri Lanka (Karunaratne, Edirisinghe & Pauly, 2005) that resulted in 11 genera of bees that were previously classified under 3 genera.

### **Distribution**

Field studies conducted in the recent past have shown that most bee species are distributed across a range of altitudes while few species are restricted to specific habitats above 900 m. They are *Homalictus singhalensis*, *Lasioglossum (Sudila) bidentatum*, *L. (Sudila) alphenum*,

*L. (Sudila) aulacophorum*, and *L. (Evylaeus) carnifrons*. The Low country Dry zone harbours the majority of bee species where disturbed habitats such as scrublands that comprise of a diverse assemblage of herbaceous flowering plants, support the largest number of generalist bee species.

### **Threats**

The most serious threat faced by bees is the decline and fragmentation of natural habitats that harbour their feeding plants and nesting sites. Encroachment of exotic invasive tall grass species such as *Panicum maximum* into scrublands and agricultural lands that harbour large number of bee species can be considered as a serious threat to the bees. These invasive grass species eventually eliminate the herbaceous flowering plants that provide food and the nesting grounds for bees. In agricultural habitats, uncontrolled application of insecticides and weedicides, especially during the active period of bees, has lowered their populations significantly.

### **Conservation**

As bees are the major pollinators of our crops and flowering plants, priority should be given to proper management of this faunal group. Conservation of natural habitats is an essential task in bee conservation. Presence of a variety of pollen and nectar producing plants that can provide a year-around supply of food that is necessary to retain bees even during off seasons. Further, ground nesting bees should have undisturbed soil to make their nests. Therefore, at least 25% of the area covered by cultivated landscapes should be set aside for natural vegetation to keep beneficial insects including bees. Also application of insecticides and weedicides in agricultural habitats should be carried out during periods when bees are less active.

Conserving flowering plants that provide nectar and pollen for bees and establishing sites that are suitable for nesting is another priority area that needs to be addressed. Further, application of insecticides and weedicides should be carried out in a manner that would have the least affect on bees. Measures such as application of insecticides prior to flowering and at a time of the day when bees are less active on flowers would minimize their exposure to such chemicals.

### **Research gaps**

The need for revising the bee taxa of Sri Lanka is a major requirement as evidenced by the recent studies that have led to the discovery of several new species in Sri Lanka. Further, much of the data available for bees in Sri Lanka is restricted to few locations. Therefore, lack of knowledge about the distribution of bees is also a major gap in the knowledge on Sri Lankan bees. Thus, an island-wide survey should be conducted to document distribution patterns of the bees. This can be coupled with the establishment of a reference collection at the National Museum. Bees play a crucial role as pollinators, especially in crop plants. Yet bee pollinators of many crop plants are yet to be identified and documented. Therefore, an attempt should be taken to identify and document bees that function as pollinators of crop plants and plants that are of conservation value such as threatened and endemic plants. Studies done in India have indicated that a significant increase in the yields can be achieved by augmenting the pollinator bee populations. Similar studies can be undertaken in Sri Lanka as to how crop pollination can be enhanced in both natural and built environments. The current trends in bee populations remain unknown and as population fluctuations of bees will have a direct bearing

on agriculture, a mechanism must be established for monitoring the changes in bee diversity and density in specific landscapes.

## Conclusions and recommendations

1. It is necessary to enhance the capacity of bee taxonomists to undertake the much needed taxonomic revisions on bees of Sri Lanka, through education and training
2. It is also important to educate the local communities on the important role played by bees as pollinators and encourage them to actively engage in the conservation of bees
3. Develop an user friendly field guide on bees that to enable and popularize the study of bees
4. Prepare an information booklet outlining actions that can be taken to enhance the population of bees
5. Introduce agronomic practices that requires a lesser usage of agrochemical that are detrimental to bees
6. Undertake a coordinated programmes to enhance the bee diversity and density, especially in agricultural landscapes

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**Table 03 : List of Bees in Sri Lanka**

Scientific Name	NCS	Criteria
<b>Family: Colletidae</b>		
<i>Hylaeus krombeini</i> Snelling, 1980	CR	B2ab(iii)
<i>Hylaeus sedens</i> Snelling, 1980	CR	B2ab(iii)
<b>Family: Halictidae</b>		
<i>Austronomia krombeini</i> Hirashima, 1978	NT	
<i>Austronomia notiomorpha</i> Hirashima, 1978	NT	
<i>Ceylalictus cereus</i> (Nurse, 1901)	EN	B1ab(iii)+2ab(iii)
<i>Ceylalictus horni</i> (Strand, 1913)	CR	
<i>Ceylalictus taprobanae</i> (Cameron, 1897)	EN	B2ab(iii)
<i>Curvinomia formosa</i> (Smith, 1858)	EN	B2ab(iii)
<i>Curvinomia iridiscens</i> (Smith, 1857)	EN	B2ab(iii)
<i>Gnathonomia nasicana</i> Bingham, 1897	EN	B2ab(iii)
<i>Halictus (Seladonia) lucidipennis</i> Smith, 1853	LC	
<i>Halictus trincomalicus</i> Cameron, 1903	CR	B2ab(iii)
<i>Homalictus paradnanus</i> (Strand, 1914)	EN	B1ab(iii)
<i>Homalictus singhalensis</i> (Blüthgen, 1926)	CR	B1ab(iii)+2ab(iii)
<i>Hoplonomia westwoodi</i> (Gribodo, 1894)	LC	
<i>Lasioglossum (Ctenonomia) amblypygus</i> (Strand, 1913)	VU	B1ab(iii)
<i>Lasioglossum (Ctenonomia) cire</i> (Cameron, 1897)	VU	B1ab(iii)
<i>Lasioglossum (Ctenonomia) clarum</i> (Nurse, 1902)	NT	
<i>Lasioglossum (Ctenonomia) semisculptum</i> (Cockerell, 1911)	CR	B2ab(iii)
<i>Lasioglossum (Ctenonomia) semisculptum</i> (Cockerell, 1911)	CR	
<i>Lasioglossum (Ctenonomia) vagans</i> (Smith, 1857)	VU	B1ab(iii)
<i>Lasioglossum (Ctenonomia) albescens</i> (Smith, 1853)	EN	B1ab(iii)
<i>Lasioglossum (Evylaeus) carinifrons</i> (Cameron, 1904)	LC	
<i>Lasioglossum (Nesohalictus) halictoides</i> (Smith, 1859)	VU	B1ab(iii)
<i>Lasioglossum (Nesohalictus) serenum</i> (Cameron, 1897)	LC	
<i>Lasioglossum (Sudila) alphenum</i> (Cameron, 1897)	LC	
<i>Lasioglossum (Sudila) aulacophorum</i> (Strand, 1913)	EN	B1ab(iii)+2ab(iii)
<i>Lasioglossum (Sudila) bidentatum</i> (Cameron, 1898)	CR	B1ab(iii)+2ab(iii)
<i>Lasioglossum (Sudila) kandiense</i> (Cockerell, 1913)	CR	B2ab(iii)
<i>Lipotriches (Austronomia) ustula</i> (Cockerell, 1911)	EN	B2ab(iii)
<i>Lipotriches austella</i> (Hirashima, 1978)	EN	B1ab(iii)
<i>Lipotriches cromberi</i> (Cockerell, 1911)	EN	B2ab(iii)
<i>Lipotriches edirisinghei</i> Pauly, 2006	VU	B1ab(iii)
<i>Lipotriches exagens</i> (Walker, 1860)	EN	B1ab(iii)
<i>Lipotriches fulvinerva</i> (Cameron, 1907)	EN	
<i>Lipotriches pulchriventris</i> (Cameron, 1897)	CR	B2ab(iii)
<i>Lipotriches sp nr. Comperta</i> (Cockerell, 1912)	CR	B2ab(iii)
<i>Nomia (Hoplonomia) strigata</i> (Fabricius, 1793)	CR	B2ab(iii)
<i>Nomia biroi</i> Friese, 1913	EN	B1ab(iii)
<i>Nomia butteli</i> Friese, 1913	CR	B2ab(iii)
<i>Nomia crassipes</i> Fabricius 1798	NT	
<i>Nomia crassiuscula</i> Friese, 1913	CR	B2ab(iii)

Scientific Name	NCS	Criteria
<i>Nomia elegantula</i> Friese, 1913	CR	B2ab(iii)
<i>Nomia matalea</i> Starnd, 1913	EN	B1ab(iii)
<i>Nomia oxybeloides</i> Smith, 1875	EN	B1ab(iii)
<i>Nomia puttalama</i> Starnd, 1913	EN	B1ab(iii)
<i>Nomia rufa</i> Friese, 1918	CR	B2ab(iii)
<i>Pachyhalictus bedanus</i> (Blüthgen, 1926)	CR	B2ab(iii)
<i>Pachyhalictus kalutarae</i> (Cockerell, 1911)	VU	B1ab(iii)
<i>Pachyhalictus sigiriellus</i> (Cockerell, 1911)	CR	B2ab(iii)
<i>Pachyhalictus vinctus</i> (Walker, 1860)	CR	B2ab(iii)
<i>Pseudapis oxybeloides</i> (Smith, 1875)	LC	
<i>Sphecodes biroi</i> Friese, 1909	CR	B2ab(iii)
<i>Sphecodes crassicornis</i> Smith, 1875	VU	B1ab(iii)
<i>Steganomus nodicornis</i> (Smith, 1875)	EN	B2ab(iii)
<i>Systropha tropicalis</i> Cockerell, 1911	EN	B2ab(iii)
<b>Family: Megachilidae</b>		
<i>Anthidiellum ramakrishnae</i> (Cockerell, 1919)	CR	B2ab(iii)
<i>Coelioxys angulata</i> Smith, 1870	VU	B1ab(iii)
<i>Coelioxys apicata</i> Smith, 1854	CR	B1ab(iii)
<i>Coelioxys capitata</i> Smith, 1854	VU	B1ab(iii)
<i>Coelioxys confusus</i> Smith, 1875	EN	B2ab(iii)
<i>Coelioxys fenestrata</i> Smith, 1873	EN	B1ab(iii)
<i>Coelioxys fuscipennis</i> Smith, 1854	CR	B2ab(iii)
<i>Coelioxys intacta</i> Friese, 1923	CR	B2ab(iii)
<i>Coelioxys minutus</i> Smith, 1879	EN	B1ab(iii)+2ab(iii)
<i>Coelioxys nitidoscutellaris</i> Pasteels, 1987	CR	B2ab(iii)
<i>Coelioxys taiwanensis</i> Cockerell, 1911	EN	B1ab(iii)
<i>Euasps edentata</i> Baker, 1995	EN	B2ab(iii)
<i>Heriades binghami</i> Cameron, 1897	NT	
<i>Lithurgus atratus</i> Smith, 1854	VU	B1ab(iii)
<i>Megachile amputata</i> Smith, 1858	CR	B2ab(iii)
<i>Megachile ardens</i> Smith, 1879	CR	B2ab(iii)
<i>Megachile conjuncta</i> Smith, 1853	NT	
<i>Megachile disjuncta</i> Fabricius, 1781	NT	
<i>Megachile hera</i> Bingham, 1897	VU	B1ab(iii)
<i>Megachile kandyca</i> Friese, 1918	CR	B2ab(iii)
<i>Megachile lanata</i> Fabricius, 1793	VU	B1ab(iii)
<i>Megachile mystacea</i> Fabricius, 1775	CR	B2ab(iii)
<i>Megachile nana</i> Bingham, 1897	VU	B1ab(iii)
<i>Megachile nigricans</i> Cameron, 1898	CR	B2ab(iii)
<i>Megachile reepeni</i> Friese, 1918	CR	B2ab(iii)
<i>Megachile relata</i> Smith, 1879	CR	B2ab(iii)
<i>Megachile umbripennis</i> Smith, 1853	VU	B1ab(iii)
<i>Megachile vestita</i> Smith, 1853	EN	B1ab(iii)+2ab(iii)
<i>Megachile vigilans</i> Smith, 1878	EN	B2ab(iii)



Scientific Name	NCS	Criteria
<b>Family: Apidae</b>		
<i>Amegilla (Glossamegilla) violacea</i> Lepeletier, 1841	VU	B1ab(iii)
<i>Amegilla (Zebramegilla) fallax</i> Smith, 1879	NT	
<i>Amegilla (Zebramegilla) subcoerulea</i> Lepeletier, 1841	CR	B2ab(iii)
<i>Amegilla (Zonamegilla) cingulifera</i> Cockerell, 1910	EN	B1ab(iii)+2ab(iii)
<i>Amegilla (Zonamegilla) comberi</i> Cockerell, 1911	NT	
<i>Amegilla (Zonamegilla) niveocincta</i> (Smith, 1854)	CR	B2ab(iii)
<i>Amegilla (Zonamegilla) puttalama</i> Strand, 1913	VU	B1ab(iii)
<i>Amegilla (Zonamegilla) subinsularis</i> (Strand)	EN	B1ab(iii)+2ab(iii)
<i>Amegilla (Zonamegilla) zonata</i> Linnaeus, 1758	VU	B1ab(iii)
<i>Apis cerana</i> Fabricius, 1793	VU	B1ab(iii)
<i>Apis dorsata</i> Fabricius, 1793	EN	B2ab(iii)
<i>Apis florea</i> Fabricius, 1787	EN	B2ab(iii)
<i>Braunsapis cupulifera</i> Vachal, 1894	CR	B2ab(iii)
<i>Braunsapis mixta</i> Smith, 1852	LC	
<i>Braunsapis picitarsis</i> Cameron, 1902	EN	B1ab(iii)+2ab(iii)
<i>Ceratina (Ceratinidia) hieroglyphica</i> Smith, 1854	LC	
<i>Ceratina (Pithitis) binghami</i> Cockerell, 1910	LC	
<i>Ceratina (Pithitis) smaragdula</i> Fabricius, 1787	EN	B2ab(iii)
<i>Ceratina (Simoceratina) tanganyicensis</i> Strand, 1911	CR	B2ab(iii)
<i>Ceratina (Xanthoceratina) beata</i> Cameron, 1897	CR	B2ab(iii)
<i>Nomada antennata</i> Meade-Waldo, 1913	CR	B2ab(iii)
<i>Nomada bicellula</i> Schwarz, 1990	EN	B1ab(iii)
<i>Nomada priscilla</i> Nurse, 1902	CR	B1ab(iii)+2ab(iii)
<i>Nomada wickwari</i> Meade-Waldo, 1913	CR	B2ab(iii)
<i>Tetralonia commixtana</i> Strand, 1913	CR	B2ab(iii)
<i>Tetralonia fumida</i> Cockerell, 1911	CR	B2ab(iii)
<i>Tetralonia taprobanicola</i> Strand, 1913	CR	B2ab(iii)
<i>Thyreus ceylonicus</i> Friese, 1905	NT	
<i>Thyreus histrio</i> Fabricius, 1775	NT	
<i>Thyreus insignis</i> Meyer, 1912	EN	B2ab(iii)
<i>Thyreus ramosellus</i> Cockerell, 1919	EN	B2ab(iii)
<i>Thyreus surniculus</i> Lieftinck, 1959	CR	B2ab(iii)
<i>Thyreus takaonis</i> Cockerell, 1911	LC	
<i>Trigona iridipennis</i> Smith, 1854	LC	
<i>Xylocopa amethystina</i> Fabricius, 1793	VU	B1ab(iii)
<i>Xylocopa auripennis</i> Lepeletier, 1841	CR	B2ab(iii)
<i>Xylocopa bhowara</i> Maa, 1938	VU	B1ab(iii)
<i>Xylocopa bryorum</i> Fabricius, 1775	CR	B2ab(iii)
<i>Xylocopa confusa</i> Perez, 1901	EN	B1ab(iii)
<i>Xylocopa dejeanii</i> Lepeletier, 1841	EN	B1ab(iii)
<i>Xylocopa fenestrata</i> Fabricius, 1798	NT	
<i>Xylocopa nasalis</i> Westwood, 1842	CR	B2ab(iii)
<i>Xylocopa ruficornis</i> Fabricius, 1804	EN	B1ab(iii)+2ab(iii)
<i>Xylocopa tenuiscapa</i> Westwood, 1840	LC	
<i>Xylocopa tranquibarica</i> Fabricius, 1804	CR	B2ab(iii)

# The Taxonomy and Conservation Status of the Butterflies of Sri Lanka

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## Introduction

The study of butterflies in Sri Lanka began with a short account of 7 species from the island by Sir J. Emerson Tennent in his book *Ceylon: An account of the island*, Volume 1 (1860). This was followed by a more comprehensive account on the butterflies of Sri Lanka by Frederick Moore in *The Lepidoptera of Ceylon* Volume 1 (1880-1881) and Volume 3 (1884-87). Several scientific works such as Marshall & de Nicéville (1882-83), de Nicéville (1886, 1890), Manders (1899, 1903, 1904), Bingham (1905 & 1907), Ormiston (1924), Evans (1927 & 1932), Woodhouse (1942, 1949, 1950), and Talbot (1947) have contributed to furthering the knowledge on butterfly fauna of Sri Lanka. However, much of the information in these books was based on the original writings of Moore with some added information generated by studies done in India and contributions by local naturalists including E. E. Green, Tunnard, Manders, Wiley and Ormiston. In 1998, d'Abrera published a book with short accounts on all of the species accompanied by color photographs. Since then several popular books and articles have been published on butterflies; most of them however, are based on available literature rather than new information.

To date, 245 species of butterflies (Order Lepidoptera: Superfamily Papilionoidea) have been recorded from Sri Lanka, of which twenty-six species are endemic to the island. Sri Lanka shares most of its butterfly fauna with peninsular India, with which it is zoographically related. In particular, there are several species regionally endemic to the Western Ghats and Sri Lanka.

## Current taxonomic status

The phylogenetic analysis of the butterflies and skippers of the world by Ackery *et. al.*, (1999) in which they were classified under three superfamilies (Hedyloidea, Hesperoidea and Papilionoidea), has been superseded by the work of van Nieuwerkerken *et. al.*, (2011) in which all seven families of butterflies, including the skippers, are now classified in the superfamily Papilionoidea. In Sri Lanka, all species of butterflies and skippers are classified under the following six families: Papilionidae (15 species), Pieridae (28 species), Nymphalidae (68 species), Riodinidae (1 species), Lycaenidae (84 species) and Hesperidae (49 species). Of the 26 endemic species, 9 species each are found in the Nymphalidae and Lycaenidae families while the remaining 8 species belong to the families Papilionidae (2), Pieridae (2) and Hesperidae (4). However, ongoing taxonomic work on the group may result in a change in the number of endemic species (Kunte, K., in prep.).

Since the publication of 2007 IUCN Red List, two species new to Sri Lanka have been discovered: *Catopsilia scylla* (van der Poorten & van der Poorten, 2012c.) and *Cephrenes trichopepla* (van der Poorten & van der Poorten, 2012b, in press.). These two species are recent arrivals to the island from possibly Malaysia and Australia, respectively. In addition, *Spindasis greeni* is now considered a valid species. Some authors questioned its status as a species because it was originally described from only one specimen. However, new information confirms that it is indeed a valid species (van der Poorten & van der Poorten, 2012a, in press.).

## Distribution

The distribution of butterflies in Sri Lanka is largely determined by climate, topography and the underlying geology of the land, as these factors determine the types of vegetation that will grow in a particular area. Many species of butterflies are generalists and occur in a range of climatic zones because of their ability to survive on a wide range of larval and adult resources, and their ability to migrate or disperse widely. However, there are few species that display a very local and restricted distribution because they are constrained by one or more resources. The following describes the species restricted to specific climatic zones, types of forests or grasslands in which they are found and the habitats within them (endemics are indicated by \*).

### Arid zone

North and north-west

Coastal thorn scrub: *Colotis fausta*, *Junonia hierta*, *Azonus ubaldus*, and *Colotis danae*

Meadows with seasonal flooding: *Byblia ilithyia*

South and south-east

Coastal thorn scrub: *Tarucas callinara*

### Dry zone

Dry mixed evergreen forest (north): *Spindasis nubilus*\*, *Tajuria jehana*, *Virachola isocrates*

Dry mixed evergreen forest (south-east): *Gomalia elma*, *Graphium nomius*

### Dry intermediate zone

Savannah grassland habitats of the Uva and Sabaragamuwa provinces: *Symphaedra nais*, *Ypthima singala*\*, *Pratapa deva*

### Wet zone: lowland

Generalists: *Parthenos sylvia*, *Papilio helenus*, *Nacaduba ollyetti*\*, *Pachliopta jophon*\*

Bamboo habitats: *Mycalesis rama*\*

Riparian habitats: *Jamides coruscans*\*, *Kallima philarchus*\*, *Idea iasonia*\*

Seepages and marsh habitats: *Thoressa decorata*\*

Dipterocarp forests: *Rapala lankana*, *Arhopala ormistoni*\*, *Horaga onyx*, *Horaga albimacula*, *Nacaduba calauria*

Mangrove habitats: *Euploea phaenareta*, *Ideopsis similis*

### Wet zone: submontane

Generalists: *Prioneris sita*

Riparian habitats: *Doleschallia bisaltide*, *Celaenorrhinus spilothyrus*\*

Rocky riparian habitats: *Phalanta alcippe*

Bamboo thickets: *Lethe dynsate*\*, *Lethe drypetis*

Grasslands: *Baracus vittatus*\*, *Eurema laeta*

### Wet zone: montane

Generalists: *Udara lanka*\*, *Udara akasa*, *Spindasis greeni*\*, *Vanessa indica*, *Parantica taprobana*\*, *Cepora nadina*, *Spindasis greeni*\*, *Argynnis hyperbius*

Bamboo habitats: *Lethe daretis*\*

Grassland habitats: *Baracus vittatus*\*, *Eurema laeta*

## Threats to butterflies

The most significant threat to the butterfly fauna of Sri Lanka is the disappearance and degradation of forest, grassland and coastal habitats due to human activity. In the wet zone, the greatest concerns include the ever-increasing illegal encroachment of human settlements, the illegal felling of trees for timber and firewood and the illegal expansion of tea and rubber cultivations into the protected forest reserves. In the dry and arid zones, the situation is similar, though it is the illegal cultivation of rice and other crops that threatens the butterfly habitats. The coastal habitats of butterflies are threatened by a more recent phenomenon: the rapid development of hotels and resorts in many near-pristine areas of the coast.

In addition to these general threats, there are specific ones. For example, the introduction of the thorny non-native tree, *Prosopis juliflora*, to the arid zones has eliminated the native flora, including the larval food plants and nectar sources of many species of butterflies, which were once common in that eco-system. In the southern arid zone, the incursion of *Prosopis* will have a dramatic impact on the survival of *Tarucas callinara*, which is entirely restricted to the coastal arid zone of the south and south-east. The situation in Mannar and Arippe is the same where the most affected species is *Junonia hierta*, a species entirely confined to the coastal belt of the arid zone of the north and north-west. Several other butterfly species of the arid zone (e.g. *Ixias pyrene* and *Colotis amata*), which are also found in the dry zone, have undergone local extinctions in places where *Prosopis* has replaced the native thorn scrub.

The Knuckles Conservation Area also faces several specific threats. *Pinus caribaea* has become naturalized and is invading the natural grasslands, which are the habitats of butterflies such as *Baracus vittatus*, *Eurema laeta*, *E. brigitta*, and *Mycalesis mineus*. The native undergrowth of much of the forested areas has been taken over by the cultivation of *Elettaria cardamomom* and the naturalization of *Cestrum nocturnum*. In addition, the spread of these two species along streams as well has displaced much of the native vegetation. In particular, *Asystasia chelonoides* and *Pseuderanthemum latifolium* which are larval food plants of *Doleschallia bisaltide* have declined and continue to disappear in many stream habitats. Similarly, several species of *Strobilanthes*, which are the larval food plants of *Kallima philarchus* have also declined with the consequent adverse effects for the butterfly.

The threat faced by *Symphaedra nais* in the Nilgala-Bibile savanna grasslands is not one of invasion by foreign plant species, but one of yearly forest fires deliberately set by people living in the area and uncontrolled utilization of its food tree. The fires are set to allow for new growth of grass for improved grazing by animals and to promote flushing of the “beedi” tree, *Diospyros melanoxylon*. The newly matured leaves of this plant are used by the local people to manufacture a type of local cigarette called “Beedi”. These maturing leaves are also used by the larvae of *S. nais* as their food source. The harvesting of these leaves destroys ova and larvae in large numbers while adults perish under the fires set to the forests. The fires also prevent young trees from developing into mature seed-bearing trees. At times, entire branches are lopped off mature trees to make collecting the maturing leaves easier. These activities coupled with the dying off of mature trees will result in a deficit in the seed bank for the future generations of *D. melanoxylon*. The direct effects of fire, the harvesting of leaves and the likely disappearance or drastic reduction of *D. melanoxylon* from this habitat do not bode well for the survival of *S. nais*.

Another threat of increasing importance is the illicit removal of very young trees about 4–6 cm in diameter from the understorey of the wet zone forests for firewood, fences and other uses. Several small tree species such as *Humboldtia laurifolia* (larval host plant of *Jamides coruscans*) and several species of *Polyalthia* (larval food plants of *Graphium doson* and *Graphium agamemnon*) are entirely understorey plants and their removal along with other understorey plants will not only impact the larval food source but will also alter the composition of the understorey by influencing its microclimate and thereby impacting shade-loving butterfly species (*Discophora lepida*) and plant species (*Thottea siliquosa*, the sole larval food plant of *Pachliopta jophon*).

The disappearance of suitable habitats and larval food plants in all climatic zones is reflected in the reduced size of many populations of butterflies, particularly those that show seasonal mass movements. This is particularly evident during the mass movements of *Appias galene*, *A. libythea*, *Catopsilia pomona*, *Hebomoia glaucippe* and *Papilo crino*; the numbers seen today are but a fraction of what was seen a few decades ago.

## Conservation

Of the 245 species of butterflies in Sri Lanka, 100 species (41%) are listed as threatened species (21 are critically endangered, 38 are endangered and 40 are vulnerable). A further 21 species are listed as Near Threatened. The status of 6 species was not analyzed because of lack of data on their occurrence and distribution. However, only *Pachliopta jophon* is listed as a globally threatened species (critically endangered) by the IUCN. This indicates the need to update the Global Red List with respect to the conservation status of the butterfly fauna of Sri Lanka.

These statistics also reflect the dire consequences of many of the threats outlined above as well as the lack of information on the biology of many species of butterflies in Sri Lanka. The status designated to the butterflies in this report has been based on EOO and AOO and has not taken into consideration the rate of decline in numbers over several years (because of lack of data), although this is a very important criterion in determining the loss of ground by a species in its environment over time. Nonetheless, several species such as *Rapala lankana*, *Horaga onyx*, *H. albimacula*, *Gangara lebadea*, *Nacaduba calauria*, *Junonia hierta*, *Tajuria arida*, *Spindasis greeni*, *Appias indra*, and *Cepora nadina*, have been recorded in such low numbers and in so few locations over many years that these must certainly be considered the most critically endangered in the island and their conservation must be addressed with a sense of urgency. These butterflies have been sighted less than a half dozen times over the past 7 years since detailed records have been kept. Interestingly, these butterflies have also been historically very rare even 100 years ago (Ormiston, 1924) and the assessment of their status given here can be questioned until their biology is understood. They are also very rare in museum collections and the information available on the specimens is scanty. There is little or no information on what habitats they were found in and in which locations. All of these species are habitat specialists of the wet zone lowlands or montane forests and cannot survive outside pristine or near pristine forests as shown by the data collected by the Ministry of the Environment and several independent researchers. This highlights the importance of conserving the rain forests of the south and south-west, particularly those forest reserves that are under state control, which are probably the last refuges of these species. Another butterfly, *Catapaecilma major*, falls into this category but it flies in the dry and intermediate zones.

At least for one butterfly, *Arhopala ormistoni*, the mystery of its great rarity has been recently uncovered. This is a species of the dense Dipterocarp forests of the wet zone, and it spends its entire life high up in the canopy where it is very difficult to see and therefore record; it seldom descends to levels where it can be observed easily. This points to the importance of understanding the general biology of the butterflies before assessing the status and conservation importance.

On the other hand, there are several species that are well adapted to altered landscapes and that survive outside forests very well. These include many species (e.g. *Ypthima*, *Leptosia* and *Mycalesis*) whose larvae feed on annual weed species that grow in abandoned lands and roadsides and their populations certainly seem to be increasing compared to the past. The establishment of butterfly gardens in urban and non-urban areas has certainly encouraged these species. The private sector has been particularly active in the promotion of these butterfly gardens for eco-tourism and it is hoped that the idea will spread to individuals, government and non-governmental institutions more rapidly. Fortunately, there is a push by the Ministry of the Environment to promote the idea of butterfly gardens by organizing seminars, workshops and publications. More work need to be done to create awareness on butterfly conservation in rural areas, particularly in villages that are bordering forests in the wet zone. Further, more funding opportunities should be created for butterfly conservation projects to ensure long term survival of butterfly fauna of Sri Lanka.

### Recommendations for Research and Conservation

1. Establish an officially recognized group of amateur and professional lepidopterists to work closely with designated biologists from the Ministry of the Environment and other affiliated institutions to act as a consultative body on issues relating to butterfly conservation. This group must be empowered to carry out island-wide surveys to monitor population fluctuations and to gather information on all aspects of butterfly biology.
2. Establish an official website with a comprehensive database containing historical and current information on the butterflies of the island.
3. Initiate a project to gather data on the habitats, distribution, flight periods, immature stages, and the general biology of the endangered and critically endangered species. The findings of such a study will enable identification of areas that can be protected and enhanced for the conservation of the butterflies of Sri Lanka.
4. Conduct DNA and genitalia studies to verify the taxonomic status of the endemic species and sub-species in Sri Lanka to compare with those of the Indian mainland, e.g. *Tarucas callinara*, *Tarucas nara*, *Pelopidas agna*, *Pelopidas mathias*, *Halpe egena*, *Halpe ceylonica*, *Spindasis ictis*, *Spindasis elima*, *Spindasis nubilus*, *Acytolepis puspa* and *Acytolepis lilacea*.

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**Table 04 : List of Butterflies in Sri Lanka**

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family: Papilionidae</b>					
<i>Graphium agamemnon</i> Linnaeus, 1758	E: Tailed Jay; S: Thudanga Pralapani	LC			
<i>Graphium antiphates</i> Cramer, 1775	E: Fivebar Swordtail; S: Pancha iri kaga-waligaya	EN	B2ab(iii)		
<i>Graphium doson</i> Felder, 1864	E: Common Jay ; S: Pralapani	LC			
<i>Graphium nomius</i> Esper, 1784	E: Spot Swordtail; S: Thith Kaga-waligaya	VU	B1ab(iii)		
<i>Graphium sarpedon</i> Linnaeus, 1758	E: Bluebottle ; S: Neelabomi	LC			
<i>Pachliopta aristolochiae</i> Fabricius, 1775	E: Common Rose ; S: Sewwandiya	LC			
<i>Pachliopta hector</i> Linnaeus, 1758	E: Crimson Rose; S: Arunu Sewwandiya	LC			
<b><i>Pachliopta jophon</i></b> Gray, 1852	E: Sri Lanka Rose; S: Sri Lanka rosa papiliya	EN	B2ab(iii)	CR*	B1+2ac
<i>Papilio clytia</i> Linnaeus, 1758	E: Mime; S: Rawana Papiliya	LC			
<i>Papilio crino</i> Fabricius, 1792	E: Banded Peacock; S: Mayurabada	VU	B2ab(iii)		
<i>Papilio demoleus</i> Linnaeus, 1758	E: Lime Butterfly; S: Dehirisiya	LC			
<i>Papilio helenus</i> Linnaeus, 1758	E: Red Helen; S: Maha Kela Papiliya	VU	B1ab(iii)		
<i>Papilio polymnestor</i> Cramer, 1775	E: Blue Mormon ; S: Neela Parindaya	LC			
<i>Papilio polytes</i> Linnaeus, 1758	E: Common Mormon; S: Wesgaththi	LC			
<b><i>Troides darsius</i></b> Gray, 1852	E: Sri Lanka Birdwing; S: Sri Lanka Maha Kurulu Piya Paliliya	LC			
<b>Family: Pieridae</b>					
<i>Appias albina</i> Boisduval, 1836	E: Common Albatross; S: Dingupath Samanalaya	LC			
<b><i>Appias galene</i></b> Cramer, 1777	E: Sri Lanka Lesser Albatross; S: Sri Lanka Thundu Dingupath Samanalaya	LC			
<i>Appias indra</i> Moore, 1857	E: Plain Puffin; S: Dumbara-sudana	CR	B1ab(iii)+ 2ab(iii)		
<i>Appias libythea</i> Fabricius, 1775	E: Striped Albatross; S: Iri Sudana	LC			
<i>Appias lyncida</i> Cramer, 1779	E: Chocolate Albatross; S: Dumburuwan Sudana	LC			
<i>Belenois aurota</i> Fabricius, 1793	E: Pioneer ;S: Apsaravi	LC			
<i>Catopsilia pomona</i> Fabricius, 1775	E: Lemon Emigrant; S: Dehi seriya	LC			
<i>Catopsilia pyranthe</i> Linnaeus, 1758	E: Mottled Emigrant; S: Lapa seriya	LC			
<i>Catopsilia scylla</i> Linnaeus, 1763	E: Orange Migrant	LC			



Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Cepora nadina</i> Lucas, 1852	E: Lesser Gull; S: Heen Panduru-sudana	CR	B2ab(iii)		
<i>Cepora nerissa</i> Fabricius, 1775	E: Common Gull; S: Lihini Samanalaya	LC			
<i>Colotis amata</i> Fabricius, 1775	E: Small Salmon Arab; S: Punchi Rosa Sudana	LC			
<i>Colotis danae</i> Fabricius, 1775	E: Crimson Tip; S: Rathu-thudu Sudda	VU	B1ab(iii)+ 2ab(iii)		
<i>Colotis etrida</i> Boisduval, 1836	E: Little Orange Tip; S: Heen Sudana	NT			
<i>Colotis aurora</i> Cramer, 1780	E: Plain Orange Tip; S: Podu Tembiliwan Sudana	VU	B1ab(iii)		
<i>Colotis fausta</i> Olivier, 1807	E: Large Salmon Arab; S: Maha Rosa Sudana	VU	B1ab(iii)		
<i>Delias eucharis</i> Drury, 1773	E: Jezebel; S: Pilila Risiya	LC			
<i>Eurema blanda</i> Boisduval, 1836	E: Three-spot Grass Yellow; S: Thun pulli Thruna Pithaya	LC			
<i>Eurema brigitta</i> Stoll, 1780	E: Small Grass Yellow; S: Rubella Thruna pithaya	LC			
<i>Eurema hecabe</i> Linnaeus, 1764	E: Common Grass Yellow; S: Thruna Pithaya	LC			
<i>Eurema laeta</i> Boisduval, 1836	E: Spotless Grass Yellow; S: Nothith Thruna Pithaya	VU	B1ab(iii)		
<b><i>Eurema ormistonii</i></b> Moore, 1886	E: Sri Lanka One-spot Grass Yellow; S: Sri Lanka Kela kahakolaya	VU	B1ab(iii)		
<i>Hebomoia glaucippe</i> Linnaeus, 1758	E: Great Orange Tip; S: Maha Ramba Thuduwa)	LC			
<i>Ixias marianne</i> Cramer, 1779	E: White Orange Tip; S: Ela Ramba Thuduwa	LC			
<i>Ixias pyrene</i> Linnaeus, 1764	E: Yellow Orange Tip; S: Padu Ramba Thuduwa	LC			
<i>Leptosia nina</i> Fabricius, 1793	E: Psyche; S: Manahari	LC			
<i>Pareronia ceylanica</i> Felder, 1865	E: Dark Wanderer; S: Anduru seriya	LC			
<i>Prioneris sita</i> Felder, 1865	E: Painted Sawtooth; S: Vichitra Maha-sudda	EN	B1ab(iii)+ 2ab(iii)		
<b>Family: Nymphalidae</b>					
<i>Acraea violae</i> Fabricius, 1807	E: Tawny Coster ; S: Viyola	LC			
<i>Argynnis hyperbius</i> Linnaeus, 1763	E: Indian Fritillary; S: Indiyanu Alankarikaya	EN	B1ab(iii)+ 2ab(iii)		
<i>Ariadne ariadne</i> Linnaeus, 1763	E: Angled Castor; S: Naw-Risiya	LC			
<i>Ariadne merione</i> Cramer, 1777	E :Common Castor; S: Podu Pathan-sariya	VU	B1ab(iii)		
<i>Byblia ilithyia</i> Drury, 1773	E :Joker; S: Kawataya	VU	B1ab(iii)		
<i>Cethosia nietneri</i> Felder, 1867	E :Ceylon Lace Wing; S:Lanka Seda-piyapatha	LC			
<i>Charaxes psaphon</i> Westwood, 1848	E :Tawny Rajah; S: Maha Kumaraya	NT			
<i>Charaxes solon</i> Fabricius, 1793	E :Black Rajah; S: Kalu Raja-kumaraya	NT			

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Cirrochroa thais</i> Fabricius, 1787	E :Yeoman; S: Kela Raththiya	LC			
<i>Cupha erymanthis</i> Drury, 1773	E :Rustic; S: Raththiya	LC			
<i>Danaus chrysippus</i> Linnaeus, 1758	E: Plain Tiger; S: Pahan Gomara	LC			
<i>Danaus genutia</i> Cramer, 1779	E: Common Tiger; S: Agni Gomara	LC			
<i>Discophora lepida</i> Moore, 1857	E: Southern Duffer; S: Dumburu Kewattaya	VU	B1ab(iii)		
<i>Doleschallia bisaltide</i> Cramer, 1777	E: Autumn Leaf; S: Yoda kela-kolaya	EN	B2ab(iii)		
<i>Dophla evelina</i> Stoll, 1790	E: Redspot Duke; S: Rath-ne	LC			
<i>Elymnias hypermnestra</i> Linnaeus, 1763	E: Common Palmfly; S: Ramba-thaliya	LC			
<b><i>Elymnias singhala</i></b> Moore, 1875	E: Sri Lanka Palmfly; S: Sri Lanka Thal-dumburuwa	EN	B1ab(iii)+ 2ab(iii)		
<i>Euploea core</i> Cramer, 1779	E: Common Indian Crow; S: Indu Kakaya	LC			
<i>Euploea klugii</i> Moore, 1888	E: Brown King Crow; S: Raja Kaka-kotithiya	LC			
<i>Euploea phaenareta</i> Schaller, 1758	E: The Great Crow; S: Yoda Kaka-kotithiya	EN	B2ab(iii)		
<i>Euploea sylvester</i> Fabricius, 1793	E: Double- branded Black Crow; S: De-iri Kaka-kotithiya	NT			
<i>Euthalia aconthea</i> Cramer, 1777	E: Baron ; S: Sitano	LC			
<i>Euthalia lubentina</i> Cramer, 1779	E: Gaudy Baron; S: Kela Achchilaya	VU	B1ab(iii)		
<i>Hypolimnas bolina</i> Linnaeus, 1756	E: Great Eggfly; S: Maha-siwwa	LC			
<i>Hypolimnas misippus</i> Linnaeus, 1758	E: Danaid Eggfly; S: Punchi-siwwa	LC			
<b><i>Idea iasonia</i></b> Westwood, 1848	E: Sri Lanka Tree Nymph; S:Sri Lanka Pawenna	VU	B1ab(iii)	NT	
<i>Ideopsis similis</i> Linnaeus, 1764	E: Blue Glassy Tiger; S:Maha Nil-kotithiya	VU	B1ab(iii)		
<i>Junonia almana</i> Linnaeus, 1758	E: Peacock Pansy; S: Mayura Pansaya	LC			
<i>Junonia atlites</i> Linnaeus, 1758	E: Grey Pansy; S: Alu Pansaya	LC			
<i>Junonia hierta</i> Fabricius, 1793	E: Yellow Pansy; S: Peetha Pansaya	CR	B2ab(iii)		
<i>Junonia iphita</i> Cramer, 1779	E: Chocolate Soldier; S: Miyuru-Hewa	LC			
<i>Junonia lemonias</i> Linnaeus, 1758	E: Lemon Pansy; S: Pangiri Pansaya	LC			
<i>Junonia orithya</i> Linnaeus, 1758	E: Blue Pansy; S: Nil Alankarikaya	NT			
<b><i>Kallima philarchus</i></b> Westwood, 1848	E :Sri Lanka Blue Oakleaf; S: Sri Lanka Nil Kela-kolaya	EN	B2ab(iii)		
<i>Kaniska canace</i> Linnaeus, 1763	E: Blue Admiral; S: Nil Seneviya	LC			

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b><i>Lethe daretis</i></b> Hewitson, 1868	E: Sri Lanka Treebrown; S: Sri Lanka Gas-dumburuwa	EN	B1ab(iii)+ 2ab(iii)		
<i>Lethe drypetis</i> Hewitson, 1868	E: Tamil Treebrown; S: Maha- Gas-dumburuwa	EN	B1ab(iii)+ 2ab(iii)		
<b><i>Lethe dynsate</i></b> Hewitson, 1868	E :Sri Lanka Forester; S: Sri Lanka Kela Gas-dumburuwa	EN	B1ab(iii)+ 2ab(iii)		
<i>Lethe rohria</i> Fabricius, 1787	E: Common Treebrown; S: Podu Gas-dumburuwa	EN	B2ab(iii)		
<i>Libythea celtis</i> Laicharting, 1782	E: Beak; S: Dumburu-thuduwa	EN	B1ab(iii)+ 2ab(iii)		
<i>Libythea myrrha</i> Godart, 1819	E :Club Beak; S: Dandu Dumburu-thuduwa	VU	B1ab(iii)		
<i>Melanitis leda</i> Linnaeus, 1763	E: Common Evening Brown; S: Gomman-guruwa	LC			
<i>Melanitis phedima</i> Cramer, 1780	E: Dark Evening Brown; S: Anduru Gomman-guruwa	NT			
<i>Moduza procris</i> Cramer, 1777	E: Commander; S: Maha Selaruwa	LC			
<i>Mycalesis mineus</i> Linnaeus, 1758	E: Dark-Brand Bushbrown; S: Anduru-lapa panduru Guruwa	LC			
<i>Mycalesis patnia</i> Moore, 1857	E: Gladeye Bushbrown; S: Min-neth panduru Guruwa)	LC			
<i>Mycalesis perseus</i> Fabricius, 1775	E: Common Bushbrown; S: Panduru Guruwa	LC			
<b><i>Mycalesis rama</i></b> Moore, 1892	E: Sri Lanka Bushbrown; S: Sri Lanka Panduru-dumburuwa	EN	B1ab(iii)+ 2ab(iii)		
<b><i>Mycalesis subdita</i></b> Moore, 1857	E: Sri Lanka Tamil Bushbrown; S: Sri Lanka Damila Panduru-dumburuwa	LC			
<i>Neptis hylas</i> Linnaeus, 1758	E: Common Sailor; S: Selaruwa	LC			
<i>Neptis jumbah</i> Moore, 1857	E: Chestnut-streaked Sailor; S: Wairan Selaruwa	LC			
<i>Orsotriaena medus</i> Fabricius, 1775	E: Medus Brown; S: Iri Siw-mudda	LC			
<i>Pantoporia hordonia</i> Stoll, 1790	E: Common Lascar; S: Kaha Selaruwa	NT			
<i>Parantica aglea</i> Stoll, 1782	E: Glassy Tiger; S: Palingu Gomara	LC			
<b><i>Parantica taprobana</i></b> Felder, 1865	E: Sri Lanka Tiger; S: Sri Lanka Nil-kotithiya	EN	B1ab(iii)+ 2ab(iii)	NT	
<i>Parthenos sylvia</i> Cramer, 1775	E: Clipper; S: Yoda Kela Selaruwa	LC			
<i>Phalanta alcippe</i> Cramer, 1780	E: Small Leopard; S: Punchi Thith-thambiliya	CR	B1ab(iii)		
<i>Phalanta phalantha</i> Drury, 1773	E: Leopard; S: Maha Diwi-Pulliya	LC			
<i>Polyura athamas</i> Drury, 1770	E: Nawab; S: Kaha Kumaraya	LC			

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Rohana parisatis</i> Westwood, 1850	E: Black Prince; S: Kalu Kumaraya	VU	B1ab(iii)		
<i>Symphaedra nais</i> Forster, 1771	E: Baronet; S: Punchi Achchilaya	EN	B1ab(iii)+ 2ab(iii)		
<i>Tirumala limniace</i> Cramer, 1775	E: Blue Tiger; S: Neela Gomara	LC			
<i>Tirumala septentrionis</i> Butler, 1865	E: Dark Blue Tiger; S: Anduruwan Nil-kotithiya	NT			
<i>Vanessa cardui</i> Linnaeus, 1761	E: Painted Lady; S: Vichithra Alnkarikaya	VU	B1ab(iii)		
<i>Vanessa indica</i> Herbst, 1794	E: Indian Red Admiral; S: Rathu seneviya	EN	B1ab(iii)+ 2ab(iii)		
<i>Vindula erota</i> Fabricius, 1793	E: Cruiser; S: Yoda Thambiliya	NT			
<i>Ypthima ceylonica</i> Hewitson, 1864	E: White Four-ring; S: Sithiri Siwwa	LC			
<b><i>Ypthima singala</i></b> Felder, 1868	E: Sri Lanka Jewel Four-ring; S: Sri Lanka Ran Heen-dumburuwa	EN	B1ab(iii)+ 2ab(iii)		
<b>Family: Lycaenidae</b>					
<i>Acytolepis lilacea</i> Hampson, 1889	E: Hampson's Hedge Blue; S: Hampson Gomu Neelaya	EN	B1ab(iii)+ 2ab(iii)		
<i>Acytolepis puspa</i> Horsfield, 1828	E: Common Hedge Blue; S: Gomu Neelaya	LC			
<i>Amblypodia anita</i> Hewitson, 1862	E: Purple Leafblue; S: Dam-path Neelaya	NT			
<i>Anthene lycaenina</i> Felder, 1868	E: Pointed Ciliate Blue; S: UI Kirana-neelaya	LC			
<i>Arhopala abseus</i> Hewitson, 1862	E: Aberrant Bushblue; S: Kela Gas-neelaya	EN	B1ab(iii)+ 2ab(iii)		
<i>Arhopala amantes</i> Hewitson, 1862	E: Large Oakblue; S: Maha-siduru Neelaya	LC			
<i>Arhopala centaurus</i> Doubleday, 1847	E: Centaur Oakblue; S: Samila Neelaya	LC			
<b><i>Arhopala ormistoni</i></b> Riley, 1920	E: Sri Lanka Ormiston's Oakblue; S: Sri Lanka Siduru Neelaya	CR	B1ab(iii)		
<i>Azanus jesous</i> Guérin, 1847	E: African Babul Blue; S: Rata Neelaya	LC			
<i>Azanus ubaldus</i> Stoll, 1782	E: Bright Babul Blue; S: Punchi neelaya	CR	B1ab(iii)+ 2ab(iii)		
<i>Bindahara phocides</i> Fabricius, 1793	E: Plane; S: Visithuru Digu- penda Neelaya	EN	B2ab(iii)		
<i>Caleta decidia</i> Hewitson, 1876	E: Angled Pierrot; S: Mulu Konangiya	LC			
<i>Castalius rosimon</i> Fabricius, 1775	E: Common Pierrot; S: Konangiya	LC			
<i>Catapaecilma major</i> Druce, 1895	E: Common Tinsel; S: Visithuru Gas-neelaya	EN	B1ab(iii)+ 2ab(iii)		
<i>Catochrysops panormus</i> Felder, 1860	E: Silver Forget-me-not; S: Rajatha Sadasiya	CR	B2ab(iii)		
<i>Catochrysops strabo</i> Fabricius, 1793	E: Forget-me-not; S: Sadasiya	LC			

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Celastrina lavendularis</i> Moore, 1877	E: Plain Hedge Blue; S: Sarala Gomu Neelaya	CR	B1ab(iii)+ 2ab(iii)		
<i>Cheritra freja</i> Fabricius, 1793	E: Common Imperial; S: Digu-penda Gas-neelaya	VU	B1ab(iii)		
<i>Chilades lajus</i> Stoll, 1780	E: Lime Blue; S: Dehi-neelaya	LC			
<i>Chilades pandava</i> Horsfield, 1829	E: Plains Cupid; S: Meewana-sara	LC			
<i>Chilades parrhasius</i> Fabricius, 1793	E: Small Cupid; S: Punchi Panu-neelaya	LC			
<i>Curetis thetis</i> Drury, 1773	E: Indian Sunbeam; S: Wismi-keeta	LC			
<i>Deudorix epijarbas</i> Moore, 1857	E: Cornelian; S: Podu Kirana-neelaya	VU	B1ab(iii)		
<i>Discolampa ethion</i> Westwood, 1851	E: Banded Blue Pierrot; S: Nil Konangiya	LC			
<i>Euchrysops cnejus</i> Fabricius, 1798	E: Gram Blue; S: Mun-risiya	LC			
<i>Everes lacturnus</i> Godart, 1824	E: Indian Cupid; S: Malavi Parasiya	LC			
<i>Freyeria putli</i> Kollar, 1844	E: Grass Jewel; S: Palamini	LC			
<i>Horaga albimacula</i> Wood-Mason & de Nicéville, 1881	E: Brown Onyx; S:Guru Agasthiya	CR	B1ab(iii)+ 2ab(iii)		
<i>Horaga onyx</i> Moore, 1857	E: Blue Onyx; S: Nil Agasthiya	CR	B2ab(iii)		
<i>Hypolycaena nilgirica</i> Moore, 1883	E: Nilgiri Tit; S: Nilgiri neelaya	LC			
<i>Ionolyce helicon</i> Felder, 1860	E: Pointed Lineblue; S: Thuduri Neelaya	CR	B2ab(iii)		
<i>Iraota timoleon</i> Stoll, 1790	E: Silverstreak Blue; S: Redee Gas-neelaya	NT			
<i>Jamides alecto</i> Felder, 1860	E: Metallic Cerulean; S: Dili Seruliya	LC			
<i>Jamides bochus</i> Stoll, 1782	E: Dark Cerulean; S: Anduru Seruliya	LC			
<i>Jamides celeno</i> Cramer, 1775	E: Common Cerulean; S: Seruliya	LC			
<b><i>Jamides coruscans</i></b> Moore, 1877	E: Sri Lanka Cerulean; S: Sri Lanka Seru-nilaya	VU	B1ab(iii)		
<b><i>Jamides lacteata</i></b> de Nicéville, 1895	E: Sri Lanka Milky Cerulean; S: Sri Lanka Ela Seruliya	VU	B1ab(iii)		
<i>Lampides boeticus</i> Linnaeus, 1767	E: Pea Blue; S: Mun- neelaya	LC			
<i>Leptotes plinius</i> Fabricius, 1793	E: Zebra Blue; S: Sabaru Neelaya	LC			
<i>Loxura atymnus</i> Stoll, 1780	E: Yamfly; S: Kadala Samanalaya	LC			
<i>Megisba malaya</i> Horsfield, 1828	E: Malayan; S: Malalini	LC			
<i>Nacaduba berenice</i> Herrich-Schäffer, 1869	E: Rounded 6-Lineblue; S: Wata Iri Neelaya	DD			
<i>Nacaduba beroe</i> Felder & Felder, 1865	E: Opaque 6-Lineblue; S: Adisi-Iri Neelaya	EN	B1ab(iii)+ 2ab(iii)		

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Nacaduba calauria</i> Felder, 1860	E: Dark Ceylon 6-Lineblue; S: Anduru Iri Neelaya	DD			
<i>Nacaduba hermus</i> Felder, 1860	E: Pale 4-Lineblue; S: Sawri-neela	NT			
<i>Nacaduba kurava</i> Moore, 1857	E: Transparent 6-Lineblue; S: Disi-Iri Neelaya	VU	B1ab(iii)		
<b><i>Nacaduba ollyetti</i></b> Corbet, 1947	E: Sri Lanka Woodhouse's 4-Lineblue; S: Sri Lanka Wanasi-neelaya	CR	B2ab(iii)		
<i>Nacaduba pactolus</i> Felder, 1860	E: Large 4-Lineblue; S: Maha Nil-Iriya	NT			
<b><i>Nacaduba sinhala</i></b> Ormiston, 1924	E: Sri Lanka Pale Ceylon 6-Lineblue; S: Sri Lanka Hela Iri Neelaya	VU	B1ab(iii)		
<i>Neopithecops zalmora</i> Butler, 1870	E: Quaker; S: Samlani	LC			
<i>Petrelaea dana</i> de Nicéville, 1883	E: Dingy Lineblue; S: Dingi Nil-Iriya	EN	B2ab(iii)		
<i>Pratapa deva</i> Moore, 1857	E: White Royal; S: Sudu Raja-nilaya	EN	B1ab(iii)+ 2ab(iii)		
<i>Prosotas dubiosa</i> Semper, 1879	E: Tailless Lineblue; S: Apus Iri Neelaya	LC			
<i>Prosotas nora</i> Felder, 1860	E: Common Lineblue; S: Iri Neelaya	LC			
<i>Prosotas noreia</i> Felder, 1868	E: White-tipped Lineblue; S: Sudu Nil-iriyā	EN	B1ab(iii)+ 2ab(iii)		
<i>Rapala iarbus</i> Fabricius, 1787	E: Indian Red Flash; S: Rathu Debati	DD			
<i>Rapala lankana</i> Moore, 1879	E: Malabar Flash; S: Kala Kiranaya	CR	B1ab(iii)+ 2ab(iii)		
<i>Rapala manea</i> Hewitson, 1863	E: Slate Flash; S: Anduru Kiranaya	LC			
<i>Rapala varuna</i> Horsfield, 1829	E: Indigo Flash; S: Nil Debati	VU	B1ab(iii)		
<i>Rathinda amor</i> Fabricius, 1775	E: Monkey-puzzle; S: Rathinda	LC			
<i>Spalgis epeus</i> Westwood, 1851	E: Apefly; S: Hanuman Samanalaya	LC			
<i>Spindasis elima</i> Moore, 1877	E: Scarce Shot Silverline; S: Hiru Raja-thariya	DD			
<b><i>Spindasis greeni</i></b> Heron, 1896	E: Sri Lanka Green's Silverline	CR	B2ab(iii)		
<i>Spindasis ictis</i> Hewitson, 1865	E: Ceylon Silverline; S: Hela Raja-thariya	LC			
<i>Spindasis lohita</i> Horsfield, 1829	E: Long -banded Silverline; S: Digu-iri Ridee-neelaya	VU	B1ab(iii)		
<b><i>Spindasis nubilus</i></b> Moore, 1887	E: Sri Lanka Clouded Silverline; S: Sri Lanka Wala Raja-thariya	DD			
<i>Spindasis schistacea</i> Moore, 1881	E: Plumbeous Silverline; S: Lamba Raja-thariya	VU	B1ab(iii)		
<i>Spindasis vulcanus</i> Fabricius, 1775	E: Common Silverline; S: Raja-thariy	LC			
<i>Surendra vivarna</i> Horsfield, 1829	E: Common Acacia Blue; S: Andara Neelaya	LC			

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Tajuria arida</i> Riley, 1923	E: Sri Lanka Indigo Royal; S: Sri Lanka Raja-neelaya	CR	B2ab(iii)		
<i>Tajuria cippus</i> Fabricius, 1798	E: Peacock Royal; S: Mayura Paramaya	LC			
<i>Tajuria jehana</i> Moore, 1883	E: Plains Blue Royal; S: Podu Raja-neelaya	CR	B2ab(iii)		
<i>Talicauda nyseus</i> Guérin-Méneville, 1843	E: Red Pierrot; S: Rathu Konangiya	LC			
<i>Tarucus callinara</i> Butler, 1886	E: Butler's Spotted Pierrot; S: Thith Konangiya	EN	B1ab(iii)+ 2ab(iii)		
<i>Tarucus nara</i> Kollar, 1848	E: Striped Pierrot; S: Thith-iri Mal-neelaya	LC			
<i>Udara akasa</i> Horsfield, 1828	E: White Hedge Blue; S: Ela Gomu Neelaya	EN	B1ab(iii)+ 2ab(iii)		
<i>Udara lanka</i> Moore, 1877	E: Sri Lanka Hedge Blue; S: Sri Lanka Udara-neelaya	EN	B1ab(iii)+ 2ab(iii)		
<i>Udara singalensis</i> R. Felder, 1868	E: Singalese Hedge Blue; S: Singha Udara-neelaya	EN	B1ab(iii)+ 2ab(iii)		
<i>Virachola isocrates</i> Fabricius, 1793	E: Common Guava Blue; S: Diwletha	LC			
<i>Virachola perse</i> Hewitson, 1863	E: Large Guava Blue; S: Maha Pera-neelaya	VU	B1ab(iii)		
<i>Zesius chrysomallus</i> Hübner, 1819	E: Redspot; S: Rathu pulliya	LC			
<i>Zizeeria karsandra</i> Moore, 1865	E: Dark Grass Blue; S: Neela Kasandra	LC			
<i>Zizina otis</i> Fabricius, 1787	E: Lesser Grass Blue; S: Thuru-thana Neelaya	LC			
<i>Zizula hylax</i> Fabricius, 1775	E: Tiny Grass Blue; S: Heen-thana Neelaya	LC			
<b>Family: Riodinidae</b>					
<i>Abisara echerius</i> Stoll, 1790	E: Plum Judy; S: Dan-samanalaya	LC			
<b>Family: Hesperidae</b>					
<i>Ampittia dioscorides</i> Fabricius, 1793	E: Bush Hopper; S: Panduru Pimma	LC			
<i>Badamia exclamatoris</i> Fabricius, 1775	E: Brown Awl ; S: Guruleesa	LC			
<i>Baoris penicillata</i> Moore, 1881	E: Sri Lanka Paintbrush Swift ; S: Sri Lanka Thudu-sara	CR	B2ab(iii)		
<i>Baracus vittatus</i> Felder, 1862	E: Sri Lanka Hedge Hopper; S: Sri Lanka Gomu Pimma	VU	B1ab(iii)		
<i>Bibasis sena</i> Moore, 1865	E: Orange-Tailed Awl ; S: Ramba Thudu Leesa	EN	B1ab(iii)+ 2ab(iii)		
<i>Borbo cinnara</i> Wallace, 1866	E: Wallace's Swift; S: Wolas-sariya	LC			
<i>Burara oedipodea</i> Swainson, 1820	E: Branded Orange Awlet; S : Rambaleesa	EN	B2ab(iii)		
<i>Caltois kumara</i> Moore, 1878	E: Blank Swift; S: Kalu Paha Sariya	VU	B1ab(iii)		
<i>Caltois philippina</i> Herrich-Schäffer, 1869	E: Philippine Swift; S: Rata Sariya	CR	B1ab(iii)+ 2ab(iii)		



Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Caprona alida</i> de Nicéville, 1891	E: Ceylon Golden Angle; S: Lak-ran Mulla	CR	B2ab(iii)		
<i>Caprona ransonnettii</i> Felder, 1868	E: Golden Angle; S: Ran Mulla	LC			
<b><i>Celaenorrhinus spilothyrus</i></b> R. Felder, 1868	E: Sri Lanka Black Flat ; S: Sri Lanka Kala Kunchika	VU	B1ab(iii)		
<i>Cephrenes trichopepla</i> Lower, 1908	E: Yellow Palm Dart	LC			
<i>Choaspes benjaminii</i> Guérin-Méneville, 1843	E: Indian Awl King ; S:Raja-leesa	VU	B2ab(iii)		
<i>Coladenia indrani</i> Moore, 1866	E: Tricolour Pied Flat ; S: Triwarana Kunchika	NT			
<i>Gangara lebadea</i> Hewitson, 1868	E: Banded Redeye; S: Iri-rathasiya	CR	B2ab(iii)		
<i>Gangara thyrus</i> Fabricius, 1775	E: Giant Redeye; S: Mara-rathasiya	VU	B1ab(iii)		
<i>Gomalia elma</i> Trimen, 1862	E: African Marbled Skipper; S: Mabal Pimma	CR	B2ab(iii)		
<i>Halpe ceylonica</i> Moore, 1878	E: Ceylon Ace; S: Lanka-siya	EN	B1ab(iii)+ 2ab(iii)		
<i>Halpe egena</i> Felder, 1868	E: Rare Ace; S: Dulabasiya	EN	B1ab(iii)		
<i>Hasora badra</i> Moore, 1858	E: Ceylon Awl; S:Hela Leesa	EN	B1ab(iii)+ 2ab(iii)		
<i>Hasora chromus</i> Cramer, 1780	E: Common Banded Awl ; S: Iri-leesa	LC			
<i>Hasora taminatus</i> Hübner, 1818	E: White Banded Awl; S: Sudu iri-leesa	NT			
<i>Hyarotis adrastus</i> Stoll, 1780	E: Tree Flitter; S: Ruk- sariya	LC			
<i>Iambrix salsala</i> Moore, 1866	E: Chestnut Bob; S: Guru Bobaya	LC			
<i>Matapa aria</i> Moore, 1866	E: Common Redeye; S: Rathasiya	VU	B1ab(iii)		
<i>Notocrypta curvifascia</i> C. & R. Felder, 1862	E: Restricted Demon; S: Nethu Dassa	VU	B1ab(iii)		
<i>Notocrypta paralysos</i> Wood-Mason & de Nicéville, 1881	E: Common Banded Demon; S: Iri Dassa	VU	B1ab(iii)		
<i>Oriens goloides</i> Moore, 1881	E: Common Dartlet; S: Sariththa	NT			
<i>Parnara bada</i> Moore, 1878	E: Smallest Swift ; S: Tikiri sariya	NT			
<i>Pelopidas agna</i> Moore, 1866	E: Little Branded Swift ; S: Podi Iri-sariya	NT			
<i>Pelopidas conjuncta</i> Herrich-Schäffer, 1869	E: Conjoined Swift ; S: Wihanga sariya	VU	B1ab(iii)		
<i>Pelopidas mathias</i> Fabricius, 1798	E: Small Branded Swift ; S: Thudu Iri-sariya	NT			
<i>Pelopidas thrax</i> Hübner, 1821	E: Large Branded Swift; S: Maha Iri-sariya	VU	B1ab(iii)		
<i>Potanthus confuscus</i> C. & R. Felder, 1862	E: Tropic Dart; S: Gim-sara	LC			
<i>Potanthus pallida</i> Evans, 1932	E: Indian Dart; S:Indu-sara	DD			
<i>Potanthus pseudomaesa</i> Moore, 1881	E: Common Dart; S: Hela-sara	VU	B1ab(iii)		



Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Sarangesa dasahara</i> Moore, 1866	E: Common Small Flat ; S: Kuda Kunchika	NT			
<i>Spialia galba</i> Fabricius, 1793	E: Indian Skipper ; S: Indu-pimma	LC			
<i>Suastus gremius</i> Fabricius, 1798	E: Indian Palm Bob ; S: Indu-thala Bobaya	LC			
<i>Suastus minuta</i> Moore, 1877	E: Ceylon Palm Bob; S: Hela-thala Bobaya	EN	B2ab(iii)		
<i>Tagiades japetus</i> Stoll, 1781	E: Ceylon Snow Flat; S: Hima Kunchika	LC			
<i>Tagiades litigiosa</i> Möschler, 1878	E: Water Snow Flat; S: Diya Kunchika	VU	B2ab(iii)		
<i>Tapena thwaitesi</i> Moore, 1881	E: Black Angle; S: Kalu Mulla	EN	B1ab(iii)+ 2ab(iii)		
<i>Taractrocera maevius</i> Fabricius, 1793	E: Common Grass Dart; S: Thana-sara	LC			
<i>Telicota bambusae</i> Moore, 1878	E: Dark Palmdart ; S: Anduru Thala-sara	VU	B1ab(iii)		
<i>Telicota colon</i> Fabricius, 1775	E: Pale Palmdart; S: Thala-sara)	NT			
<b><i>Thoressa decorata</i></b> Moore, 1881	E: Sri Lanka Decorated Ace; S: Sri Lanka Sithirasiya	EN	B1ab(iii)+ 2ab(iii)		
<i>Udaspes folus</i> Cramer, 1775	E: Grass Demon ; S: Thanapath Dassa	LC			

Note 1: *Halpe ceylonica* and *H. egena* may prove to be subspecies of *H. homolea* or seasonal forms

Note 2: *Pelopidas thrax* may prove to be *P. subochracea*

Note 3: *Potanthus confuscus* may prove to be *P. satra*

Note 4: *Telicota bambusae* was previously erroneously identified as *T. ancilla*

## **The Taxonomy and Conservation Status of the Spiders (Arachnida: Araneae) in Sri Lanka**

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### **Introduction**

Spiders are found all over the world and have colonized almost all habitats. Most species of spiders are relatively small in size (around 2-10 mm in body length) while a few species may reach up to 90mm in size (Foelix, 2011). Platnick (2011) has compiled a catalog of all the spiders recorded to date which stands at, approximately, 42,000 species that belongs to 110 families. However, this is only a small fraction of the true diversity of this order as the spider fauna of most countries remains grossly understudied. The situation is the same in Sri Lanka that supports a highly diverse spider assemblage. To date, 501 species representing 48 families have been listed for Sri Lanka, including 256 (51.09%) endemic species (Platnick, 2011). Further, 11 species (not included in the list) that are only identified upto genus level are also found in Sri Lanka which includes an additional family Deinopidae. However, this figure is likely to be a gross underestimate as spiders are perhaps one of the least studied invertebrate groups in Sri Lanka, even though they are one of the most conspicuous elements of the Sri Lankan forest landscape (Benjamin and Bambaradeniya, 2006).

The exploration of Sri Lankan spider fauna began with the work of Pickard-Cambridge (1869), followed mainly by species descriptions by the French Arachnologist E. Simon who visited the island in 1892 to collect spiders (Pethiyagoda, 2007). Sri Lankan species have been regularly included in taxonomic revision of genera and families. However, the exclusive study of Sri Lanka spider fauna only began in the early 1990s (Benjamin and Bambaradeniya, 2006). Currently, the Institute of Fundamental Studies (IFS) is conducting an island-wide survey of spiders. As this is a daunting task, the immediate focus is to make a complete collection of spiders that will form the basis for future detailed taxonomic studies.

### **Taxonomy**

After the work done by early arachnologists such as Pickard-Cambridge, Pocock and Simon, there has been little interest in spider taxonomy of Sri Lanka. The work on Sri Lankan spiders was reinitiated in 1970s when investigations had been carried out on few selected spider families (Brignoli, 1972, 1975; Van Helsdingen, 1985). Wijesinghe (1987) has reviewed the spiders of Sri Lanka and prepared a preliminary checklist comprising of 402 species. During the last decade much has been done on spiders of Sri Lanka that has resulted in the revision of several genera and description of few new species (Benjamin, 2006; Benjamin, 2010; Benjamin and Jaleel, 2010; Kronestedt, 2010; Platnick *et al.*, 2011). Further, these studies also indicated that older nominal species need to be revised and re-described (Benjamin & Hormiga, 2009; Dimitrov *et al.*, 2009; Álvarez-Padilla & Benjamin, 2011). A comprehensive list of recent publications related to Sri Lankan spiders is given in Platnick (2011) and Benjamin (2006).

## **Distribution**

Spiders are found in all habitats, both natural and man-made. Benjamin (2006) has hypothesised that the endemic Sri Lankan spider fauna are confined mostly to the intact natural forest remaining in the south-west and central high lands. Further, as in the case of other faunal groups, the endemic Sri Lankan spiders are thought to be closely related to Western Ghats in India. These hypotheses are supported by the results of a recent study (Benjamin, 2010).

## **Conclusions and recommendations**

Spiders are one of the largest taxonomic groups that are present in Sri Lanka and they play a key role in both man-made and natural ecosystems as predators. However, more than 75% of the spider species assessed during the Red Listing process, have been listed under the Data Deficient (DD) category that indicates the huge gap that exist in the knowledge base on Sri Lankan spiders. The study of spiders in Sri Lanka is still in a neonate stage and many new genera and species await discovery, particularly from the northern part of the country as highlighted by the discovery of several new species which belong to the genus *Poecilotheria* (Nanayakkara & Vishvanath 2011). Particularly the genus *Poecilotheria* has drawn the attention of the scientific community across the World and several studies were initiated by different researchers at various times within a period of 20 years.

Therefore, conducting an island-wide survey on spiders has been identified as a priority need. This activity can be coupled with the establishment of a reference collection at the National Museum as well as establishing a second reference collection in a state academic institution in order to facilitate the study of spiders. This activity can be funded through the National Science Foundation.

Number of recent studies indicate the clear need to revise the taxonomy of the spider fauna of Sri Lanka. This reference collection can provide the basis for this activity. Further this can be coupled with training of new taxonomist. The only guide available on Sri Lankan spiders is a superficial treatment by Pocock (1900), published over a century ago. Therefore, production of an easy-to-use photographic identification/field guide for the spiders of Sri Lanka is highly recommended in order to popularize the study of spiders. Further, a web portal should be established for dissemination of information about the Sri Lankan spiders.

Due to myths and folklore surrounding the spiders, particularly that of genus *Poecilotheria* (Tarantulas) due to its imagined virulent poison and its effects on humans, these creatures face summarily destruction whenever located. This is a great pity as spiders are in reality important biological control agents, making a significant contribution to the agriculture and the local populace. It is vitally important to educate the local community of the relevant areas on the need to conserve these creatures, as well as of the benefits that can be accrued from their presence and create awareness of the true facts and to dispel the myths.

Pesticide use in Sri Lanka is still to be regulated; the pesticides Control of Pesticides Act addresses only threats to human health and not environmental health or impact on non-target organisms. Therefore, pesticides approved for use in Sri Lanka should also be assessed for impact on spiders as well as other non-target organisms before being approved for use in Sri Lanka.

Preliminary investigation carried out by Benjamin (2010) has demonstrated that long term survival of most of the endemic and threatened spiders depend on protecting the remaining natural ecosystems of the wet zone of Sri Lanka, as is the case for other taxonomic groups. Therefore, the key habitats necessary for spider conservation must be identified and a plan should be drawn up to determine how these habitats can be protected in the future.

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**Table 05: List of Spiders in Sri Lanka**

Scientific Name	Common Name	NCS	Criteria
<b>Family: Agelenidae</b>			
<i>Tegenaria taprobanica</i> Strand, 1907		DD	
<i>Tegenaria domestica</i> (Clerck, 1757)		DD	
<b>Family: Araneidae</b>			
<i>Anepsion maritatum</i> (O. P.-Cambridge, 1877)		DD	
<i>Arachnura scorpionides</i> Vinson, 1863	E: Scorpion spider	LC	
<i>Araneus enucleatus</i> (Karsch, 1879)		DD	
<i>Araneus minutalis</i> (Simon, 1889)		DD	
<i>Araneus mitificus</i> (Simon, 1886)	E: Kidney garden spider/ Pale Orb Weaver	LC	
<b><i>Araneus obtusatus</i></b> (Karsch, 1891)		DD	
<i>Argiope aemula</i> (Walckenaer, 1841)	E: Andrew's Cross Spider; S: Kaha visithuru kathira dal viyanna	LC	
<i>Argiope aetherea</i> (Walckenaer, 1841)		DD	
<i>Argiope anasuja</i> Thorell, 1887	E: Signature Spider; S: Liyana dal viyanna	LC	
<i>Argiope catenulata</i> (Doleschall, 1859)	E: Grass cross spider; S: Thana kathira dal viyanna	DD	
<i>Argiope pulchella</i> Thorell, 1881		DD	
<b><i>Argiope taprobanica</i></b> Thorell, 1887		DD	
<i>Caerostris indica</i> Strand, 1915	E: Indian Bark spider; S: Indu kadan makuluwa	CR	B2ab(iii)
<i>Chorizopes frontalis</i> O. P.-Cambridge, 1870		DD	
<b><i>Chorizopes mucronatus</i></b> Simon, 1895		DD	
<i>Cyclosa quinqueguttata</i> (Thorell, 1881)		DD	
<i>Cyclosa bifida</i> (Doleschall, 1859)	E: Long-bellied Cyclosa Spider	LC	
<i>Cyclosa insulana</i> (Costa, 1834)	E: Brown Lobed Spider	LC	
<i>Cyrtarachne perspicillata</i> (Doleschall, 1859)		DD	
<i>Cyrtarachne raniceps</i> Pocock, 1900		DD	
<i>Cyrtophora cicatrosa</i> (Stoliczka, 1869)		DD	
<i>Cyrtophora citricola</i> (Forsskål, 1775)		DD	
<i>Cyrtophora exanthematica</i> (Doleschall,1859)		DD	
<i>Cyrtophora moluccensis</i> (Doleschall, 1857)	E: Common Tent-web Spider	LC	
<i>Cyrtophora unicolor</i> (Doleschall, 1857)		DD	
<i>Eriovixia laglaizei</i> (Simon, 1877)		LC	
<i>Gasteracantha cancriformis</i> (Linnaeus, 1758)	E: Star Spider, Spiny-backed Orbweaver	CR	B2ab(iii)
<i>Gasteracantha geminata</i> (Fabricius, 1798)	E: Common Spiny orb-weavers/ Common Kite Spider; S: Podu Sarungal makuluwa	LC	
<i>Gasteracantha remifera</i> Butler, 1873		DD	
<i>Gea spinipes</i> C. L. Koch, 1843		CR	B2ab(iii)
<i>Gea subarmata</i> Thorell, 1890		DD	
<b><i>Glyptogona duriuscula</i></b> Simon, 1895		DD	
<b><i>Hypsosinga taprobanica</i></b> (Simon, 1895)		DD	
<i>Macracantha arcuata</i> (Fabricius, 1793)	E: Long-horned Orb-weaver; S: Digu agathi sarungala makuluwa	CR	B2ab(iii)

Scientific Name	Common Name	NCS	Criteria
<i>Mangora semiargentea</i> Simon, 1895		DD	
<i>Neogea nocticolor</i> (Thorell, 1887)		CR	B2ab(iii)
<i>Neoscona nautica</i> (L. Koch, 1875)	E: Brown sailor spider; S: Podu gewathu makuluwa	LC	
<i>Neoscona punctigera</i> (Doleschall, 1857)		DD	
<i>Neoscona theisi</i> (Walckenaer, 1841)		DD	
<i>Neoscona vigilans</i> (Blackwall, 1865)	E: Neoscona Orb Weaver Spider	CR	B1+2ab(iii)
<i>Ordgarius hobsoni</i> (O. P.-Cambridge, 1877)		DD	
<i>Parawixia dehaani</i> (Doleschall, 1859)		DD	
<i>Phonognatha vicitra</i> Sherriffs, 1928		CR	B2ab(iii)
<i>Poltys columnaris</i> Thorell, 1890		CR	B2ab(iii)
<i>Poltys illepidus</i> C. L. Koch, 1843		DD	
<i>Thelacantha brevispina</i> (Doleschall, 1857)		EN	B1+2ab(iii)
<i>Ursa vittigera</i> Simon, 1895		DD	
<b>Family: Barychelidae</b>			
<i>Diplothele halyi</i> Simon, 1892		DD	
<i>Plagiobothrus semilunaris</i> Karsch, 1891		DD	
<i>Sason robustum</i> (O. P.-Cambridge, 1883)		DD	
<i>Sipalolasma ellioti</i> Simon, 1892		DD	
<i>Sipalolasma greeni</i> Pocock, 1900		DD	
<b>Family: Clubionidae</b>			
<i>Clubiona drassodes</i> O. P.-Cambridge, 1874	E: Common Sac Spider	EN	B1ab(iii)
<i>Matidia flagellifera</i> Simon, 1897		DD	
<i>Matidia simplex</i> Simon, 1897		DD	
<i>Nusatidia bimaculata</i> (Simon, 1897)		DD	
<i>Simalio lucorum</i> Simon, 1906		DD	
<i>Simalio phaeocephalus</i> Simon, 1906		DD	
<b>Family: Corinnidae</b>			
<i>Aetius decollatus</i> O. P.-Cambridge, 1896		DD	
<i>Coenoptychus pulcher</i> Simon, 1885		CR	B2ab(iii)
<i>Copa annulata</i> Simon, 1896		DD	
<i>Copa spinosa</i> Simon, 1896		DD	
<i>Koppe armata</i> (Simon, 1896)		DD	
<i>Oedignatha affinis</i> Simon, 1897		DD	
<i>Oedignatha bicolor</i> Simon, 1896		DD	
<i>Oedignatha coriacea</i> Simon, 1897		DD	
<i>Oedignatha flavipes</i> Simon, 1897		DD	
<i>Oedignatha gulosa</i> Simon, 1897		DD	
<i>Oedignatha major</i> Simon, 1896		DD	
<i>Oedignatha montigena</i> Simon, 1897		DD	
<i>Oedignatha proboscidea</i> (Strand, 1913)		DD	
<i>Oedignatha retusa</i> Simon, 1897		DD	
<i>Oedignatha scrobiculata</i> Thorell, 1881		DD	
<i>Oedignatha striata</i> Simon, 1897		DD	
<i>Orthobula impressa</i> Simon, 1897		DD	
<i>Sphecotypus taprobanicus</i> Simon, 1897		DD	

Scientific Name	Common Name	NCS	Criteria
<i>Trachelas oreophilus</i> Simon, 1906		DD	
<i>Trachelas quisquiliarum</i> Simon, 1906		DD	
<i>Utivarachna accentuata</i> (Simon, 1896)		DD	
<b>Family: Ctenidae</b>			
<i>Ctenus ceylonensis</i> O. P.-Cambridge, 1897		DD	
<i>Ctenus karschi</i> Roewer, 1951		DD	
<i>Ctenus thorelli</i> O. P.-Cambridge, 1897		DD	
<i>Diallomus fuliginosus</i> Simon, 1897		DD	
<i>Diallomus speciosus</i> Simon, 1897		DD	
<b>Family: Dictynidae</b>			
<i>Anaxibia nigricauda</i> (Simon, 1905)		DD	
<i>Atelolathys varia</i> Simon, 1892		DD	
<i>Dictyna turbida</i> Simon, 1905		DD	
<i>Dictynomorpha smaragdula</i> (Simon, 1905)		CR	B2ab(iii)
<i>Rhion pallidum</i> O. P.-Cambridge, 1870		DD	
<b>Family: Dipluridae</b>			
<i>Indothele dumicola</i> Pocock, 1900		DD	
<i>Indothele lanka</i> Coyle, 1995		DD	
<b>Family: Eresidae</b>			
<i>Stegodyphus sarasinorum</i> Karsch, 1891		DD	
<b>Family: Hahniidae</b>			
<i>Alistra radleyi</i> (Simon, 1898)		DD	
<i>Alistra stenura</i> (Simon, 1898)		DD	
<i>Alistra taprobanica</i> (Simon, 1898)		DD	
<i>Hahnia oreophila</i> Simon, 1898		DD	
<i>Hahnia pusio</i> Simon, 1898		DD	
<b>Family: Hersiliidae</b>			
<i>Hersilia pectinata</i> Thorell, 1895		DD	
<i>Hersilia savignyi</i> Lucas, 1836	E: Comon Two Tailed Spider; S: Hersiliya makuluwa	LC	
<i>Hersilia sumatrana</i> (Thorell, 1890)		DD	
<i>Hersilia tibialis</i> Baehr & Baehr, 1993		DD	
<i>Murrícia crinifera</i> Baehr & Baehr, 1993		DD	
<i>Neotama variata</i> (Pocock, 1899)		DD	
<i>Promurrícia depressa</i> Baehr & Baehr, 1993		DD	
<b>Family: Idiopidae</b>			
<i>Heligmomerus taprobanicus</i> Simon, 1892		DD	
<i>Scalidognathus oreophilus</i> Simon, 1892		DD	
<i>Scalidognathus radialis</i> (O. P.-Cambridge, 1869)		DD	
<b>Family: Linyphiidae</b>			
<i>Atypena ellioti</i> Jocqué, 1983		DD	
<i>Atypena simoni</i> Jocqué, 1983		DD	
<i>Ceratinopsis monticola</i> (Simon, 1894)		DD	
<i>Helsdingenia ceylonica</i> (van Helsdingen, 1985)		DD	
<i>Labullinyphia tersa</i> (Simon, 1894)		EN	B1+2ab(III)
<i>Microbathyphantes palmarius</i> (Marples, 1955)		DD	

Scientific Name	Common Name	NCS	Criteria
<i>Nematogmus dentimanus</i> Simon, 1886		DD	
<b><i>Neriene katyae</i></b> van Helsdingen, 1969		DD	
<i>Nesioneta benoiti</i> (van Helsdingen, 1978)		DD	
<b><i>Obrimona tennenti</i></b> (Simon, 1894)		DD	
<b><i>Trematocephalus simplex</i></b> Simon, 1894		DD	
<b><i>Trematocephalus tripunctatus</i></b> Simon, 1894		DD	
<b><i>Typhistes antilope</i></b> Simon, 1894		DD	
<b><i>Typhistes comatus</i></b> Simon, 1894		DD	
<b>Family: Liocranidae</b>			
<b><i>Argistes seriatus</i></b> (Karsch, 1891)		DD	
<b><i>Argistes velox</i></b> Simon, 1897		DD	
<b><i>Paratus reticulatus</i></b> Simon, 1898		DD	
<b><i>Sphingius scutatus</i></b> Simon, 1897		DD	
<b>Family: Lycosidae</b>			
<i>Draposa atropalpis</i> (Gravely, 1924)		DD	
<i>Draposa lyrivulva</i> (Bösenberg & Strand, 1906)		DD	
<i>Draposa subhadrae</i> (Patel & Reddy, 1993)		DD	
<i>Hippasa greenalliae</i> (Blackwall, 1867)		DD	
<i>Hippasa olivacea</i> (Thorell, 1887)		DD	
<b><i>Hogna lupina</i></b> (Karsch, 1879)		DD	
<i>Lycosa indagatrix</i> Walckenaer, 1837		DD	
<i>Lycosa nigrotibialis</i> Simon, 1884		CR	B2ab(iii)
<b><i>Lycosa yerburyi</i></b> Pocock, 1901		DD	
<i>Ocyale (cf)atalanta</i> Audouni, 1826		DD	
<b><i>Ocyale lanca</i></b> (Karsch, 1879)		DD	
<i>Ocyale pilosa</i> (Roewer, 1960)		DD	
<i>Pardosa birmanica</i> Simon, 1884		CR	B2ab(iii)
<b><i>Pardosa palliclava</i></b> (Strand, 1907)		DD	
<i>Pardosa pseudoannulata</i> (Bösenberg & Strand, 1906)		CR	B2ab(iii)
<i>Pardosa pusiola</i> (Thorell, 1891)		DD	
<i>Pardosa semicana</i> Simon, 1885		DD	
<i>Pardosa sumatrana</i> (Thorell, 1890)		DD	
<i>Pardosa timidula</i> (Roewer, 1951)		DD	
<i>Wadicosa quadrifera</i> (Gravely, 1924)		DD	
<i>Zoica parvula</i> (Thorell, 1895)		DD	
<i>Zoica puellula</i> (Simon, 1898)		DD	
<b>Family: Mimetidae</b>			
<i>Mimetus indicus</i> Simon, 1906		DD	
<b><i>Mimetus strinatii</i></b> Brignoli, 1972		DD	
<b><i>Phobetinus sagittifer</i></b> Simon, 1895		DD	
<b>Family: Miturgidae</b>			
<b><i>Cheiracanthium incertum</i></b> O. P.-Cambridge, 1869		DD	
<i>Cheiracanthium indicum</i> O. P.-Cambridge, 1874		DD	
<i>Cheiracanthium insigne</i> O. P.-Cambridge, 1874		CR	B2ab(iii)



Scientific Name	Common Name	NCS	Criteria
<i>Cheiracanthium melanostomum</i> (Thorell, 1895)		LC	
<i>Cheiracanthium taprobanense</i> Strand, 1907		DD	
<b>Family: Mysmenidae</b>			
<i>Mysmenella saltuensis</i> (Simon, 1895)		DD	
<i>Phricotelus stelliger</i> Simon, 1895		DD	
<b>Family: Nemesiidae</b>			
<i>Atmetochilus fossor</i> Simon, 1887		DD	
<b>Family: Nephilidae</b>			
<i>Clitaetra thisbe</i> Simon, 1903		NT	
<i>Herennia multipuncta</i> (Doleschall, 1859)	E: Ornate Tree trunk Spider; S: Asia visithuru pathali makuluwa	LC	
<i>Nephila pilipes</i> (Fabricius, 1793)	E: Giant Wood Spider	NT	
<i>Nephilengys malabarensis</i> (Walckenaer, 1841)	E: Hermit Spider; S: Podu vayiram nives makuluwa	LC	
<b>Family: Nesticidae</b>			
<i>Nesticella aelleni</i> (Brignoli, 1972)		DD	
<b>Family: Ochyroceratidae</b>			
<i>Merizocera brincki</i> Brignoli, 1975		DD	
<i>Merizocera cruciata</i> (Simon, 1893)		DD	
<i>Merizocera oryzae</i> Brignoli, 1975		DD	
<i>Merizocera picturata</i> (Simon, 1893)		DD	
<i>Psiloderces elasticus</i> (Brignoli, 1975)		DD	
<i>Speocera taprobanica</i> Brignoli, 1981		DD	
<b>Family: Oecobiidae</b>			
<i>Oecobius cellariorum</i> (Dugès, 1836)		CR	B2ab(iii)
<b>Family: Oonopidae</b>			
<i>Aprusia kataragama</i> Grismado & Deeleman, 2011		CR	B2ab(iii)
<i>Aprusia strenuus</i> Simon, 1893		CR	B2ab(iii)
<i>Aprusia veddah</i> Grismado & Deeleman, 2011		CR	B2ab(iii)
<i>Aprusia vestigator</i> (Simon, 1893)		EN	B1ab(iii)
<i>Brignolia ambigua</i> (Simon, 1893)		DD	
<i>Brignolia ratnapura</i> Platnick et al., 2011		DD	
<i>Brignolia sinharaja</i> Platnick et al., 2011		CR	B2ab(iii)
<i>Brignolia trichinalis</i> (Benoit, 1979) ?		DD	
<i>Brignolia nigripalpis</i> (Simon, 1893)		DD	
<i>Camptoscaphiella simoni</i> Baehr, 2010		DD	
<i>Epectris mollis</i> Simon, 1907		DD	
<i>Gamasomorpha microps</i> Simon, 1907		DD	
<i>Gamasomorpha subclathrata</i> Simon, 1907		DD	
<i>Gamasomorpha taprobanica</i> Simon, 1893		DD	
<i>Ischnothyreus bipartitus</i> Simon, 1893		DD	
<i>Ischnothyreus lymphaseus</i> Simon, 1893		DD	
<i>Orchestina dentifera</i> Simon, 1893		DD	
<i>Orchestina manicata</i> Simon, 1893		DD	
<i>Orchestina pilifera</i> Dalmás, 1916		DD	
<i>Orchestina tubifera</i> Simon, 1893		DD	
<i>Xestaspis sublaevis</i> Simon, 1893		DD	

Scientific Name	Common Name	NCS	Criteria
<b>Family: Oxyopidae</b>			
<i>Oxyopes ceylonicus</i> Karsch, 1891		DD	
<i>Oxyopes daksina</i> Sherriffs, 1955		DD	
<i>Oxyopes hindostanicus</i> Pocock, 1901		DD	
<i>Oxyopes javanus</i> Thorell, 1887	E: White-Striped Lynx Spider; S: Sudu Iri Lynx makuluwa	LC	
<i>Oxyopes juvenicus</i> Strand, 1907		DD	
<i>Oxyopes macilentus</i> L. Koch, 1878	E: Yellow-Striped Lynx Spider; S: Kaha Iri Lynx makuluwa	LC	
<i>Oxyopes nilgircus</i> Sherriffs, 1955		DD	
<i>Oxyopes rufisternis</i> Pocock, 1901		DD	
<i>Peucetia</i> (cf) <i>thalassina</i> (Koch, 1846)		DD	
<i>Peucetia viridana</i> (Stoliczka, 1869)	E: Green Lynx Spider; S: Kola Lynx makuluwa	CR	B2ab(iii)
<b>Family: Palpimanidae</b>			
<i>Steriphopus macleayi</i> (O. P.-Cambridge, 1873)		DD	
<b>Family: Philodromidae</b>			
<i>Gephyrota virescens</i> (Simon, 1906)		DD	
<i>Tibellus vitilis</i> Simon, 1906		DD	
<b>Family: Pholcidae</b>			
<i>Artema atlanta</i> Walckenaer, 1837		DD	
<i>Belisana benjamini</i> Huber, 2005		DD	
<i>Belisana keyti</i> Huber, 2005		DD	
<i>Belisana ratnapura</i> Huber, 2005		DD	
<i>Crossopriza lyoni</i> (Blackwall, 1867)		DD	
<i>Holocneminus multiguttatus</i> (Simon, 1905)		DD	
<i>Leptopholcus podophthalmus</i> (Simon, 1893)		DD	
<i>Micropholcus fauroti</i> (Simon, 1887)		DD	
<i>Modisimus culicinus</i> (Simon, 1893)		DD	
<i>Pholcus</i> (cf) <i>opilionoides</i> (Schrank, 1781)		DD	
<i>Pholcus fragillimus</i> Strand, 1907		DD	
<i>Sihala ceylonicus</i> (O. P.-Cambridge, 1869)		EN	B1+2ab(iii)
<i>Smeringopus pallidus</i> (Blackwall, 1858)		DD	
<i>Wanniyala agrabopath</i> Huber & Benjamin, 2005		CR	B1+2ab(iii)
<i>Wanniyala hakgala</i> Huber & Benjamin, 2005		EN	B1+2ab(iii)
<b>Family: Pisauridae</b>			
<i>Dolomedes boiei</i> (Doleschall, 1859)		DD	
<i>Dolomedes karschi</i> Strand, 1913		DD	
<i>Perenethis sindica</i> (Simon, 1897)		DD	
<i>Perenethis venusta</i> L. Koch, 1878		DD	
<i>Nilus albocinctus</i> (Doleschall, 1859)		DD	
<b>Family: Psechridae</b>			
<i>Fecenia macilenta</i> (Simon, 1885)		EN	B1ab(iii)
<i>Fecenia travancoria</i> Pocock, 1899		DD	
<i>Psechrus torvus</i> (O. P.-Cambridge, 1869)		LC	
<b>Family: Salticidae</b>			
<i>Aelurillus kronestedti</i> Azarkina, 2004		DD	

Scientific Name	Common Name	NCS	Criteria
<i>Aelurillus quadrimaculatus</i> Simon, 1889		DD	
<i>Asemonea tenuipes</i> (O. P.-Cambridge, 1869)		CR	B2ab(iii)
<b><i>Ballus segmentatus</i></b> Simon, 1900		DD	
<b><i>Ballus sellatus</i></b> Simon, 1900		DD	
<i>Bianor angulosus</i> (Karsch, 1879)		DD	
<b><i>Brettus adonis</i></b> Simon, 1900		DD	
<b><i>Carrhotus taprobanicus</i></b> Simon, 1902		DD	
<i>Carrhotus viduus</i> (C. L. Koch, 1846)		DD	
<i>Chrysoilla lauta</i> Thorell, 1887	E: Elegant Golden Jumper	EN	B1+2ab(iii)
<b><i>Colaxes horton</i></b> Benjamin, 2004		DD	
<b><i>Colaxes wanlessi</i></b> Benjamin, 2004		DD	
<b><i>Cosmophasis olorina</i></b> (Simon, 1901)		DD	
<b><i>Curubis annulata</i></b> Simon, 1902		DD	
<b><i>Curubis erratica</i></b> Simon, 1902		DD	
<b><i>Curubis tetrica</i></b> Simon, 1902		DD	
<b><i>Epidelaxia albocruciata</i></b> Simon, 1902		DD	
<b><i>Epidelaxia albostellata</i></b> Simon, 1902		DD	
<b><i>Epidelaxia obscura</i></b> Simon, 1902		DD	
<i>Epocilla aurantiaca</i> (Simon, 1885)		DD	
<b><i>Euophrys declivis</i></b> Karsch, 1879		DD	
<i>Euryattus bleekeri</i> (Doleschall, 1859)		DD	
<b><i>Euryattus brevisculus</i></b> (Simon, 1902)		DD	
<i>Evarcha cancellata</i> (Simon, 1902)		DD	
<i>Evarcha flavocincta</i> (C. L. Koch, 1846)	E: Horned Grass Jumper	EN	B1+2ab(iii)
<b><i>Flacillula lubrica</i></b> (Simon, 1901)		DD	
<b><i>Gelotia lanka</i></b> Wijesinghe, 1991		DD	
<i>Harmochirus brachiatus</i> (Thorell, 1877)		DD	
<b><i>Hasarius [arcigerus]</i></b> Karsch, 1891		DD	
<i>Hasarius adansoni</i> (Audouin, 1826)	E: Adanson's House Jumper	LC	
<i>Hispo bipartita</i> Simon, 1903		DD	
<i>Hyllus semicupreus</i> (Simon, 1885)		NT	
<b><i>Icius [discatus]</i></b> Karsch, 1891		DD	
<b><i>Irura pulchra</i></b> Peckham & Peckham, 1901		DD	
<b><i>Maevia [roseolimbata]</i></b> Hasselt, 1893		DD	
<b><i>Marengo crassipes</i></b> Peckham & Peckham, 1892		DD	
<b><i>Marengo inornata</i></b> (Simon, 1900)		DD	
<b><i>Marengo nitida</i></b> (Simon, 1900)		EN	B1+2ab(iii)
<b><i>Marengo rattotensis</i></b> Benjamin, 2006		CR	B2ab(iii)
<b><i>Marengo striatipes</i></b> (Simon, 1900)		DD	
<i>Menemerus bivittatus</i> (Dufour, 1831)	E: Common House Jumper; S: Podu Niwes makuluwa	LC	
<i>Menemerus fulvus</i> (L. Koch, 1878)	E: Grey house Jumper; S: Alu Niwes makuluwa	LC	
<i>Modunda aeneiceps</i> Simon, 1901		DD	
<b><i>Myrmarachne bicurvata</i></b> (O. P.-Cambridge, 1869)		DD	

Scientific Name	Common Name	NCS	Criteria
<i>Myrmarachne imbellis</i> (Peckham & Peckham, 1892)		DD	
<i>Myrmarachne maxillosa</i> (C. L. Koch, 1846)	E: Giant Ant-like Jumper; S: Kalu kadi makuluwa	NT	
<i>Myrmarachne melanocephala</i> MacLeay, 1839	S: Sipi makuluwa	LC	
<i>Myrmarachne plataleoides</i> (O. P.-Cambridge, 1869)	E: Kerengga/Red ant like Jumper; S: Dimi makuluwa	LC	
<i>Myrmarachne prava</i> (Karsch, 1880)		DD	
<i>Myrmarachne spissa</i> (Peckham & Peckham, 1892)		DD	
<i>Onomastus nigricaudus</i> Simon, 1900		CR	B2ab(iii)
<i>Onomastus pethiyagodai</i> Benjamin, 2010		CR	B2ab(iii)
<i>Onomastus quinquenotatus</i> Simon, 1900		CR	B2ab(iii)
<i>Onomastus rattotensis</i> Benjamin, 2010		CR	B2ab(iii)
<i>Panachraesta paludosa</i> Simon, 1900		DD	
<i>Panyinus semiermis</i> Simon, 1902		DD	
<i>Phaeacius wanlessi</i> Wijesinghe, 1991		LC	
<i>Phausina bivittata</i> Simon, 1902		DD	
<i>Phausina flavofrenata</i> Simon, 1902		DD	
<i>Phausina guttipes</i> Simon, 1902		DD	
<i>Phintella bifurcilinea</i> (Bösenberg & Strand, 1906)		DD	
<i>Phintella multimaculata</i> (Simon, 1901)		DD	
<i>Phintella vittata</i> (C. L. Koch, 1846)	E: Banded Phintella; S: Wayiram kuru Pinum makuluwa	LC	
<i>Phintella volupe</i> (Karsch, 1879)		DD	
<i>Phyaces comosus</i> Simon, 1902		DD	
<i>Plexippus paykulli</i> (Audouin, 1826)	E: Larger Housefly catcher; S: Yoda Makulu masimaara	NT	
<i>Plexippus petersi</i> (Karsch, 1878)	E: Common Housefly catcher; S: Makulu masimaara	LC	
<i>Plexippus redimitus</i> Simon, 1902		DD	
<i>Portia albimana</i> (Simon, 1900)		DD	
<i>Portia fimbriata</i> (Doleschall, 1859)		DD	
<i>Portia labiata</i> (Thorell, 1887)	E: White-mustached Portia; S: Sudu rewulathi Pinum makuluwa	NT	
<i>Ptocasius fulvonitens</i> Simon, 1902		DD	
<i>Rhene [tamula]</i> (Karsch, 1879)		DD	
<i>Rhene albigera</i> (C. L. Koch, 1846)		LC	
<i>Rhene flavicomans</i> Simon, 1902		DD	
<i>Saitis chaperi</i> Simon, 1885		DD	
<i>Sigytes paradisiacus</i> Simon, 1902		DD	
<i>Siler semiglaucus</i> (Simon, 1901)	E: Red and Blue Tiny Jumper; S: Nil Visithuru Pinum Makuluwa	LC	
<i>Simaetha cingulata</i> (Karsch, 1891)		DD	
<i>Simaetha laminata</i> (Karsch, 1891)		DD	
<i>Simaetha reducta</i> (Karsch, 1891)		DD	
<i>Spartaeus spinimanus</i> (Thorell, 1878)	E: Spiny-legged Jumper; S: Katupa Pinum makuluwa	LC	
<i>Stagetillus taprobanicus</i> (Simon, 1902)		DD	

Scientific Name	Common Name	NCS	Criteria
<i>Stergusa aurata</i> Simon, 1902		DD	
<i>Stergusa aurichalcea</i> Simon, 1902		DD	
<i>Stergusa stelligera</i> Simon, 1902		DD	
<i>Tamigalesus munnaricus</i> Zabka, 1988		DD	
<i>Telamonia dimidiata</i> (Simon, 1899)	E: Two-striped Telamonia; S: Yoda deiri Pinum makuluwa	LC	
<i>Telamonia sponosa</i> (Simon, 1902)		DD	
<i>Thiania bhamoensis</i> Thorell, 1887	E: Fighting Spider; S: Pora pinum makuluwa	CR	B2ab(iii)
<i>Thiania bhamoensis</i> Thorell, 1887		DD	
<i>Thiania pulcherrima</i> C. L. Koch, 1846		DD	
<i>Thyene imperialis</i> (Rossi, 1846)		CR	B2ab(iii)
<i>Thyene concinna</i> (Keyserling, 1881)		DD	
<i>Uroballus henicurus</i> Simon, 1902		DD	
<i>Uroballus octovittatus</i> Simon, 1902		DD	
<i>Viciria polysticta</i> Simon, 1902		DD	
<b>Family: Scytodidae</b>			
<i>Scytodes fusca</i> Walckenaer, 1837		DD	
<i>Scytodes lugubris</i> (Thorell, 1887)		LC	
<i>Scytodes venusta</i> (Thorell, 1890)		DD	
<b>Family: Segestriidae</b>			
<i>Ariadna oreades</i> Simon, 1906		DD	
<i>Ariadna taprobanica</i> Simon, 1906		DD	
<b>Family: Selenopidae</b>			
<i>Selenops radiatus</i> Latreille, 1819		DD	
<b>Family: Sicariidae</b>			
<i>Loxosceles rufescens</i> (Dufour, 1820)		DD	
<b>Family: Sparassidae</b>			
<i>Heteropoda eluta</i> Karsch, 1891		DD	
<i>Heteropoda kandiana</i> Pocock, 1899		DD	
<i>Heteropoda leprosa</i> Simon, 1884		DD	
<i>Heteropoda subtilis</i> Karsch, 1891		DD	
<i>Heteropoda thoracica</i> (C. L. Koch, 1845)		DD	
<i>Heteropoda umbrata</i> Karsch, 1891		DD	
<i>Heteropoda venatoria</i> (Linnaeus, 1767)	E: Domestic Huntsman Spider; S: Pulun kotta makuluwa	LC	
<i>Olios ceylonicus</i> (Leardi, 1902)		DD	
<i>Olios greeni</i> (Pocock, 1901)		DD	
<i>Olios hirtus</i> (Karsch, 1879)		DD	
<i>Olios lamarcki</i> (Latreille, 1806)		DD	
<i>Olios milleti</i> (Pocock, 1901)	E: Common Green Huntsman Spider; S: Podu kola Dahaganna	LC	
<i>Olios punctipes</i> Simon, 1884		CR	B2ab(iii)
<i>Olios senilis</i> Simon, 1880		DD	
<i>Pandercetes decipiens</i> Pocock, 1899		DD	
<i>Pandercetes plumipes</i> (Doleschall, 1859)		DD	
<i>Rhitymna occidentalis</i> Jäger, 2003		DD	

Scientific Name	Common Name	NCS	Criteria
<i>Spariolenus taprobanicus</i> (Walckenaer, 1837)		DD	
<i>Stasina nalandica</i> Karsch, 1891		DD	
<i>Stasina paripes</i> (Karsch, 1879)		DD	
<i>Thecticopis hercules</i> Pocock, 1901		DD	
<b>Family: Stenochilidae</b>			
<i>Stenochilus crocatus</i> Simon, 1884		DD	
<b>Family: Tetrablemmidae</b>			
<i>Brignoliella ratnapura</i> Shear, 1988		DD	
<i>Brignoliella scrobiculata</i> (Simon, 1893)		DD	
<i>Gunasekara ramboda</i> Lehtinen, 1981		DD	
<i>Pahanga diyaluma</i> Lehtinen, 1981		DD	
<i>Shearella lilawati</i> Lehtinen, 1981		DD	
<i>Shearella selvarani</i> Lehtinen, 1981		DD	
<i>Tetrablemma medioculatum</i> O. P.-Cambridge, 1873		DD	
<b>Family: Tetragnathidae</b>			
<i>Atelidea spinosa</i> Simon, 1895		EN	B1+2ab(iii)
<i>Dolichognatha albida</i> (Simon, 1895)		DD	
<i>Dolichognatha incanescens</i> (Simon, 1895)		DD	
<i>Dolichognatha nietneri</i> O. P.-Cambridge, 1869		DD	
<i>Dolichognatha quinquemucronata</i> (Simon, 1895)		DD	
<i>Dyschiriognatha dentata</i> Zhu & Wen, 1978		DD	
<i>Guizygiella melanocrania</i> (Thorell, 1887)		CR	B2ab(iii)
<i>Leucauge argentata</i> (O. P.-Cambridge, 1869)		DD	
<i>Leucauge celebesiana</i> (Walckenaer, 1841)		DD	
<i>Leucauge decorata</i> (Blackwall, 1864)	E: Decorative Leucauge; S: Kola Visithuru digu hanuka makuluwa	LC	
<i>Leucauge ditissima</i> (Thorell, 1887)		DD	
<i>Leucauge lamperti</i> Strand, 1907		DD	
<i>Leucauge undulata</i> (Vinson, 1863)		DD	
<i>Opadometa fastigata</i> (Simon, 1877)	E: Pear-Shaped Leucauge; S: Bathik digu hanuka makuluwa	LC	
<i>Schenkeliella spinosa</i> (O. P.-Cambridge, 1870)		DD	
<i>Tetragnatha armata</i> Karsch, 1891		DD	
<i>Tetragnatha mandibulata</i> Walckenaer, 1841		DD	
<i>Tetragnatha maxillosa</i> Thorell, 1895		DD	
<i>Tetragnatha determinata</i> Karsch, 1891		DD	
<i>Tetragnatha foveata</i> Karsch, 1891		DD	
<i>Tetragnatha geniculata</i> Karsch, 1891		DD	
<i>Tetragnatha gracilis</i> (Bryant, 1923)		DD	
<i>Tetragnatha planata</i> Karsch, 1891		DD	
<i>Tetragnatha tenera</i> Thorell, 1881		DD	
<i>Tetragnatha virescens</i> Okuma, 1979		DD	
<i>Tetragnatha viridorufa</i> Gravely, 1921	E: Common Long-jawed Orb weaver; S: Podu digu hanuka makuluwa	LC	
<i>Tylorida culta</i> (O. P.-Cambridge, 1869)		DD	

Scientific Name	Common Name	NCS	Criteria
<i>Tylorida striata</i> (Thorell, 1877)	E: Striated Tylorida	CR	B2ab(iii)
<i>Tylorida ventralis</i> (Thorell, 1877)		DD	
<b>Family: Theraphosidae</b>			
<i>Chilobrachys nitelinus</i> Karsch, 1891		EN	B1ab(iii)
<i>Plesiophrictus tenuipes</i> Pocock, 1899		DD	
<i>Poecilotheria fasciata</i> (Latreille, 1804)	E: Lemon Leg Tiger Spider; S: Thada kaha iri padathi divimakuluwa/ Yaksha divimakuluwa	EN	B2ab(iii)
<i>Poecilotheria ornata</i> Pocock, 1899	E: Ornate Tiger Spider; S: Kaha iri padathi divimakuluwa	EN	B2ab(iii)
<i>Poecilotheria pederseni</i> Kirk, 2001	E: Pederseni's Tiger Spider, Hambanthota Tiger Spider; S: Pedarsanige Diwimakuluwa	EN	B2ab(iii)
<i>Poecilotheria smithi</i> Kirk, 1996	E: Smith's Tiger Spider; S: Smithige Diwimakuluwa	CR	B2ab(iii)
<i>Poecilotheria subfusca</i> Pocock, 1895	E: Ivory Birdeating Tiger Spider; S: Eth dala pahe iri padathi divimakuluwa	EN	B1+2ab(iii)
<b>Family: Theridiidae</b>			
<i>Argyrodes argentatus</i> O. P.-Cambridge, 1880		DD	
<i>Argyrodes fissifrons</i> O. P.-Cambridge, 1869		DD	
<i>Argyrodes flavescens</i> O. P.-Cambridge, 1880	E: Red and silver dew drop spider; S: Rathu ridee pinibidu makuluwa	NT	
<i>Argyrodes nasutus</i> O. P.-Cambridge, 1880		DD	
<i>Argyrodes scintillulanus</i> O. P.-Cambridge, 1880		DD	
<i>Ariamnes pavesii</i> Leardi, 1902		DD	
<i>Cephalobares globiceps</i> O. P.-Cambridge, 1870		DD	
<i>Chrysso nigra</i> (O. P.-Cambridge, 1880)	E: Cat's eye Spider; S: Balal aes makuluwa	EN	B1+2ab(iii)
<i>Chrysso spiniventris</i> (O. P.-Cambridge, 1869)		EN	B1ab(iii)
<i>Coleosoma blandum</i> O. P.-Cambridge, 1882		DD	
<i>Coscinida gentilis</i> Simon, 1895		DD	
<i>Coscinida novemnotata</i> Simon, 1895		DD	
<i>Coscinida triangulifera</i> Simon, 1904		DD	
<i>Dipoena sertata</i> (Simon, 1895)		DD	
<i>Emertonella taczanowskii</i> (Keyserling, 1886)		DD	
<i>Enoplognatha oreophila</i> (Simon, 1894)		DD	
<i>Euryopsis brevis</i> (Cambridge, 1870)		DD	
<i>Euryopsis episinoides</i> (Walckenaer, 1847)		CR	B2ab(iii)
<i>Janula taprobanicus</i> (Simon, 1895)		DD	
<i>Kochiura aulica</i> (C. L. Koch, 1838)		DD	
<i>Latrodectus erythromelas</i> Schmidt & Klaas, 1991		DD	
<i>Latrodectus hasselti</i> Thorell, 1870	E: Red-back Spider	CR	B2ab(iii)
<i>Molione trispinosa</i> (O. P.-Cambridge, 1873)		DD	
<i>Moneta spinigera</i> O. P.-Cambridge, 1870		DD	
<i>Nesticodes rufipes</i> (Lucas, 1846)		DD	
<i>Parasteatoda tepidariorum</i> (C. L. Koch, 1841)		DD	
<i>Parasteatoda mundula</i> (L. Koch, 1872)	E: Comb-footed Platform Spider	EN	B1+2ab(iii)
<i>Parasteatoda tepidariorum</i> (C. L. Koch, 1841)		DD	



Scientific Name	Common Name	NCS	Criteria
<i>Phoroncidia nasuta</i> (O. P.-Cambridge, 1873)		DD	
<b><i>Phoroncidia septemaculeata</i></b> O. P.-Cambridge, 1873		DD	
<i>Phoroncidia testudo</i> (O. P.-Cambridge, 1873)		DD	
<b><i>Phoroncidia thwaitesi</i></b> O. P.-Cambridge, 1869		DD	
<i>Phycosoma spundana</i> (Roberts, 1978)		EN	B1+2ab(iii)
<i>Platnickina mneon</i> (Bösenberg & Strand, 1906)		CR	B2ab(iii)
<i>Propostira quadrangulata</i> Simon, 1894		DD	
<i>Steatoda rufoannulata</i> (Simon, 1899)		DD	
<b><i>Taphiassa punctigera</i></b> Simon, 1895		DD	
<b><i>Theridion albomaculosum</i></b> O. P.-Cambridge, 1869		DD	
<b><i>Theridion ceylonicus</i></b> Dunlop & Jekel, 2009		DD	
<b><i>Theridion gabardi</i></b> Simon, 1895		DD	
<b><i>Theridion modestum</i></b> (Simon, 1894)		DD	
<i>Theridion nilgherinum</i> Simon, 1905		DD	
<b><i>Theridion nodiferum</i></b> Simon, 1895		DD	
<i>Theridion quadratum</i> (O. P.-Cambridge, 1882)		DD	
<b><i>Theridion teliferum</i></b> Simon, 1895		DD	
<i>Theridula gonygaster</i> (Simon, 1873)	E: Cobweb Spider	EN	B1ab(iii)
<i>Theridula opulenta</i> (Walckenaer, 1841)		DD	
<i>Thwaitesia margaritifera</i> O. P.-Cambridge, 1881		DD	
<b>Family: Theridiosomatidae</b>			
<b><i>Andasta semiargentea</i></b> Simon, 1895		DD	
<i>Ogulnius pullus</i> Bösenberg & Strand, 1906		DD	
<b><i>Theridiosoma genevensium</i></b> (Brignoli, 1972)		DD	
<b>Family: Thomisidae</b>			
<i>Amyciae forticeps</i> (O. P.-Cambridge, 1873)		LC	
<i>Ascurisoma striatipes</i> (Simon, 1897)		DD	
<b><i>Boliscus decipiens</i></b> O. P.-Cambridge, 1899		DD	
<b><i>Borboropactus asper</i></b> (O. P.-Cambridge, 1884)		DD	
<i>Camaricus formosus</i> Thorell, 1887		DD	
<b><i>Cymbacha simplex</i></b> Simon, 1895		DD	
<b><i>Diaea placata</i></b> O. P.-Cambridge, 1899		DD	
<i>Epidius longipalpis</i> Thorell, 1877		DD	
<b><i>Epidius parvati</i></b> Benjamin, 2000		DD	
<b><i>Holopelus piger</i></b> O. P.-Cambridge, 1899		DD	
<i>Indoxysticus minutus</i> (Tikader, 1960)		CR	B2ab(iii)
<i>Lysiteles catulus</i> Simon, 1895		DD	
<b><i>Monaeses attenuatus</i></b> O. P.-Cambridge, 1899		DD	
<i>Monaeses cinerascens</i> (Thorell, 1887)		DD	
<b><i>Monaeses greeni</i></b> O. P.-Cambridge, 1899		DD	
<b><i>Oxytate subvirens</i></b> (Strand, 1907)	E: Sri Lanka Elongated Green Crab Spider; S: Digu kola kakulu makuluwa	NT	
<b><i>Oxytate taprobane</i></b> Benjamin, 2001		CR	B1+2ab(iii)
<b><i>Pagida salticiformis</i></b> (O. P.-Cambridge, 1883)		DD	



Scientific Name	Common Name	NCS	Criteria
<i>Peritraeus hystrix</i> Simon, 1895		DD	
<i>Phrynarachne ceylonica</i> (O. P.-Cambridge, 1884)		DD	
<i>Phrynarachne decipiens</i> (Forbes, 1883)		CR	B2ab(iii)
<i>Phrynarachne fatalis</i> O. P.-Cambridge, 1899		DD	
<i>Phrynarachne rothschildi</i> Pocock & Rothschild, 1903		DD	
<i>Runcinia bifrons</i> (Simon, 1895)		DD	
<i>Stiphropus sigillatus</i> (O. P.-Cambridge, 1883)		DD	
<i>Tagulis mystacinus</i> Simon, 1895		DD	
<i>Talaus oblitus</i> O. P.-Cambridge, 1899		DD	
<i>Tarrocenus capra</i> Simon, 1895		DD	
<i>Thomisus callidus</i> (Thorell, 1890)		DD	
<i>Thomisus elongatus</i> Stoliczka, 1869		DD	
<i>Thomisus granulifrons</i> Simon, 1906		DD	
<i>Thomisus pugilis</i> Stoliczka, 1869		DD	
<i>Thomisus spectabilis</i> Doleschall, 1859		DD	
<i>Thomisus stoliczkai</i> (Thorell, 1887)		DD	
<i>Tmarus fasciolatus</i> Simon, 1906		DD	
<i>Tmarus taiwanus</i> Ono, 1977		CR	B2ab(iii)
<b>Family: Titanoecidae</b>			
<i>Pandava laminata</i> (Thorell, 1878)		DD	
<b>Family: Uloboridae</b>			
<i>Hyptiotes analis</i> Simon, 1892		DD	
<i>Miagrammopes ferdinandi</i> O. P.-Cambridge, 1870		DD	
<i>Miagrammopes thwaitesi</i> O. P.-Cambridge, 1870		DD	
<i>Uloborus bigibbosus</i> Simon, 1905		DD	
<i>Uloborus umboniger</i> Kulczyn'ski, 1908*		DD	
<i>Zosis geniculata</i> (Olivier, 1789)	E: Grey house Spider/ Common house cribellate orb weaver; S: Podu peeru dal viyanna	LC	
<b>Family: Zorariidae</b>			
<i>Cryptothele ceylonica</i> O. P.-Cambridge, 1877		DD	
<i>Habronestes bradleyi</i> (O. P.-Cambridge, 1869)		DD	
<i>Hermippus cruciatus</i> Simon, 1905		DD	
<i>Suffasia attidiya</i> Benjamin & Jocqué, 2000		CR	B2ab(iiii)
<i>Suffasia mahasumana</i> Benjamin & Jocqué, 2000		DD	
<b>Family: Zorocratidae</b>			
<i>Campostichomma manicatum</i> Karsch, 1891		DD	
<b>Family: Zoropsidae</b>			
<i>Devendra pardalis</i> (Simon, 1898)		DD	
<i>Devendra pumilus</i> (Simon, 1898)		DD	
<i>Devendra seriatus</i> (Simon, 1898)		DD	

## Taxonomy and Conservation Status of the Freshwater Crabs (Crustacea: Decapoda) in Sri Lanka

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### Introduction

The exploration of Sri Lanka's freshwater crabs began 132 years ago with the description in 1880 of *Thelphusa* [*Perbrinckia*] *enodis* and *Thelphusa* [*Ceylonthelphusa*] *rugosa* by the American zoologist, J. S. Kingsley. This was followed by several studies by Rathbun, (1904) Roux (1915) and Fernando (1960). The first revision of the freshwater crab fauna of Sri Lanka was carried out by Bott in 1970. A resurgence in the research interest on Sri Lanka's freshwater crabs was observed in 1990's following a joint exploration carried out by the National University of Singapore and the Wildlife Heritage Trust of Sri Lanka (Ng, 1994, 1995a, 1995b; Bahir, 1998, 1999; Ng & Tay, 2001; Bahir & Ng, 2005; Bahir & Yeo, 2005).

Up to 1994, only eight valid species of freshwater crabs belonging to four genera were recognized from Sri Lanka. The extensive exploration work carried out by the National University of Singapore and the Wildlife Heritage Trust of Sri Lanka resulted in the discovery of many new species and genera of freshwater crabs taking the total number of species to 51 and genera to 7. Based on the present state of knowledge of the peninsular Indian carcinofauna (Bossuyt *et al.*, 2004; Bahir & Yeo, 2005), 50 Sri Lankan freshwater-crab species and five of the genera (*Ceylonthelphusa*, *Perbrinckia*, *Mahatha*, *Clinothelphusa* and *Pastilla*) are endemic to Sri Lanka while the two lowland genera, *Oziothelphusa* and *Spiralothelphusa*, are shared with southern India. All the Sri Lankan freshwater crabs belong to a single family, Gecarcinucidae.

### Distribution

Sri Lanka supports a rich freshwater crab assemblage in comparison with other similar, well-studied tropical Asian countries such as Peninsular Malaysia and Singapore, which together have a territory about twice the extent of Sri Lanka, and yet about the same number of freshwater crab species (Ng, 1988), while Taiwan which is about little over half the size of Sri Lanka (36,000 km<sup>2</sup>) has 34 species (Ng *et al.*, 2001). Another unique feature of Sri Lankan freshwater crabs is that they show 98.04% endemism which has not been observed in any other faunal group in Sri Lanka.

Nearly half the freshwater crabs known to date (23 species) are point endemics, rendering them extremely vulnerable to habitat loss, degradation and stochastic events. The reason as to why freshwater crabs show such a highly restricted distribution is unclear. However, this phenomenon has been observed to a lesser extent in other taxa with low mobility such as amphibians and reptiles as well. Out of the 51 known species of freshwater crabs 41 (80%) are restricted to the wet zone. Only 4.6% of the wet zone (800 km<sup>2</sup>) now contains natural forest. The wet zone of Sri Lanka also has a very high population density (700 per km<sup>2</sup>) one of the highest population densities observed in all of the global biodiversity hotspots of the world (Cincotta *et al.*, 2000). Therefore, conserving freshwater crabs in such a human-dominated landscape is going to be a challenging task.

## Threats

Sri Lanka's aquatic habitats are threatened by invasive alien species. Further, influx of fertilizer and pesticides, local climate change (Schaefer, 1998), rainwater acidification and increased erosion leading to sedimentation of water bodies can be sited as other major threats on the habitats of the freshwater crabs. The water yield in the freshwater systems is also influenced to a great extent by the loss of forest cover due to encroachment and illegal timber extraction.

Pesticides are key pollutants of many aquatic systems as these substances are freely and widely used in Sri Lanka. Regulation presently addresses only human safety issues, and not impacts on other non-target organisms or the environment in general (Anon., 1980). Since nearly half the freshwater crab species (24) of Sri Lanka are restricted to montane and sub-montane habitats, poor sloping-land management and unwise land-use change in the highlands continues to be a serious problem (Hewawasam *et al.*, 2003). An estimated 292 MT ha<sup>-1</sup> yr<sup>-1</sup> of topsoil is lost to erosion from these lands, degrading habitats and increasing silt loads in streams and rivers (ADB, 2003). A handful of freshwater-crab species have wide distributions and are clearly tolerant of land-use change, given that they persist in rice fields (*e.g.* *Oziothelphusa* spp.) and tea plantations (*e.g.* *Ceylonthelphusa rugosa* and *Ceylonthelphusa soror*). Even such species, however, could suffer catastrophic declines as a result of changes in the hydrology or pesticide-use regimes.

## Conservation

Given the fact that most of the freshwater crabs have been discovered over the last two decades and they are poorly represented in museum collections, there is no reliable historical baseline against which to judge trends in distributions or population changes. Therefore it is not possible to ascertain whether there have been any recent extinctions in the freshwater crab fauna as has been recorded for flowering plants (~ 130 species: Dassanayake *et al.*, 1980–2004); amphibians (19 species: Manamendra-Arachchi & Pethiyagoda, 2005; Stuart *et al.*, 2004; Meegaskumbura *et al.*, 2012; Wickramasinghe *et al.*, 2012); and freshwater fish (2 species: Pethiyagoda, 1994). However, according to the outcome of the current conservation status review of the freshwater crabs of Sri Lanka, nearly 90% of the freshwater crabs in Sri Lanka are globally threatened with 66% being listed under the critically endangered category. Thus, conservation of the entire freshwater crab fauna of Sri Lanka, given its remarkable diversity, richness and endemism, is a matter of the highest priority. The urgency to take appropriate conservation action is more so given the fact that freshwater crabs are not targeted for exploitation in Sri Lanka and yet a high proportion of them are globally threatened. It is not clear whether the exceedingly small populations seen in many species of crabs are a natural phenomenon or have resulted due to a sudden decline. Further, it is not known whether the freshwater crabs naturally have a severely restricted distribution, resulting in the extremely small extents of occurrence that is observed for nearly 90% of the crabs in Sri Lanka or this situation has resulted due to habitat loss or some other driver operating on this taxa.

As very little is known about the ecology of the freshwater crabs of Sri Lanka, it is prudent to take the precautionary approach when determining strategies for conserving this fauna. Therefore, the conservation assessment made here should be accepted at face value, and recovery strategies devised accordingly, until more data become available to support the conclusion that each threatened species is in fact secure.

Nearly 80% of the known crab species of Sri Lanka are restricted to the wet zone where 95% of the forest cover has been converted for human use during the last century. The remaining forests are also severely fragmented with three fragments (Knuckles, Sinharaja and Peak Wilderness) accounting for half of the remaining forest cover and the balance are contained in > 100 fragments of varying size. Studies done in Brazil (Bierregaard *et al.*, 2001; Ferraz *et al.*, 2003) have shown that extreme rainforest fragmentation could lead to catastrophic declines and extinction of species within a short period of time. Therefore, the long-term security of Sri Lanka's biodiversity will depend on minimizing fragmentation impacts through effective land-use planning and restoration initiatives while maximizing habitat connectivity between forest sites. Such goals can be met only through a policy framework built on sound scientific data, implemented through sustained, long-term financing mechanisms.

Given the fact that conservation of freshwater crabs hinges almost entirely on preserving patches of natural forest large enough to maintain good water quality, it is of concern that water quality is deteriorating even in key natural habitats (Gunawardena *et al.*, 1998). Many freshwater crabs are extremely sensitive to polluted or silted waters and will not survive when exposed to these factors. In Singapore for example, the small patch of primary forest of Bukit Timah Hill (~70 ha) has been sufficient to maintain a thriving population of the endemic potamid *Johora singaporensis* (Ng, 1988; 1989; 1990). The same is also true for *Parathelphusa reticulata*, which is known to occur in only a small remnant patch of peat-swamp forest patch of less than five hectares (Ng, 1989; 1990). Decade-long monitoring of these populations demonstrates that crab species will persist even in small habitat fragments if these are managed well, though exposed to extirpation by stochastic events (Brook *et al.*, 2003).

### **Recommended conservation actions**

The fact that exploration carried out during the last two decades alone has resulted in the description of 43 new species, provide strong support for the necessity of a national freshwater crab survey, leading to a gap analysis and the identification of key habitats for conservation attention. It is also necessary to closely monitor at least the Critically Endangered species, especially to detect actions that could alter habitat, so that these could be treated before they impact on the population involved. Further, as discussed above, the long term conservation of freshwater crabs depends heavily on maintaining water quality of their habitat. Since one of the key drivers of freshwater habitat change is pesticides, it should become mandatory for all pesticides be assessed for impact on non-target organisms and the environment in general, and the labeling of such products should include information on environmental safeguards before being approved for use within Sri Lanka. Many of the freshwater crabs occur outside the protected area network in private lands (*e.g.* *Perbrinckia armata*, *Perbrinckia callista* and *Clinothelphusa kakoota*). Therefore, introducing legal and institutional reforms necessary to engage local communities in the *in situ* conservation of point-endemic freshwater crabs is an important step. At the same time it is necessary to establish an *ex situ* management programme to maintain captive populations of at least the Critically Endangered species. Finally, lack of information on many of the freshwater crab species signifies the need for promoting further research and awareness on this unique taxonomic group. Therefore, developing a user-friendly guide for identification of freshwater crabs and conducting education and awareness programmes for school children, university students, policy makers and the civil society are also identified as key elements of a successful campaign to conserve the freshwater crabs of Sri Lanka.

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**Table 06: List of Freshwater Crabs in Sri Lanka**

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family: Gecarcinucidae</b>					
<i>Ceylonthelphusa alpina</i> Bahir & Yeo, 2005		CR	B1ab(iii)+2ab(iii)	EN	B1ab(iii)+2ab(iii)
<i>Ceylonthelphusa armata</i> (Ng, 1993)		CR	B1ab(iii)+2ab(iii)	EN	B1ab(iii)+2ab(iii)
<i>Ceylonthelphusa callista</i> (Ng, 1995)		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Ceylonthelphusa cavatrix</i> (Bahir, 1998)		CR	B2ab(iii)	EN	B1ab(iii)+2ab(iii)
<i>Ceylonthelphusa diva</i> Bahir & Yeo, 2005		CR	B2ab(iii)	EN	B1ab(iii)+2ab(iii)
<i>Ceylonthelphusa durrelli</i> Bahir & Yeo, 2005		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Ceylonthelphusa kandambyi</i> Bahir, 1999		EN	B1ab(iii)+2ab(iii)	NT	
<i>Ceylonthelphusa kotagama</i> (Bahir, 1998)		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Ceylonthelphusa nata</i> Ng & Tay, 2001		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Ceylonthelphusa orthos</i> Ng & Tay, 2001		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Ceylonthelphusa rugosa</i> (Kingsley, 1880)		NT		LC	
<i>Ceylonthelphusa sanguinea</i> (Ng, 1995)		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Ceylonthelphusa savitriae</i> Bahir & Yeo, 2005		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Ceylonthelphusa sentosa</i> Bahir , 1999		EN	B1ab(iii)+2ab(iii)	LC	
<i>Ceylonthelphusa soror</i> (Zehntner, 1894)		EN	B1ab(iii)+2ab(iii)	LC	
<i>Ceylonthelphusa venusta</i> (Ng, 1995)		CR	B2ab(iii)	NT	
<i>Clinothelphusa kakoota</i> Tay & Ng, 2001		CR	B1ab(iii)+2ab(iii)	CR	B1ab(iii)
<i>Mahatha adonis</i> Ng & Tay, 2001		NT		LC	
<i>Mahatha helaya</i> Bahir & Yeo, 2005		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Mahatha iora</i> Ng & Tay, 2001		CR	B2ab(iii)	CR	B1ab(iii)
<i>Mahatha lacuna</i> Bahir & Yeo, 2005		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Mahatha ornatipes</i> (Roux, 1915)		NT		LC	
<i>Mahatha regina</i> Bahir & Yeo, 2005		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Oziothelphusa ceylonensis</i> (Fernando, 1960)		NT		LC	
<i>Oziothelphusa dakuna</i> Bahir & Yeo, 2005		CR	B2ab(iii)	EN	B1ab(iii)
<i>Oziothelphusa gallicola</i> Bahir & Yeo, 2005		CR	B2ab(iii)	EN	B1ab(iii)+2ab(iii)

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Oziothelphusa hippocastanum</i> (Muller, 1887)		EN	B1ab(iii)+2ab(iii)	VU	
<i>Oziothelphusa intuta</i> Bahir & Yeo, 2005		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Oziothelphusa kodagoda</i> Bahir & Yeo, 2005		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Oziothelphusa mineriyaensis</i> Bott, 1970		EN	B1ab(iii)+2ab(iii)	LC	
<i>Oziothelphusa populosa</i> Bahir & Yeo, 2005		EN	B1ab(iii)+2ab(iii)	EN	B1ab(iii)
<i>Oziothelphusa ritigala</i> Bahir & Yeo, 2005		EN	B1ab(iii)	VU	D2
<i>Oziothelphusa stricta</i> Ng & Tay, 2001		NT		VU	B1ab(iii)
<i>Pastilla ruhuna</i> Ng & Tay, 2001		CR	B2ab(iii)	EN	B1ab(iii)+2ab(iii)
<i>Perbrinckia cracens</i> Ng, 1995		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Perbrinckia enodis</i> Kingsley, 1880		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Perbrinckia fenestra</i> Bahir & Yeo, 2005		CR	B2ab(iii)	VU	D2
<i>Perbrinckia fido</i> Bahir, 2001		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Perbrinckia gabadagei</i> Bahir & Yeo, 2005		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Perbrinckia glabra</i> Ng, 1995		CR	B1ab(iii)+2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Perbrinckia integra</i> Ng, 1995		EN	B1ab(iii)+2ab(iii)	VU	D2
<i>Perbrinckia morayensis</i> Ng & Tay, 2001		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Perbrinckia nana</i> (Bahir, 1999)		EN	B1ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Perbrinckia punctata</i> Ng, 1995	"Pulli Pathan Kakuluwa"	CR	B1ab(iii)+2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Perbrinckia quadratus</i> Ng & Tay, 2001		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Perbrinckia rosae</i> Bahir & Yeo, 2005		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
<i>Perbrinckia scitula</i> Ng, 1995		CR	B2ab(iii)	LC	
<i>Perbrinckia uva</i> Bahir, 1998		CR	B2ab(iii)		
<i>Spiralothelphusa fernando</i> Ng, 1994		EN	B1ab(iii)+2ab(iii)	EN	B1ab(iii)
<i>Spiralothelphusa parvula</i> (Fenando, 1961)		EN	B1ab(iii)+2ab(iii)	EN	B1ab(iii)
<i>Perbrinckia scansor</i> (Ng, 1995)		EN	B1ab(iii)+2ab(iii)	LC	



## The Taxonomy and Conservation Status of the Land snails in Sri Lanka:

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### Introduction

Molluscs (snails and slugs) are the second most diverse animal phyla after arthropods (Solem, 1981; Emberton *et al.*, 1997). Majority of the molluscs are aquatic (marine and freshwater), whereas only 25% comprise of terrestrial species (Emberton *et al.*, 1997). Class Gastropoda is the largest class of mollusks, which is considered as the most successful of all molluscan classes and they have colonized a wide range of habitats including land, freshwater and marine environments. Prosobranchia, Opisthobranchia and Pulmonata are the three major subclasses of class Gastropoda. Majority of Opisthobranchs are marine inhabitants. Molluscs are important elements in the studies on mechanisms of evolution and examining the effects of ecology on evolutionary change (Crampton, 1932; Cain and Sheppard 1950; Cain and Currey, 1963; Cowie, 1992; Johnson *et al.*, 1993). Their low vagility also makes them suitable as indicators for biogeographical studies of early tectonic events (Solem, 1981). Due to their low mobility, land snails have become models for studying the effects of pesticides and influence of the activities of man in altering the environment.

Of the 253 species of land snails recorded from the country, 166 species belong to Sub class Pulmonata and is represented by 28 families. The remaining 87 species belong to the subclass Prosobranchia, which is represented by four families. This indicates that the pulmonate group dominates land snails in Sri Lanka. The families Ariophantidae (mainly *Cryptozonia* and *Euplecta*) with 50 species and Glessulidae (22 species) are the largest pulmonate families found in the country. Cyclophoridae (54 species) is the largest Prosobranch family.

### Taxonomy

Taxonomic status of some of the land snail groups in Sri Lanka needs to be thoroughly revised. For instance '*Digoniaxis cingalensis*' (Benson 1863) was described from a single specimen collected by Edgar Layard close to Matale, North of Kandy, Sri Lanka. The taxonomic status of *D. cingalensis* remains a mystery because the type species of the genus *Digoniaxis* Jousseaume, 1894 was found on a beach near Aden, Yemen, which proves to be a marine pyramidellid.

### Distribution

A significant portion of Sri Lankan snail fauna consists of Gondwana relicts, with origins dating back prior to the breakup of the southern super-continent over 100 million years ago (Naggs *et al.*, 2003). Sri Lankan land snails are considered as the most distinct in the South Asian Region, despite their faunistic affinities with the Indian mainland (Naggs *et al.*, 2003). Species richness and endemism are high among Sri Lankan land snails (Naggs *et al.*, 2003). Of the 253 species of land snails recorded from the country, majority (205 species, approximately 81%) are categorized as endemic according to the current available data. Further five land snail genera are considered to be endemic to Sri Lanka. These include four stylommatophoran

pulmonates, namely *Ravana*, *Ratnadvipia*, *Acavus*, *Oligospira* and cyclophorid prosobranch *Aulopoma*. These species show discontinued distribution and are restricted to few specific habitats in the wet and southwestern portion of the island (Raheem, 2000).

Of the land snail genera recorded from the island, 13 (*Ruthvenia*, *Thysanota*, *Cryptozona*, *Euplecta*, *Mariaella*, *Eurychlamys*, *Corilla*, *Beddomea*, *Trachia*, *Leptopomodes*, *Micraulax*, *Tortulosa* and *Nicida*) are restricted to Sri Lanka and Peninsular India, primarily to Western Ghats; approximately 50% of the 253 species recorded from the island belong to genera endemic to southern India and Sri Lanka. About 18 exotic land snails and slug species, most of which are agricultural pests, have also been recorded from the country during recent studies (Naggs *et al.*, 2003). However, this has increased up to 21 species according to the most recent information.

Studies done by Raheem *et al.* (2000) and Ranawana (2005) showed that the lowland rainforest zone and the montane rainforest zone in Sri Lanka have distinctive snail faunas. The lowland rainforest fauna is composed of a widely distributed element and a localized or restricted-range component. Widely distributed lowland rainforest species include *Cryptozona chenui*, *Ratnadvipia irradians*, *Acavus phoenix*, *Corilla adamsi*, *Beddomea albizonatus* aggregate and *Leptopoma semiclausum*. These taxa range across most or all of the forested areas of the lowland wet zone while some species such as *Ratnadvipia irradians* occur in both forest and non forest habitats (Raheem *et al.*, 2000).

## Threats

Molluscs, together with other animals and plants, are facing a rapid process of extinction largely due to human activities, and the present extinctions of species occur in time spans of less than ten years (Kay, 1995). Majority of the terrestrial molluscs are forest dwellers, sensitive to habitat disturbance. Therefore, from the biodiversity conservation point of view they are of regional and global concern (Emberton, 1995; Tattersfield *et al.*, 2001).

Habitat loss is the main threat faced by land snails in the country. Highly diverse areas such as lowland rainforests of the wet zone of the country are highly fragmented. Ground cover of the mountain regions such as in the Knuckles Region are cleared for cardamom cultivation. Most of the land snails are leaf litter inhabitants, thus clearance of forest floor is detrimental to their survival. Vast area of land in the wet and dry zones of Sri Lanka was inundated due to large scale dam construction for river diversion (especially the Mahaweli river) and hydroelectric generation. These development activities cause loss of habitats, either minimize the area available for a species or completely wipe out a species from a locality. Frequent fires in the grasslands, scrublands and forests are detrimental to the survival of land snails. This is evidenced by the record of very few snail species from the grasslands, where repeated fires occurs. Use of agrochemicals is also harmful to native land snail species found in association with human settlements. Species belonging to endemic genera such as *Acavus* and *Ratnadvipia*, found in synanthropic habitats are severely affected by agrochemicals.

## Conservation

Survival of highly diverse land snail fauna of Sri Lanka is therefore dependent on the effective conservation of the country's remaining rainforest fragments in the lowland rainforests of wet zone and the montane forests as endemism is restricted to localized zones within these areas. The following recommendations are made to promote research and conservation activities of land snails of Sri Lanka (Ranawana, 2006).

## Conclusions and recommendations

Some of the key recommendations include

- Conduct research on the ecology and distribution of land snails of Sri Lanka, with particular emphasis on the endemic and relict taxa which in turn help to identify the land snail hotspots.
- Develop plans for population restoration of endemic and relict species which are facing the danger of extinction due to habitat loss (such as development activities and inundation of land due to dam building). The affected taxa could be translocated to suitable areas having similar habitat conditions.
- Establish strict regulation to control the entry of exotic land snails in to the country mainly through the import trade of vegetables and foliage plants. Attempts should be made to control these exotic species as much as possible before they colonize natural forest habitats in the country
- Care should be taken to control the spread of some predatory gastropods, which has been introduced to the country in early 1950s to control *Lissachatina fulica*. Still, individuals of predatory gastropod *Eustreptaxis kibweziensis* are recorded from Peradeniya, where it was first introduced. This predatory carnivore population has to be eradicated before it enters the natural habitats.
- Increase the awareness of village communities and school children about the importance of land snails as an integral component of the ecosystem. The message that "not all snails are pests" should be clearly conveyed to the general public. The role of snails in breaking down leaf litter should be recognized.

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**Table 07: List of Land Snails in Sri Lanka**

Abbreviations: Scientific Name<sup>EX</sup> (Exotic)

Scientific Name	Common Name	NCS	Criteria
<b>Family: Pupiliidae</b>			
<i>Microstele muscerda</i> (Benson 1853)	E: Muscerda's Moss Snail	CR	B1+2ab(iii)
<i>Pupoides coenopictus</i> (Hutton 1834) <sup>EX</sup>	E: Coenopictus Moss Snail	NE	
<b>Family: Vertiginidae</b>			
<i>Gastrocopta mimula</i> (Benson 1853)	E: Sri Lanka Whorl Snail	EN	B1+2ab(iii)
<i>Nesopupa cinghalensis</i> (Guide 1914)	E: Toothed Whorl Snail	CR	B1+2ab(iii)
<i>Pupisoma longstaffae</i> (Godwin-Austen 1912)	E: Sri Lanka Grass Snail	EN	B1+2ab(iii)
<i>Pupisoma miccylla</i> (Benson 1860)		DD	
<b>Family: Pyramidulidae</b>			
<i>Pyramidula halyi</i> (Jousseau 1894)	E: Sri Lanka Rock Snail	CR	B1+2ab(iii)
<b>Family: Buliminidae</b>			
<i>Mirus panos</i> (Benson 1853)	E: Sri Lanka Lesser Bulin	EN	B2ab(iii)
<i>Mirus proletaria</i> (Pfeiffer 1855)		EN	B1+2ab(iii)
<i>Mirus stalix</i> (Benson 1863)		EN	B1+2ab(iii)
<b>Family: Cerastuidae</b>			
<i>Rachis punctatus</i> (Anton 1839) <sup>EX</sup>	E: Pipe Snail	NE	
<i>Rhachistia adumbratus</i> (Pfeiffer 1855)	E: Sri Lanka Pipe Snail	EN	B1+2ab(iii)
<i>Rhachistia pulcher</i> (Gray 1825)		VU	B1ab(iii)
<b>Family: Endodontidae</b>			
<i>Philalanka circumsculpta</i> (Sykes 1897)	E: Sri Lanka Philalanka	EN	B1+2ab(iii)
<i>Philalanka depressa</i> (Preston 1909)		EN	B2ab(iii)
<i>Philalanka edithae</i> (Preston 1909)		CR	B1ab(iii)
<i>Philalanka lamcabensis</i> (Jousseau 1894)		CR	B1+2ab(iii)
<i>Philalanka liratula</i> (Pfeiffer 1860)		CR	B2ab(iii)
<i>Philalanka mononema</i> (Benson 1853)		CR	B2ab(iii)
<i>Philalanka secessa</i> (Godwin-Austen 1898)		EN	B1+2ab(iii)
<i>Philalanka sinhila</i> (Godwin-Austen 1897)		CR	B2ab(iii)
<i>Philalanka thwaitesi</i> (Pfeiffer 1854)		CR	B2ab(iii)
<i>Philalanka trifilosa</i> (Pfeiffer 1854)		EN	B1ab(iii)
<b>Family: Charopidae</b>			
<i>Ruthvenia biciliata</i> (Pfeiffer 1854)	E: Sri Lanka Micro Hairy Ruthvenia	CR	B1+2ab(iii)
<i>Ruthvenia caliginosa</i> (Sykes 1898)		CR	B1+2ab(iii)
<i>Ruthvenia clathratula</i> (Pfeiffer 1850)		EN	B1+2ab(iii)
<i>Thysanota elegans</i> (Preston 1909)	E: Sri Lanka Micro Hairy Thysanota	EN	B1ab(iii)

Scientific Name	Common Name	NCS	Criteria
<i>Thysanota eumita</i> (Sykes 1898)		EN	B2ab(iii)
<i>Thysanota hispida</i> (Sykes 1898)		CR	B2ab(iii)
<b>Family: Clausilioidae</b>			
<i>Phaedusa ceylanica</i> (Benson 1863)	E: Sri Lanka Door Snail	EN	B2ab(iii)
<b>Family: Gastrodontoidea</b>			
<i>Zonitoides arboreus</i> (Say 1816) <sup>EX</sup>	E: Quick Gloss Glass Snail	NE	
<b>Family: Oxychilidae</b>			
<i>Oxychilus alliarius</i> (Miller, 1822) <sup>EX</sup>	E: Garlic Glass Snail	NE	
<b>Family: Euconulidae</b>			
<i>Eurychlamys layardi</i> (Benson 1860)	E: Sri Lanka Brilliant Granule	EN	B1+2ab(iii)
<i>Eurychlamys regulata</i> (Benson 1860)		EN	B1+2ab(iii)
<i>Eurychlamys winifredae</i> (Preston 1909)		EN	B1+2ab(iii)
<b>Family: Helicarionidae</b>			
<i>Kaliella barrakporensis</i> (Pfeiffer 1853) <sup>EX</sup>	E: Common Hive Snail	NE	
<i>Kaliella colletti</i> (Sykes 1899)	E: Sri Lanka Hive Snail	EN	B1+2ab(iii)
<i>Kaliella delectabilis</i> (Sykes 1898)		EN	B2ab(iii)
<i>Kaliella leithiana</i> (Godwin Austen 1883)		EN	B1+2ab(iii)
<i>Kaliella salicensis</i> (Godwin Austen 1897)		DD	
<i>Sivella galerus</i> (Benson 1856)		CR	B2ab(iii)
<i>Sivella hyptiocyclos</i> (Benson 1863)		CR	B2ab(iii)
<b>Family: Ariophantidae</b>			
<i>Cryptozona bistrialis</i> (Beck 1837)	E: Common Translucent Snail	LC	
<i>Cryptozona ceraria</i> (Benson 1853)	E: Sri Lanka Hard Translucent Snail	VU	B1ab(iii)
<i>Cryptozona chenui</i> (Pfeiffer 1847)		VU	B1ab(iii)
<i>Cryptozona juliana</i> (Gray 1834)		EN	B1+2ab(iii)
<i>Cryptozona novella</i> (Pfeiffer 1855)		EN	B2ab(iii)
<i>Cryptozona semirugata</i> (Beck 1837)		VU	B1ab(iii)
<i>Euplecta acuducta</i> (Benson 1850)	E: Glass Translucent Snail	CR	B2ab(iii)
<i>Euplecta albizonata</i> (Dohm 1858)		CR	B2ab(iii)
<i>Euplecta binoyaensis</i> (Godwin Austen 1899)		EN	B1+2ab(iii)
<i>Euplecta colletti</i> (Sykes 1897)		EN	B1+2ab(iii)
<i>Euplecta concavospira</i> (Pfeiffer 1854)		CR	B2ab(iii)
<i>Euplecta emiliana</i> (Pfeiffer 1854)		EN	B1+2ab(iii)
<i>Euplecta gardeneri</i> (Pfeiffer 1854)		VU	B1ab(iii)
<i>Euplecta hyphasma</i> (Pfeiffer 1854)		VU	B1ab(iii)
<i>Euplecta indica</i> (Pfeiffer 1854)		VU	B1ab(iii)
<i>Euplecta isabellina</i> (Pfeiffer 1854)		VU	B1ab(iii)
<i>Euplecta laevis</i> (Blanford 1901)		DD	
<i>Euplecta lankaensis</i> (Preston 1909)		DD	

Scientific Name	Common Name	NCS	Criteria
<i>Euplecta layardi</i> (Pfeiffer 1854)		EN	B1+2ab(iii)
<i>Euplecta neglecta</i> (Preston 1909)		DD	
<i>Euplecta partita</i> (Pfeiffer 1854)		NT	
<i>Euplecta phidias</i> (Hanley & Theobald 1897)		CR	B1+2ab(iii)
<i>Euplecta prestoni</i> (Godwin-Austen 1897)		CR	B1ab(iii)
<i>Euplecta rosamonda</i> (Benson 1860)		DD	
<i>Euplecta scobinoides</i> (Sykes 1897)		CR	B1ab(iii)
<i>Euplecta semidecussata</i> (Pfeiffer 1854)		VU	B1ab(iii)
<i>Euplecta subopaca</i> (Pfeiffer 1854)		DD	
<i>Euplecta trimeni</i> (Jousseume 1894)		DD	
<i>Euplecta turritella</i> (Adams 1869)		DD	
<i>Euplecta travancorica</i> (Benson 1865)		NT	
<i>Euplecta verrucula</i> (Pfeiffer 1854)		DD	
<i>Ratnadvipia edgariana</i> (Benson 1853)	E: Sri Lanka Ratnadvipia	DD	
<i>Ratnadvipia irradians</i> (Pfeiffer 1854)		VU	B1ab(iii)
<i>Ratnadvipia karui</i> (Raheem & Naggs 2006)		CR	B1+2ab(iii)
<i>Ravana politissima</i> (Pfeiffer 1854)	E: Sri Lanka Ravana Snail	EN	B1+2ab(iii)
<i>Mariaella dussumieri</i> (Gray 1855) <sup>EX</sup>	E: Common Shelled Slug	NE	
<i>Macrochlamys indica</i> (Godwin Austen 1883)	E: Macro Lucid Snail	DD	
<i>Macrochlamys kandiensis</i> (Godwin-Austen 1883)	E: Sri Lanka Macro Lucid Snail	CR	B1+2ab(iii)
<i>Macrochlamys nepas</i> (Pfeiffer 1854)		CR	B2ab(iii)
<i>Macrochlamys perfucata</i> (Benson 1853)		DD	
<i>Macrochlamys tratanensis</i> (Jousseume 1894)		CR	B2ab(iii)
<i>Macrachlamys umbrina</i> (Pfeiffer 1854)		CR	B1+2ab(iii)
<i>Macrachlamys vilipensa</i> (Benson 1853)		DD	
<i>Macrochlamys woodiana</i> (Pfeiffer 1854)		EN	B1+2ab(iii)
<i>Microcystina bintennensis</i> (Godwin-Austen 1899)	E: Sri Lanka Micro Lucid Snail	DD	
<i>Microcystina lita</i> (Sykes 1898)		EN	B1+2ab(iii)
<i>Satiella membranacea</i> (Benson 1853)	E: Sri Lanka Lucid Satiella Snail	CR	B1+2ab(iii)
<i>Sitala operiens</i> (Sykes 1898)	E: Sri Lanka Sitala Snail	DD	
<i>Sitala phyllophila</i> (Benson 1853)		CR	B2ab(iii)
<i>Sitala pyramidalis</i> (Sykes 1898)		EN	B2ab(iii)
<b>Family Milacidae</b>			
<i>Milax gagates</i> (Draparnaud 1801) <sup>EX</sup>	E: Smooth Jet Slug	NE	
<b>Family: Agriolimacidae</b>			
<i>Deroceras reticulatum</i> (Miller 1774) <sup>EX</sup>	E: Gray Field Slug	NE	
<i>Deroceras laeve</i> (Muller 1774) <sup>EX</sup>	E: Marsh Slug	NE	

Scientific Name	Common Name	NCS	Criteria
<b>Family: Ferussaciidae</b>			
<i>Digoniaxis cingalensis</i> (Benson 1863)		LC	
<b>Family: Glessulidae</b>			
<i>Glessula capillacea</i> (Pfeiffer 1855)	E: Corkscrew Snail	CR	B2ab(iii)
<i>Glessula ceylanica</i> (Pfeiffer 1845)	E: Sri Lanka Corkscrew Snail	EN	B2ab(iii)
<i>Glessula collettae</i> (Sykes 1898)		EN	B2ab(iii)
<i>Glessula deshayesi</i> (Pfeiffer 1853)		EN	B1+2ab(iii)
<i>Glessula fulgens</i> (Pfeiffer 1858)		CR	B1ab(iii)
<i>Glessula inornata</i> (Pfeiffer 1853)		EN	B1+2ab(iii)
<i>Glessula lankana</i> (Pilsbry 1908)		EN	B1+2ab(iii)
<i>Glessula layardi</i> (Pilsbry 1908)		CR	B2ab(iii)
<i>Glessula nitens</i> (Gray 1825)		DD	
<i>Glessula pachycheila</i> (Benson 1853)		DD	
<i>Glessula pallens</i> (Beddome 1906)		CR	B1+2ab(iii)
<i>Glessula panaetha</i> (Benson 1860)		CR	B1+2ab(iii)
<i>Glessula parabilis</i> (Benson 1856)		EN	B1+2ab(iii)
<i>Glessula prestoni</i> (Gude 1914)		CR	B2ab(iii)
<i>Glessula punctogallana</i> (Pfeiffer 1852)		EN	B1ab(iii)
<i>Glessula pusilla</i> (Beddome 1906) <sup>EX</sup>		NE	
<i>Glessula reynelli</i> (Gude 1914)		DD	
<i>Glessula sattaraensis</i> (Hanley & Theobald 1874)		CR	B2ab(iii)
<i>Glessula serena</i> (Benson 1860)		EN	B2ab(iii)
<i>Glessula simoni</i> (Jousseume 1894)		DD	
<i>Glessula sinhila</i> (Preston 1909)		CR	B1+2ab(iii)
<i>Glessula veruina</i> (Benson 1853)		CR	B2ab(iii)
<b>Family: Subulinidae</b>			
<i>Subulina octona</i> (Bruguiere 1789) <sup>EX</sup>	E: Common Awl Snail	NE	
<i>Allopeas gracile</i> (Hutton 1834) <sup>EX</sup>	E: Graceful Awl Snail	NE	
<i>Allopeas layardi</i> (Benson 1863)	E: Sri Lanka Awl Snail	EN	B1+2ab(iii)
<i>Allopeas mariae</i> (Jousseume 1894)		CR	B2ab(iii)
<i>Allopeas prestoni</i> (Sykes 1898)		CR	B1+2ab(iii)
<i>Allopeas pussilus</i> (Adams 1867)		DD	
<i>Allopeas sykesi</i> (Pilsbry 1906)		CR	B2ab(iii)
<i>Paropeas achatinaceum</i> (Pfeiffer 1846) <sup>EX</sup>	E: Achatina's Awl Snail	NE	
<i>Zootecus insularis</i> (Ehrenberg 1831) <sup>EX</sup>	E: Chrysalis Awl Snail	NE	
<b>Family: Achatinidae</b>			
<i>Lissachatina fulica</i> (Bowdich 1822) <sup>EX</sup>	E: Giant African Snail	NE	
<b>Family: Streptaxidae</b>			
<i>Eustreptexis kideziensis</i> (Smith 1895) <sup>EX</sup>	E: Eustreptex Hunter Snail	NE	



Scientific Name	Common Name	NCS	Criteria
<i>Indoartemon cingalensis</i> (Benson 1853)	E: Sri Lanka Hunter Snail	CR	B2ab(iii)
<i>Indoartemon gracilis</i> (Collet 1898)		CR	B2ab(iii)
<i>Indoartemon layardianus</i> (Benson 1853)		VU	B1ab(iii)
<i>Perrottetia peroteti</i> (Petit de la Saussaye 1841)	E: Perrotte's Hunter Snail	DD	
<i>Perrottetia ravanae</i> (Blanford 1899)	E: Sri Lanka Ravana's Hunter Snail	DD	
<i>Gulella bicolor</i> (Hutton 1834) <sup>EX</sup>	E: Two-toned Hunter Snail	NE	
<i>Sinoennea planguncula</i> (Benson 1863)	E: Plangucula's Hunter Snail	DD	
<b>Family: Acavidae</b>			
<i>Acavus haemastoma</i> (Lennaeus 1758)	E: Sri Lanka Red mouthed Lustful Snail	EN	B2ab(iii)
<i>Acavus phoenix</i> (Pfeiffer 1854)	E: Arabian Lustful Snail	NT	
<i>Acavus superbus</i> (Pfeiffer 1850)	E: Superb Lustful Snail	VU	B1ab(iii)
<i>Oligospira polei</i> (Collet 1899)	E: Sri Lanka White Lip Blunted Snail	EN	B2ab(iii)
<i>Oligospira skinneri</i> (Reeve 1854)	E: Sri Lanka Small Blunted Snail	EN	B1+2ab(iii)
<i>Oligospira waltoni</i> (Reeve 1842)	E: Sri Lanka Common Blunted Snail	VU	B1ab(iii)
<b>Family: Corillidae</b>			
<i>Corilla adamsi</i> (Gude 1914)	E: Sri Lanka Toothed Lip Snail	EN	B1+2ab(iii)
<i>Corilla beddomeae</i> (Hanley 1875)		EN	B1+2ab(iii)
<i>Corilla carabinata</i> (Ferussac 1821)		EN	B1+2ab(iii)
<i>Corilla colletti</i> (Sykes 1897)		VU	B1ab(iii)
<i>Corilla erronea</i> (Albers 1853)		EN	B1+2ab(iii)
<i>Corilla fryae</i> (Gude 1896)		DD	
<i>Corilla gudei</i> (Sykes 1897)		CR	B1+2ab(iii)
<i>Corilla humberti</i> (Brot 1864)		CR	B1+2ab(iii)
<i>Corilla lesleyae</i> (Barnacle 1959)		EN	B1+2ab(iii)
<i>Corilla odontophora</i> (Benson 1865)		CR	B2ab(iii)
<b>Family: Camaenidae</b>			
<i>Beddomea albizonatus</i> (Reeve 1849)		VU	B1ab(iii)
<i>Beddomea ceylanicus</i> (Pfeiffer 1846)	E: Sri Lanka Bed-domea Snail	CR	B2ab(iii)
<i>Beddomea intermedius</i> (Pfeiffer 1855)		CR	B2ab(iii)
<i>Beddomea trifasciatus</i> (Gmelin 1786)		VU	B1ab(iii)
<i>Trachia fallaciosa</i> (Ferussac 1821)	E: Strawberry Snail	CR	B1+2ab(iii)
<i>Trachia vittata</i> (Muller 1774)		CR	B2ab(iii)

Scientific Name	Common Name	NCS	Criteria
<i>Landouria radleyi</i> (Jousseaume 1894)	E: Sri Lanka Landouria	EN	B1+2ab(iii)
<b>Family: Bradybaenidae</b>			
<i>Bradybaena similaris</i> (Femssac 1822) <sup>EX</sup>	E: Asian Tramp Snail	NE	
<b>Family: Succineidae</b>			
<i>Succinea ceylanica</i> (Pfeiffer 1855)	E: Amber Snail	CR	B2ab(iii)
<b>Family: Cochlicopidae</b>			
<i>Cochlicopa lubrica</i> (Muller 1774) <sup>EX</sup>	E: Glossy Pillar Snail	NE	
<b>Family: Arionidae</b>			
<i>Arion intermedius</i> (Normand 1852) <sup>EX</sup>	E: Hedgehog Slug	NE	
<b>Family: Veronicellidae</b>			
<i>Laevicaulis alte</i> (Femssac 1821)	E: Leatherleaf Slug	LC	
<i>Semperula maculata</i> (Tempieton 1888)	E: Tropical Leatherleaf Slug	LC	
<i>Semperula siamensis</i> (Martens 1867)		LC	
<b>Family: Cyclophoroidea</b>			
<i>Cyclophorus alabastrinus</i> (Pfeiffer 1855)		CR	B2ab(iii)
<i>Cyclophorus ceylanicus</i> (Pfeiffer 1849)	E: Sri Lanka Large Operculate Snail	VU	B1ab(iii)
<i>Cyclophorus involvulus</i> (Muller 1774)	E: Involvulus Operculate Snail	EN	B2ab(iii)
<i>Cyclophorus menkeanus</i> (Philippi 1848)		VU	B1ab(iii)
<i>Aulopoma grande</i> (Pfeiffer 1855)	E: Grande's Operculate Snail	VU	B1ab(iii)
<i>Aulopoma helicinum</i> (Chemnitz 1786)	E: Helicinum Operculate Snail	VU	B1ab(iii)
<i>Aulopoma itieri</i> (Guerin 1847)	E: Itier's Operculate Snail	EN	B1ab(iii)
<i>Aulopoma sphaeroideum</i> (Dohrn 1857)	E: Sphaeroid's Operculate Snail	EN	B1+2ab(iii)
<i>Cyathopoma album</i> (Beddome 1875)	E: Cyathopom's Operculate Snail	EN	B1+2ab(iii)
<i>Cyathopoma artatum</i> (Sykes 1897)		DD	
<i>Cyathopoma ceylanicum</i> (Beddome 1875)		EN	B2ab(iii)
<i>Cyathopoma colletti</i> (Sykes 1898)		DD	
<i>Cyathopoma conoideum</i> (Sykes 1898)		DD	
<i>Cyathopoma innocens</i> (Sykes 1899)		CR	B2ab(iii)
<i>Cyathopoma leptomita</i> (Sykes 1898)		CR	B2ab(iii)
<i>Cyathopoma mariae</i> (Jousseaume 1894)		DD	
<i>Cyathopoma ogdenianum</i> (Preston 1909)		CR	B2ab(iii)
<i>Cyathopoma perconoideum</i> (Preston 1909)		DD	
<i>Cyathopoma prestoni</i> (Sykes 1897)		CR	B2ab(iii)
<i>Cyathopoma serendibense</i> (Preston 1903)		DD	
<i>Cyathopoma turbinatum</i> (Sykes 1897)		DD	
<i>Cyathopoma uvaense</i> (Preston 1909)		DD	

Scientific Name	Common Name	NCS	Criteria
<i>Japonia binoyae</i> (Sykes 1897)	E: Japonia's Operculate Snail	DD	
<i>Japonia occulta</i> (Sykes 1897)		CR	B1+2ab(iii)
<i>Japonia vesca</i> (Sykes 1897)		EN	B2ab(iii)
<i>Leptopoma apicatum</i> (Benson 1856)	E: Leptopoma's Operculate Snail	DD	
<i>Leptopoma elatum</i> (Pfeiffer 1852)		DD	
<i>Leptopoma semiclausum</i> (Pfeiffer 1855)	E: Leptopomoid's Operculate Snail	EN	B1+2ab(iii)
<i>Leptopomoides conulus</i> (Pfeiffer 1855)		DD	
<i>Leptopomoides flammeus</i> (Pfeiffer 1855)		CR	B1+2ab(iii)
<i>Leptopomoides halophilus</i> (Benson 1851)		DD	
<i>Leptopomoides orophilus</i> (Benson 1853)		DD	
<i>Leptopomoides poecilus</i> (Pfeiffer 1855)		CR	B1+2ab(iii)
<i>Leptopomoides taprobanensis</i> (Preston 1909)		CR	B1+2ab(iii)
<i>Micraulax coeloconus</i> (Benson 1851)	E: Micraulax Operculate Snail	CR	B2ab(iii)
<i>Scabrina brounae</i> (Sykes 1898)		CR	B2ab(iii)
<i>Scabrina liratula</i> (Preston 1909)	E: Hairy Operculate Snail	DD	
<i>Theobaldius annulatus</i> (Pfeiffer 1847)	E: Theobald's Operculate Snail	LC	
<i>Theobaldius bairdi</i> (Pfeiffer 1854)		VU	B1ab(iii)
<i>Theobaldius cadiscus</i> (Benson 1860)		CR	B2ab(iii)
<i>Theobaldius cratera</i> (Benson 1856)		DD	
<i>Theobaldius cytopoma</i> (Benson 1860)		EN	B1+2ab(iii)
<i>Theobaldius layardi</i> (Adams 1868)		VU	B1ab(iii)
<i>Theobaldius liliputianus</i> (Preston 1909)		DD	
<i>Theobaldius loxostoma</i> (Pfeiffer 1854)		CR	B1+2ab(iii)
<i>Theobaldius parapsis</i> (Benson 1853)		DD	
<i>Theobaldius parma</i> (Benson 1856)		EN	B1+2ab(iii)
<i>Theobaldius subplicatulus</i> (Beddome 1875)		VU	B1ab(iii)
<i>Theobaldius thwaitesi</i> (Pfeiffer 1855)		CR	B2ab(iii)
<i>Pterocyclus bifrons</i> (Pfeiffer 1855)		DD	
<i>Pterocyclus bilabiatus</i> (Sowerby 1835)	E: Ptero's Operculate Snail	EN	B1+2ab(iii)
<i>Pterocyclus cingalensis</i> (Benson 1853)		NT	
<i>Pterocyclus cumingi</i> (Pfeiffer 1851)		NT	
<i>Pterocyclus troscheli</i> (Benson 1851)		NT	
<b>Family: Diplomatinidae</b>			
<i>Nicida catathymia</i> (Sykes 1898)	E: Sri Lanka Nicida's Operculate Snail	NT	
<i>Nicida ceylanica</i> (Beddome 1875)		CR	B1+2ab(iii)
<i>Nicida delectabilis</i> (Preston 1905)		CR	B1+2ab(iii)
<i>Nicida lankaensis</i> (Preston 1905)		CR	B1+2ab(iii)
<i>Nicida pedronis</i> (Beddome 1875)		DD	

Scientific Name	Common Name	NCS	Criteria
<i>Nicida prestoni</i> (Sykes 1897)		CR	B2ab(iii)
<b>Family: Pupinidae</b>			
<i>Tortulosa aurea</i> (Pfeiffer 1855)	E: Sri Lanka Tortu's Opercu- late Snail	CR	B1+2ab(iii)
<i>Tortulosa austeniana</i> (Benson 1853)		CR	B2ab(iii)
<i>Tortulosa barnaclei</i> (Tomlin 1928)		DD	
<i>Tortulosa blanfordi</i> (Dohrn 1862)		DD	
<i>Tortulosa colletti</i> (Sykes 1898)		CR	B2ab(iii)
<i>Tortulosa congener</i> (Sykes 1905)		CR	B1+2ab(iii)
<i>Tortulosa connectens</i> (Fulton 1903)		DD	
<i>Tortulosa cumingi</i> (Pfeiffer 1857)		EN	B1+2ab(iii)
<i>Tortulosa decora</i> (Benson 1853)		EN	B1+2ab(iii)
<i>Tortulosa duplicata</i> (Pfeiffer 1855)		CR	B2ab(iii)
<i>Tortulosa eurytrema</i> (Pfeiffer 1852)		DD	
<i>Tortulosa greeni</i> (Sykes 1899)		EN	B1+2ab(iii)
<i>Tortulosa haemastoma</i> (Pfeiffer 1857)		EN	B1+2ab(iii)
<i>Tortulosa hartleyi</i> (Tomlin 1928)		DD	
<i>Tortulosa layardi</i> (Pfeiffer 1851)		EN	B2ab(iii)
<i>Tortulosa leucocheilus</i> (Adams & Sowerby 1866)		DD	
<i>Tortulosa marginata</i> (Pfeiffer 1854)		EN	B1+2ab(iii)
<i>Tortulosa nevillei</i> (Sykes 1898)		EN	B1+2ab(iii)
<i>Tortulosa nietneri</i> (Nevill 1871)		DD	
<i>Tortulosa prestoni</i> (Sykes 1905)		DD	
<i>Tortulosa pyramidata</i> (Pfeiffer 1852)		EN	B1+2ab(iii)
<i>Tortulosa rugosa</i> (Fulton 1904)		DD	
<i>Tortulosa smithi</i> (Sykes 1905)		CR	B2ab(iii)
<i>Tortulosa sykesi</i> (Fulton 1904)		CR	B2ab(iii)
<i>Tortulosa templemani</i> (Pfeiffer 1854)		CR	B2ab(iii)
<i>Tortulosa thwaitesi</i> (Pfeiffer 1852)		CR	B2ab(iii)
<b>Family: Truncatellidae</b>			
<i>Truncatella ceylanica</i> (Pfeiffer 1856)		DD	

# The Taxonomy and Conservation Status of the Freshwater Fishes in Sri Lanka

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## Introduction

Sri Lanka supports a rich freshwater fish assemblage that comprises of 91 species including 50 endemics (Bailey and Gans, 1998; Goonatilake, 2007; Silva *et al.*, 2008; Meegaskumbura, *et al.*, 2008; Pethiyagoda, 1991; Pethiyagoda *et al.*, 2008; Pethiyagoda *et al.*, 2008a; Pethiyagoda *et al.*, 2008b; Pethiyagoda *et al.*, 2008c; Silva *et al.*, 2011; Pethiyagoda *et al.*, 2012; Watson, 1998). Other than these indigenous species, 24 exotic species have been introduced to the island, mainly to boost the inland fishery (Goonatilake, 2007). Senanayake and Moyle (1982) have identified four major Ichthyological zones (Southwestern, Mahaweli, Dry and Transition) according to the distribution patterns of freshwater fish in Sri Lanka. Out of these four zones, Southwestern and Mahaweli zones bear the highest freshwater fish diversity in the island.

## Taxonomy

The island's freshwater fish fauna has received significant attention from early European ichthyologists that dates back to early 19<sup>th</sup> Century. Georges Cuvier and Achille Valenciennes described several species of fish (Cuvier & Valenciennes, 1828–49) from Sri Lanka based on a single collection made in 1827 near the Kinniyar hot springs by the French explorer A. Reynaud. However, the first local exploration of the fish fauna by an expert took place in the early 1860s, when the Dutch ichthyologist P. Bleeker described several new species of freshwater fish based on a collection from the Gin River basin. In the early 1900's Bleeker's work has been followed by a German ichthyologist, George Duncker, who explored several localities including Gin river basin that led to the compilation of first checklist of Sri Lankan freshwater fishes (Duncker, 1912). These early efforts on fish exploration by European ichthyologists were followed in the mid 20<sup>th</sup> Century by local naturalists of whom the most notable being P.E.P. Deraniyagala who has described several new species and produced the first illustrated book on Sri Lankan freshwater fish (Deraniyagala, 1952). His work has been followed by Mendis (1954) and Munro (1955).

The first systematic exploration of the island's freshwater fish fauna was carried out during the late 1970s by Ranil Senanayake for his doctoral dissertation that has led to a comprehensive review of the conservation status of freshwater fishes for the first time in Sri Lanka (Senanayake, 1980; Senanayake and Moyle, 1982). This work was followed by a more extensive survey on freshwater fish by the Wildlife Heritage Trust that has led to the discovery of many new species of freshwater fish (Kottelat & Pethiyagoda, 1991; Meegaskumbura, *et al.*, 2008; Pethiyagoda *et al.*, 2008; Pethiyagoda *et al.*, 2008a; Pethiyagoda *et al.*, 2008b; Pethiyagoda *et al.*, 2008c; Pethiyagoda *et al.*, 2012; Silva *et al.*, 2008; Silva *et al.*, 2011).

Taxonomic nomenclature of freshwater fish has also been extensively revised during the past two decades, the most recent being the taxonomic revision of the genus *Puntius* by Pethiyagoda *et al.* (2012) that has resulted in the splitting of this genus into four genera, namely *Puntius*,

*Pethia*, *Systemus* and, *Dawkinsia*. Likewise, revision of the Genera *Rasbora* (Silva *et al.*, 2011) and *Danio* (Kevin *et al.*, 2010) resulted in some species of genus *Rasbora* being placed under the genus *Rasboroides* and all species of genus *Danio* being placed under the genus *Devario*. Further, what was listed as *Chela ceylonensis* was split in to three species and placed under the genus *Labuca* (Pethiyagoda *et al.*, 2008a). Also, species names of several species have also been revised over the past decade. For instance, *Puntius filamentous*, *Puntius amphibious*, *Macroganthus aral*, *Labeo porcellus* and *Channa marulius* have been renamed as *Puntius singhala*, *Puntius kamalika*, *Macroganthus pentophthalmos*, *Labeo lankae* and *Channa ara* respectively (Pethiyagoda & Kottelat, 1991; Silva *et al.*, 2008 and Pethiyagoda *et al.*, 2008c; Pethiyagoda, 1994).

## Distribution

Senanayake and Moyle (1982) have proposed four major Ichthyological zones (Southwestern, Mahaweli, Dry and Transition) based the on distribution pattern of freshwater fishes. Of these the South Western and Mahaweli zones support the highest diversity in freshwater fish while the Dry Zone species have a higher affinity with the freshwater fish in the Indian peninsula. Number of species such as *Pethia bandula* (Minipura at Kegalle District) and *Stiphodon martenstyni* (Atweltota near Matugama) and *Rasboroides nigromarginata* are only known from a single location (point endemics). Further, some species such as *Dawkinsia srilankensis*, *Laubuca insularis*, *Systemus martenstyni*, *Labeo fisheri* and *Labeo lankae* are only known from a single river basin. However, species such as *Lepidocephalichthys jonklaasi*, *Devario pathirana*, *Rasbora wilpita* which were also thought to be restricted to a single river basin, namely the Nilwala basin, have been shown to occur also in the Kelani river basin.

## Threats

Arguably, the freshwater fish are the most vulnerable taxonomic group as most of the threatened or endemic freshwater species are found in streams that are lying outside the Protected Area Network of Sri Lanka. Therefore these habitats are highly susceptible to various threats such as forest clearance, gem mining, expanding agriculture, large and small scale hydro projects, exposure to chemical pollutants including agrochemicals and sedimentation due to soil erosion.

Several species such as *Ophisternon bengalense*, *Systemus martenstyni*, *Labeo fisheri* and *Labeo lankae* have become threatened during the past few decades due to loss of their habitat, land reclamation or habitat conversion as a result of reservoir projects. Further, natural processes such as spread of alien invasive plant species such as like *Annona gabra*, *Eichornia crassipes* bring about rapid habitat changes that make these marsh habitats less suitable for freshwater fish. The water quality of many of the suburban water bodies have also undergone drastic changes due to accumulation of toxic compounds discharged by industries. A case in point is the Attidiya-Bellanwila Sanctuary where the number of freshwater species recorded has changed from 54 to a mere 8 species (Goonatilake unpublished data, 2012) within a span of about 20 years due to pollution and spread of invasive alien plant species. On the other hand, in rural areas heavy use of agrochemicals such as pesticides and fertilizer has contributed to the population decline of at least two endemic fish species, *Pethiya bandula* and *Aplocheilus dayi* and several species of indigenous fish. Intentional and accidental introduction of invasive alien

fish species such as *Chitala chitala* (Clown knife fish) and *Hypostomus plecostomus* (Sucker-mouth catfish) is posing a major threat to native fresh water fishes (Gunawardane, 2002).

Number of endemic species have a high demand in the aquarium trade and hence over-exploitation of naturally occurring populations for export has resulted in marked reduction in their populations and in some instances to local extinctions. Further, destructive fishing techniques such as the use of *Kala wel* (a plant that is toxic to fish), Dynamite and other chemicals such as anti-lice compounds by local communities to capture fish lead to complete wipe-out of all the fish in a water hole. Therefore, such fishing methods should be banned and discouraged through awareness-raising among local communities.

## **Conservation**

As mentioned earlier, most of the threatened and endemic freshwater fish are found in habitats located outside the Protected Area Network. These habitats are under high human pressure. Therefore, they need to be protected; especially their catchment areas that will decide the water yield as well as the quality of water. Any type of development affecting these habitats needs to be clearly assessed before granting approval. Further, species oriented conservation programmes and habitat oriented conservation programmes should be developed for at least the critically endangered species. As most of the species occur outside the protected areas the local communities have to be involved in conservation of these species. Such a programme has been successfully implemented for *Pethia bundula* that has resulted in curtailing of illegal collection of the fish and the recovery of the population. Likewise conservation action plans should be drawn up for all identified threatened species.

*Ex-situ* breeding programmes should also be established with the aim of boosting dwindling wild population. However, translocation or reintroduction programmes should be planned with utmost care to prevent hybridisation and introduction of diseases to the population. Thus far, a number of translocations have been attempted in Sri Lanka with the aim of conserving threatened species. Some of these translocation programmes have been highly successful while some have failed to achieve the desired objectives. Therefore, these programmes should be carefully reviewed to document the lessons learnt before attempting further translocations.

## **Research gaps and research needs**

The recent field surveys in both the dry and wet zone, and phylogenetic studies have demonstrated that there still are new species to be discovered. Therefore, island-wide systematic surveys should be carried out to document the distribution and ecological conditions necessary for freshwater fishes of Sri Lanka. The baseline data generated from such a survey can be used to make proper assessments of the conservation status of species as well as to draw up species conservation plans. Lack of financial support is the main obstacle for such a systematic island-wide survey. A model already exists in the neighbouring India, where they have a dedicated zoological survey to gather baseline data not only for fishes but for other taxonomic groups as well. The National Science Foundation of Sri Lanka had such a programme in the 1980's which needs to be resurrected.

## Conclusions and recommendations

Sri Lanka has a rich freshwater fish fauna of which more than 50% are endemic species. However, nearly 50% freshwater fish are also listed as threatened species due to a number of threats. Therefore, it is important to develop a conservation action plan for the endemic and threatened freshwater fish of Sri Lanka. Such an action plan should first identify priority list of species as well as critical habitats of freshwater fish that require immediate conservation action. This should be followed with preparation and implementation of species specific recovery plans. The implementation of such plans requires large investments and therefore, possibility of private sector involvement in financing such recovery plans should be pursued. Also, a national programme to protect catchments as well as enforce river and stream reservations is another identified need which will benefit not only fish but other terrestrial species as well. As most of the species occur in human dominated landscapes a conservation model involving local communities in conservation of freshwater fish should be developed, at least for the restricted range species. At the same time, the *ex situ* breeding programmes should obtain the expertise available in the ornamental fish industry, especially to develop breeding techniques for threatened species that are difficult to breed in captivity. All pesticides approved for release in Sri Lanka should be assessed for impact on non-target organisms and the environment in general, and the labelling of such products should include information on environmental safeguards. Further, all future intentional release of exotic fishes should be preceded by an environmental impact assessment involving specific safeguards against invasiveness, and at the same time a ban should be imposed on importation of exotic fish species that are known to be invasive in other countries. Also, international agencies that fund development projects must be appraised of the negative consequences that can arise due to fisheries development projects in Sri Lanka

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**Table 08: List of Freshwater Fish in Sri Lanka**

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family: Cyprinidae</b>					
<b><i>Amblypharyngodon grandisquamis</i></b> Jordan & Starks, 1917	E:Sri Lanka Large Silver Carplet; S:Gangiliya	EN	B1ab(iii)+ 2ab(iii)		
<i>Amblypharyngodon melettinus</i> (Valenciennes,1844)	E: Silver Carplet; S: Soraya	LC		LC	
<b><i>Dawkinsia singhala</i></b> (Dunker, 1912) syn. <b><i>Puntius singhala</i></b>	E: Sri Lanka Filamented Barb; S:Dankola pethiya	LC		LC	
<b><i>Dawkinsia srilankensis</i></b> (Senanayake,1985) syn. <b><i>Puntius srilankensis</i></b>	E:Sri Lanka Blotched Filamented Barb ; S:Dankuda pethiya	CR	B2ab(iii)	CR	
<b><i>Devario aequipinnatus</i></b> (McClelland, 1839)	E:Sri Lanka Knuckles Danio; S:Dumbara saalaya, Dankola saalaya	CR	B2ab(iii)	LC	
<i>Devario malabaricus</i> (Jerdon, 1849)	E:Giant Danio; S:Rath kailaya, Dankola saalaya	LC		LC	
<b><i>Devario pathirana</i></b> (Kottelat & Pethiyagoda, 1990)	E:Sri Lanka Barred Danio; S: Pathirana saalaya	CR	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)
<b><i>Esomus thermoicos</i></b> (Valenciennes,1842)	E:Sri Lanka Flying Barb; S:Ravul dandiya, Thatu dandiya	LC		LC	
<b><i>Garra ceylonensis</i></b> Bleeker, 1863	E:Sri Lanka Stone Sucker; S:Gal paanduruva, Gal paandiya	VU	B2ab(iii)	EN	
<b><i>Garra phillipsi</i></b> Deraniyagala, 1933	E:Sri Lanka Phillips' Garra; S:Gal paanduruva, Gal paandiya	DD		DD	
<i>Labeo dussumieri</i> (Valenciennes,1842)	E:Common Labeo; S:Hiri kanaya, Gan kanaya	LC		LC	
<b><i>Labeo fisheri</i></b> Jordan & Starks,1917	E:Sri Lanka Mountain Labeo; S:Loku gadaya, Kalu gadaya, Weli gadaya, Gadaya	CR	B2ab(iii)	EN	B1ab(iii)
<b><i>Labeo lankae</i></b> Deraniyagala, 1952	E:Sri Lanka Orange-Fin Labeo; S:Thambalaya, Thambalaya vanna, Hiri kanaya	CR	B2ab(iii)	CR	A1c+2c, C1
<b><i>Laubuca insularis</i></b> Pethiyagoda, Kottelat, Silva, Maduwage & Meegaskumbura, 2008	E: Sri Lanka Knuckles Laubuca; S: Dumbara kara- adaya	CR	B2ab(iii)		
<b><i>Laubuca lankensis</i></b> (Deraniyagala, 1960)	E: Sri Lanka Blue Laubuca; S: Nilkara kara- adaya	VU	B1ab(iii)		
<b><i>Laubuca ruhuna</i></b> Pethiyagoda, Kottelat, Silva, Maduwage & Meegaskumbura, 2008	E:Sri Lanka Ruhunu Laubuca; S: Ruhunu kara- adaya	EN	B1ab(iii)+ 2ab(iii)		

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Laubuca varuna</i> Pethiyagoda, Kottelat, Silva, Maduwage & Meegaskumbura, 2008	E:Sri Lanka Varuna Laubuca; Varuna kara-adaya	CR	B2ab(iii)		
<i>Pethia bandula</i> (Kottelat & Pethiyagoda, 1991) syn. <i>Puntius bandula</i>	E:Sri Lanka Bandula Barb; S: Bandula pethiya, Jayanthiya	CR	B1ab(iii)+ 2ab(iii)	CR	B1+2c, C1
<i>Pethia cumingii</i> (Gunther, 1868) syn. <i>Puntius cumingii</i>	E: Sri Lanka Cuming's Barb; S:Depulliya, Pothya	EN	B1ab(iii)+ 2ab(iii)	LR/cd	
<i>Pethia melanomaculata</i> (Deraniyagala, 1956) syn. <i>Puntius melanomaculatus</i>	E: Sri Lanka tic tac Barb; S: Pothaya	VU	B1ab(iii)		
<i>Pethia nigrofasciata</i> (Gunther, 1868) syn. <i>Puntius nigrofasciatus</i>	E:Sri Lanka Black Ruby Barb; S:Bulath hapaya, Manamaalaya	EN	B2ab(iii)	LR/cd	
<i>Pethia reval</i> (Meegaskumbura, Silva, Maduwage & Pethiyagoda, 2008) syn. <i>Puntius reval</i>	E: Sri Lanka Redfined Barb; S: Ratuwaral pothaya	EN	B1ab(iii)+ 2ab(iii)		
<i>Puntius bimaculatus</i> (Bleeker, 1863)	E:Redside Barb; S: Ipili kadaya	LC		LC	
<i>Puntius dorsalis</i> (Jerdon, 1849)	E:Long-Snouted Barb; S:Katu pethiya, Katu kuriya, Rathu varal pethiya	LC			
<i>Puntius kamalika</i> Silva, Maduwage & Pethiyagoda, 2008	E: Sri Lanka Kamalika's Barb; S: Mada pethiya	EN	B1ab(iii)+ 2ab(iii)		
<i>Puntius kelumi</i> Pethiyagoda, Silva, Maduwage & Meegaskumbura, 2008	E: Sri Lanka Redeye Barb; S: Rathu-es katupethiya	EN	B1ab(iii)+ 2ab(iii)		
<i>Puntius layardi</i> (Günther, 1868)	E: Sri Lanka Layards bard; S: Leyardge katupethiya	DD			
<i>Puntius tetraspilus</i> (Günther, 1868)	E: Sri Lanka four spot Long snouted bard; S: Siu tit katupethiya	DD			
<i>Puntius thermalis</i> (Valenciennes, in Cuvier & Valenciennes, 1844)	E:Swamp Barb; S:Kota pethiya; S: Kota pethiya	LC		LC	
<i>Puntius titteya</i> Deraniyagala 1929	E:Sri Lanka Cherry Barb; S: Le thiththaya	EN	B2ab(iii)	LR/cd	
<i>Puntius vittatus</i> (Day, 1865)	E:Silver Barb; S: Bandi thiththaya, Podi pethiya, Ipili kadaya	LC		LC	
<i>Rasbora armitagei</i> Silva, Maduwage & Pethiyagoda, 2010	E: Sri Lanka Armitagi Rasbora; S: Rakvana dandiya	CR	B1ab(iii)+ 2ab(iii)		
<i>Rasbora dandiya</i> (Valenciennes, in Cuvier & Valenciennes, 1844)	E:Broad line Strip Rasbora; S: Dandiya, Kudamassa	LC			
<i>Rasbora microcephalus</i> (Jerdon, 1849)	E:Narrow line Rasbora S: Kiri dandiya, Kudamassa	LC		LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Rasbora naggasi</b> Silva, Maduwage & Pethiyagoda, 2010	Sri Lanka Naggasi Rasbora; S: Belihuloya dandiya	CR	B1ab(iii)+ 2ab(iii)		
<b>Rasbora wilpita</b> Kottelat & Pethiyagoda, 1991	E:Sri Lanka Wilpita Rasbora; S: Wilpita dandiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1+2c
<b>Rasboroides atukorali</b> (Deraniyagala, 1943)	E: Horadandia athukorale; S: Horadandia	VU	B1ab(iii)		
<b>Rasboroides nigromarginata</b> Meinken, 1957	E: Sri Lanka blackline golden Rasbora; S: Kaluiri halmaldandiya	CR	B2ab(iii)		
<b>Rasboroides vaterifloris</b> (Deraniyagala, 1930)	E: Sri Lanka Golden Rasbora; S:Halmal dandiya, Halmal thiththaya	EN	B1ab(iii)+ 2ab(iii)	LR/cd	
<b>Systemus pleurotaenia</b> (Bleeker, 1863) syn. <b>Puntius pleurotaenia</b>	E: Sri Lanka Black-Lined Barb; S:Heetha mathsaya	EN	B1ab(iii)+ 2ab(iii)	LR/cd	
<b>Systemus asoka</b> (Kottelat & Pethiyagoda, 1989) syn. <b>Puntius asoka</b>	E:Sri Lanka Asoka Barb; S: Ran manissa, Asoka pethiya	CR	B1ab(iii)+ 2ab(iii)	EN	A1c, B1+2c
<b>Systemus martenstyni</b> (Kottelat & Pethiyagoda, 1991) syn. <b>Puntius martenstyni</b>	E:Sri Lanka Martenstyn's Barb; S: Dumbara pethiya	CR	B1ab(iii)+ 2ab(iii)	EN	B1+2c
<b>Systemus spilurus</b> (Günther, 1868) syn. <b>Puntius spilurus</b>	E: Sri Lanka Olive Barb; S: Sri Lanka mas pethiya	DD			
<b>Systemus timbiri</b> (Deraniyagala, 1963) syn. <b>Puntius timbiri</b>	E: Sri Lanka thibiri Barb; S: Sri Lanka pethiya	DD			
<i>Tor khudree</i> Sykes, 1841	E:Mahseer; S: Lehella, Horapolaya	NT		EN	A2acde
<b>Family: Balitoridae</b>					
<b>Acanthocobitis urophthalmus</b> (Gunther, 1868)	E:Sri Lanka Tiger Loach; S: Wairan ahirava, Pol ahirava	EN	B1ab(iii)+ 2ab(iii)	LR/cd	
<b>Schistura notostigma</b> (Bleeker, 1863)	E:Sri Lanka Banded Mountain Loach; S:Kandu ahirava, Pol ahirava, Gomara ahirava	NT			
<b>Family: Cobitidae</b>					
<b>Lepidocephalichthys jonklaasi</b> (Deraniyagala, 1956)	E:Sri Lanka Jonklaas's Loach; S:Ahirava, Wairan ahirava	CR	B2ab(iii)	EN	B1+2c, C1
<b>Lepidocephalichthys thermalis</b> (Valenciennes, 1846)	E:Common Spiny Loach; S:Ahirava, Wairan ahirava	LC		LC	
<b>Family - Bagridae</b>					
<b>Mystus gulio</b> (Hamilton, 1822)	E:Long-Whiskered Catfish; Anguluwa, Maana ankutta	LC		LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Mystus vittatus</i> (Bloch,1794)	E: Striped Dwarf Catfish; S: Iri ankutta, Hiri ankutta	LC		LC	
<b><i>Mystus ankutta</i></b> Pethiyagoda, Silva & Maduwage, 2008	E: Sri Lanka Dwarf Catfish; S: Sri Lanka ankutta	EN	B1ab(iii)+2ab(iii)		
<i>Mystus seengtee</i> (Sykes, 1839)	E: Yellow Catfish; S: Path ankutta	LC			
<b>Family: Claridae</b>					
<b><i>Clarias brachysoma</i></b> Gunther 1864	E:Sri Lanka Walking Catfish; S:Magura, Vel magura, Kaha magura	NT			
<b>Family: Siluridae</b>					
<i>Ompok bimaculatus</i> (Bloch,1794)	E: Butter Catfish; S: Walapoththa, Penavalaya, Kokassa	LC		NT	
<i>Wallago attu</i> (Bloch & Schneider, 1801)	E:Shark Catfish; S:Walaya, Maha Walaya	EN	B2ab(iii)	NT	
<b>Family: Heteropneustidae</b>					
<i>Heteropneustes fossilis</i> (Bloch,1797)	E:Stinging Catfish; S:Hunga, Kaha hunga, Le hunga	LC		LC	
<b>Family: Gobiidae</b>					
<i>Awaous melanocephalus</i> (Bleeker, 1849)	E: Scribbled Goby; S:Bali Weligowwa	LC			
<i>Glossogobius giuris</i> Hamilton, 1822	E:Bar-Eyed Goby; S:Maha weligowwa, Bali weligemba	LC			
<i>Oligolepis acutipennis</i> (Valenciennes, 1837)	E: Sharptail goby; S: Weligowwa	DD			
<i>Schismatogobius deraniyagalai</i> Kottelat & Pethiyagoda, 1989	E:Redneck Goby; S:Kata rathu weligowwa	EN	B1ab(iii)+2ab(iii)		
<i>Sicyopterus griseus</i> Day,1878	E:Stone Goby; S:Maha gal weligowwa	CR	B1ab(iii)+2ab(iii)	LC	
<i>Sicyopterus halei</i> (Day,1888)	E:Red-Tailed Goby; S:Gal weligowwa	CR	B2ab(iii)	DD	
<b><i>Sicyopus jonklaasi</i></b> (Klausewitz & Henrich,1986)	E:Sri Lanka Lipstick Goby; S:Thol rathu weligowwa	EN	B1ab(iii)+2ab(iii)	DD	
<i>Stenogobius malabaricus</i> (Day,1865)	E:Malabar Goby; S:Weligowwa	DD			
<b><i>Stiphodon martenstyni</i></b> Watson,1998	E:Sri Lanka Martenstyn's Goby; S: Weligowwa	CR(PE)	B2ab(iii)		
<b>Family: Anguillidae</b>					
<i>Anguilla bicolor</i> Mc Clelland, 1844	E:Level Finned Eel; S:Mada aandha, kakkutu aandha, kalapu aandha	LC		LC	
<i>Anguilla nebulosa</i> Mc Clelland, 1844	E:Long Finned Eel; S: Vairan aandha, polmal aandha, kabaraaandha, kaha aandha, pulli aandha	LC		LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family: Mastacembelidae</b>					
<i>Mastacembelus armatus</i> (Lacepede, 1803)	E:Marbled Spiny Eel; S:Gan theliya, Oya theliya	LC		LC	
<i>Macrognathus pentophthalmos</i> Gronow	Sri Lanka spiny eel	CR(PE)	B1ab(iii)+ 2ab(iii)		
<b>Family: Synbranchidae</b>					
<i>Monopterus desilvai</i> Bailey & Gans, 1998	E:Sri Lanka Lesser Swamp Eel; S:Dumburu potta aandha, potta aandha	CR	B2ab(iii)		
<i>Ophisternon bengalense</i> Mc Clelland, 1844	E:Asian Swamp Eel; S:Potta aandha	CR	B1ab(iii)+ 2ab(iii)	LC	
<b>Family: Channidae</b>					
<i>Channa ara</i> (Deraniyagala, 1945)	E:Sri Lanka Giant Snakehead; S:Aara, Kalumaha, Gangara	EN	B2ab(iii)		
<i>Channa gachua</i> (Bleeker, 1877)	E: Brown Snakehead; S:Paradal kanaya, kanaya	LC		LC	
<i>Channa orientalis</i> (Bloch & Schneider, 1801)	E:Smooth-Breasted Snakehead; S:Kola kanaya, Gas kanaya	VU	B1ab(iii)		
<i>Channa punctata</i> (Bloch, 1794)	E:Spotted Snakehead; S:Mada kanaya, mada ara, madakariya	LC		LC	
<i>Channa striata</i> (Bloch, 1793)	E:Murrel; S:Loola, Halpath maha	LC		LC	
<b>Family: Aplocheilidae</b>					
<i>Aplocheilus dayi</i> (Steindachner, 1892)	E:Sri Lanka Day's Killifish; S:Uda handaya	EN	B2ab(iii)		
<i>Aplocheilus parvus</i> (Raj, 1919)	E:Dwarf Panchax; S:Kalapu handaya, Uda handaya	LC			
<i>Aplocheilus wernerii</i> Meinken, 1966	E:Sri Lanka Werner's Killifish; S: Iri handaya	EN	B1ab(iii)+ 2ab(iii)		
<b>Family: Belonidae</b>					
<i>Xenentodon cancila</i> Hamilton, 1822	E:Freshwater Gar Fish; S:Yonna	NT		LC	
<b>Family: Cichlidae</b>					
<i>Etroplus suratensis</i> (Bloch, 1785)	E:Green Chromide; S:Koraliya, Mal koraliya	LC		LC	
<i>Etroplus maculatus</i> (Bloch, 1785)	E:Orange Chromide; S:Kaha koraliya, Ralliya, Ran koraliya	LC		LC	
<b>Family: Belontiidae</b>					
<i>Belontia signata</i> (Gunther 1861)	E:Sri Lanka Combtail; S:Thalkossa, Pulutta, Kola moda	NT		LR/cd	
<i>Malpulutta kretseri</i> Deraniyagala, 1937	E:Sri Lanka Ornate Paradise Fish; S: Malpulutta	CR	B2ab(iii)	LR/cd	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Pseudosphromenus cupanus</i> (Cuvier, 1831)	E:Spike Tailed Paradise Fish; S: Pulutta, Thalkossa, Thal kaday	LC		LC	
<b>Family: Anabantidae</b>					
<i>Anabas testudineus</i> (Bloch,1795)	E:Climbing Perch; S:Kaavaiya, Pol kaavaiya	LC		DD	
<b>Family: Eleotridae</b>					
<i>Butis butis</i> (Hamilton, 1822)	E: Upside-down Sleeper; S: Uduppuva, Vaniya	LC		LC	
<i>Eleotris fusca</i> (Forster, 1801)	E:Brown Gudgeon, Dusky Sleeper; S: Puwakbadilla	LC		LC	
<b>Family: Adrianichthyidae</b>					
<i>Oryzias dancena</i> (Hamilton 1822)	E: Common Blue Eye; Indian ricefish; S: Handi hadaya	DD		LC	
<i>Oryzias carnaticus</i> (Jerdon, 1849)	E: Spotted Ricefish S: Handi hadaya	DD		LC	

## The Taxonomy and Conservation Status of Amphibians in Sri Lanka

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### Introduction

Knowledge on Sri Lanka's amphibians has increased rapidly during the past decade. The first review of this fauna, Kirtisinghe, (1957) recognized 35 species. This figure was increased to 53 species by Dutta & Manamendra-Arachchi (1996) based on examination of museum materials and the preliminary findings of a field survey that commenced in 1993. This field survey has resulted in a complete re-evaluation of the Amphibian fauna of Sri Lanka. Further, this survey facilitated the re-discovery of several species that had otherwise been known only from type specimens collected in the 19th century. In 1998, Pethiyagoda & Manamendra-Arachchi, based on the findings of their extensive field survey, announced that Sri Lanka's amphibian fauna might comprise of as many as 250 species, a figure that was subsequently revised to ~ 140 species by Meegaskumbura *et al.*, (2002). To date, descriptions of 111 valid amphibian species have been published (Manamendra-Arachchi & Pethiyagoda, 2005; Meegaskumbura & Manamendra-Arachchi, 2005; Mendis, 2012). This includes 95 endemic species and three endemic genera, *Adenomus*, *Lankanectes* and *Nannophrys*.

Bossuyt *et al.*, (2004) demonstrated conclusively that the Sri Lankan Philautids have long been isolated from the Indian group, with no biotic exchange having taken place between the island and the mainland populations in the past ~ 500,000 years. The presence of ancient lineages of amphibians in Sri Lanka was also demonstrated by Roelants *et al.*, (2004), who showed that the endemic genus *Lankanectes* diverged from the mainstream of Ranidae before the India-Sri Lanka plate separated from the Madagascar plate in the Upper Cretaceous. Sri Lanka's Amphibian fauna are therefore important not just for their species richness, but also for their representation of ancient lineages.

### Conservation

In year 2004, the conservation status of all species of amphibians described and considered valid world-wide, including 94 species from Sri Lanka, has been carried out (The Global Amphibian Assessment). This analysis has shown that out of the 34 species of amphibians confirmed as extinct worldwide in the past 500 years, 21 are from Sri Lanka. These comprise of 19 species belonging to genus *Pseudophilautus*, and one species each of the endemic genera *Adenomus* and *Nannophrys*. However, Wickramasinghe *et al.*, (2012) have re-discovered *Adenomus kandianus* and reported the possible rediscovery of *Pseudophilautus stellatus*, another species that had been listed as extinct in Sri Lanka, which will bring down the number of species that are listed as extinct in Sri Lanka to 19.

The amphibians are not exploited for commercial purposes in Sri Lanka. Yet, many species of amphibians are running a high risk of becoming extinct. Habitat loss is the main threat faced by the amphibian fauna. The vast majority of the amphibians are restricted to the south-western wet zone quarter of the island (Dutta & Manamendra-Arachchi, 1996), where more than 95%



of the original forest cover has now vanished. Only ~ 800 km<sup>2</sup> of relatively undisturbed forest now remain in the wet zone, and even this is severely fragmented. Three fragments (Knuckles, Sinharaja, Peak Wilderness) account for half of these forests while the balance 400 km<sup>2</sup> are contained in > 100 fragments of varying size, many of which exist only on maps. Clearly, fragmentation is a threat and needs to be addressed through the active management of habitat quality at key sites, and through the establishment of habitat corridors between them.

Fragmentation *per se*, is however, unlikely to be the only significant threat. Pesticide use in Sri Lanka is still to be regulated; the Control of Pesticides Act addresses only threats to human health and not environmental health or impact on non-target organisms. Taken together with massive erosion from sloping lands, aquatic ecosystems in general are at grave risk, and these risks remain un-assessed to date.

The extent of air pollution too, is yet to be assessed in Sri Lanka except in the context of human health in urban areas. Acid rain and mist have been implicated in forest die-back in many other countries. The single report there has been of this phenomenon in Sri Lanka (Gunawardena *et al.*, 1998), has largely been ignored by the conservation establishment even though forest die-back has been reported in several key amphibian habitats in Sri Lanka including Horton Plains, Peak Wilderness and Knuckles.

While threats to amphibians mentioned above are self-evident, the causes for the extreme rarity of many species and the extinction of relatively high number of species (19 or ca. 17% of the reported species) are as yet not fully understood. In a phase during which new species continue to be discovered, it could be argued that a discussion of either rarity or extinction is inappropriate, and that rare and even “extinct” species could be discovered with further exploration as evidenced by rediscovery of *Adenomus kandianus* by Wickramasinghe *et al.*, (2012). However, given the record of exploration of the last decade, Sri Lanka is now one of the better-explored countries with respect to amphibians.

The population declines observed in many parts of the world have, as yet, not been observed in Sri Lanka, but this could be because no populations have been monitored over sufficiently long periods of time. Further, amphibian species may be under-sampled in surveys because their populations are in any case small, or because individuals are otherwise difficult to locate (e.g. cryptic coloration; small size; restriction to arboreal or canopy habitats; lack of prominent vocalisation in males). Therefore, it is imperative that monitoring be carried out, at least in major bio-geo-climatic zones and prominent habitats within these zones. In addition to monitoring populations, it is also necessary to acquire data on parameters known to pose threats to amphibians, such as UV radiation, water quality, climatic variation, and infection by known pathogens such as the oomycete, *Saprolegnia ferax* (Kiesecker *et al.*, 2001) and the chytrid fungus *Batrachochytrium dendrobatids* (Blaustein *et al.*, 1994; Pounds *et al.*, 2006).

## **Research needs**

While keeping and breeding amphibians as a hobby is commonplace in much of the developed world, it is both illegal and unfashionable in Sri Lanka. Two consequences of this are a lack of popular empathy with amphibians (which are, by and large, treated with revulsion), and

a lack of human resources skilled and interested in managing captive populations. Captive breeding and reintroduction are clearly actions of last resort, but given a track record of 19 extinctions and many more species being listed as threatened, it is one that needs to be considered at least for some Sri Lankan species. A starting point would be the accumulation of local climatic and water quality data, together with *in situ* observations of activity patterns, diet resource utilization, breeding behaviour and larval development, together with an assessment of threats at each life-history stage. Such a programme would also need to examine possible *in situ* options, such as improved upstream water-quality management and the maintenance of riparian vegetation. With these data in hand, an informed judgment could be made with regard to restoring degraded former habitats for a rigorous reintroduction programme. Even if *ex situ* measures were not to be implemented immediately, the importance of developing the methodologies for this cannot be over-emphasized.

The keys provided by Dutta & Manamendra-Arachchi (1996); Manamendra-Arachchi & Pethiyagoda (2005) and Meegaskumbura & Manamendra-Arachchi (2005) facilitate the identification of all currently known Sri Lankan amphibians. With names and diagnoses available for these species, reliable work could commence on assessing populations, habitat requirements and distributions with a view to improving conservation practices. By offering only protection, the present regulatory framework discourages engagement with this fauna by scientists and interested citizens. The threats to amphibians in Sri Lanka however, will persist regardless of how effectively they are protected. The need of the hour is science-based conservation that seeks to address threats such as environmental pollution, climate changes and habitat degradation.

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**Table 09: List of Amphibians in Sri Lanka**

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family: Bufonidae</b>					
<i>Adenomus dasi</i> Manamendra-Arachchi & Pethiyagoda, 1998	E:Das's dwarf toad; S: Das ge kuru gemba	CR	B2ab(iii)	CR	B1ab(iii)+ 2ab(iii))
<i>Adenomus kandianus</i> (Günther, 1872)	E:Kandy dwarf toad; S:Mahanuwara kuru gemba	CR	B2ab(iii)	EX	
<i>Adenomus kelaartii</i> (Günther, 1858)	E:Kelaart's dwarf toad; S: Kelaartge kuru gemba	VU	B1ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<i>Duttaphrynus atukoralei</i> Bogert & Senanayake, 1966	E:Atukorale's toad S:Atukoralage gemba	NT			
<i>Duttaphrynus kotagamai</i> Fernando & Dayawansa, 1994	E:Kotagama's toad; S:Kotagamage gemba	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<i>Duttaphrynus melanostictus</i> Schneider, 1799	E:Common toad; S:Gey gemba	LC			
<i>Duttaphrynus noellerti</i> Manamendra-Arachchi & Pethiyagoda, 1998	E:Nollert's toad; S: Nollertge gemba	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)
<i>Duttaphrynus scaber</i> Schneider, 1799	E:Schneider's toad; S:Schneiderge gemba	VU	B1ab(iii)		
<b>Family: Microhylidae</b>					
<i>Kaloula taprobanica</i> (Parker, 1934)	E:Sri Lankan bullfrog; S:Visithuru rathu gemba	LC			
<i>Microhyla karunaratnei</i> Fernando & Siriwardhane, 1996	E:Karunaratne's narrow-mouthed frog; S: Karunaratnege muva patu madiya	EN	B1ab(iii)+ 2ab(iii)	CR	B1ab(iii)
<i>Microhyla ornata</i> (Duméril & Bibron, 1841)	E:Omate narrow mouthed frog; S:Visithuru muva patu madiya	LC			
<i>Microhyla rubra</i> (Jerdon, 1854)	E:Red narrow mouthed frog; S:Rathu muva patu madiya	LC			
<i>Microhyla zeylanica</i> Parker & Hill, 1949	E:Sri Lanka narrow mouthed frog; S:Lanka muva patu madiya	CR	B2ab(iii)	EN	B1+2
<i>Ramanella nagaoui</i> Manamendra-Arachchi & Pethiyagoda, 2001	E:Nagao's ramanella; S:Nagaoge mota hombu madiya	EN	B1ab(iii)+ 2ab(iii)	VU	D2
<i>Ramanella obscura</i> (Günther, 1864)	E:Obscure ramanella; S: Dumburu mota hombu madiya	VU	B1ab(iii)		
<i>Ramanella palmata</i> (Parker, 1934)	E:Parker's ramanella; S:Parkerge mota hombu madiya	CR	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)
<i>Ramanella variegata</i> (Stoliczka, 1872)	E:Variegated ramanella; S:Bada sudu mota hombu madiya	LC			

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Uperodon systoma</i> (Schneider, 1799)	E:Marbled baloon frog; S:Baloon madiya	LC			
<b>Family: Ranidae</b>					
<i>Hylarana gracilis</i> Gravenhorst, 1829	E:Sri Lanka wood frog; S:Lanka diya madiya	LC			
<i>Hylarana aurantiaca</i> Boulenger, 1904	E:Golden frog; S:Ranvan diya madiya	EN	B2ab(iii)	VU	B1ab(iii)
<i>Hylarana temporalis</i> (Günther, 1864)	E:Bronzed frog; S:Thambavan diya madiya	NT			
<b>Family: Dicroglossidae</b>					
<i>Euphlyctis cyanophlyctis</i> (Schneider, 1799)	E:Indian skipper frog; S:Uthpathana madiya	LC			
<i>Euphlyctis hexadactylus</i> (Lesson, 1834)	E:Indian green frog; S:Sayangili pala madiya	LC			
<i>Fejervarya greenii</i> (Boulenger, 1904)	E:Sri Lanka frog; S:Lanka kandukara madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<i>Fejervarya kirtisinghei</i> Manamendra-Arachchi & Gabadage, 1994	E:Kirtisinghe's frog; S: Kirtisinghege madiya	VU	B1ab(iii)		
<i>Fejervarya</i> cf. <i>syhadrensis</i> (Annandale, 1919)	E:Common paddy field frog; S:Vel madiya	LC			
<i>Hoplobatrachus crassus</i> (Jerdon, 1853)	E:Jurdon's bullfrog; S:Jurdonge diya madiya	LC			
<i>Hoplobatrachus tigerinus</i> (Daudin, 1802)	E:Indian bullfrog; S:Indiya diya madiya	DD			
<i>Nannophrys ceylonensis</i> (Günther, 1868)	E:Sri Lankan rock frog; S:Lanka galpara diya madiya	EN	B2ab(iii)	VU	B1ab(iii)+ 2ab(iii)
<i>Nannophrys guentheri</i> Boulenger, 1882	E:Gunther's rock frog; S: Guntherge galpara diya madiya	EX		EX	
<i>Nannophrys marmorata</i> Kirtisinghe, 1946	E:Marbled rock frog; S:Dumbara galpara diya madiya	CR	B1ab(iii)+ 2ab(iii)	CR	B1ab(iii)
<i>Nannophrys naeyakai</i> Fernando, S. S., Wickramasingha, L.J.M. & Rodrigo, R.K., 2007	E:Sri Lanka Tribal rock frog	CR	B2ab(iii)	EN	B1ab(iii)
<i>Sphaerotheca breviceps</i> (Schneider, 1799)	E:Short-headed burrowing frog; S:Thunhichi veli diya madiya	LC			
<i>Sphaerotheca rolandae</i> (Dubois, 1983)	E:Roland's burrowing frog; S:Lapavan veli diya madiya	LC			
<b>Family: Nyctibatrachidae</b>					
<i>Lankanectes corrugatus</i> (Peters, 1863)	E:Corrugated water frog; S:Vaka reli diya madiya	VU	B1ab(iii)		

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family: Rhacophoridae</b>					
<i>Pseudophilautus abundus</i> Manamendra-Arachchi & Pethiyagoda, 2005	E:Labugama shrub frog; S:Labugama panduru madiya	EN	B1ab(iii)+ 2ab(iii)		
<i>Pseudophilautus adspersus</i> (Günther, 1872)	E:Thwaites's shrub frog; S:Thwaitesge panduru madiya	EX		EX	
<i>Pseudophilautus alto</i> Manamendra-Arachchi & Pethiyagoda, 2005	E:Horton Plains shrub frog; S:Mahaeliya panduru madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<i>Pseudophilautus asankai</i> Manamendra-Arachchi & Pethiyagoda, 2005	E:Asanka's shrub frog; S: Asankage panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<i>Pseudophilautus auratus</i> Manamendra-Arachchi & Pethiyagoda, 2005	E:Golden shrub frog; S:Ranwan panduru madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<i>Pseudophilautus caeruleus</i> Manamendra-Arachchi & Pethiyagoda, 2005	E:Blue thigh shrub frog; S:Nil kalawethi panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<i>Pseudophilautus cavirostris</i> (Günther, 1869)	E:Hollow-snouted shrub frog; S:Hirigadu panduru madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<i>Pseudophilautus cuspis</i> Manamendra-Arachchi & Pethiyagoda, 2005	E:Sharp-snouted shrub frog; S: Thiyunu hombu panduru madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<i>Pseudophilautus decoris</i> Manamendra-Arachchi & Pethiyagoda, 2005	E:Elegant shrub frog; S:Bhushana panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<i>Pseudophilautus dimbullae</i> (Shreve, 1940)	E:Dimbulla shrub frog; S:Dimbulla panduru madiya	EX		EX	
<i>Pseudophilautus eximius</i> (Shreve, 1940)	E:Queenwood shrub frog; S:Queenwood panduru madiya	EX		EX	
<i>Pseudophilautus extirpo</i> Manamendra-Arachchi & Pethiyagoda, 2005	E:Blunt-snouted shrub frog; S:Mota-hombu panduru madiya	EX		EX	
<i>Pseudophilautus femoralis</i> (Günther, 1864)	E:Leaf-nesting shrub frog; S:Pala panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<i>Pseudophilautus fergusonianus</i> (Ahl, 1927)	E:Ferguson's shrub frog; S:Fergusonge panduru madiya	VU	B1ab(iii)		
<i>Pseudophilautus folicola</i> Manamendra-Arachchi & Pethiyagoda, 2005	E:Leaf dwelling shrub frog; S:Vakutu kola panduru madiya	VU	B1ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<i>Pseudophilautus frankenbergi</i> Manamendra-Arachchi & Pethiyagoda, 2005	E:Frankenberg's shrub frog; S:Frankenbergge panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<i>Pseudophilautus fulvus</i> Manamendra-Arachchi & Pethiyagoda, 2005	E:Knuckles shrub frog; S:Dumbara panduru madiya	CR	B1ab(iii)	EN	B1ab(iii)+ 2ab(iii)

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b><i>Pseudophilautus halyi</i></b> Manamendra-Arachchi & Pethiyagoda, 2005	E:Pattipola shrub frog; S:Pattipola panduru madiya	EX		EX	
<b><i>Pseudophilautus hallidayi</i></b> Manamendra-Arachchi & Pethiyagoda, 2005	E:Halliday's shrub frog; S::Hallidayge panduru madiya	EN	B1ab(iii)+ 2ab(iii)	VU	B1ab(iii)
<b><i>Pseudophilautus hoffmanni</i></b> Manamendra-Arachchi & Pethiyagoda, 2005	E:Hoffman's shrub frog; S:Hoffmange panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus hoipolloi</i></b> Manamendra-Arachchi & Pethiyagoda, 2005	E:Anthropogenic shrub frog; S:Gevathu panduru madiya	EN	B1ab(iii)+ 2ab(iii)		
<b><i>Pseudophilautus hypomelas</i></b> (Günther, 1876)	E:Webless shrub frog; S:Patala rahith apnduru madiya	EX		EX	
<b><i>Pseudophilautus leucorhinus</i></b> (Lichtenstein, Weinland & Von Martens, 1856)	E:White-nosed shrub frog; S:Sudu nasethi panduru madiya	EX		EX	
<b><i>Pseudophilautus limbus</i></b> Manamendra-Arachchi & Pethiyagoda, 2005	E:Haycock shrub frog; S:Haycock panduru madiya	CR	B2ab(iii)	CR	B1ab(iii)
<b><i>Pseudophilautus lunatus</i></b> Manamendra-Arachchi & Pethiyagoda, 2005	E:Handapan Ella shrub frog; S:Handapan ella panduru madiya	CR	B2ab(iii)	CR	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus macropus</i></b> (Günther, 1869)	E:Bigfoot shrub frog; S:Vishala padethi panduru madiya	CR	B1ab(iii)	CR	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus malcolmsmithi</i></b> (Ahl, 1927)	E:Malcolmsmith's shrub frog; S:Malcolmsmithge panduru madiya	EX		EX	
<b><i>Pseudophilautus microtyimpanum</i></b> (Günther, 1859)	E:Small eared shrub frog; S:Kudakan panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus mittermeieri</i></b> Megaskumbura & Manamendra-Arachcchi, 2005	E:Mittermeier's shrub frog; S:Mittermeierge panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)
<b><i>Pseudophilautus mooreorum</i></b> Megaskumbura & Manamendra-Arachcchi, 2005	E:Moore's shrub frog; S:Moorige panduru madiya	CR	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus nanus</i></b> (Günther, 1869)	E:Southern shrub frog; S:Dakunu diga panduru madiya	EX		EX	
<b><i>Pseudophilautus nasutus</i></b> (Günther, 1869)	E:Pointed-snouted shrub frog; S:Ul hombu panduru madiya	EX		EX	
<b><i>Pseudophilautus nemus</i></b> Megaskumbura & Manamendra-Arachcchi, 2005	E:Whistling shrub frog; S:Urahanbana panduru madiya	CR	B2ab(iii)	CR	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus ocellaris</i></b> Megaskumbura & Manamendra-Arachcchi, 2005	E:Golden-eyed shrub frog; S:Ranwan-es ethi panduru madiya	CR	B1ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus oxyrhynchus</i></b> (Günther, 1872)	E:Sharp-snouted shrub frog; S:Thiyunu hombu panduru madiya	EX		EX	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b><i>Pseudophilautus papillosus</i></b> Megaskumbura & Manamendra-Arachcchi, 2005	E:Papillated shrub frog; S:Dive-getithathi panduru madiya	CR	B1ab(iii)+ 2ab(iii)	CR	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus pleurotaenia</i></b> (Boulenger, 1904)	E:Side-striped shrub frog; S:Pathi thirethi panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus popularis</i></b> Megaskumbura & Manamendra-Arachcchi, 2005	E:Common shrub frog; S:Sulabha panduru madiya	NT		EN	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus poppiae</i></b> Megaskumbura & Manamendra-Arachcchi, 2005	E:Poppy's shrub frog; S:Poppyge panduru madiya	CR	B1ab(iii)+ 2ab(iii)		
<b><i>Pseudophilautus procax</i></b> Megaskumbura & Manamendra-Arachcchi, 2005	E:Cheeky shrub frog; S:Kammule pellamethi panduru madiya	CR	B2ab(iii)	CR	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus regius</i></b> Megaskumbura & Manamendra-Arachcchi, 2005	E:Polonnaruwa shrub frog; S:Rajarata panduru madiya	VU	B1ab(iii)		
<b><i>Pseudophilautus reticulatus</i></b> (Günther, 1864)	E:Reticulated thigh shrub frog; S:Jalabha panduru madiya	EN	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus rugatus</i></b> (Ahl, 1927)	E:Farnland shrub frog; S:Farnland panduru madiya	EX		EX	
<b><i>Pseudophilautus rus</i></b> Megaskumbura & Manamendra-Arachcchi, 2005	E:Kandian shrub frog; S:Nuwara panduru madiya	CR	B2ab(iii)		
<b><i>Pseudophilautus sarasinorum</i></b> (Müller, 1887)	E:Muller's shrub frog; S:Mullerge panduru madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus schmarda</i></b> (Kelaart, 1854)	E:Schmarda's shrub frog; S:Gorahendi panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus semiruber</i></b> (Annandale, 1913)	E:Annandale's shrub frog; S:Annandalege panduru madiya	DD			
<b><i>Pseudophilautus silus</i></b> Manamendra-Arachchi & Pethiyagoda, 2005	E:Pug-nosed shrub frog; S:Mukkan hombu ethi panduru madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus silvaticus</i></b> Manamendra-Arachchi & Pethiyagoda, 2005	E:Forest shrub frog; S:Kela panduru madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus simba</i></b> Manamendra-Arachchi & Pethiyagoda, 2005	E:Sinharaja shrub frog; S:Sinharaja panduru madiya	CR	B2ab(iii)	CR	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus sordidus</i></b> Manamendra-Arachchi & Pethiyagoda, 2005	E:Grubby shrub frog; S:Anduru lapavan panduru madiya	VU	B1ab(iii)		
<b><i>Pseudophilautus stellatus</i></b> (Kelaart, 1853)	E:Spotted shrub frog; S:Pulli sahitha panduru madiya	CR (PE)		EX	
<b><i>Pseudophilautus steineri</i></b> Manamendra-Arachchi & Pethiyagoda, 2005	E:Steiner's shrub frog; S:Steinerge panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)



Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b><i>Pseudophilautus stictomerus</i></b> (Günther, 1876)	E:Orange canthal shrub frog; S:Thembili-hombu ethi panduru madiya	EN	B1ab(iii)+ 2ab(iii)		
<b><i>Pseudophilautus stuarti</i></b> Manamendra-Arachchi & Pethiyagoda, 2005	E:Stuart's shrub frog; S:Stuartge panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus temporalis</i></b> (Günther, 1864)	E:Striped-snouted shrub frog; S:Hombu thirethi panduru madiya	EX		EX	
<b><i>Pseudophilautus variabilis</i></b> (Günther, 1859)	E:Gunther's shrub frog; S:Guntherge panduru madiya	EX		EX	
<b><i>Pseudophilautus viridis</i></b> Manamendra-Arachchi & Pethiyagoda, 2005	E:Dull-green shrub frog; S:Anduru kola panduru madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus zal</i></b> Manamendra-Arachchi & Pethiyagoda, 2005	E:White blotched shrub frog; S:Sudu pulli ethi panduru madiya	EX		EX	
<b><i>Pseudophilautus zimmeri</i></b> Manamendra-Arachchi & Pethiyagoda, 2005	E:Rummassala shrub frog; S:Rummassala panduru madiya	EX		EX	
<b><i>Pseudophilautus zorro</i></b> Manamendra-Arachchi & Pethiyagoda, 2005	E:Gannoruwa shrub frog; S:Gannoruwa panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<b><i>Pseudophilautus pardus</i></b> Meegaskumbura, M., Manamendra-Arachchi, K & Pethiyagoda, R., 2007	E:Leopard shrub frog	EX		EX	
<b><i>Pseudophilautus maia</i></b> Ferguson, 1876		EX		EX	
<b><i>Pseudophilautus singu</i></b> Meegaskumbura, M., Manamendra-Arachchi, K & Pethiyagoda, R., 2009		EN	B1ab(iii)+ 2ab(iii)	EN	B2ab(ii,iii)
<b><i>Pseudophilautus tanu</i></b> Meegaskumbura, M., Manamendra-Arachchi, K & Pethiyagoda, R., 2009	E: Sri Lanka petite frog	EN	B1ab(iii)+ 2ab(iii)	EN	B2ab(iii)
<b><i>Pseudophilautus schneideri</i></b> Meegaskumbura, M. & Manamendra-Arachchi, K., 2011	E:Schneider's shrub frog; S:Schneiderge panduru madiya	EN	B1ab(iii)+ 2ab(iii)		
<b><i>Pseudophilautus hankeni</i></b> Meegaskumbura, M. & Manamendra-Arachchi, K., 2011	E:Hanken's shrub frog; S:Hankenge panduru madiya	CR	B2ab(iii)		
<b><i>Polypedates cruciger</i></b> Blyth, 1852	E:Common hourglass tree frog; S:Sulabha pahimbu gas madiya	LC			
<i>Polypedates maculatus</i> (Gray, 1834)	E:Spotted tree frog; S:Pulli gas madiya	LC			
<b><i>Polypedates ranwellai</i></b> Wickranasinghe, Munindradasa & Fernando, 2012	E: Ranwellas tree frog	CR	B2ab(iii)		
<b><i>Taruga eques</i></b> Günther, 1858	E:Mountain hourglass tree frog; S:Kandukara gas madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Taruga fastigo</i> Manamendra-Arachchi & Pethiyagoda, 2001	E:Morningside tree frog; S:Ensal watta gas madiya	CR	B1ab(iii)+ 2ab(iii)	CR	B1ab(iii)
<i>Taruga longinasus</i> (Ahl, 1931)	E:Long-snouted tree frog; S:Dik hombu gas madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
<b>Family: Ichthyophiidae</b>					
<i>Ichthyophis glutinosus</i> (Linnaeus, 1758)	E:Ceylon caecilian; S: Kaha hiridanda	VU	B1ab(iii)		
<i>Ichthyophis orthoplicatus</i> Taylor, 1965	E:Pattipola caecilian; S:Dumburu hiridanda	EN	B1ab(iii)+ 2ab(iii)	VU	B1ab(iii)
<i>Ichthyophis pseudangularis</i> Taylor, 1965	E:Lesser yellow banded caecilian; S: Kuda kaha hiridanda	EN	B2ab(iii)	VU	B1ab(iii)

# The Taxonomy and Conservation Status of the Reptile Fauna in Sri Lanka

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## Introduction

Since the description of the first reptile, *Cylindrophis maculate* (syn. *Anguis maculata*) from Sri Lanka by Carl Linnaeus in 1754, large number of reptile species have been recorded from Sri Lanka (Batuwita and Bahir, 2005; Batuwita and Pethiyagoda, 2007; Das, *et al.* 2008; Deraniyagala 1953 and 1955; de Silva 1980; de Silva 1990; Gans & Fetcho, 1982; Gower and Maduwage 2011; Greer, 1991; Manamendra-Arachchi, *et al.* 2007; Pethiyagoda & Manamendra-Arachchi, 1998; Smith 1933, 1935 & 1943, Smith *et al.* 2008; Taylor 1950a, 1950b & 1953, Wall 1921; Wickramasinghe, *et al.* 2009, Wood *et.al.*, 2012). These published works indicates that Sri Lanka is endowed with a rich reptile fauna. The current list of reptile fauna of Sri Lanka comprise of 211 species of which 59% (124) are considered as endemic species. The reptile fauna can be further categorized in to 103 species of serpentoid reptiles (49 endemic) belonging to 10 families, one Subfamilie and 40 genera (five endemic - *Pseudotyphlops*, *Aspidura*, *Balanophis*, *Cercaspis* and *Haplocercus*), and 108 species of tetrapod reptiles (76 endemic) belonging to 12 families with 34 genera (six endemic - *Ceratophora*, *Cophotis*, *Lyriocephalus*, *Chalcidoseps*, *Nessia* and *Lankascincus*).

## Taxonomy

Since the publication of the 2007 Red List of Threatened Fauna and Flora of Sri Lanka, 24 new species have been added to the list of reptiles in Sri Lanka. Out of these, 17 are new to science that includes four species of serpentoid reptiles *Calliophis haematoetron* (Smith *et al.* 2008), *Rhinophis erangaviraji* (Wickramasinghe, *et al.* 2009), *Rhinophis lineatus*, and *Rhinophis zigzag* (Gower and Maduwage 2011), and 13 species of tetrapod reptiles *Cnemaspis amith*, *C. clivicola*, *C. kallima*, *C. latha*, *C. menikay*, *C. pava*, *C. phillipsi*, *C. pulchara*, *C. punctata*, *C. silvula*, *C. upendrai* (Manamendra-Arachchi, *et al.* 2007), *Lankascincus greeri* (Batuwita and Pethiyagoda 2007), *Eutropis tammanna* (Das, *et al.* 2008). The remaining seven species has resulted due to three re-validations *Hypnale zara* (Gray, 1849) by Maduwage *et al.* 2009 and *Dendrelaphis schokari* (Kuhl, 1820) by Rooijen & Vogel 2008 and *Hemidactylus pieresii* Kelaart, 1853 by Batuwita & Pethiyagoda, 2012, a probable new species *Hypnale sp. 'amal'* (Maduwage *et al.* 2009), two new records for Sri Lanka *Hydrophis fasciatus* (Abyerami and Sivashanthini 2008) and *Chalcides cf. ocellatus* that resulted in a range extension of the genus *Chalcides* from India to Sri Lanka (Karunarathna *et al.* 2008), and finally *Enhydris enhydris* (Schneider, 1799) was included since a specimen from Sri Lanka (CAS 12767) was examined and identified by Murphy & Voris (2005) from the California Academy of Science.

Number of taxonomic revisions has taken place during the last decade resulting in changes in reptile nomenclature at family, genus and species level. Nine genera belonging to the family Colubridae which consisted of 22 genera earlier have been placed under two other families based on molecular studies (genera *Cerberus*, *Enhydris* and *Gerarda* are included in family Homolapsidae, and genera *Amphiesma*, *Atretium*, *Argyrogena*, *Aspidura*, *Balanophis*, *Macropisthodon*, and *Xenochrophis* are included in family Natricidae Vidal *et al.* 2009; Zaher *et al.* 2009). Genus level name changes included *Sphenomorphus dorsicatenatus* being changed to *Lankascincus dorsicatenatus* (Batuwita and Pethiyagoda, 2007), all members of the genus *Mabuya* being placed under the genus *Eutropis* (Mausfeld and Schmitz, 2003), and *Cosymbotus platyurus* being changed to *Hemidactylus platyurus* (Carranza and Arnold, 2006). Several species level name changes have also been affected resulting in *Lissemys punctata*

been changed to *L. ceylonensis* (Praschag *et al.* 2011), *Hemidactylus brookii parvimaclatus* to *H. parvimaclatus* (Bauer *et al.* 2010a), *Hemidactylus maculates hunae* to *H. hunae* (Bauer *et al.* 2010b), *Hemidactylus triedrus lankae* to *H. lankae* (Bauer *et al.* 2010), *Hypnale nepa* to *H. zara* (Maduwage *et al.* 2009) and *Geckoella triedrus* (Günther, 1864) to *Cyrtodactylus triedra* (Wood, *et al.* 2012). Further, several species have been removed from the list of reptiles in Sri Lanka due to taxonomic revisions. For instance, *Hypnale walli*, has been declared as a junior synonym of *Hypnale nepa* (Maduwage *et al.* 2009), *Boiga ranawanei*, as a junior synonym of *Boiga beddomei* (Manamendra-Arachchi and Pethiyagoda 2007) and *Cnemaspis ranwellai*, as a junior synonym of *Cnemaspis scalpensis* (Manamendra-Arachchi, *et al.* 2007).

## Distribution

The name changes mentioned above have also resulted in status changes of number of species, where *Lissemys ceylonensis*, *Hemidactylus hunae*, and *H. lankae* are now listed as species endemic to Sri Lanka (Praschag *et al.* 2011; Bauer *et al.* 2010). Further, Wickramasinghe *et al.*, (2011) have shown that *Dasia halianus* is also endemic to Sri Lanka. In addition number of recent studies has provided evidence to change the previously known distribution pattern of several species of reptiles. For instance, *Cnemaspis kandianus* and *C. tropidagastur* that were formerly considered to have a wide distribution in Sri Lanka is now known to be confined to Kandy district and certain parts of the Matale district (Manamendra-Arachchi, *et al.* 2007). Likewise, *Dendrelaphis tristis*, who was thought to have a wide distribution, has now been confined to the dry and arid zones, but may be rarely found from the wet zone, while the species commonly found in the wet zone was re-validated as *D. schokari* who can also rarely be found from the dry zone of the island, but never in the arid zone. On the other hand the distribution range of number of species such as *C. podihuna* (Karunarathna *et al.* 2010), *C. molligodai*, and *C. silvulai*, (Karunarathna and Amarasinghe 2011a, 2012), *Calodactylodes illingworthorum*, (Karunarathna and Amarasinghe 2011b), *Liopeltis calamaria* (Karunarathna and Perera 2010), *Lankascincus greeri* (Karunarathna and Amarasinghe 2011a, Karunarathna *et al.* 2012; Peabotuwage *et al.* 2012) has been expanded with the availability of new information.

*Laticauda colubrina* (Schneider, 1799) was not included in the current list despite the fact that several authors (Das & de Silva 2005; Somaweera 2006; Somaweera & Somaweera 2009) have included the species in their publications, due to the fact that there is no evidence for its landing sights and no sight records for the species in the island's surrounding oceans.

## Threats

Deforestation, leading to loss of habitat and habitat fragmentation are the main threats faced by reptile fauna of Sri Lanka. The rate of forest depletion and loss of wild life habitats in Sri Lanka is considered one of the highest in South Asia with more than 50% of the forest cover being lost during the last century alone. Loss of forest cover is especially prominent in the dry zone of Sri Lanka which may be the reason for low level of endemism observed in the reptile fauna. This idea is further supported by the fact that most of the dry zone restricted endemic reptiles are found in forests associated with isolated hills (*Cnemaspis ritigalaensis* in Ritigala, *Cnemaspis kumarasinghei* in Moneragala and *Cnemaspis podihuna* in Lahugala), which are perhaps the only forests patches that have been preserved untouched by man for centuries. Majority of the endemic and threatened reptiles are restricted to the Lowland and Montane forests that are fast disappearing is identified as the biggest threat to the reptile fauna of Sri Lanka. In addition, mortality related to man-made forest fires, application of agrochemicals, road kills, non selective killing of snakes and predation by farm and domestic animals have also been identified as threats faced by the reptile fauna.

The crocodile populations are under increased threat and have even attracted the attention of the international scientific community. Once again, habitat loss and habitat fragmentation resulting due to ever expanding human population and rapid development projects that brings these animals into conflict with humans is considered as the main threat to the two crocodile populations in Sri Lanka. Capture and relocation, the main management tool used at present to mitigate such conflicts, cannot be considered as an effective conservation measure as the remaining natural habitats cannot absorb more animals as they are already near their carrying capacity. Therefore the next best option would be to devise an alternate location for them such as a 'crocodile sanctuary' so that their destiny will not have to end at the hands of humans.

## **Conservation**

Less than 33% of the Sri Lankan reptiles are listed in the global list of threatened species. Out of the species of reptiles that are globally assessed, most are listed under the Data Deficient (DD) category. The main reason for this low representation in the global threatened list is the lack of data on many species of reptiles endemic to Sri Lanka, especially species belonging to Typhlopidae, Uropeltidae, and Hydrophidae snake families. Most of the species belonging to family Uropeltidae except species with single records have been assessed in the current list. Since systematic studies for the families Typhlopidae, and Hydrophidae have only commenced recently, species of these families were placed under the DD category for the time being until more information becomes available. No specific conservation programmes have been carried out for reptiles of Sri Lanka except for sea turtles. There is a need to formulate species recovery plans for at least identified critically endangered and endangered species and their habitats (Erdelen 2012). Further there are habitats that support unique reptile species assemblages such as Aruwakkalu which is the type locality of four burrowing reptiles species *Rhinophis dorsimaculatus* (Orange shield tail), *Rhinophis porrectus* (Willey's earth snake), and *Nessia hickanala* (Sharkhead snakeskink) which is being mined extensively by the Cement industry. Such habitats have to be identified and preserved to ensure long term conservation of the reptile fauna of Sri Lanka.

## **Research Needs**

Absence or lack of accurate data on many species of Sri Lankan reptiles is the major impediment in correctly assessing their current conservation status as well as preparing species specific conservation action plans for the threatened reptile species. Most of the studies done to date have focussed mainly on the distribution of reptiles with little attention being paid to study the ecology and biology of at least the threatened and endemic reptile species. Therefore, a research agenda needs to be prepared for the reptiles identifying the priority areas that need to be focussed in order to facilitate research that will address the present information gaps in reptile fauna of Sri Lanka. Further, there is practically no information available on the reptile fauna of Northern and North-eastern parts of the island due to three decades of civil war that existed in the region. It should be noted that some species of *Typhlops* that have been described from this region has not been recorded after their initial descriptions (Taylor, 1947; Smith, 1943). Also reptile fauna found in the isolated mountains in the dry zone needs to be investigated further as studies done to date have shown that the natural forests associated with such isolated hills may be the last refuges for the herpetofauna inhabiting the dry zone (Wickramasinghe & Munindradasa 2007; Gower & Maduwage 2011). A systematic study of the distribution of reptile fauna in Sri Lanka is also a major research need as 22 reptile species

have not been recorded after their initial description and 12 species have not been recorded for nearly a century. Further, the type localities of many reptile species are given as Ceylon or the name of a major town, which is not precise and prevents a proper assessment of the status of such species. Study of systematics of the reptile fauna is also another identified need especially the taxonomic status of the marine snake fauna of Sri Lanka which has not been revised for the past 52 years since the work done by Deraniyagala (1955). Since then, virtually no in-depth study on systematic has been carried out by scientists on marine snake fauna in coastal waters of Sri Lanka.

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**Table 10: List of Reptiles in Sri Lanka**

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family: Crocodylidae</b>					
<i>Crocodylus palustris</i> Lesson, 1831	E: Mugger crocodile / Marsh crocodile; S: Hala kimbula; T: Kulathi Muthalei	NT		VU	A1a, C2a
<i>Crocodylus porosus</i> Schneider, 1801	E: Saltwater crocodile / Estuarine crocodile; S: Gata kimbula; T: Semmukku Muthalei	EN	B2ab(iii)	LR/lc	
<b>Family: Bataguridae</b>					
<i>Melanochelys trijuga</i> (Schweigger, 1812)	E: Black turtle; S: Gal ibba; T: Amai, Karuppu Amai	LC		LR/nt	
<b>Family: Cheloniidae</b>					
<i>Caretta caretta</i> (Linnaeus, 1758)	E: Loggerhead sea turtle; S: Olugedi kasbaeva / Kannadi kasbaeva; T: Perunthalai Amai	EN	B2ab(iii)	EN	A1abd
<i>Chelonia mydas</i> (Linnaeus, 1758)	E: Green turtle; S: Gal kasbaeva / Mas kasbaeva / Vali kasbaeva; T: Pal Amai	EN	B2ab(iii)	EN	A2bd
<i>Eretmochelys imbricata</i> (Linnaeus, 1766)	E: Hawksbill sea turtle; S: Pothu kasbaeva / Leli kasbaeva; T: Nanja Amai	EN	B2ab(iii)	CR	A2bd
<i>Lepidochelys olivacea</i> (Eschscholtz, 1829)	E: Olive ridley sea turtle; S: Batu kasbaeva / Mada kasbaeva; T: Pul Amai	EN	B2ab(iii)	VU	A2bd
<b>Family: Dermochelidae</b>					
<i>Dermochelys coriacea</i> (Vandelli, 1761)	E: Leatherback sea turtle; S: Dara kasbaeva / Tun Dara kasbaeva; T: Dhoni Amai	EN	B2ab(iii)	CR	A1abd
<b>Family: Testudinidae</b>					
<i>Geochelone elegans</i> (Schoepff, 1795)	E: Indian star tortoise; S: Mevara ibba/ Taraka ibba; T: Katu Amai	NT		LR/lc	
<b>Family: Trionychidae</b>					
<i>Lissemys ceylonensis</i> (Gray, 1856)	E: Flapshell turtle; S: Kiri ibba; T: Pal Amai	LC			
<b>Family: Agamidae</b>					
<i>Calotes calotes</i> (Linnaeus, 1758)	E: Green garden lizard; S: Pala katussa; T: Pachai Karata	LC			
<i>Calotes ceylonensis</i> (Müller, 1887)	E: Painted lip lizard; S: Tholavisturu katussa	NT			
<i>Calotes desilvai</i> Bahir & Maduwage, 2005	E: Desilvas' whistling lizard / Desilvas' forest lizard; S: Desilvage sivuruhandalana katussa	CR	B2ab(iii)		
<i>Calotes liocephalus</i> Günther, 1872	E: Crestless lizard; S: Kondu datirahita katussa	EN	B2ab(iii)	EN	B1+2bc
<i>Calotes liolepis</i> Boulenger, 1885	E: Whistling lizard / Forest lizard; S: Sivuruhandalana katussa	NT			



Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b><i>Calotes nigrilabris</i></b> Peters, 1860	E: Black cheek lizard; S: Kalu kopul katussa	EN	B1ab(iii) +2ab(iii)		
<i>Calotes versicolor</i> (Daudin, 1802)	E: Common garden lizard; S: Gara katussa	LC			
<b><i>Ceratophora aspera</i></b> Günther, 1864	E: Rough horn lizard; S: Raluang katussa / Kuru angkatussa	EN	B1ab(iii) +2ab(iii)	VU	B1ab
<b><i>Ceratophora erdeleni</i></b> Pethiyagoda & Manamendra-Arachchi, 1998	E: Erdelen's horn lizard; S: Erdelenge angkatussa	CR	B1ab(iii)		
<b><i>Ceratophora karu</i></b> Pethiyagoda & Manamendra-Arachchi, 1998	E: Karunaratne's horn lizard; S: Karunaratnage angkatusua	CR	B1ab(iii)		
<b><i>Ceratophora stoddartii</i></b> Gray, 1835	E: Rhinohorn lizard; S: Kagamuva angkatussa	EN	B1ab(iii) +2ab(iii)		
<b><i>Ceratophora tennentii</i></b> Günther and Gray, 1861	E: Leafnose lizard; S: Pethi angkatussa.	CR	B2ab(iii)	EN	B1+2bc
<b><i>Cophotis ceylanica</i></b> Peters, 1861	E: Pygmy lizard; S: Kandukara kurukatussa	EN	B1ab(iii) +2ab(iii)		
<b><i>Cophotis dumbara</i></b> Samarawickrama, Ranawana, Rajapaksha, Ananjeva, Orlov, Ranasinghe & Samarawickrama, 2006	E: Knuckles pygmy lizard; S: Dumbara kurukatussa	CR	B2ab(iii)	CR	B1ab(iii)
<b><i>Lyriocephalus scutatus</i></b> (Linnaeus, 1758)	E: Lyre head lizard / Hump-snouted lizard; S: Gatahombu katussa / Karamal bodiliya	VU	B1ab(iii)	NT	
<b><i>Otocryptis nigristigma</i></b> Bahir & Silva, 2005	E: Black spotted kangaroo lizard; S: Wiyali Pinum katussa	LC			
<b><i>Otocryptis wiegmanni</i></b> Wagler, 1830	E: Sri Lankan kangaroo lizard; S: Gomu talikatussa / Pinum katussa /	LC			
<i>Sitana ponticeriana</i> Cuvier, 1829	E: Fanthroated lizard; S: Pulina talikatussa / Vali katussa	LC		LC	
<b>Family: Chameleoniae</b>					
<i>Chamaeleo zeylanicus</i> Laurenti, 1768	E: Sri Lankan chameleon; S: Bodilima / Bodiliya	EN	B2ab(iii)		
<b>Family: Gekkonidae</b>					
<b><i>Calodactylodes illingworthorum</i></b> Deraniyagala, 1953	E: Lankan golden gecko; S: Maha galhuna	EN	B2ab(iii)		
<b><i>Cnemaspis alwisi</i></b> Wickramasinghe & Munundradasa, 2007	E: Alwis's day gecko; S: Alwisge divasarihuna	NT			
<b><i>Cnemaspis amith</i></b> Manamendra-Arachchi, Batuwita & Pethiyagoda, 2007	E: Amith's day gecko; S: Amithge divasarihuna	CR	B2ab(iii)		
<b><i>Cnemaspis clivicola</i></b> Manamendra-Arachchi, Batuwita & Pethiyagoda, 2007	E: Montain day gecko; S: Kandukara divasarihuna	CR	B2ab(iii)		
<b><i>Cnemaspis gemunu</i></b> Bauer, De Silva, greenbaum & Jackman, 2007	E: Gemunu's day gecko; S: Gemunuge divasarihuna	CR	B1ab(iii) +2ab(iii)		
<b><i>Cnemaspis kallima</i></b> Manamendra-Arachchi, Batuwita & Pethiyagoda, 2007	E: Gammaduwa day gecko; S: Gammaduwa divasarihuna	CR	B1ab(iii) +2ab(iii)		
<b><i>Cnemaspis kandiana</i></b> (Kelaart, 1853)	E: Kandyan day gecko; S: Kandukara divasarihuna	EN	B1ab(iii) +2ab(iii)	LC	
<b><i>Cnemaspis kumarasinghei</i></b> Wickramasinghe & Munundradasa, 2007	E: Kumarasinghe's day gecko; S: Kumarasinghege divasarihuna	EN	B1ab(iii) +2ab(iii)		

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Cnemaspis latha</b> Manamendra-Arachchi, Batuwita & Pethiyagoda, 2007	E: Elegant day gecko; S: Bushana divasarihuna	CR	B2ab(iii)		
<b>Cnemaspis menikay</b> Manamendra-Arachchi, Batuwita & Pethiyagoda, 2007	E: Jewel day gecko; S: Ratna divasarihuna	CR	B2ab(iii)		
<b>Cnemaspis molligodai</b> Wickramasinghe & Munundradasa, 2007	E: Molligod's day gecko; S: Molligodage divasarihuna	EN	B1ab(iii) +2ab(iii)		
<b>Cnemaspis pava</b> Manamendra-Arachchi, Batuwita & Pethiyagoda, 2007	E: Little day gecko; S: Kuda divasarihuna	CR	B2ab(iii)		
<b>Cnemaspis phillipsi</b> Manamendra-Arachchi, Batuwita & Pethiyagoda, 2007	E: Phillip's day gecko; S: Phillipge divasarihuna	CR	B2ab(iii)		
<b>Cnemaspis podihuna</b> Deraniyagala, 1944	E: Dwarf day gecko; S: Kuda divasarihuna / Podi galhuna	VU	B1ab(iii)	LC	
<b>Cnemaspis pulchra</b> Manamendra-Arachchi, Batuwita & Pethiyagoda, 2007	E: Rakvana day gecko; S: Rakvana divasarihuna	CR	B1ab(iii) +2ab(iii)		
<b>Cnemaspis punctata</b> Manamendra-Arachchi, Batuwita & Pethiyagoda, 2007	E: Dotted day gecko; S: Thith divasarihuna	CR	B2ab(iii)		
<b>Cnemaspis ritigalensis</b> Wickramasinghe & Munundradasa, 2007	E: Ritigala day gecko; S: Ritigala divasarihuna	CR	B2ab(iii)		
<b>Cnemaspis samanalensis</b> Wickramasinghe & Munundradasa, 2007	E: Peakwilderness day gecko; S: Samanaola divasarihuna	CR	B1ab(iii) +2ab(iii)		
<b>Cnemaspis scalpensis</b> (Ferguson, 1877)	E: Gannoruva day gecko; S: Gannoruva divasarihuna	EN	B1ab(iii) +2ab(iii)		
<b>Cnemaspis silvula</b> Manamendra-Arachchi, Batuwita & Pethiyagoda, 2007	E: Forest day gecko; S: Vana divasarihuna	EN	B1ab(iii) +2ab(iii)		
<b>Cnemaspis tropidogaster</b> (Boulenger, 1885)	E: Roughbelly day gecko; S: Ralodara divasarihuna	DD		DD	
<b>Cnemaspis upendrai</b> Manamendra-Arachchi, Batuwita & Pethiyagoda, 2007	E: Upendra's day gecko; S: Upendrage divasarihuna	CR	B2ab(iii)		
<b>Cyrtodactylus cracens</b> Batuwita & Bahir, 2005	E: Narrow headed forest gecko; S: Hisa-patu Mukalam huna	EN	B1ab(iii) +2ab(iii)		
<b>Cyrtodactylus edwardtaylori</b> Batuwita & Bahir, 2005	E: Taylors forest gecko; S: Taylorge mukalam huna	CR	B2ab(iii)		
<b>Cyrtodactylus fraenatus</b> (Günther, 1864)	E: Great forest gecko; S: Maha halae huna / Mukalam huna	CR	B1ab(iii)		
<b>Cyrtodactylus ramboda</b> Batuwita & Bahir, 2005	E: Ramboda forest gecko; S: Ramboda mukalam huna	CR	B2ab(iii)		
<b>Cyrtodactylus soba</b> Batuwita & Bahir, 2005	E: Knuckles forest gecko; S: Dumbara mukalam huna	CR	B2ab(iii)		
<b>Cyrtodactylus subsolanus</b> Batuwita & Bahir, 2005	E: Rakwana forest gecko; S: Rakwana mukalam huna	CR	B1ab(iii) +2ab(iii)		
<b>Cyrtodactylus triedra</b> (Günther, 1864)	E: Spotted bowfinger gecko; S: Pulli vakaniyahuna	VU	B1ab(iii)	NT	
<b>Geckoella collegalensis</b> (Beddome, 1870)	E: Collegal rockgecko; S: Collegalge vakaniyahuna	DD			

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b><i>Geckoella yakhuna</i></b> (Deraniyagala, 1945)	E: Blotch bowfinger gecko / Demon gecko; S: Lapavan vakaniyahuna / Yak huna	VU	B1ab(iii)		
<i>Gehyra mutilata</i> (Wiegmann, 1834)	E: Four-claw gecko; S: Caturanguli huna	LC			
<b><i>Hemidactylus depressus</i></b> Gray, 1842	E: Kandyan gecko; S: Hali gehuna	LC		LC	
<i>Hemidactylus frenatus</i> Schlegel in Duméril & Bibron, 1836	E: Common house-gecko; S: Sulaba gehuna	LC		LC	
<b><i>Hemidactylus hunae</i></b> Deraniyagala, 1937	E: Spotted giant-gecko / Rock gecko; S: Davanta tit huna	EN	B1ab(iii)		
<b><i>Hemidactylus lankae</i></b> Deraniyagala, 1953	E: Termite hill gecko; S; Hum-bas huna	LC			
<i>Hemidactylus leschenaultii</i> Duméril & Bibron, 1836	E: Bark gecko / Sycamore gecko; S: Kimbul huna / Gas huna / Kumbuk huna	LC			
<i>Hemidactylus parvimaculatus</i> Deraniyagala, 1953	E: Spotted housegecko; S: Pulli gehuna	LC			
<b><i>Hemidactylus pieresii</i></b> Kelaart, 1853	E: Pieresii's housegecko; S; Pimburu huna	EN	B1ab(iii)		
<i>Hemidactylus platyurus</i> (Schneider, 1792)	E: Frilltail gecko; S: Nagutavakarali huna	DD			
<i>Hemidactylus scabriceps</i> (Annandale, 1906)	E: Scaly gecko; S; Korapotu huna	DD		DD	
<i>Hemiphyllodactylus typus</i> Bleeker, 1860	E: Slender gecko; S: Sihin huna	VU	B1ab(iii)		
<i>Lepidodactylus lugubris</i> (Duméril & Bibron, 1836)	E: Scaly-finger gecko / Mourning gecko; S: Salkapa huna	VU	B1ab(iii)		
<b>Family: Lacertidae</b>					
<i>Ophisops leschenaultii</i> Milne- Edwards, 1829	E: Leschenault's Snake eye lizard; S: Panduru sarpakshi katusa	CR	B2ab(iii)		
<i>Ophisops minor</i> (Deraniyagala, 1971)	E: Lesser snake eye lizard; S: Kuda sarpakshi katusa	CR	B2ab(iii)		
<b>Family: Scincidae</b>					
<i>Chalcides</i> cf. <i>ocellatus</i> Forskal, 1775	E: White spotted skink; S: Sudu-pulli hikanala	DD			
<b><i>Chalcidoseps thwaitesii</i></b> (Günther, 1872)	E: Fourtoe snakeskink; S: Caturanguli sarpiyahikanala	CR	B2ab(iii)		
<b><i>Dasia halianus</i></b> (Haly & Nevill in: Nevill, 1887)	E: Haly's treeskink; S: Helige rukhiraluva	NT			
<i>Eutropis beddomii</i> (Jerdon, 1870)	E: Beddome's stripe skink; S: Vairan hikanala	EN	B2ab(iii)		
<i>Eutropis bibronii</i> (Gray, 1838)	E: Bibron's sand skink; S: Vali hikanala	EN	B1ab(iii) +2ab(iii)		
<i>Eutropis carinata</i> (Schneider, 1801)	E: Common skink; S: Sulaba hikanala	LC			
<b><i>Eutropis floweri</i></b> Taylor, 1950	E: Taylor's skink; S: Taylorge hikanala	EN	B1ab(iii) +2ab(iii)		
<i>Eutropis macularia</i> (Byth, 1853)	E: Bronzegreen little skink; S: Pingu hikanala	LC			
<b><i>Eutropis madaraszi</i></b> Méhely, 1897	E: Spotted skink; S: Pulli hikanala	VU	B1ab(iii)		

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Eutropis tammanna</i> Das, de Silva & Austin, 2008	E: Tmmanna skink; S: Tam-manna hikanala	LC			
<i>Lankascincus deignani</i> (Taylor, 1950)	E: Deignan's lankaskink; S: Deignange lakhikanala	EN	B1ab(iii) +2ab(iii)	EN	B1ab(iii)
<i>Lankascincus deraniyagalae</i> Greer, 1991	E: Deraniyagal's lankaskink; S: Daraniyagalge lakhikanala	EN	B2ab(iii)		
<i>Lankascincus dorsicatenatus</i> (Deraniyagala, 1953)	E: Catenated litter skink; S: Damwal singitihikanala	EN	B1ab(iii) +2ab(iii)		
<i>Lankascincus fallax</i> (Peters, 1860)	E: Common lankaskink; S: Sulaba lakhikanala	LC			
<i>Lankascincus gansi</i> Greer, 1991	E: Gans's lankaskink; S: Gansge lakhikanala	VU	B1ab(iii)		
<i>Lankascincus greari</i> Batuwita & Pethiyagoda, 2007	E: Geer's lanka skink; S: Geerge lakhikanala	EN	B1ab(iii) +2ab(iii)		
<i>Lankascincus munindradasai</i> Wickramasinghe, Rodrigo, Dayawansa & Jayantha, 2007	E: Munindradasa's lanka skink; S: Munindradasage lakhikanala	CR	B1ab(iii)		
<i>Lankascincus sripadensis</i> Wickramasinghe, Rodrigo, Dayawansa & Jayantha, 2007	E: Sripada forest skink; S: Sripakandu duburu hikanala	CR	B2ab(iii)		
<i>Lankascincus taprobanensis</i> (Kelaart, 1854)	E: Smooth lanka skink; S: Sumudu lakhikanala	EN	B1ab(iii) +2ab(iii)	NT	
<i>Lankascincus taylori</i> Greer, 1991	E: Taylor's lanka skink; S: Telorge lakhikanala	EN	B2ab(iii)		
<i>Lygosoma punctatus</i> (Gmelin, 1799)	E: Dotted skink; S: Tit hiraluhikanala	LC			
<i>Lygosoma singha</i> (Taylor, 1950)	E: Taylor's skink; S: Taylorge hiraluhikanala	DD			
<i>Nessia bipes</i> Smith, 1935	E: Smith's snakeskink; S: Smithge sarpahiraluva	EN			
<i>Nessia burtonii</i> Gray, 1839	E: Threetoe Snakeskink; S: Triyanguli sarpahiraluva	LC			
<i>Nessia deraniyagalai</i> Taylor, 1950	E: Deraniyagala's snakeskink; S: Derniyagalage sarpahiraluva	DD			
<i>Nessia didactylus</i> (Deraniyagala, 1934)	E: Two toe snakeskink; S: Dvayanguli sarpahiraluva	EN			
<i>Nessia hickanala</i> Deraniyagala, 1940	E: Sharkhead snakeskink; S: Morahis sarpahiraluva	CR	B1ab(iii) +2ab(iii)		
<i>Nessia layardi</i> (Kelaart, 1854)	E: Layard's snakeskink; S: Leyardge sarpahiraluva	EN	B1ab(iii) +2ab(iii)		
<i>Nessia monodactylus</i> (Gray, 1839)	E: Toeless snakeskink; S: Ananguli sarpahiraluva	EN	B2ab(iii)		
<i>Nessia sarasinorum</i> (Müller, 1889)	E: Sarasin's snakeskink; S: Sarasinge sarpahiraluva	VU	B1ab(iii)		
<i>Sphenomorphus dussumieri</i> (Duméril & Bibron, 1839)	E: Dussumier's litter skink; S: Salkasahita singitihikanala	DD		LC	
<i>Sphenomorphus megalops</i> (Annandale, 1906)	E: Annandale's litter skink; S: Annandalege singitihikanala	DD			
<b>Family: Varanidae</b>					
<i>Varanus bengalensis</i> (Daudin, 1802)	E: Land monitor; S; Talagoya	LC		LC	
<i>Varanus salvator</i> (Laurenti, 1768)	E: Water monitor; S: Kabaragoya	LC		LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family: Acrochordidae</b>					
<i>Acrochordus granulatus</i> (Schneider, 1799)	E: Wart snake; S: Diya goya/ Redi naya	VU	B2ab(iii)	LC	
<b>Family: Boidae</b>					
<i>Gongylophis conica</i> (Schneider, 1796)	E: Sand boa; B: Vali pimbura, kota pimbura	VU	B2ab(iii)		
<b>Family: Pythonidae</b>					
<i>Python molurus</i> (Linnaeus, 1758)	E: Indian python; S: Pimbura	LC		LR/nt	
<b>Family: Cyliodrophidae</b>					
<i>Cylindrophis maculata</i> (Linnaeus, 1758)	E: Pipe snake, S: Depath naya	NT			
<b>Family: Natricidae</b>					
<i>Amphiesma stolatum</i> (Linnaeus, 1758)	E: Buff striped keelback; S: Aharukuka	LC	B1ab(iii)		
<i>Aspidura brachyrrhos</i> (Boie, 1827)	E: Boie's roughside; S: Le madilla	VU	B2ab(iii)	DD	
<i>Aspidura copei</i> Günther, 1864	E: Cope's roughside; S: Kalumedilla	DD			
<i>Aspidura deraniyagalae</i> Gans & Fetcho, 1982	E: Deraniyagala's roughside; S: Kandu madilla	CR	B1ab(iii)		
<i>Aspidura drummondhayi</i> Boulenger, 1904	E: Drummond – Hay's roughside; S: Ketiwalmadilla	EN	B2ab(iii)		
<i>Aspidura guentheri</i> Ferguson, 1876	E: Guenther's roughside; S: Kudamadilla	NT	B1ab(iii)		
<i>Aspidura trachyprocta</i> Cope, 1860	E: Common roughside; S: Dalawa madilla	EN	B2ab(iii)	LC	
<i>Atretium schistosum</i> (Daudin, 1803)	E: The Olive keelback water-snake; S: Diyawarna.	LC		NT	
<i>Balanophis ceylonensis</i> (Günther, 1858)	E: Sri Lanka keelback; S: Nihaluwa	EN	B1ab(iii)		
<i>Macropisthodon plumbicolor</i> (Cantor, 1839)	E: The green keelback; S: Palabariya	NT			
<i>Xenochrophis asperrimus</i> (Boulenger, 1891)	E: The checkered keelback; S: Diya polonga / Diya bariya	LC	B2ab(iii)		
<i>Xenochrophis piscator</i> (Schneider, 1799)	E: Checkered Keelback; S: Diya bariya	LC			
<b>Family: Homalopsidae</b>					
<i>Cerberus rynchops</i> (Schneider, 1799)	E: Dog-faced water snake; S: Kuna diya kaluwa.	LC		LC	
<i>Gerarda prevostianus</i> (Eydoux & Gervais, 1837)	E: Gerard's water snake; S: Prevostge diyabariya	EN	B2ab(iii)	LC	
<i>Enhydris enhydris</i> (Schneider, 1799)	E: Rainbow mud snake; S: Dedunu diyabariyawa	DD			
<b>Family: Colubridae</b>					
<i>Ahaetulla nasuta</i> (Lacépède, 1789)	E: Green vine snake; S: Ahaetulla	LC			
<i>Ahaetulla pulverulenta</i> (Duméril, Bibron & Duméril, 1854)	E: Brown vine snake; S: Henakandaya	LC			
<i>Argyrogena fasciolata</i> (Shaw, 1802)	E: Banded racer; S: Wal gerandiya	DD			
<i>Boiga barnesii</i> (Günther, 1869)	E: Barnes's cat snake, S: Panduru mapila	VU	B1ab(iii)		

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Boiga beddomei</i> (Wall, 1909)	E: Beddoms cat snake; S: Kaha mapila	NT		DD	
<i>Boiga ceylonensis</i> (Günther, 1858)	E: Sri Lanka cat snake; S: Nidi mapila	LC			
<i>Boiga forsteni</i> (Duméril, Bibron & Duméril, 1854)	E: Forsten's cat snake; S: Naga mapila	NT		LC	
<i>Boiga trigonatus</i> (Schneider, 1802)	E: Gamma cat snake; S: Ran mapila	LC		LC	
<b><i>Cercaspis carinata</i></b> (Kuhl, 1820)	E: The Sri Lanka wolf snake; S: Dhara radanakaya	EN	B2ab(iii)		
<i>Chrysopelea ornata</i> (Shaw, 1802)	E: Ornate flying snake; S: Polmal karawala, Malsara	VU	B1ab(iii)		
<b><i>Chrysopelea taprobanica</i></b> Smith, 1943	E: Striped flying snake; S: Dangara danda	LC			
<i>Coeloganthus helena</i> (Daudin, 1803)	E: Trinket snake; S: Katalaluwa	LC			
<b><i>Dendrelaphis bifrenalis</i></b> (Boulenger, 1890)	E: Boulenger's bronze back; S: Pandura haldanda	NT		LC	
<i>Dendrelaphis caudolineolatus</i> (Gray, 1834)	E: Gunther's bronze back; S: Viri haldanda	VU	B1ab(iii)		
<b><i>Dendrelaphis oliveri</i></b> (Taylor, 1950)	E: Oliver's bronze back; S: Oliverge haldanda	DD			
<b><i>Dendrelaphis schokari</i></b> (Kuhl, 1820)	E: Schokari's bronze back; S: Schokarige haldanda	LC			
<i>Dendrelaphis tristis</i> (Daudin, 1803)	E: Common bronze back; S: Tura haldanda	LC			
<i>Dryocalamus gracilis</i> (Günther, 1864)	E: The scarce bridal; S: Megata radanakaya	DD		DD	
<i>Dryocalamus nympa</i> (Daudin, 1803)	E: Bridal snake; S: Geta Radanakaya / Geta karawala	LC			
<b><i>Haplocercus ceylonensis</i></b> Günther, 1858	E: The black spine snake / Mould snake; S: Kurunkarawala.	EN	B2ab(iii)		
<i>Liopeltis calamaria</i> (Günther, 1858)	E: Reed snake; S: Punbariya	NT			
<i>Lycodon aulicus</i> (Linnaeus, 1758)	E: Wolf snake, house snake; S: Alu radanakaya	LC			
<b><i>Lycodon osmanhilli</i></b> Taylor, 1950	E: Flowery wolf snake; S: Mal radanakaya	LC		LC	
<i>Lycodon striatus</i> (Shaw, 1802)	E: Shaw's wolf snake; S: Kabara radanakaya	LC			
<i>Oligodon arnensis</i> (Shaw, 1802)	E: Common kukri snake/ Banded Kukri; S: Arani dath ketiya	LC			
<b><i>Oligodon calamarius</i></b> (Linnaeus, 1758)	E: Templeton's kukri snake; S: Kabara dath ketiya	EN	B2ab(iii)	DD	
<b><i>Oligodon sublineatus</i></b> Duméril & Bibron, 1854	E: Dumerul's kuki snake; S: Pulli dath ketiya	LC		LC	
<i>Oligodon taeniolata</i> (Jerdon, 1853)	E: Variegated kukri snake / Russell's kukri snake; S: Wairi dattketiya	LC		LC	
<i>Ptyas mucosa</i> (Linnaeus, 1758)	E: Rat snake; S: Gerandiya.	LC			



Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Sibynophis subpunctatus</i> (Duméril & Bibron, 1854)	E: Jerdon's polyodont; S: Dathigomaraya	NT			
<b>Family: Elapidae</b>					
<i>Bungarus caeruleus</i> (Schneider, 1801)	E: The common krait; S: Thel karawala/ Maga maruwa	LC	B2ab(iii)		
<i>Bungarus ceylonicus</i> Günther, 1864	E: Sri Lanka krait / Ceylon krait; S: Mudu karawala/ Hath karawala	VU	B1ab(iii)		
<i>Calliophis haematoetron</i> Smith, Manamendra-Arachchi & Somaweera, 2008	E: Red bellied coral snake; S: Bada rathu depath kaluwa	CR	B2ab(iii)		
<i>Calliophis melanurus</i> (Shaw, 1802)	E: Sri Lanka coral snake; S: Depath kaluwa	NT			
<i>Naja naja</i> (Linnaeus, 1758)	E: Indian cobra; S: Naya/ Nagaya	LC			
<b>Family: Hydrophidae</b>					
<i>Astrotia stokesii</i> (Gray in Stokes, 1846)	E: Stoke's sea snake; S: Mahavalakkadiya	LC			
<i>Enhydrina schistosa</i> (Daudin, 1803)	E: Hook nose sea snake; S: Valakkadiya	LC			
<i>Hydrophis bituberculatus</i> Peters, 1872	E: Peter's sea snake; S: Peterge muhudunaya	DD			
<i>Hydrophis cyanocinctus</i> Daudin, 1803	E: The chitul; S: Wairan muhudunaya	LC			
<i>Hydrophis fasciatus</i> (Schneider, 1799)		LC			
<i>Hydrophis gracilis</i> (Shaw, 1802)	E: John's sea snake; S: Kudahis Muhudu naya	LC			
<i>Hydrophis lapemoides</i> (Gray, 1849)	E: Persian Gulf seasnake; S: Persiyanu bokke muhudu naya	LC			
<i>Hydrophis mammilaris</i> (Daudin, 1803)		DD			
<i>Hydrophis ornatus</i> (Gray, 1849)	E: Gray's sea snake; S: Grayge Muhudu naya	LC			
<i>Hydrophis spiralis</i> (Shaw, 1802)	E: Narrow banded sea snake; S: Sihin Mudhu naya	LC			
<i>Hydrophis stricticollis</i> Günther, 1864	E: Guenther's sea snake; S: Guntherge muhudunaya	DD			
<i>Kerilia jerdonii</i> Gray, 1849	E: Jerdon's sea snake; S: Jerdonge Muhudu naya	LC			
<i>Lapemis curtus</i> (Shaw, 1802)	E: Shaw's sea snake; S: Shawge kuda muhudunaya	LC			
<i>Pelamis platurus</i> (Linnaeus, 1766)	E: Yellow bellied sea snake; S: Badakaha muhudu naya	LC			
<i>Praescutata viperina</i> (Schmidt, 1852)	E: Schmidt's sea snake; S: Polon muhudunaya	LC			
<b>Family: Typhlopidae</b>					
<i>Ramphotyphlops braminus</i> (Daudin, 1803)	E: Common blind snake; S: Dumuta kanaulla	LC			
<i>Typhlops ceylonicus</i> Smith, 1943	E: Smith's blind snake; S: Smithge kanaulla	DD			
<i>Typhlops lankaensis</i> Taylor, 1947	E: Lanka blind snake; S: Lak kanaulla	CR	B2ab(iii)		

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Typhlops leucomelas</i> Boulenger, 1890	E: Pied typhlops; S: Dewarna kanaulla	CR	B2ab(iii)		
<i>Typhlops malcolmi</i> Taylor, 1947	E: Malcolm's blind snake; S: Malcomge kanaulla	DD			
<i>Typhlops mirus</i> Jan in: Jan & Sordelli, 1860	E: Jan's blind snake; S: Heen-kanaulla.	CR	B1ab(iii)		
<i>Typhlops porrectus</i> Stoliczka, 1871	E: Stoliczka's blind snake; S: Stoliczkage kanaulla	EN	B1ab(iii) +B2ab		
<i>Typhlops tenebrarum</i> Taylor, 1947	E: Taylor's blind snake; S: Taylorge kanaulla	DD			
<i>Typhlops veddae</i> Taylor, 1947	E: Veddha's blind snake; S: Veddage kanaulla	DD			
<i>Typhlops violaceus</i> Taylor, 1947	E: Violet blind snake; S: Dan kanaulla	DD			
<b>Family: Uropeltidae</b>					
<i>Platyplectrurus madurensis</i> Beddome 1877	E: Madura blind snake; S: Madura kanaulla	DD			
<i>Pseudotyphlops philippinus</i> Schlegel, 1839	E: Large shield tail; S: Maha bimulla	EN	B2ab(iii)		
<i>Rhinophis blythii</i> Kelaart, 1853	E: Blyth's earth snake; S: Gomarathudulla	EN	B1ab(iii) +B2ab		
<i>Rhinophis dorsimaculatus</i> Deraniyagala, 1941	E: Orange shield tail; S: Thambapani walga ebaya	DD			
<i>Rhinophis drummondhayi</i> (Wall, 1921)	E: Drummond-Hay's earth snake; S: Thapothudulla	EN	B2ab(iii)	NT	
<i>Rhinophis erangaviraji</i> Wickramasinghe, Vidanapathirana, Wickramasinghe & Ranwella, 2009	E: Viraj's shieldtail snake or Eranga Viraj's Rhinophis; S: Eranga Virajge thudulla	CR	B1ab(iii) +B2ab		
<i>Rhinophis homolepis</i> Hemprich, 1820	E: Kelaarts earth snake; S: Depaththudulla	EN	B1ab(iii) +B2ab		
<i>Rhinophis lineatus</i> Gower & Maduwage, 2011	E: Striped rhinophis; S: Dick-iri thudulla	CR	B2ab(iii)		
<i>Rhinophis oxyrynchus</i> (Schneider, 1801)	E: Schneider's earth snake; S: Ulthudulla	LC		LC	
<i>Rhinophis philippinus</i> (Cuvier, 1829)	E: Cuvier's earth snake; S: Cuvierge walga ebaya	EN	B1ab(iii) +B2ab		
<i>Rhinophis porrectus</i> Wall, 1921	E: Willey's earth snake; S: Digthudulla	DD			
<i>Rhinophis punctatus</i> Müller, 1832	E: Muller's earth snake; S: Tictudulla	DD			
<i>Rhinophis tricoloratus</i> Deraniyagala, 1975	E: Deraniyagala's shield tail; S: Deraniyagalage walga ebaya	CR	B1ab(iii)+B2ab		
<i>Rhinophis zigzag</i> Gower & Maduwage, 2011	E: Zigzag Rhinophis; S: Ack-wack thudulla	CR	B2ab(iii)		
<i>Uropeltis melanogaster</i> Gray, 1858	E: Black shield tail; S: Kaluwakatulla	EN	B1ab(iii)+B2ab		
<i>Uropeltis phillipsi</i> (Nicholls, 1929)	E: Phillips's shield tail; S: Iriwakatulla	EN	B2ab(iii)		
<i>Uropeltis ruhunae</i> Deraniyagala, 1954	E: Ruhunu shield tail; S: Ruhunuwakatulla	DD			



Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family: Viperidae</b>					
<i>Daboia russelii</i> (Shaw & Nodder, 1797)	E: Russell's viper; S: Tith Polonga/ Gata polaga	LC			
<i>Echis carinatus</i> (Schneider, 1801)	E: Saw scale viper; S: Vali polonga	VU	B2ab(iii)		
<i>Hypnale hypnale</i> (Merrem, 1820)	E: The Merrem's Hump nose viper; S: Polonthelissa	LC			
<i>Hypnale nepa</i> (Laurenti, 1768)	E: Merrem's hump-nosed viper; S: Polonthelissa/ Kunakatuwa	EN	B2ab(iii)	LC	
<i>Hypnale zara</i> (Gray, 1849)	E: Stripe-necked hump-nosed viper; S: Wayiram gelathi Kunakatuwa	VU	Biab(iii)		
<i>Hypnale sp. 'amal'</i> Maduwage, Silva, Manamendra-Arachchi & Pethiyagoda, 2009	E: Amal's Hump nose viper; S: A: Amalge polonthelissa	CR	B2ab(iii)		
<i>Trimeresurus trigonocephalus</i> (Sonnini et Latreille, 1801)	E: Green pit viper; B: Pala polonga	LC			

## The Taxonomy and Conservation Status of Birds in Sri Lanka

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### Introduction

The early formal Sri Lankan literature does not carry detailed descriptions on birds other than casual references. Since the 14<sup>th</sup> century birds have been extensively featured in Sinhalese poetry *Sandesha Kavya*. Detailed documentation of the Sri Lankan avifauna began in the 16<sup>th</sup> century with the arrival of Europeans such as Ribeiro, Baldaeus, Queyroz and Knox. However, the first formal account of a Sri Lankan species, Sri Lanka Lorikeet, was given by George Edwards (1743) in his book *Natural History of Uncommon Birds*. The systematic study of the avifauna of Sri Lanka began in the mid 18<sup>th</sup> century with major contributions from naturalists such as Loten, Joinville, Templeton, Layard, Kelaart and Holdsworth. Then came the monumental four volume publication by Capt. Vincent Legge, *A History of the Birds of Ceylon*, which remains the most comprehensive account on the birds of Sri Lanka to date. Since then the knowledge on Sri Lankan avifauna has been updated periodically by many ornithologists such as Murray, Wait, Baker, Ripley, Whistler, Henry, Phillips, Kotagama, Rasmussen, Anderton and Warakagoda

Sri Lanka supports a rich avifauna that stands at 453 species at present. This include 240 species of birds that are known to breed in Sri Lanka, of which 33 are accepted by some ornithologists as endemic species while some ornithologists consider only 27 species as endemic and the remaining 6 are considered as proposed endemics. Further, 21 species that are listed as breeding residents, also have migrant populations which also include migrants of different races of the species that occur in the country. The remaining 213 species are migrants of which 72 species are encountered rarely and therefore considered as vagrants. It should be noted that only 240 resident birds have been evaluated in this Red List.

### Taxonomy

The taxonomy of Asian birds has been subject to many changes over the last two decades, consequent to increased research efforts and new methodologies which were adopted in avian taxonomy. This resulted in several changes in the scientific nomenclature of Birds of Sri Lanka.

Kotagama *et. al.* (2006) recognized sixty four families representing the bird species present in Sri Lanka based on Sibley & Monroe (1990). Since then, twenty new families have been added, due to elevation of subfamilies or tribes to full family status (Tribes Haematopodini, Recurvirostrini, Stercorariini, Artamini, Rhipidurini, Dicrurini, Monarchini, Dicaeini were upgraded to family level while tribe Oriolini has been split and upgraded to two families, Oriolidae and Campephagidae which also include members of the tribe Vangini. Further, subfamilies Dromadinae, Hydrobatinae, Aegithininae, Turdinae, Passerinae, Motacillinae, Ploceinae, Estrildinae and Emberizinae are upgraded to family level. Subfamily Garrulacinae and tribe Timaliini are placed in the family Timaliidae). Members of five families have been “lumped” with other existing families (Dendrocygnidae, Megalaimidae, Centropodidae and Batrachostomidae now placed in Anatidae, Ramphastidae, Cuculidae and Podargidae

respectively). Further, Halcyonidae and Cerylidae are placed in the family Alcedinidae and members of family Irenidae are placed in family Chloropseidae). Therefore, the avifauna of Sri Lanka is currently represented by 79 families (Dickinson, 2003).

Many species level taxonomic changes have also been affected recently, due to either lumping or splitting of existing species. These include splitting of *Phoenicopterus ruber* into *P. roseus* and *P. ruber* (Knox *et al.*, 2002); *Corvus macrorhynchos* into *C. leuallantii* and *C. macrorhynchos* (Sibley & Monroe, 1990); *Hirundo tahitica* into *H. domicola* and *H. tahitica* (Sibley & Monroe, 1990); *Mirafra assamica* into *M. affinis*, *M. assamica*, *M. erythrocephala* and *M. microptera* (Alström, 1998); *Chloropsis cochinchinensis* into *C. jerdoni*, *C. cochinchinensis*, and *C. kinabaluensis* (Wells *et al.*, 2003); *Sula dactylatra* into *S. dactylatra* and *S. granti* (AOU, 2000); *Spilornis minimus* into *S. klossi* and *S. cheela* (Rasmussen & Anderton (2005); *Spizaetus cirrhatus* into *S. cirrhatus* and *S. floris* (Gjershaug *et al.*, 2004); *Otus scops* into *O. senegalensis* (Dowsett & Forbes-Watson, 1993), *O. sunia* (AOU, 1998), *O. alius* (Rasmussen, 1998) and *O. scops*; *Acrocephalus stentoreus* into *A. stentoreus* and *A. orinus* (Bensch & Pearson, 2002); *Seicercus burkii* into *S. burkii*, *S. valentini*, *S. whistleri*, *S. soror* and *S. tephrocephalus* (Alström & Olsson, 1999) and *S. omeiensis* (Martens *et al.*, 1999); *Lonchura malacca* into *L. malacca* and *L. atricapilla* (AOU, 2000). Further, *Pomatorhinus horsfieldii* has been split into *P. melanurus* and *P. horsfieldii* (Collar, 2006; Rasmussen & Anderton, 2005), of which *P. melanurus* is listed as endemic to Sri Lanka. Like wise, *Dicrurus paradiseus* has been split into *D. paradiseus* and *D. lophorinus* of which the latter is endemic to Sri Lanka. *Zoothera dauma imbricata* previously considered as a subspecies is now recognized as a distinct species, *Z. imbricata* that is endemic to Sri Lanka (Collar, 2005; Rasmussen & Anderton 2005).

Number of species that has been listed for Sri Lanka has been lumped together with other species. These include lumping of *Coturnix chinensis* and *C. adansonii* into *C. chinensis* (Dowsett & Forbes-Watson, 1993); *Puffinus bannermani*, *P. persicus* and *P. subalaris* into *P. Iherminieri* (Brooke, 2004); *Butorides sundevalli* and *B. striatus* into *B. striata* (AOU, 2003); *Egretta garzetta* and *E. dimorpha* into *E. garzetta* (Kushlan & Hancock, 2005); *Copsychus malabaricus* and *C. stricklandii* into *C. malabaricus* (Collar, 2004); *Motacilla alba* and *M. lugens* into *M. alba* (AOU, 2005); *Anthus richardi*, *A. cinnamomeus*, *A. camaroonensis* and *A. latistriatus* into *A. richardi* (Dowsett & Forbes-Watson, 1993).

## Distribution

Sri Lanka is divided into 6 Avifaunal Zones based on the distribution patterns of the resident bird species (Kotagama, 1993). These include the Northern or Indian zone that shares many similarities with the South Indian avifauna; Low country wet zone, Mid country wet zone and Hill country wet zone that contain most of the endemic and threatened species; Dry zone and the Uva zone, which contain mostly common bird species as well as few rare species that are restricted to these zones. The Northern avifaunal zone has not been accessible for nearly 30 years due to the conflict that existed in the area. However, following the culmination of the war in 2009 these areas have once again become accessible which has resulted in a wealth of new information about Sri Lankan avifauna.

## Threats

In Sri Lanka, wild birds are rarely exploited as a source of food. However, there is an emerging trend which began in the recent past of capturing some of the species for the illegal pet trade. As in the case of all other taxa, habitat loss is the main threat faced by the birds of Sri Lanka. Nearly one third of all the resident birds in Sri Lanka are forest birds including all the endemic species. Out of the endemic birds, more than 60% are restricted to the forests in the wet zone. These forests are being rapidly depleted to support the needs of the burgeoning human population. Therefore, loss of forest cover and fragmentation of forests are the main threats faced by the birds of Sri Lanka. Wetlands are also an important bird habitat in Sri Lanka with nearly 25% of the resident birds and more than 75% of the migrants depend on such habitats. Many of these wetland habitats are adversely impacted due to conversion, changes in salinity and hydrology, pollution of water ways, spread of invasive species (e.g. spread of *Prosopis juliflora* in Bundala and Wankalai, *Annona glabra* in Bellanwila-Attidiya), expansion of prawn farming and salt production. As a result, species richness and the carrying capacity of many wetland habitats have declined rapidly. Even though land use change has impacted most bird species in a detrimental manner, some species such as *Lonchura* spp., *Psittacula krameri*, *Stigmatopelia chinensis*, *Corvus splendens*, *Centropus chinensis* have shown a marked increase in their range and numbers.

## Research Needs

Compared to other taxonomic groups, birds have received a great deal of attention from both amateur and professional bird watchers. However, information available on birds is restricted mostly to their distribution while, for most birds, especially the threatened species, information on their biology and ecology is inadequate. This has been identified as a serious impediment in formulating species specific conservation plans for threatened species in Sri Lanka. Even though the taxonomy of many species of birds have been revised based on regional revisions, a number of taxonomic issues, especially the status of the proposed endemic species, remain unresolved at present. While taking stringent measures to preserve the existing habitat, establishment of a captive breeding programme for the threatened endemic birds, preferably in the National Zoological gardens as well as at such a facility in the hill country for the hill species, is also a critical need, if it becomes necessary in the future to conduct reintroduction or population enhancement as a conservation measure. Lastly, a systematic monitoring mechanism of the critical bird species, important bird habitats and large breeding colonies needs to be established for Sri Lanka.

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**Table 11: List of Birds in Sri Lanka**

Abbreviations: Scientific Name<sup>PE</sup> (Possibly Endemic)

\* Only the breeding population has been considered in this assessment

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family: Phasianidae</b>					
<i>Francolinus pictus</i> (Jardine & Selby, 1828)	E: Painted Francolin; S: Thith Ussa-watuwa; T: Varna cowthari.	CR	B1ab(iii)	LC	
<i>Francolinus pondicerianus</i> (Gmelin, 1789)	E: Grey Francolin; S: Alu Ussa-watuwa; T: Cowthari.	NT		LC	
<i>Coturnix chinensis</i> Linnaeus, 1766	E: Blue Quail; S: Nil piriwatuwa, Wil-watuwa; T: Neelamaarbuk kaadai.	EN	B2ab(iii)	LC	
<i>Perdica asiatica</i> (Latham, 1790)	E: Jungle Bush-quail; S: Wana panduru watuwa, Wil watuwa; T: Kaatuputhar kaadai.	CR	B2ab(iii)	LC	
<b><i>Galloperdix bicalcarata</i></b> (Forster, 1781)	E: Sri Lanka Spurfowl; S: Sri Lanka haban kukula; T: Sinnak kaatuk koli.	NT		LC	
<b><i>Gallus lafayetii</i></b> Lesson, 1831	E: Sri Lanka Junglefowl; S: Sri Lanka Wali kukula; T: Kattu-koli	LC		LC	
<i>Pavo cristatus</i> Linnaeus, 1758	E: Indian Peafowl; S: Monara; T: Neela mayil.	LC		LC	
<b>Family: Anatidae</b>					
<i>Dendrocygna javanica</i> (Horsfield, 1821)	E: Lesser Whistling-duck; S: Heen thamba seruwa; T: Siriya seelkani siravi.	LC		LC	
<i>Nettapus coromandelianus</i> (Gmelin, 1789)	E: Cotton pygmy -goose; S: Mal seruwa; T: Kullathara.	NT		LC	
<i>Anas poecilorhyncha</i> Forster, JR 1781*	E: Spot-billed Duck; S: Thithhota tharava	CR	B1ab(iii)+ 2ab(iii)	LC	
<b>Family: Turnicidae</b>					
<i>Turnix suscitator</i> (Gmelin, 1789)	E: Barred Buttonquail; S: Punchi bola watuyuruwa; T: Kadai	LC		LC	
<b>Family: Picidae</b>					
<i>Dendrocopos nanus</i> (Vigors, 1832)	E: Brown-capped Woodpecker; S: Bora isasi piri-kerala, Mal Kerella; T: Sinna marang kothi.	LC		LC	
<i>Dendrocopos mahrattensis</i> (Latham, 1801)	E: Yellow-crowned Woodpecker; S: Kahasilu Piri -kerala; T: Manjal nettri marang kothi.	NT		LC	
<i>Celeus brachyurus</i> (Vieillot, 1818)	E: Rufous Woodpecker; S: Borath anu-kerela, Dumburu Kerela; T: Karunchirappu marang kothi.	LC		LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Picus chlorolophus</i> Vieillot, 1818	E: Lesser Yellownape; S: Heen kahagelasi Kerela, Konde -kaha Kerela; T: Manjal pidari siru marang kothi.	NT		LC	
<i>Picus xanthopygaeus</i> (Gray & Gray, 1846)	E: Streak-throated Woodpecker; S: Irigela Kerela; T: Sethil vayittru marang kothi.	EN	B1ab(iii) +2abl(iii)	LC	
<i>Dinopium benghalense</i> (Linnaeus, 1758)	E: Black-rumped Flameback; S: Ginipita pili-kerela, Pita-rang Kerela; T: Siriya pon muthuhu marang kothi.	LC		LC	
<i>Chrysocolaptes lucidus</i> (Scopoli, 1786) <sup>PE</sup>	E: Greater Flameback ; S: Lepita maha-kerela, Mukalang Kerela; T: Periya ponmuthuhu marang kothi.	LC			
<i>Chrysocolaptes festivus</i> (Boddaert, 1783)	E: White -naped Woodpecker; S: Sudugelesi maha- kerela, Maha-rang Kerela; T: Karumuthuhu marang kothi.	VU	B2ab(iii)		
<b>Family: Ramphastidae</b>					
<i>Megalaima zeylanica</i> (Gmelin, 1788)	E: Brown-headed Barbet; S: Polos Kottoruwa; T: Paluppu thalai kukkuruvan.	LC		LC	
<i>Megalaima flavifrons</i> (Cuvier, 1816)	E: Sri Lanka Yellow-fronted Barbet; S: Sri Lanka kahamunath Kottoruwa, Mukalang Kottoruwa; T: Ilankai manjal kuruttu kukkuravan.	LC		LC	
<i>Megalaima rubricapillus</i> (Gmelin, 1788) <sup>PE</sup>	E: Crimson-fronted Barbet ; S: Rathmunath Kottoruwa, Mal Kottoruwa; T: Sennetri kukkuravan.	LC		LC	
<i>Megalaima haemacephala</i> (Müller, 1776)	E: Coppersmith Barbet; S: Rathlaya Kottoruwa, Mal Kottoruwa; T: Senmaarbu Kukkuruvan	LC		LC	
<b>Family: Bucerotidae</b>					
<i>Ocyrceros gingalensis</i> (Shaw, 1811)	E: Sri Lanka Grey Hornbill; S: Sri Lanka Alu Kandetta; T: Ilankai naarai irattai chondu kuruvi.	LC		LC	
<i>Anthracoceros coronatus</i> (Boddaert, 1783)	E: Malabar Pied Hornbill; S: Poru Kandetta; T: Malabar karuppuvellai iruvaayan.	LC		NT	
<b>Family: Upopidae</b>					
<i>Upupa epops</i> Linnaeus, 1758	E: Eurasian Hoopoe; S: Poroluwa; T: Kondalthis.	LC		LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family: Trogonidae</b>					
<i>Harpactes fasciatus</i> (Pennant, 1769)	E:Malabar Trogon; S: Lohavannichcha, Gini-kurulla; T: Malabar theekakai.	NT		LC	
<b>Family: Coraciidae</b>					
<i>Coracias benghalensis</i> (Linnaeus, 1758)	E:Indian Roller; S:Dumbonna; T: Panan-kadai, Kottai-kili	LC		LC	
<i>Eurystomus orientalis</i> (Linnaeus, 1766)	E:Asian Dollarbird; S: Dumkava; T: Pulupporukki	EN	B2ab(iii)	LC	
<b>Family: Alcedinidae</b>					
<i>Alcedo atthis</i> (Linnaeus, 1758)	E:Common Kingfisher; S: Mal Pilihuduwa; T: Siriya neela meen kothi.	LC		LC	
<i>Alcedo meninting</i> Horsfield, 1821	E:Blue-Eared Kingfisher; S: Nilkan Pilihuduwa; T: Neela kaathu meen kothi.	CR	B2ab(iii)	LC	
<i>Ceyx erithaca</i> (Linnaeus, 1758)	E:Black-Backed Kingfisher; S:Pitakalu Heen-pilihuduwa, Rang Pilihuduwa; T: Siru meen kothi.	NT		LC	
<i>Pelargopsis capensis</i> (Linnaeus, 1766)	E: Stork-billed Kingfisher; S:Manathudu maha pilihuduwa; T: Parutha alahu meen kothi.	LC		LC	
<i>Halcyon smyrnensis</i> (Linnaeus, 1758)	E:White-Throated Kingfisher; S:Gelasudu medi-pilihuduwa; T: Ven marabu meen kothi.	LC		LC	
<i>Ceryle rudis</i> (Linnaeus, 1758)	E:Pied Kingfisher; S: Gomara pilihuduwa; T: Siriya karuppu vellai meen kothi.	LC		LC	
<b>Family: Meropidae</b>					
<i>Merops orientalis</i> Latham, 1802	E:Little Green Bee-eater; S:Punchi binguharaya; T: Siriya pachai panchuruttaan.	LC		LC	
<i>Merops leschenaulti</i> Vieillot, 1817	E:Chestnut-headed Bee-eater; S:Thambalahis binguharaya; T: Senthalai panchuruttan.	LC		LC	
<i>Merops philippinus</i> Linnaeus, 1766*	E: Blue-tailed Bee-eater; S: Nilpenda binguhariya	CR	B1ab(iii)+ +2ab(iii)	LC	
<b>Family: Cuculidae</b>					
<i>Clamator jacobinus</i> (Boddaert, 1783)	E:Pied Cuckoo; S:Gomara kondakoha; T:Kadalai kuyil.	LC		LC	
<i>Cuculus varius</i> Vahl, 1797	E:Common Hawk-cuckoo; S:Ukusu kokilaya; T: Kuyil	EN	B2ab(iii)	LC	
<i>Cacomantis sonneratii</i> (Latham, 1790)	E:Banded Bay Cuckoo; S:Vaira anakoha; T: Sempaluppu vari kuyil.	NT		LC	



Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Surniculus lugubris</i> (Horsfield, 1821)	E:Drongo Cuckoo; S:Kavudukoha; T:Karichan kuyil.	NT			
<i>Eudynamys scolopaceus</i> (Linnaeus, 1758)	E:Asian Koel; S:Kovula; T: Asia Kuyil.	LC		LC	
<i>Phaenicophaeus viridirostris</i> (Jerdon, 1840)	E:Blue-faced Malkoha; S: Wathanil malkoha; T: Neela muha malkoha.	LC		LC	
<i>Phaenicophaeus leschenaultii</i> (Lesson, 1830)	E:Sirkeer Malkoha; S:Pathan Malkoha; T: Sevvalahu malkoha.	VU	B1ab(iii)	LC	
<b><i>Phaenicophaeus pyrrhocephalus</i></b> (Pennant, 1769)	E:Sri Lanka Red-faced Malkoha; S:Sri Lanka Watharathu Malkoha; T: Ilankai semmuka malkoha.	VU	B1ab(iii)	VU	C2a(i)
<i>Centropus sinensis</i> (Stephens, 1815)	E:Greater Coucal; S:Atikukula; T: Periya sembaham.	LC		LC	
<b><i>Centropus chlororhynchus</i></b> Blyth, 1849	E:Sri Lanka Green-billed Coucal; S:Sri Lanka Bata Atikukula; T: Ilankai pachai alahu sembaham.	EN	B2ab(iii)	VU	B1ab(i,ii,iii,iv,v); C2a(i)
<i>Cuculus micropterus</i> Gould, 1838 *	E:Indian Cuckoo; S: Indu kokilaya	LC		LC	
<b>Family: Psittacidae</b>					
<b><i>Loriculus beryllinus</i></b> (Forster, 1781)	E:Sri Lanka Hanging Parrot; S:Sri Lanka giramaliththa; T: Ilankai sinna kili.	LC		LC	
<i>Psittacula eupatria</i> (Linnaeus, 1766)	E:Alexandrine Parakeet; S: Labu girawa; T:Periya pachai Kili	LC		LC	
<i>Psittacula krameri</i> (Scopoli, 1769)	E:Rose-ringed Parakeet; S:Rena girawa; T: Pachai Kili	LC		LC	
<i>Psittacula cyanocephala</i> (Linnaeus, 1766)	E:Plum-headed Parakeet; S:Pandu girawa; T: Senthalai Kili.	NT		LC	
<b><i>Psittacula calthropae</i></b> (Blyth, 1849)	E:Sri Lanka Emerald-collared Parakeet; S:Sri Lanka Alu girawa; T: Ilankai naadu Kili.	NT		LC	
<b>Family: Apodidae</b>					
<i>Collocalia unicolor</i> (Jerdon, 1840)	E:Indian Swiftlet; S:Indu upa-thurithaya, Wehilihiniya; T: Sinna ulavaaran.	LC		LC	
<i>Hirundapus giganteus</i> (Temminck, 1825)	E:Brown-backed Needletail; S:Pitabora katu-thurithaya; T: Paluppu muthuhu mulv ulavaaran.	NT			
<i>Cypsiurus balasiensis</i> (Gray, 1829)	E:Asian Palm-swift; S:Asia thal-thurithaya; T: Panai ulavaaran.	LC		LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Tachymarpis melba</i> (Linnaeus, 1758)	E:Alpine Swift; S:Alpine piri-thurithaya; T: Alphine ulavaaran.	EN	B2ab(iii)	LC	
<i>Apus affinis</i> (Gray, 1830)	E:Little Swift; S: Punchi thurithaya; T: Naadu ulavaaran.	LC		LC	
<b>Family: Hemiprocnidae</b>					
<i>Hemiprogne coronata</i> (Tickell, 1833)	E:Crested Treeswift; S: Silu ruk-thurithaya; T: Kondai ulavaaran.	LC			
<b>Family: Tytonidae</b>					
<i>Tyto alba</i> (Scopoli, 1769)	E:Barn Owl; S: Atu wesbassa, Bakamuna; T: Koochai aanthai.	NT		LC	
<i>Phodilus badius</i> (Horsfield, 1821)	E:Oriental Bay-owl; S:Peradigu gurubassa; T: Kaatu sempaluppu aanthai.	EN	B1ab(iii) +2ab(iii)	LC	
<b>Family: Strigidae</b>					
<i>Otus sunia</i> Hodgson, 1836	E:Oriental Scops-owl; S:Peradigu kanbassa; T: Keelai theya sevi aanthai.	NT			
<i>Otus bakkamoena</i> Pennant, 1769	E:Collared Scops-owl; S: Karapati Kanbassa; T: Pattaikaluthu sevi aanthai.	LC		LC	
<i>Otus thilohoffmanni</i> Warakagoda & Rasmussen, 2004	E:Sri Lanka Serendib Scops-owl; S: Sri Lanka pandu kanbassa; T: Ilankai serendib sevi aanthai.	EN	B1ab(iii) +2ab(iii)	EN	B1ab(ii,iii); C2a(i)
<i>Bubo nipalensis</i> Hodgson, 1836	E:Spot-Bellied Eagle-owl; S:Uksubakamuna, Ulama; T:Pullivayittru kaluhu aanthai.	NT		LC	
<i>Ketupa zeylonensis</i> (Gmelin, 1788)	E:Brown Fish-owl; S:Bora kevlubakamuna; T: Meen pidi aanthai.	LC		LC	
<i>Strix leptogrammica</i> Temminck, 1831	E:Brown Wood-owl; S:Bora Wanabakamuna; T: Paluppu kaatu aanthai.	NT		LC	
<i>Glaucidium radiatum</i> (Tickell, 1833)	E:Jungle Owlet; S:Wana Upabassa; T: Kaatu siru aanthai.	NT		LC	
<i>Glaucidium castanonotum</i> (Blyth, 1846)	E:Sri Lanka Chestnut-backed Owlet; S:Sri Lanka Pitathambala Upabassa; T: Ilankai semmanjal muthuhu siru aanthai.	VU	B1ab(iii)	NT	
<i>Ninox scutulata</i> (Raffles, 1822)	E:Brown Hawk-owl; S:Dumburu Uksubassa; T: Vettaikara aanthai.	LC		LC	
<b>Family: Podargidae</b>					
<i>Batrachostomus moniliger</i> Blyth, 1846	E:Frogmouth; S:Madimuhuna; T: Ceylon thavalai vaayan.	LC		LC	
<b>Family:Caprimulgidae</b>					

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Caprimulgus indicus</i> Latham, 1790	E:Grey Nightjar; S: Alu bimbassa; T: Kaatu pakki.	VU	B1ab(iii)	LC	
<i>Caprimulgus atripennis</i> Jerdon, 1845	E:Jerdon's Nightjar; S: Digupenda bimbassa; T: Jerdon pakki.	LC		LC	
<i>Caprimulgus asiaticus</i> Latham, 1790	E:Indian Nightjar; S: Indu Bimbassa; T: Siru pakki.	LC		LC	
<b>Family: Columbidae</b>					
<i>Columba livia</i> Gmelin, 1789	E;Rock Pigeon; S: Pareviya; T:Maada Puraa.	CR- considering only wild population	B2ab(iii)	LC	
<i>Columba torringtoniae</i> (Blyth & Kelaart, 1853)	E:Sri Lanka Wood-Pigeon; S:Sri Lanka Maila Paraviya (Mailagoya); T: Ilankai karuppup Puraa.	VU	B1ab(iii)	VU	B1ab(i,ii,iii,iv,v); C2a(i)
<i>Stigmatopelia chinensis</i> (Scopoli, 1786)	E:Spotted Dove; S: Alu-kobeiya; T: Pulli Puraa.	LC		LC	
<i>Streptopelia decaocto</i> (Frisch, 1838)	E:Eurasian Collared Dove; S: Mala kobeiya; T: Panjavarana Puraa.	NT		LC	
<i>Chalcophaps indica</i> (Linnaeus, 1758)	E:Emerald Dove; S: Neela kobeiya; T: Pathekai Puraa.	LC		LC	
<i>Treron bicinctus</i> (Jerdon, 1840)	E:Orange-breasted Green-pigeon; S: Layaran batagoya; T: Orange maarbu Pachai Puraa.	LC		LC	
<i>Treron pompadora</i> (Gmelin, 1789) <sup>PE</sup>	E:Pompadour Green Pigeon; S: Pitadam Batagoya; T: Sambal nettri Pachai Puraa.	LC		LC	
<i>Treron phoenicopterus</i> (Latham, 1790)	E:Yellow-footed Green-Pigeon; S: Ranpa Batagoya; T: Manjal kaal pachai puraa.	CR	B2ab(iii)	LC	
<i>Ducula aenea</i> (Linnaeus, 1766)	E:Green Imperial-Pigeon; S: Nil Mahagoya; T: Pachai arasa Puraa.	LC		LC	
<b>Family: Rallidae</b>					
<i>Gallirallus striatus</i> (Linnaeus, 1766)	E:Slaty-breasted Rail; S:Layalu Geli-reluwa; T: Saambal maarbu sambang koli.	VU	B2ab(iii)	LC	
<i>Amaurornis phoenicurus</i> (Pennant, 1769)	E:White-breasted Waterhen; S: Layasudu korawakka; T: Ven maarbu kaanaang koli.	LC		LC	
<i>Porzana fusca</i> (Linnaeus, 1766)	E:Ruddy-breasted Crake; S: Layarathu vil-keralaiya; T: Sem maarbu kaanaang koli.	VU	B2ab(iii)	LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Gallinula cinerea</i> (Gmelin, 1789)	E:Watercock; S:Korawa; T: Thaneer kolli.	NT		LC	
<i>Porphyrio porphyrio</i> (Linnaeus, 1758)	E:Purple Swamphen; S:Dam madi-kithala; T: Neela thodai koli.	LC		LC	
<i>Gallinula chloropus</i> (Linnaeus, 1758)	E:Common Moorhen; S: Podu galinuwa, Wil kukkula; T: Thaalai koli.	LC		LC	
<i>Fulica atra</i> Linnaeus, 1758	E:Common Coot; S: Podu kithala; T: Nama koli.	LC		LC	
<i>Rallina eurizonoides</i> Lafresnaye, 1845*	E: Slaty-legged Crane; S: Alupa keraliya	CR	B1ab(iii)+ 2ab(iii)	LC	
<b>Family: Rostratulidae</b>					
<i>Rostratula benghalensis</i> (Linnaeus, 1758)	E:Greater Painted-Snipe; S:Raja ulu-kaswatuwa; T: Mayil ullaan.	VU	B2ab(iii)		
<b>Family: Jacanidae</b>					
<i>Hydrophasianus chirurgus</i> (Scopoli, 1786)	E:Pheasant-Tailed Jacana; S: Savul-diyasana, Pan kukula; T: Neela vaal illaik koli.	LC		LC	
<b>Family: Burhinidae</b>					
<i>Burhinus oedicnemus</i> (Linnaeus, 1758)	E:Eurasian Thick-Knee; S:Golu-kirala; T: Perungkanni.	LC		LC	
<i>Esacus recurvirostris</i> (Cuvier, 1829)	E:Great Thick-Knee; S: Gal kirala; T: Valaimukku perungkanni.	LC		LC	
<b>Family: Recurvirostridae</b>					
<i>Himantopus himantopus</i> (Linnaeus, 1758)	E: Black-Winged Stilt; S:Kalupiya ipalpava, Kalapu-kirala; T: Nedungkaal ullaan.	LC		LC	
<b>Family: Charadriidae</b>					
<i>Charadrius dubius</i> Scopoli, 1786	E:Little Ringed Plover; S:Punchi mala oleviya; T: Sinna pattani uppuk kothi.	VU	B2ab(iii)	LC	
<i>Charadrius alexandrinus</i> Linnaeus, 1758	E:Kentish Plover; S:Kent oleviya; T: Kentish pattani uppuk kothi.	VU	B2ab(iii)	LC	
<i>Vanellus malarbaricus</i> (Boddaert, 1783)	E:Yellow-Wattled Lapwing; S:Kaha yatimal kirala; T: Manjal mooku aart kaati.	LC		LC	
<i>Vanellus indicus</i> (Boddaert, 1783)	E:Red-Wattled Lapwing; S:Rath yatimal kirala; T: Sihappu mooku aart kaati.	LC		LC	
<b>Family: Glareolidae</b>					
<i>Glareola maldivarum</i> Forster, 1795	E:Oriental Pranticole; S: Mala jivasariya; T: Thotkuruvi.	EN	B2ab(iii)	LC	
<i>Glareola lactea</i> Temminck, 1820	E:Small Pranticole; S:Ounchi jivasariya; T: Sinna Thotkuruvi.	VU	B1ab(iii)	LC	
<i>Cursorius coromandelicus</i> Gmelin, 1789	E: Indian Courser; S: Javalihiniya	CR	B1ab(iii)+ 2ab(iii)	LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family: Laridae</b>					
<i>Sterna bergii</i> Lichtenstein, 1823	E: Great Crested Tern; S: Maha konda muhudulihiniya; T: Periya kondai aalaa.	NT		LC	
<i>Sterna nilotica</i> Brehm, 1830*	E: Gull-billed Tern; S: Galuthudu muhudulihiniya	CR	B1ab(iii)+2ab(iii)	LC	
<i>Sterna caspia</i> Pallas, 1770*	E: Caspian Tern; S: kaspiya muhudulihiniya	CR	B1ab(iii)+2ab(iii)	LC	
<i>Sterna dougallii</i> Montagu, 1813	E: Roseate Tern; S: Arunu muhudulihiniya	CR	B1ab(iii)+2ab(iii)	LC	
<i>Sterna hirundo</i> Linnaeus, 1758*	E: Common Tern; S: Podu muhudulihiniya	CR	B1ab(iii)+2ab(iii)	LC	
<i>Sterna albifrons</i> Pallas, 1764*	E: Little Tern; S: Punchi muhudulihiniya	VU	B2ab(iii)	LC	
<i>Sterna saundersi</i> Hume, 1877*	E: Saunder's Tern; S: Sondara muhudulihiniya	CR	B1ab(iii)+2ab(iii)	LC	
<i>Sterna anaethetus</i> Scopoli, 1786*	E: Bridled Tern; S: Katakali muhudulihiniya	CR	B1ab(iii)+2ab(iii)	LC	
<i>Sterna fuscata</i> Linnaeus, 1766*	E: Sooty Tern; S: Dumbutu muhudulihiniya	CR	B1ab(iii)+2ab(iii)	LC	
<b>Family: Dromadidae</b>					
<i>Dromas ardeola</i> Paykull, 1805*	E: Crab Plover; S: kakulu-oleviya	CR	B1ab(iii)+2ab(iii)	LC	
<b>Family: Accipitridae</b>					
<i>Aviceda jerdoni</i> (Blyth, 1842)	E: Jerdon's Baza; S: Bora saratakussa, Kurulugoya; T: Jerdon parunthu.	EN	B1ab(iii)+2ab(iii)	LC	
<i>Pernis ptilorhyncus</i> (Temminck, 1821)	E: Oriental Honey-Buzzard; S: Silu bambarakussa, Rajaliya; T: Then parunthu.	NT		LC	
<i>Elanus caeruleus</i> (Desfontaines, 1789)	E: Black-Winged Kite; S: Kaluuris pathanakussa, kurulugoya; T: Karunthol parunthu.	NT		LC	
<i>Milvus migrans</i> (Boddaert, 1783)	E: Black Kite; S: Bora parakussa, Ukussa; T: Karum parunthu.	LC			
<i>Haliastur indus</i> (Boddaert, 1783)	E: Brahminy Kite; S: Bamunu piyakussa, Ukussa; T: Sem parunthu.	LC		LC	
<i>Haliaeetus leucogaster</i> (Gmelin, 1788)	E: White-Bellied Sea-eagle; S: Kusa alli muhudukussa; T: Ven vayitru kadat kaluhu.	LC		LC	
<i>Ichthyophaga ichthyaetus</i> (Horsfield, 1821)	E: Grey-Headed Fish-eagle; S: Aluhis masukussa, Wewa rajaliya; T: Siriya sambalthalai meen kaluhu.	NT		NT	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Spilornis cheela</i> (Latham, 1790)	E:Crested Serpent-eagle; S: Silu sarapakussa; T: Kondai paambu kaluhu.	LC		LC	
<i>Accipiter trivirgatus</i> (Temminck, 1824)	E:Crested Goshawk; S:Silu kurulugoya, kurulugoya; T: Kondai valooru.	VU	B1ab(iii)	LC	
<i>Accipiter badius</i> (Gmelin, 1788)	E:Shikra; S:Kurulugoya; T: Valooru.	LC		LC	
<i>Accipiter virgatus</i> (Temminck, 1822)	E:Besra; S: Besra kurulugoya; T: Kaatuk kaluhu.	VU	B2ab(iii)	LC	
<i>Ictinaetus malayensis</i> (Temminck, 1822)	E:Black Eagle; S: Kalukussa, kalu rajaliya; T: Karung kaluhu.	NT		LC	
<i>Hieraetus kienerii</i> (G.de Sparre, 1835)	E:Rufous-bellied Eagle; S:Kusarath rajaliya; T: Sevvayitru kaluhu.	NT			
<i>Spizaetus cirrhatus</i> (Gmelin, 1788)	E:Changeable Hawk- eagle; S: Perali kondakussa, Konde Rajaliya; T: Niram marum kaluhu.	LC			
<i>Spizaetus nipalensis</i> Hodgson, 1836	E:Mountain Hawk-eagle; S:Hel kondakussa, Maha konde Rajaliya; T: Malai kaluhu.	VU	B1ab(iii)		
<b>Family: Falconidae</b>					
<i>Falco tinnunculus</i> Linnaeus, 1758	E:Common Kestrel; S: Podu ukusugoya; T: Sivappu valooru.	EN	B2ab(iii)	LC	
<i>Falco peregrinus</i> Tunstall, 1771	E:Peregrine Falcon, Shahin Falcon; S: Para ukusugoya; T: Periya rasali.	VU	B2ab(iii)	LC	
<b>Family: Podicipedidae</b>					
<i>Tachybaptus ruficollis</i> (Pallas, 1764)	E:Little Grebe; S:Punchi gembithuruva; T: Sinna mookulippan.	LC		LC	
<b>Family: Anhingidae</b>					
<i>Anhinga melanogaster</i> Pennant, 1769	E:Oriental Darter; S:Ahikava; T: Paambu thara.	LC		NT	
<b>Family: Phalacrocoracidae</b>					
<i>Phalacrocorax niger</i> (Vieillot, 1817)	E:Little Cormorant; S:Punchi diyakava; T: Siriya neerkaham.	LC		LC	
<i>Phalacrocorax fuscicollis</i> Stephens, 1826	E:Indian Cormorant; S: Indu diyakava; T: Naduthoura neerkaaham.	LC		LC	
<i>Phalacrocorax carbo</i> (Linnaeus, 1758)	E:Great Cormorant; S: Maha diyakava; T: Periya neerkaaham.	NT		LC	
<b>Family: Ardeidae</b>					

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Egretta garzetta</i> (Linnaeus, 1766)	E:Little Egret; S:Punchi anu-koka, sudu-kokka; T: Sinna kokku.	LC		LC	
<i>Ardea cinerea</i> Linnaeus, 1758	E:Grey Heron; S: Alu kokka; T: Sambal kokku.	LC		LC	
<i>Ardea purpurea</i> Linnaeus, 1766	E:Purple Heron; S: Karaval kokka; T: Senneela kokku.	LC		LC	
<i>Casmerodius albus</i> (Linnaeus, 1758)	E:Great Egret; S:Sudu-maha kokka; T: Periya kokku	LC		LC	
<i>Mesophoyx intermedia</i> (Wagler, 1829)	E:Intermediate Egret; S: Sudu medi-kokka; T: Naduthara kokku.	LC		LC	
<i>Bubulcus ibis</i> (Linnaeus, 1758)	E:Cattle Egret; S:Geri-kokka, Harak kokka; T: Unnik kokku.	LC		LC	
<i>Ardeola grayii</i> (Sykes, 1832)	E:Indian Pond-heron; S:Kana kokka; T: Mudaiyan.	LC		LC	
<i>Butorides striata</i> (Linnaeus, 1758)	E:Striated Heron; S:Pala-kokka; T: Siriya pachchai kokku.	LC		LC	
<i>Nycticorax nycticorax</i> (Linnaeus, 1758)	E:Black-Crowned Night-heron; S:Rekana- kokka; T: Irak kokku.	NT		LC	
<i>Ixobrychus sinensis</i> (Gmelin, 1789)	E:Yellow Bittern; S: Kaha meti-kokka; T: Manjal kuruhu.	NT		LC	
<i>Ixobrychus cinnamomeus</i> (Gmelin, 1789)	E:Cinnamon Bittern; S:Kurundu meti-kokka; T: Seng kuruhu.	NT		LC	
<i>Ixobrychus flavicollis</i> (Latham, 1790)	E:Black Bittern; S:Kalu meti-kokka; T: Karung kuruhu.	LC		LC	
<b>Family: Threskiornithidae</b>					
<i>Threskiornis melanocephalus</i> (Latham, 1790)	E:Black-headed Ibis; S:Hisakalu dekettha; T: Vellai arivaal mookan.	LC		NT	
<i>Platalea leucorodia</i> Linnaeus, 1758	E:Eurasian Spoonbill; S: Hensialava; T: Karandi vaayan.	LC		LC	
<b>Family: Pelecanidae</b>					
<i>Pelecanus philippensis</i> Gmelin, 1789	E:Spot-billed Pelican; S:Thithota pasthuduwa; T: Pullialahu koolikkada.	LC		NT	
<b>Family: Ciconiidae</b>					
<i>Mycteria leucocephala</i> (Pennant, 1769)	E:Painted Stork; S:Lathuvakiya; T: Manjalmooku naarai.	LC		NT	
<i>Anastomus oscitans</i> (Boddaert, 1783)	E:Asian Openbill; S: Vivarathuduwa; T: Naththai-kuththi-narai	LC		LC	
<i>Ciconia episcopus</i> (Boddaert, 1783)	E:Wooly-Necked Stork; S: Padili manava; T: Venkaluthu naarai.	NT		LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Ephippiorhynchus asiaticus</i> (Latham, 1790)	E:Black Necked Stork; S:Ali manava; T: Karungkaluthu naarai.	CR	B2ab(iii)	NT	
<i>Leptoptilos javanicus</i> (Horsfield, 1821)	E:Lesser Adjutant; S:Heen bahuru-manava; T: Siriyapotha.	VU	B2ab(iii)	VU	A2cd+3cd+4cd
<b>Family: Chloropseidae</b>					
<i>Chloropsis jerdoni</i> (Blyth, 1844)	E:Jerdon's Leafbird; S:Jaradan kolarisiya, Girakurulla; T: Jerdon pachaichittu.	LC		LC	
<i>Chloropsis aurifrons</i> (Temminck, 1829)	E:Golden Fronted Leafbird; S:Ran nalal kolarisiya; T: Pachaichittu.	LC		LC	
<b>Family: Laniidae</b>					
<i>Lanius schach</i> Linnaeus, 1758	E:Long Tailed Shrike; S:Dikpenda sabaraitthta; T: Neela vaal keechaan.	VU	B1ab(iii)		
<b>Family: Corvidae</b>					
<i>Urocissa ornata</i> (Wagler, 1829)	E:Sri Lanka Magpie; S:Sri Lanka Kahibella; T: Ilankai neela kuruvi.	VU	B1ab(iii) +2ab(iii)	VU	B1ab(ii,iii,iv)
<i>Corvus splendens</i> Vieillot, 1817	E:House Crow; S: Colomba kaputa; T: Kaakai.	LC		LC	
<i>Corvus leuallantii</i> Lesson, 1831	E:Jungle Crow; S:Kalu kaputa; T: Andang kaakai.	LC		LC	
<b>Family: Artamidae</b>					
<i>Artamus fuscus</i> Vieillot, 1817	E;Ashy Woodswallow; S:Alu vanalihiniya; T: Sambal kaatu thakai vilaan.	LC		LC	
<b>Family: Oriolidae</b>					
<i>Oriolus xanthornus</i> (Linnaeus, 1758)	E:Black Hooded Oriole; S:Kahakurulla; T: Karunthalai maangkuyil.	LC		LC	
<b>Family: Campephagidae</b>					
<i>Coracina macei</i> (Lesson, 1831)	E:Large Cuckooshrike; S: Maha kovulsaratiththa; T: Periya kuyil keechaan.	LC		LC	
<i>Coracina melanoptera</i> (Rüppell, 1839)	E:Black-headed Cuckooshrike; S:Kalu his kovulsaratiththa; T: Karunthalai kuyil keechaan.	LC		LC	
<i>Pericrocotus cinnamomeus</i> (Linnaeus, 1766)	E:Small Minivet; S:Punchi miniviththa; T: Sinna min sittu.	LC		LC	
<i>Pericrocotus flammeus</i> (Forster, 1781)	E:Scarlet Minivet; S:Dilirath miniviththa; T: Sihappu min sittu.	LC		LC	
<i>Hemipus picatus</i> (Sykes, 1832)	E:Bar Winged Flycatcher Shrike; S:Wairapiya masisarathiththa, Panu kurulla; T: Karuppu vellai eepidi keechaan.	LC		LC	



Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Tephrodornis pondicerianus</i> (Gmelin, 1789) <sup>PE</sup>	E:Common Woodshrike; S: Podu vanasaratiththa; T: Kaatu keechaan.	LC		LC	
<b>Family: Rhipiduridae</b>					
<i>Rhipidura aureola</i> Lesson, 1830	E:White-browed Fantail; S:Bamasudu pavanpenda; T: Venpuruva visirivaal eepidippaan.	LC		LC	
<b>Family: Dicruridae</b>					
<i>Dicrurus macrocercus</i> Vieillot, 1817	E:Black Drongo; S:Kalu kavuda; T: Karung karichaan.	LC		LC	
<i>Dicrurus caerulescens</i> (Linnaeus, 1758)	E:White-bellied Drongo; S:Kavuda; T: Venvayittru karichaan.	LC		LC	
<i>Dicrurus paradiseus</i> (Linnaeus, 1766)	E:Greater Racket-tailed Drongo; S:Maha kavuda; T: Thuduppuval karichaan.	NT			
<i>Dicrurus lophorhinus</i> Vieillot, 1817	E: Sri Lanka Crested Drongo	VU	B1ab(iii)		
<b>Family: Monarchiidae</b>					
<i>Hypothymis azurea</i> (Boddaert, 1783)	E:Black-naped Monarch; S: Kalu gelasi radamara; T: Karumpidari arasae eepidipaan.	LC		LC	
<i>Terpsiphone paradisi</i> (Linnaeus, 1758)	E:Asian Paradise Flycatcher; S: Asia rahanmara, Redi hora; T: Arasavaal eepidipaan.	LC		LC	
<b>Family: Aegithinidae</b>					
<i>Aegithina tiphia</i> (Linnaeus, 1758)	E:Common Iora; S:Podu iorava; T: Manjal chittu.	LC		LC	
<i>Aegithina nigrolutea</i> (Marshall, 1876)	E:White-tailed Iora; S:Pendasudu iorava; T: Venvaal chittu.	VU	B1ab(iii)		
<b>Family: Turdidae</b>					
<i>Myophonus blighi</i> (Holdsworth, 1872)	E:Sri Lanka Whistling Thrush, Arrenga; S: Sri Lanka arangaya; T: Ilankai seezhkai oli paadum kuruvi.	EN	B1ab(iii) +2ab(iii)	EN	B1ab(i,ii,iii,iv,v); C2a(i)
<i>Zoothera spiloptera</i> (Blyth, 1847)	E:Sri Lanka Spot winged Thrush; S:Sri Lanka thithpiya thirasikaya, Wal avichchiya; T: Ilankai pullichiraku paadum kuruvi.	VU	B1ab(iii)	NT	
<i>Zoothera imbricata</i> E.L. Layard, 1854	E:Sri Lanka Scaly Thrush; S: Sri Lanka kayuru thirasikaya; T: Ilankai ponnira poong kuruvi.	EN	B2ab(iii)	NT	
<i>Turdus merula</i> Linnaeus, 1758	E:Eurasian Blackbird; S: Kalu bimsariya; T: Malaichittaan.	EN	B1ab(iii) +2ab(iii)		

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family: Muscicapidae</b>					
<i>Eumyias sordidus</i> (Walden, 1870)	E:Sri Lanka Dull Blue Flycatcher; S:Sri Lanka anumasimara; T: Ilankai neela vettivaat kuruvi.	VU	B1ab(iii)	NT	
<i>Cyornis tickelliae</i> Blyth, 1843	E:Tickell's Blue Flycatcher; S: Layaran nil-masimara, Kopi kurulla; T: Tickell neela ee pidippaan.	LC		LC	
<i>Copsychus saularis</i> (Linnaeus, 1758)	E:Oriental Magpie Robin; S: Polkichcha; T: Karuppu vellai solaippadi.	LC		LC	
<i>Copsychus malabaricus</i> (Scopoli, 1788)	E:White Rumped Shama; S: Vana Polkichcha; T: Solanippaadi.	LC		LC	
<i>Saxicoloides fulicatus</i> (Linnaeus, 1766)	E:Indian Robin; S: Kalukichcha, Kalu polkichcha; T: Karunj chittu.	LC		LC	
<i>Saxicola caprata</i> (Linnaeus, 1766)	E:Pied Bushchat; S: Gomara sitibichcha; T: Karuppu vellai putthar chittu.	EN	B1ab(iii) +2ab(iii)	LC	
<i>Culicicapa ceylonensis</i> Swainson, 1820	E: Grey- headed canary-flycatcher; S: Aluhis kaha-masimaaraa	LC		LC	
<b>Family: Sturnidae</b>					
<i>Sturnus albobronnatus</i> (Layard, 1854)	E:Sri Lanka White Faced Starling; S: Sri Lanka vathasudu sarikava; T: Ilankai soorai kuruvi.	EN	B1ab(iii) +2ab(iii)	VU	B1ab(i,ii,iii,iv,v); C2a(i)
<i>Acridotheres tristis</i> (Linnaeus, 1766)	E:Common Myna; S: Myna; T: Naakanavai.	LC		LC	
<i>Gracula ptilogenys</i> Blyth, 1846	E:Sri Lanka Myna; S: Sri Lanka Salalihiniya; T: Ilankai myna.	VU	B1ab(iiii)	NT	
<i>Gracula religiosa</i> Linnaeus, 1758	E:Hill Myna; S: Salalihiniya; T: Malai naakanavai.	LC		LC	
<b>Family: Sittidae</b>					
<i>Sitta frontalis</i> Swainson, 1820	E:Velvet Fronted Nuthatch; S: Villuda yatikiriththa; T: Velvet nettri maram irangi.	LC		LC	
<b>Family: Paridae</b>					
<i>Pavus major</i> Linnaeus, 1758	E:Great Tit; S: Maha tikiriththa; T: Periya pattaari kuruvi.	LC			
<b>Family: Hirundinidae</b>					
<i>Hirundo domicola</i> Jerdon, 1844	E:Hill Swallow; S: Kandu wehilihiniya; T: Pacific thakaivilaan.	VU	B1ab(iiii)	LC	
<i>Hirundo hypertyhra</i> Blyth, 1849 <sup>PE</sup>	E:Red rumped swallow; S: Nithambarath wehilihiniya; T: Sivanthapitta thakaivilaan.	LC			

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family: Pycnonotidae</b>					
<i>Pycnonotus melanicterus</i> (Gmelin, 1789) <sup>PE</sup>	E:Black-crested Bulbul; S: Kalu isasi kondaya; T: Karungkondai sinnaan.	LC		LC	
<i>Pycnonotus cafer</i> (Linnaeus, 1766)	E:Red-vented Bulbul; S:Kondaya; T: Sinnaan.	LC		LC	
<b><i>Pycnonotus penicillatus</i></b> Blyth, 1851	E:Sri Lanka Yellow-eared Bulbul; S: Sri Lanka kahakan kondaya; T: Ilankai manjal sevikkondai kuruvi.	VU	B1ab(iiii) +2ab(iii)	NT	
<i>Pycnonotus luteolus</i> (Lesson, 1841)	E:White Browed Bulbul; S:Bamasudu Kondaya; T: Ven puruva sinnaan.	LC		LC	
<i>Iole indica</i> (Jerdon, 1839)	E:Yellow Browed Bulbul; S: Bamakaha Kondaya; T: Manjal puruva sinnaan.	LC		LC	
<i>Hypsipetes leucocephalus</i> (Gmelin, 1789)	E:Asian Black Bulbul; S:Kalu piri-kondaya; T: Karung sinnaan.	LC		LC	
<b>Family: Cisticolidae</b>					
<i>Cisticola juncidis</i> (Rafinesque, 1810)	E:Zitting Cisticola; S: Iri Pavansariya; T: Naatu visirivaal kathir kuruvi.	LC		LC	
<i>Prinia hodgsonii</i> Blyth, 1844	E:Gray-breasted Prinia; S: Layalu prinia; T: Frankkin kathir kuruvi.	LC		LC	
<i>Prinia sylvatica</i> Jerdon, 1840	E:Jungle Prinia; S: Vana prinia, Hambu kurulla; T: Kaatu kathir kuruvi.	LC		LC	
<i>Prinia socialis</i> Sykes, 1832	E:Ashy Prinia; S:Alu prinia; T: Sambal kathir kuruvi.	LC		LC	
<i>Prinia inornata</i> Sykes, 1832	E:Plain Prinia; S: Sarala prinia; T: Kathir kuruvi.	LC			
<b>Family: Zosteropidae</b>					
<b><i>Zosterops ceylonensis</i></b> Holdsworth, 1872	E:Sri Lanka White Eye; S: Sri Lanka sithasiya, Mal kurulla; T: Ilankai ven vilik kuruvi.	NT		LC	
<i>Zosterops palpebrosus</i> (Temminck, 1824)	E:Oriental White Eye; S:Peradigu sithasiya; T: Vellai kanni.	LC		LC	
<b>Family: Sylviidae</b>					
<b><i>Bradypterus palliseri</i></b> (Blyth, 1851)	E:Sri Lanka Bush Warbler; S: Sri Lanka vanaraviya; T: Ilankai pattraï thinnung kuruvi.	EN	B1ab(iiii) +2ab(iii)	NT	
<i>Acrocephalus stentoreus</i> (Ehrenberg, 1833)	E:Clamorous Reed Warbler; S: Gos panraviya; T:Periya nanal kathir kuruvi.	NT		LC	
<i>Orthotomus sutorius</i> (Pennant, 1769)	E:Common Tailorbird; S: Battichcha; T: Thaiyat kaara kathir kuruvi.	LC		LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family: Timaliidae</b>					
<i>Garrulax cinereifrons</i> Blyth, 1851	E:Sri Lanka Ashy-headed Laughingthrush; S:Sri Lanka hisalu upa-demalichcha; T: Ilankai saambal thalai punnahaikum paadum kuruvi.	EN	B1ab(iiii) +2ab(iii)	VU	B1ab(i,ii,iii,iv,v); C2a(i)
<i>Pellorneum fuscicapillus</i> (Blyth, 1849)	E:Sri Lanka Brown Capped Babbler; S: Sri Lanka Boraga piri-demalichcha; T: Ilankai kabilakulla velaikkara kuruvi.	LC		LC	
<i>Pomatorhinus melanurus</i> Blyth, 1847	E:Sri Lanka Scimitar Babbler; S: Sri Lanka de-demalichcha; T: Ilankai koduvaal velaikkara kuruvi.	LC		LC	
<i>Dumetia hyperythra</i> (Franklin, 1831)	E:Tawny-bellied Babbler; S: Kusakaha landu-demalichcha; T: Karunj chirappu vayittru silamban.	LC		LC	
<i>Rhopocichla atriceps</i> (Jerdon, 1839)	E:Dark Fronted Babbler; S: Vathaduru panduru-demalichcha, Parandelkurulla; T: Karunthalai chilamban.	LC		LC	
<i>Chrysomma sinense</i> (Gmelin, 1789)	E:Yellow Eyed Babbler; S:Nethkaha thana-demalichcha; T: Manjal kan silamban.	LC		LC	
<i>Turdoides rufescens</i> (Blyth, 1847)	E:Sri Lanka Orange Billed Babbler; S:Sri Lanka rathu-demalichcha; T: Ilankai sev valuhu velaikkara kuruvi.	VU	B1ab(iiii) +2ab(iii)	NT	
<i>Turdoides affinis</i> (Jerdon, 1845)	E:Yellow Billed Babbler; S:Demalichcha; T: Manjal alahu silamban.	LC		LC	
<b>Family: Alaudidae</b>					
<i>Mirafra affinis</i> Blyth, 1845	E:Jerdon's Bushlark; S:Panduru gomaritta; T: Jerdan puthar vaanam paadi.	LC		LC	
<i>Eremopterix griseus</i> (Scopoli, 1786)	E:Ashy Crowned Sparrow Lark; S: Kirulalu Bimritta; T: Sambal thalai vaanam paadi.	LC		LC	
<i>Alauda gulgula</i> Franklin, 1831	E:Oriental Skylark; S: Peradigu ahsritta; T: Vaanam paadi.	LC		LC	
<b>Family: Dicaeidae</b>					
<i>Dicaeum agile</i> (Tickell, 1833)	E:Thick Billed Flowerpecker; S:Mathudu pililichcha; T: Parutha alahu malar kothi.	NT		LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Dicaeum vincens</i> (Sclater, 1872)	E:Sri Lanka White Throated Flowerpecker; S:Sri Lanka Pililichcha; T: Ilankai venthondai malar kothi.	VU	B1ab(iiii) +2ab(iii)	NT	
<i>Dicaeum erythrorhynchos</i> (Latham, 1790)	E:Pale Billed Flowerpecker; S:Lathudu Pililichcha; T: Dickel malar kothi.	LC		LC	
<b>Family: Nectariniidae</b>					
<i>Nectarinia zeylonica</i> (Linnaeus, 1766)	E:Purple Rumped Sunbird; S:Nithamba dam sutikka; T: Oothapitta thenchittu.	LC		LC	
<i>Nectarinia asiatica</i> (Latham, 1790)	E:Purple Sunbird; S: Dam sutikka; T: Ootha thenchittu.	LC		LC	
<i>Nectarinia lotenia</i> (Linnaeus, 1766)	E:Long Billed Sunbird; S: Dikthudu Sutikka; T: Loten thenchittu.	LC		LC	
<b>Family: Passeridae</b>					
<i>Passer domesticus</i> (Linnaeus, 1758)	E:House Sparrow; S:Gekurulla; T: Chittukkuruvi.	LC			
<b>Family: Motacillidae</b>					
<i>Anthus rufulus</i> Vieillot, 1818	E:Paddyfield Pipit; S:Keth waratichcha; T: Vayal nettaikkaadi.	LC		LC	
<b>Family: Ploceidae</b>					
<i>Ploceus manyar</i> (Horsfield, 1821)	E:Streaked Weaver; S:Pan Wadukurulla; T: Karung keetru thookanaang kuruvi.	NT		LC	
<i>Ploceus philippinus</i> (Linnaeus, 1766)	E:Baya Weaver; S:Ruk Wadukurulla; T: Thookkanaang kuruvi.	LC		LC	
<b>Family: Estrildidae</b>					
<i>Lonchura malabarica</i> (Linnaeus, 1758)	E:White Throated Munia; S:Sarala Weekurulla; T:Ven thondai sillai.	VU	B2ab(iiii)	LC	
<i>Lonchura striata</i> (Linnaeus, 1766)	E:White Rumped Munia; S:Nithamba sudu Weekurulla; T: Ven muthuhu sillai.	LC		LC	
<i>Lonchura kelaarti</i> (Jerdon, 1863)	E:Black Throated Munia; S:Gelakalu Weekurulla; T: Karunthondai sillai.	VU		LC	
<i>Lonchura punctulata</i> (Linnaeus, 1758)	E:Scaly Breasted Munia; S: Laya kayuru Weekurulla; T:Pulli sillai.	LC		LC	
<i>Lonchura malacca</i> (Linnaeus, 1766)	E:Tricoloured Munia; S: Thepaha Weekurulla; T: Karunthalai sillai.	LC		LC	

# The Taxonomy and Conservation Status of Mammals in Sri Lanka

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## Introduction

The first systematic account of the mammals of Sri Lanka was done by Kelaart (1852). Thereafter, Phillips (1935) has written a more extensive review of the mammals of Sri Lanka which, even though somewhat outdated in terms of information, remains the standard reference work for the mammals of Sri Lanka even at present. After Phillips, several attempts have been made to revise the taxonomic status of the country's mammals. Some of these reviews have focused specifically on the Sri Lankan situation (Hill, 1939; Eisenberg and McKay, 1970; Hill, 1980; McKay 1984) while others treated the country's mammals in a regional context (Ellerman and Morrison-Scott 1966; Corbet and Hill, 1992). In addition, there are a number of reviews that have focused on specific taxonomic groups (Moore, 1960; Ellerman, 1961; Musser, 1981; Bates & Harrison, 1997; Marshall, 1977; Sirinivasulu and Pradhan, 2003; Chakraborty *et al.*, 2004; Sirinivasulu and Jordan, 2004; Sirinivasulu and Sirinivasulu, 2004; Sirinivasulu *et al.*, 2004a and Sirinivasulu *et al.*, 2004b).

## Taxonomy

A total of 144 species and subspecies of mammals were described from Sri Lanka from 1758 to 1965. Of these, 24 are currently considered as valid species. According to literature, there are 95 species of indigenous mammals in Sri Lanka, of which 21 species are endemic to the island. Another 12 species have been introduced to Sri Lanka by humans, of which four species, namely *Bubalis bubalis*, *Equus caballus*, *Equus asinus* and *Rattus norvegicus*, have well established feral populations.

The endemic status of the Kelaart's long-clawed shrew, *Feroculus feroculus* had to be revised as it has been reported from equivalent bioclimatic zones in Kerala & Tamil Nadu provinces of India (Pradhan *et al.*, 1997). At the same time recent revisions of the South Asian murids (Sirinivasulu and Pradhan, 2003; Dissanayake, 2012) and primates (Walker and Molur, 2004) have indicated that *Funambulus layardi*, *Funambulus obscurus* and *Loris tardigradus* are endemic to Sri Lanka. Further, revision of the genus *Moschiola* (Groves & Meijaard, 2005) and the species *Paradoxurus zeylonensis* (Groves *et al.*, 2009) resulted in splitting of the two previously known species into five endemic species, *Moschiola meminna*, *Moschiola kathygre*, *Paradoxurus aureus*, *Paradoxurus stenocephalus* and *Paradoxurus montanus*. Finally, another species of shrew, *Crocidura hikmiya*, has been added to the list of endemic species of Sri Lanka (Meegaskumbura *et al.*, 2007), bringing the total number of endemic species to 21.

Most revisions of Sri Lankan mammals have been based mainly on museum collections rather than detailed field studies. The work of Phillips therefore remains the only truly reliable source even today, even though advances in systematics during recent years have made some of his nomenclature obsolete and, as noted above, the endemic status of several species of mammals have changed. Other aspects that need to be resolved are the subspecific status of some Sri Lankan mammals and the status of two species of small mammals described by Deraniyagala (1958 and 1964), *Podihik kura* and *Gatamiya weragami*.

Several Sri Lankan mammals are represented by sub species whose status have not been clearly established. Therefore, these sub species were not considered during the present conservation assessment. However, some of the sub species are quite rare in Sri Lanka eg. *Loris tardigradus nycticeboides*, *Macaca sinica opisthomeles*, *Semnopithecus vetulus monticola* even though the species itself is found in abundance. Therefore, if these sub species are to be conserved as genetically stable units in the future, the correct sub species status has to be clearly resolved. Both *Gatamiya weragami* and *Podihik kura* are not currently considered in the list of Sri Lankan mammals. Corbett and Hill (1992) consider that the former is probably a synonym of *Mus booduga*, while the description of the latter was based on a juvenile specimen of *Suncus murinus*. However, Deraniyagala placed *P. kura* in the subfamily Soricinae, which possess reddish incisor enamel, while the subfamily Crocidurinae, to which *Suncus* belongs, has white enamel. The status of *Podihik*, at least, needs to be re-examined.

All these taxonomic issues point to the need to carry out a systematic review of the taxonomy of Sri Lankan mammals based on detailed field collections as well as existing museum specimens.

### **Distribution**

Eisenberg and McKay (1970) proposed a system for classifying the habitats of mammals in Sri Lanka based on the climate map of Muller-Dombois and Sirisena (1967); they recognized seven mammalian zones, namely monsoon scrub jungle in the northwest (A1) and southeast (A2), monsoon forest and grassland (B), inter monsoon forest (C), rain forests and grasslands below 3000 feet (D1), between 3000-5000 feet (D2) and above 5000 feet (D3). Out of these, most of the endemic and threatened mammals of Sri Lanka are restricted to the zones D1, D2 and D3. However, these three zones remain poorly explored, especially zones D2 and D3. As recent studies have lead to the description of at least 5 new endemic species during the last five years alone from these three zones, a detailed survey of the mammals in these three zones is a timely need.

### **Research gaps related to the taxonomy of mammals of Sri Lanka**

Most of the research on mammals of Sri Lanka has been biased towards the large charismatic animals with little emphasis on the small mammals. Many of the small mammals have not been recorded in recent times and their present status remains unknown. Furthermore, many areas of Sri Lanka, such as the north, northwest, isolated hills in the dry zone and the montane regions (especially, the Knuckles Range and Sinharaja), have not been properly surveyed and may harbour species that are not recorded to date. It is extremely important, therefore, for Sri Lanka to establish a systematic survey program for the country's mammals (for both terrestrial and marine), with a special emphasis on small mammals, under the auspices of the national museum or any other relevant government agency. Such a survey would bring a wealth of information on the mammalian fauna of Sri Lanka as well as provide the basis to resolve many of the taxonomic issues we face today.

## Conservation issues pertaining to mammals of Sri Lanka

Even though many, perhaps most, of the mammals show a wide distribution within Sri Lanka, a majority of the endemic and threatened mammals are confined to the wet zone and especially, the montane zone where habitat loss and degradation are taking place at a rapid rate. Furthermore, fragmentation of habitats also has a detrimental effect on mammal populations, especially small mammals who have low mobility. Expansion of human settlements into forested areas has resulted in an influx of pest species (house rat and brown rat) and domestic predators (cat and dog) into the remaining natural habitats. These compete with indigenous species as well as increase the predator pressure on already stressed natural populations. A number of small predators, such as the fishing cat and the mongoose, live in small urban forests and marshes which are at risk of being converted to human use, endangering these small urban populations. Increased mortality due to hunting and conflict also remains a major concern, especially for the large charismatic species.

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## Notes on the Marine Mammals of Sri Lanka

The maritime zone of Sri Lanka is inhabited by 30 species of marine mammals. Even though it has been known that marine mammals inhabited the ocean around Sri Lanka as far back as the 14th century based on the writings of the travelers, the scientific study of the marine mammals has only begun in the 1980's. Therefore, what is known about the diversity, ecology and conservation of marine mammals is based on information gathered by research carried out during the last three decades. The 30 species of marine mammals recorded in Sri Lankan waters are classified under two orders, Cetartiodactyla (includes 29 species of whales, dolphins and porpoises in five families) and Sirenia (includes 1 species of Dugong).

As indicated above, the research studies on Marine Mammals in Sri Lanka has only started during the last three decades. Even these are mostly short-term studies due to funding restrictions, logistical restrictions in studying large ranging oceanic animals and lack of access to certain parts of the ocean due to security reasons. However, in order to reach a clear understanding of large ranging mammals such as whales and dolphins long term studies are necessary. Due to the lack of information, the national status of marine mammals has not been assessed and only their global status is listed in this paper.

The biggest threat to the marine mammals inhabiting the oceans around Sri Lanka is posed by the fisheries industry. Large numbers of Dolphins and Dugongs are killed each year both directly and indirectly (by-catch) by fisherman. In addition, increased shipping traffic, marine pollution by both land based and marine based sources, habitat destruction, especially shallow near shore habitats such as sea grass beds are the other major threats faced by marine mammals. Even though Sri Lanka's maritime zone is nearly eight times larger than its land area, there is a major discrepancy in the allocation of areas for conservation as evidenced by the fact that there are only four Marine Protected Areas in Sri Lanka as opposed to more than 100 protected areas declared on land under the management of Department of Wildlife Conservation and Forest Department. These four protected areas are primarily aimed at conserving coral reefs and are poorly enforced at present.

During the past decade Sri Lanka has gained a reputation as an ideal site for whale and dolphin watching, both among local and foreign tourists. However, at present there are no regulations in place to control or monitor the whale watching industry and as such it may pose a major threat to the marine mammals, especially the larger whales. Lessons learned from other countries indicate that poorly regulated whale watching can have adverse impacts on the marine mammal populations. As Sri Lanka plans to expand its tourist industry in the coming years, marine mammals can prove an important economic resource as it can be marketed as a major tourism experience. Therefore, it is critically important that Sri Lanka pays more attention towards protecting its marine mammals.

**Table 12: List of Mammals in Sri Lanka**

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family : Manidae</b>					
<i>Manis crassicaudata</i> Gray, 1827	E: Pangolin; S: Kaballewa	NT		NT	
<b>Family : Soricidae</b>					
<i>Crocidura horsfieldi</i> (Tomes, 1856)	E: Horsfield's shrew; S: Kunuhik-miya	CR	B2ab(iii)	DD	
<i>Crocidura miya</i> Phillips, 1929	E: Sri Lanka long-tailed shrew; S: Sri Lanka Kunuhik-miya	CR	B1ab(iii)	EN	B1ab(iii)+2ab(iii)
<i>Crocidura hikmiya</i> Meegaskumbura, Meegaskumbura, Pethiyagoda, Manamendra-arachchi & Schneider, 2007		CR	B2ab(iii)		
<i>Feroculus feroculus</i> (Kelaart, 1850)	E: Kelaart's long-clawed shrew; S: Pirihi-miya	EN	B1ab(iii)+2ab(iii)	EN	B1+2ab(ii,iii)
<i>Solisorex pearsoni</i> Thomas, 1924	E: Sri Lanka Pearson's long-clawed shrew; S: Sri Lanka Mahik-miya	CR	B2ab(iii)	EN	B1ab(iii)+2ab(iii)
<i>Suncus etruscus</i> (Savi, 1822)	E: Pigmy shrew; S: Podi Hik-miya	EN	B1ab(iii)	LC	
<i>Suncus fellowes-gordoni</i> Phillips, 1932	E: Sri Lanka pigmy shrew; S: Sri Lanka Podi Hik-miya	EN	B1ab(iii)+2ab(iii)	EN	B1ab(iii)+2ab(iii)
<i>Suncus montanus</i> (Kelaart, 1850)	E: Sri Lanka Highland shrew; S: Sri Lanka Kandu Hik-miya	EN	B1ab(iii)+2ab(iii)	VU	B2ab(ii,iii)
<i>Suncus murinus</i> (Linnaeus, 1766)	E: Common musk shrew; S: Podhu Hik-miya	LC		LC	
<i>Suncus zeylanicus</i> Phillips, 1928	E: Sri Lanka jungle shrew; S: Sri Lanka Kele Hik-miya	DD		EN	B2ab(iii)
<b>Family : Emballonuridae</b>					
<i>Taphozous longimanus</i> Hardwicke, 1825	E: Long-armed sheath-tailed bat; S: Dikba Kepulum- vavula	EN	B1ab(iii)+2ab(iii)	LC	
<i>Taphozous melanopogon</i> Temminck, 1841	E: Black-bearded sheath-tailed bat; S: Ravulka Kepulum- vavula	VU	B1ab(iii)	LC	
<i>Saccolaimus saccolaimus</i> Temminck, 1838	E: Pouch-bearing sheath-tailed bat; S: Maha Kepulum- vavula	CR	B2ab(iii)	LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family : Hipposideridae</b>					
<i>Hipposideros ater</i> Temleton, 1848	E: Bicolored leaf-nosed bat; S: Depata Pathnehe-vavula	LC		LC	
<i>Hipposideros fulvus</i> Gray, 1838	E: Fulvous-leaf nosed bat; S: Malekaha Pathnehe-vavula	EN	B1ab(iii)+2ab(iii)	LC	
<i>Hipposideros galeritus</i> Cantor, 1846	E: Dekhan leaf-nosed bat; S: Kesdiga Pathnehe-vavula	VU	B1ab(iii)	LC	
<i>Hipposideros lankadiva</i> Kelaart, 1850	E: Great leaf-nosed bat; S: Maha Pathnehe-vavula	VU	B1ab(iii)	LC	
<i>Hipposideros speoris</i> (Schneider, 1800)	E: Schneider's leaf-nosed bat; S: Kesketi Pathnehe-vavula	LC		LC	
<b>Family : Megadermatidae</b>					
<i>Megaderma lyra</i> Geoffroy, 1810	E: Greater False Vampire bat; S: Boru Ley-vavula	VU	B1ab(iii)	LC	
<i>Megaderma spasma</i> (Linnaeus, 1758)	E: Lesser False Vampire bat; S: Kandiga Boru Ley-vavula	VU	B1ab(iii)	LC	
<b>Family : Molossidae</b>					
<i>Tadarida aegyptiaca</i> (Geoffroy, 1818)	E: Continental wrinkled-lip bat; S: Mahadive Rallithol-vavula	CR	B2ab(iii)	LC	
<i>Chaerephon plicatus</i> (Buchnnan, 1800)	E: Common wrinkled-lip bat; S: Podhu Rallithol-vavula	CR	B2ab(iii)	LC	
<b>Family : Pteropodidae</b>					
<i>Cynopterus brachyotis</i> (Muller, 1838)	E: Lesser dog-nosed fruit bat; S: Heen Thala-vavula	EN	B1ab(iii)+2ab(iii)	LC	
<i>Cynopterus sphinx</i> (Vahl, 1797)	E: Short-nosed fruit bat; S: Thala-vavula	LC		LC	
<i>Pteropus giganteus</i> (Brunnich, 1782)	E: Flying fox; S: Ma-vavula	LC		LC	
<i>Rousettus leschenaulti</i> (Desmarest, 1820)	E: Fulvous fruit bat; S: Rath dumburu pala vavula	LC		LC	
<b>Family : Rhinolophidae</b>					
<i>Rhinolophus beddomei</i> Anderson, 1905	E: Great horse-shoe bat; S: Maha Ashladan-vavula	VU	B1ab(iii)	LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Rhinolophus rouxii</i> Temminck, 1835	E: Rufous horse-shoe bat; S: Borath Ashladan-vavula	LC		LC	
<b>Family : Vespertilionidae</b>					
<i>Hesperoptenus tickelli</i> (Blyth, 1851)	E: Tickle's bat; S: Awara-vavula	DD		LC	
<i>Kerivoula hardwickii</i> (Horsefield, 1824)	E: Malpas's bat; S: Rathbora Kehel-vavula	CR	B1ab(iii)+ 2ab(iii)		
<i>Kerivoula picta</i> (Pallas, 1767)	E: Painted bat; S: Visithuru Kehel-vavula	NT		LC	
<i>Miniopterus schreibersii</i> (Kuhl, 1819)	E: Long-winged bat; S: Dickpiya- vavula	EN	B2ab(iii)		
<i>Myotis hasseltii</i> (Temminck, 1840)	E: Brown bat; S: Bora-vavula	NT		LC	
<i>Murina cyclotis</i> Dobson, 1872	E: Tube-nosed bat; S: Nalanehe- vavula	NT		LC	
<i>Falsistrellus affinis</i> (Dobson, 1871)	E: Chocolate bat; S: Bora koseta- vavula	CR	B2ab(iii)	LC	
<i>Pipistrellus ceylonicus</i> (Kelaart, 1852)	E: Kelaart's pipistrel; S: Rathbora koseta-vavula	EN	B2ab(iii)	LC	
<i>Pipistrellus coromandra</i> (Gray, 1838)	E: Indian pipistrel; S: Indu koseta- vavula	VU	B1ab(iii)	LC	
<i>Pipistrellus tenuis</i> (Temminck, 1840)	E: Pigmy pipistrel; S: Heen koseta- vavula	LC		LC	
<i>Scotophilus heathii</i> Horsefield, 1831	E: Great yellow bat; S: Maha kaha-vavula	VU	B1ab(iii)	LC	
<i>Scotophilus kuhlii</i> Leach, 1821	E: Lesser yellow bat; S: Heen kaha-vavula	DD		LC	
<b>Family : Cercopithecidae</b>					
<i>Macaca sinica</i> (Linnaeus, 1771)	E: Sri Lanka toque monkey; S: Sri Lanka Rilawa	LC		EN	A2cd
<i>Semnopithecus priam</i> Blyth, 1844	E: Grey langur; S: Eli-wandura	LC		NT	
<i>Semnopithecus vetulus</i> (Erxleben, 1777)	E: Sri Lanka Purple-faced langur; S: Sri Lanka kalu- wandura	EN	B2ab(iii)	EN	A2cd+3cd+4cd
<b>Family : Lorisidae</b>					
<i>Loris lydekkerianus</i> Cabrera, 1908	E: Grey slender loris; S: Alu Unahapuluwa	NT		LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Loris tardigradus</i> (Linnaeus, 1758)	E: Sri Lanka red slender loris; S: Sri Lanka Rath Unahapuluwa	VU	B1ab(iii)	EN	C2a(i)
<b>Family : Canidae</b>					
<i>Canis aureus</i> Linnaeus, 1758	E: Jackal; S: Nariya / Hiwala	LC		LC	
<b>Family : Felidae</b>					
<i>Felis chaus</i> Gueldenstaedt, 1776	E: Jungle cat; S: Wal Balala	NT		LC	
<i>Panthera pardus</i> (Linnaeus, 1758)	E: Leopard; S: Kotiya/ Diviya	EN	B2ab(iii)	NT	
<i>Prionailurus rubiginosus</i> (Geoffroy, 1831)	E: Rusty-spotted cat; S: Kola Diviya / Balal Diviya	EN	B2ab(iii)	VU	C2a(i)
<i>Prionailurus viverrinus</i> (Bennett, 1833)	E: Fishing cat; S: Handun Diviya	EN	B2ab(iii)	EN	A2cd+4cd
<b>Family : Herpestidae</b>					
<i>Herpestes brachyurus</i> Gray, 1837	E: Brown mongoose; S: Bora Mugatiya	LC			
<i>Herpestes edwardsii</i> (Geoffroy, 1818)	E: Grey mongoose; S: Alu Mugatiya	LC		LC	
<i>Herpestes smithii</i> Gray, 1837	E: Black-tipped or Ruddy mongoose; S: Rath Mugatiya / Hothambuwa	LC		LC	
<i>Herpestes vitticollis</i> Bennett, 1835	E: Stripe-necked or badger mongoose; S: Maha Mugatiya / Gal Mugatiya	VU	B1ab(iii)	LC	
<b>Family : Mustelidae</b>					
<i>Lutra lutra</i> (Linnaeus, 1758)	E: Otter; S: Diya-balla	VU	B1ab(iii)	NT	
<b>Family : Ursidae</b>					
<i>Melursus ursinus</i> (Show & Nodder, 1791)	E: Sloth bear; S: Walaha	EN	B2ab(iii)	VU	A2cd+4cd;C1
<b>Family : Viverridae</b>					
<i>Paradoxurus hermaphoditus</i> (Pallas, 1777)	E: Palm cat; S: Uguduwa	LC		LC	
<i>Paradoxurus aureus</i> Cuvier, 1822	E: Golden Palm Civet	EN	B2ab(iii)		
<i>Paradoxurus stenocephalus</i> Groves, Rajapaksha & Manamendra-Arachchi, 2009	E: Golden Dry-zone Palm Civet	CR	B1ab(iii)+ 2ab(iii)		
<i>Paradoxurus montanus</i> Kelaart, 1852	E: Sri Lankan Brown Palm Civet	EN	B2ab(iii)		
<i>Viverricula indica</i> (Desmarest, 1817)	E: Ring-tailed civet; S: Urulewa	LC		LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<b>Family : Elephantidae</b>					
<i>Elephas maximus</i> Linnaeus, 1758	E: Elephant; S: Etha / Aliya	EN	B2ab(iii)	EN	A2c
<b>Family : Bovidae</b>					
<i>Bubalus arnee</i> (Kerr, 1792)	E: Wild buffalo; S: Kulu Haraka / Wal Meema	VU	B2ab(iii)	EN	A2cde+ 3cde+4cde; C1
<b>Family : Cervidae</b>					
<i>Axis axis</i> (Erxleben, 1777)	E: Spotted deer; S: Tith Muwa	LC		LC	
<i>Axis porcinus</i> (Zimmermann, 1777)	E: Hog deer; S: Vil Muwa / Gona Muwa	CR	B1ab(iii)+ 2ab(iii)		
<i>Rusa unicolor</i> Kerr, 1792	E: Sambur; S: Gona	NT		VU	A2cd+3cd+4cd
<i>Muntiacus muntjak</i> (Zimmermann, 1780)	E: Barking deer; S: Olu Muwa / Weli Muwa	NT			
<b>Family : Suidae</b>					
<i>Sus scrofa</i> Linnaeus, 1758	E: Wild boar; S: Wal Ura	LC		LC	
<b>Family : Tragulidae</b>					
<i>Moschiola meminna</i> Erxleben, 1777	E: Sri Lanka mouse-deer; S: Sri Lanka Meminna	LC		LC	
<i>Moschiola kathygre</i> Groves & Meijaard, 2004	E: Sri Lanka pigmy mouse- deer; S: Sri Lanka Kuru Meminna	VU	B1ab(iii)	LC	
<b>Family : Hystricidae</b>					
<i>Hystrix indica</i> (Kerr, 1792)	E: Porcupine; S: Ittewa	LC		LC	
<b>Family : Muridae</b>					
<i>Bandicota bengalensis</i> (Gray 1835)	E: Mole rat; S: Heen Uru-miya	LC		LC	
<i>Bandicota indica</i> (Bechstein, 1800)	E: Malabar bandicoot; S: Uru-miya	LC		LC	
<i>Madromys blanfordi</i> (Thomas, 1881)	E: White-tailed rat; S: Waligasudu- miya	EN	B2ab(iii)	LC	
<i>Golunda ellioti</i> Gray, 1837	E: Bush rat; S: Panduru-miya	EN	B1ab(iii)+ 2ab(iii)	LC	
<i>Millardia meltada</i> (Gray, 1837)	E: Soft-furred field rat; S: Kesmu Keth-miya	EN	B2ab(iii)	LC	
<i>Mus booduga</i> (Gray, 1837)	E: Field mouse; S: Wel Heen- miya	LC		LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
<i>Mus fernandoni</i> (Phillips, 1932)	E: Sri Lanka spiny mouse; S: Sri Lanka katu Heen-miya	EN	B1ab(iii)+ 2ab(iii)	EN	B2ab(iii)
<i>Mus mayori</i> (Thomas, 1915)	E: Sri Lanka spiny rat; S: Sri Lanka Depahe Katu Heen-miya	EN	B2ab(iii)	VU	B2ab(iii)
<i>Mus musculus</i> Linnaeus, 1758	E: Indian house mouse; S: Ge Heen-miya/ Koseta-miya	LC			
<i>Rattus montanus</i> Phillips, 1932	E: Nelu rat; S: Sri Lanka Nelu Miya	CR	B2ab(iii)	EN	B1ab(iii)+2ab(iii)
<i>Rattus rattus</i> (Linnaeus, 1758)	E: Common rat; S: Podu Ge Miya	LC			
<i>Rattus tanezumi</i> Temminck, 1844		NT			
<i>Srilankamys ohiensis</i> (Phillips, 1929)	E: Sri Lanka bicolored rat; S: Sri Lanka Depehe-miya	EN	B1ab(iii)+ 2ab(iii)	VU	B1ab(iii)+2ab(iii)
<i>Vandeleuria nolthenii</i> Phillips, 1929	E: Sri lanka long-tailed tree mouse; S: Sri Lanka Gas-miya	CR	B2ab(iii)	EN	B1ab(iii)+2ab(iii)
<i>Vandeleuria oleracea</i> (Bennett, 1832)	E: Long-tailed tree mouse; S: Gas-miya	VU	B1ab(iii)	LC	
<i>Tatera indica</i> (Hardwicke, 1807)	E: Antelope rat; S: Welu-miya	LC		LC	
<b>Family : Pteromyidae</b>					
<i>Petaurista philippensis</i> (Elliot, 1839)	E: Giant flying squirrel; S: Ma-hambawa	EN	B1ab(iii)+ 2ab(iii)	LC	
<i>Petinomys fuscocapillus</i> (Jerdon, 1847)	E: Small flying squirrel; S: Heen-hambawa	EN	B1ab(iii)+ 2ab(iii)	NT	
<b>Family : Sciuridae</b>					
<i>Funambulus layardi</i> (Blyth, 1849)	E: Sri Lanka flame-striped jungle squirrel; S: Sri Lanka Mukalan Leena	VU	B1ab(iii)	VU	A3c+4c; B1ab(i,ii,iii)
<i>Funambulus palmarum</i> (Linnaeus, 1766)	E: Palm squirrel; S: Leena	LC		LC	
<i>Funambulus obscurus</i> (Pelzein & Kohl, 1886)	E: Dusky-striped jungle squirrel; S: Punchi Leena	VU	B1an(iii)	VU	B2ab(i,ii,iii)
<i>Ratufa macroura</i> (Pennant, 1769)	E: Giant squirrel; S: Dandu-leena	LC		NT	
<b>Family : Leporidae</b>					
<i>Lepus nigricollis</i> Cuvier, 1823	E: Black-naped hare; S: Wal Hawa	LC		LC	

Scientific Name	Common Name	GCS	Criteria
<b>Family: Balaenopteridae</b>			
<i>Balaenoptera acutorostrata</i> Lacepede, 1804	E: Mink Whale; S: Minki thalmasa	LC	
<i>Balaenoptera borealis</i> Lesson, 1828	E: Sei Whale; S: Sei thalmasa	EN	A1ad
<i>Balaenoptera edeni</i> Anderson, 1879	E: Bride's whale; S: Bridege thalmasa	DD	
<i>Balaenoptera musculus</i> Linnaeus, 1758	E: Blue whale; S: Nil thalmasa	EN	A1abd
<i>Balaenoptera physalus</i> (Linnaeus, 1758)	E: Fin Whale; S: Waral thalmasa	EN	A1d
<i>Megaptera novaeangliae</i> (Borowski, 1781)	E: Hump-backed Whale; S: Molli thalmasa	LC	
<b>Family: Physeteridae</b>			
<i>Physeter macrocephalus</i> Linnaeus, 1758	E: Sperm Whale; S: Manda thalmasa	VU	A1d
<b>Family: Kogiidae</b>			
<i>Kogia breviceps</i> (Blainville, 1838)	E: Pygmy Sperm Whale; S: Kurumanda thalmasa	DD	
<i>Kogia sima</i> (Owen, 1866)	E: Dwarf Sperm Whale; S: Mitimanda thalmasa	DD	
<b>Family: Ziphiidae</b>			
<i>Indopacetus pacificus</i> Longman, 1926	E: Longman's Beaked Whale; S: Longmange hota ul thalmasa	DD	
<i>Mesoplodon densirostris</i> Blainville, 1817	E: Blainville's beaked Whale; S: Blanvilge hota ul thalmasa	DD	
<i>Mesoplodon hotaula</i> Nishiwaki & Kamiya, 1958	E: Ginko-toothed Beaked Whale; S: Japan hota ul thalmasa	DD	
<i>Ziphius cavirostris</i> Cuvier, 1823	E: Cuvier's beak Whale; S: Cuvierge hota ul thalmasa	LC	
<b>Family: Delphinidae</b>			
<i>Delphinus delphis</i> Linnaeus, 1758	E: Common Dolphin; S: Podu mulla	LC	
<i>Feresa attenuata</i> Gray, 1875	E: Pygmy Killer Whale; S: Kuru minimaru thalmasa	DD	
<i>Globicephala macrorhynchus</i> Gray, 1846	E: Short-finned Pilot Whale; S: Ketu waral niyamu thalmasa	DD	
<i>Grampus griseus</i> (Cuvier, 1812)	E: Rissos Dolphin/ Grey Dolphin; S: Malina mulla	LC	
<i>Lagenodelphis hosei</i> Fraser, 1957	E: Fraser's Dolphin; S: Ketu hota mulla	LC	
<i>Orcinus orca</i> (Linnaeus, 1758)	E: Killer whale; S: Minimaru thalmasa	DD	
<i>Peponocephala electra</i> (Gray, 1846)	E: Melon headed Whale; S: Puhu lolu mulla	LC	
<i>Pseudorca crassidens</i> (Owen, 1846)	E: False Killer Whale; S: Wyaja minimaru thalmasa	DD	
<i>Sousa chinensis</i> (Osbeck, 1765)	E: Indo-pacific hump-back Dolphin; S: Kabara mulla	NT	
<i>Stenella attenuata</i> (Gray, 1846)	E: Spotted Dolphin; S: Thith mulla	LC	
<i>Stenella coeruleoalba</i> (Meyen, 1833)	E: Striped Dolphin; S: Wyiram mulla	LC	
<i>Stenella longirostris</i> (Gray, 1828)	E: Spinner Dolphin; S: Sannali mulla	DD	
<i>Steno bredanensis</i> (Lesson, 1828)	E: Rough-toothed Dolphin; S: Ralu dath mulla	LC	
<i>Tursiops truncatus</i> (Monotagu, 1821)	E: Bottle nosed Dolphin; S: Digasumbu mulla	LC	
<i>Tursiops aduncus</i> (Ehrenberg, 1833)	E: Indo-pacific Bottlenosed Dolphin; S: Indu digasumbu mulla	DD	
<b>Family: Phocoenidae</b>			
<i>Neophocaena phocaenoides</i> (Cuvier, 1829)	E: Finless Porpoise; S: Awara mulla	VU	A2cde
<b>Family: Dugongidae</b>			
<i>Dugong dugong</i> (Muller, 1776)	E: Dugong; S: Muhudu Ura	VU	A2bcd



## **Analysis of Faunal Groups**

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Altogether 748 inland indigenous vertebrate species were assessed. However, the 30 marine mammals were excluded from the analysis due to insufficient data. For them only the global listing is provided. Out of these 345 (46%) species were evaluated to be Nationally Threatened (Table 1). Among the threatened vertebrate species, 233 (68%) are endemic to Sri Lanka. Nineteen species of endemic amphibians have not been recorded in Sri Lanka during the past 100 years, and these were considered as Extinct. Further, two species of fish, one species of amphibian and 1 species of reptile were listed as possibly extinct as there are no recent records for this species. Of the surviving inland vertebrates, 122 species are Critically Endangered: i.e., one in every 6 species of inland indigenous vertebrates of Sri Lanka is currently facing a high risk of extinction (CR) in the wild. Among the total endemic vertebrate species, 92 (29%) are Critically Endangered, 98 (31%) are Endangered and 39 (12%) are Vulnerable. Among the vertebrate fauna, the highest number of threatened species was recorded among reptiles (107 or 31%), followed by amphibians, birds, mammals and freshwater fish. One in every two species of freshwater fish, amphibians, reptiles and mammals and one in every five species of birds in the island are currently facing the risk of becoming extinct in the wild.

Among the selected groups of inland invertebrate fauna evaluated, the highest number of threatened species was recorded among the Land snails (179), followed by bees, butterflies, spiders, dragonflies, ants and freshwater crabs (Table 1). However, within a single group of invertebrates evaluated, the highest proportion of threatened species was recorded among the freshwater crabs (90% of the total crab species recorded to date), where one in every two species in Sri Lanka is currently facing an immediate and extremely high risk of extinction (CR) in the wild.

Of the vertebrate species evaluated, five freshwater fish, three amphibians, 15 reptiles, 35 birds and seven mammals were assessed as Near Threatened (NT). Similarly, among the evaluated invertebrate species, eight spiders, five freshwater crabs, 17 dragonflies, 12 bees, 21 butterflies and 12 land snails were evaluated as Near Threatened.

Among the inland vertebrate species evaluated, nine freshwater fish, one amphibian, 27 reptiles and six mammals were included in the Data Deficient category. Among the invertebrate species assessed, 394 spiders, 11 dragonflies, 109 ants, 06 butterflies and 36 land snails had to be included in the Data Deficient category, because they lacked sufficient distribution data within Sri Lanka. The number of species listed in the data deficient category is extremely high among the spiders and ants as very little information exists about members of these two groups. However, they were included in the assessment to encourage further study of these two economically important taxonomic groups.

**Table 1. Conservation status of the assessed vertebrates and invertebrates of Sri Lanka**

(Endemics are shown in brackets)

Taxonomic Group	EX	CR (PE)	CR	EN	VU	NT	DD	LC	Total Species	Total Threatened
Spiders			41 (14)	21 (10)		8 (2)	394 (231)	37	501(257)	62(24)
Freshwater crabs			34 (34)	12 (11)		5 (5)			51(50)	46(45)
Dragonflies			26 (22)	18 (14)	17 (4)	17 (1)	11 (5)	29 (1)	118 (47)	61(40)
Ants			25 (5)	18 (3)	16		109 (25)	26	194 (33)	59(8)
Bees			48	38	20	12		12	130	106
Butterflies			21 (5)	38 (10)	40 (7)	21	6(1)	119 (3)	245 (26)	99 (22)
Land Snails (Excluding 21 not evaluated)			80 (70)	76 (72)	23 (20)	12 (10)	36 (32)	5 (1)	253 (205)	179 (162)
Freshwater fish		2 (2)	19 (16)	19 (17)	5 (4)	5 (3)	9 (5)	32 (3)	91 (50)	45 (39)
Amphibians	19 (19)	1 (1)	34 (34)	28 (27)	10 (9)	3 (3)	1	15 (2)	111(95)	73 (71)
Reptiles (Including marine reptiles)		1 (1)	38 (36)	50 (39)	18 (11)	15 (7)	27 (15)	62 (15)	211 (124)	107 (87)
Birds			18	18 (7)	31 (11)	35 (3)		138 (6)	240 (27)	67 (18)
Mammals (Excluding the 30 marine mammals)			13 (6)	25 (8)	15 (4)	7 (0)	6 (1)	29 (2)	95 (21)	53 (18)

An analysis of the geographical distribution of threatened vertebrate fauna in the different administrative districts in the island (Table 2) revealed that districts in the lowland wet zone (ie., Ratnapura, Galle, Matara, Kalutara, Kegalle) and the central highlands (Kandy, Nuwara-Eliya, Matale, Badulla) harbour a higher number of threatened taxa. According to information compiled during this study, the highest number of threatened vertebrate fauna occur in the Ratnapura District. The analyses also show clearly that districts in the Northern Province (Jaffna, Kilinochchi, Mullaitivu, Vavuniya) and the Eastern Province (Ampara, Batticaloa and Trincomalee) lack sufficient distribution data, compared to other areas of the island.

Table 2. The geographic distribution of threatened vertebrates in Sri Lanka

District	Freshwater Fish			Amphibians			Reptiles			Birds			Mammals			Total
	CR	EN	VU	CR	EN	VU	CR	EN	VU	CR	EN	VU	CR	EN	VU	
Ampara	1 (1)	1 (0)	1 (1)	1 (1)				4 (2)	7 (3)	1 (0)	2 (0)	11 (1)		3 (1)		32 (11)
Anuradhapura	1 (1)	3 (2)	4 (3)			3 (2)	2 (2)	5 (3)	8 (3)		1 (0)	6 (0)		12 (1)	12 (1)	57 (18)
Badulla	1 (1)	2 (1)	1 (1)	1 (1)	4 (4)	5 (5)	5 (4)	14 (12)	5 (3)	1 (0)	6 (1)	18 (10)	4 (3)	11 (4)	10 (2)	88 (52)
Batticaloa		1 (0)							1 (0)			2 (0)		1 (1)		5 (1)
Colombo	3 (2)	14 (12)	3 (2)		7 (6)	6 (6)		2 (1)	3 (0)		2 (0)	11 (3)		3 (1)	4 (1)	58 (34)
Galle	4 (3)	18 (17)	3 (2)	3 (3)	20 (19)	8 (8)	4 (4)	11 (10)	13 (8)		10 (5)	16 (10)	1 (0)	8 (2)	10 (3)	129 (94)
Gampaha	2 (1)	10 (9)	2 (1)			1 (1)		3 (2)	3 (1)		3 (1)	5 (2)		3 (1)	6 (2)	35 (21)
Hambantota	1 (1)		2 (2)					6 (3)	11 (6)	2 (0)	7 (0)	20 (6)		10 (2)	7 (1)	66 (21)
Jaffna						1 (0)	1 (0)		3 (0)		1 (0)	3 (0)				9 (0)
Kalutara	7 (5)	16 (14)	3 (2)		9 (8)	5 (5)		9 (9)	8 (5)		8 (4)	17 (10)	1 (0)	5 (2)	9 (3)	97 (62)
Kandy	5 (5)	2 (1)	3 (3)	13 (13)	12 (12)	8 (8)	9 (7)	25 (23)	13 (10)	1 (0)	15 (6)	19 (11)	1 (1)	12 (4)	6 (2)	144 (108)
Kegalle	4 (2)	15 (13)	2 (2)	1 (1)	10 (9)	5 (5)	1 (1)	9 (9)	9 (7)		11 (7)	17 (11)		2 (2)	8 (3)	94 (72)
Kilinochchi																0 (0)
Kurunegala		2 (1)			1 (1)	2 (1)		2 (2)	2 (2)		1 (0)	3 (1)	1 (0)	6 (2)	6 (0)	26 (10)
Mannar	1 (1)	1 (0)				1 (0)		2 (0)	4 (0)	1 (0)	1 (0)	6 (0)		1 (0)		18 (1)
Matale	4 (4)		2 (2)	5 (5)	5 (5)	8 (7)	7 (6)	8 (8)	8 (6)	2 (0)	10 (2)	23 (7)	2 (0)	9 (2)	5 (1)	96 (55)
Matara	4 (3)	10 (10)	3 (2)	2 (2)	13 (12)	6 (6)	2 (2)	12 (11)	10 (7)		6 (4)	15 (11)		5 (2)	8 (3)	96 (75)
Monaragala	1 (1)	2 (1)	1 (1)	1 (1)	1 (1)	4 (4)	3 (1)	6 (5)	11 (8)	4 (0)	6 (0)	14 (4)		10 (3)	5 (1)	69 (31)
Mullaitivu	1 (1)	1 (0)				1 (0)	1 (0)	1 (0)	1 (0)	1 (0)	2 (0)	11 (1)		2 (1)		22 (3)
Nuwara Eliya	1 (1)	1 (1)	1 (1)	12 (12)	17 (16)	7 (7)	7 (6)	18 (15)	10 (7)		1 (0)	6 (0)	4 (3)	14 (6)	8 (3)	107 (78)
Polonnaruwa	3 (3)	3 (2)	3 (3)			4 (3)	1 (1)	3 (2)	6 (5)	1 (0)	6 (1)	18 (10)		5 (1)	6 (1)	59 (32)
Puttalam	1 (1)	2 (1)	2 (1)			2 (1)	1 (1)	3 (0)	6 (2)			2 (0)		5 (0)	3 (0)	27 (7)
Ratnapura	6 (5)	15 (13)	2 (2)	19 (19)	27 (26)	8 (8)	13 (12)	23 (21)	12 (9)		2 (0)	11 (3)	1 (1)	15 (5)	12 (3)	166 (127)
Trincomalee	1 (1)	1 (0)				2 (1)			2 (0)		10 (5)	16 (10)		5 (1)	1 (0)	36 (18)
Vavuniya	1 (1)	1 (0)							1 (0)		3 (1)	5 (2)				11 (3)

# Taxonomy and Conservation Status of Pteridophyte Flora of Sri Lanka

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## Introduction

The recorded history of exploration of pteridophytes in Sri Lanka dates back to 1672-1675 when Poul Hermann had collected a few fern specimens which were first described by Linneus (1747) in *Flora Zeylanica*. The majority of Sri Lankan pteridophytes have been collected in the 19<sup>th</sup> century during the British period and some of them have been published as catalogues and checklists. However, only Beddome (1863-1883) and Sledge (1950-1954) had conducted systematic studies and contributed significantly to today's knowledge on taxonomy and diversity of Sri Lankan pteridophytes (Beddome, 1883; Sledge, 1982). Thereafter, Manton (1953) and Manton and Sledge (1954) reported chromosome numbers and some taxonomic issues of selected Sri Lankan Pteridophytes. Recently, Shaffer-Fehre (2006) has edited the volume 15 of the revised handbook to the flora of Ceylon on pteridophyta (Fern and Fern Allies).

The local involvement of pteridological studies began with Abeywickrama (1956; 1964; 1978), Abeywickrama and Dassanayake (1956); and Abeywickrama and De Fonseka, (1975) with the preparations of checklists of pteridophytes and description of some fern families. Dassanayake (1964), Jayasekara (1996), Jayasekara *et al.*, (1996), Dhanasekera (undated), Fernando (2002), Herat and Rathnayake (2004) and Ranil *et al.*, (2004; 2005; 2006) have also contributed to the present knowledge on Pteridophytes in Sri Lanka. However, only recently, Ranil and co workers initiated a detailed study on biology, ecology and variation of tree ferns (Cyatheaceae) in Kanneliya and Sinharaja MAB reserves combining field and laboratory studies and also taxonomic studies on island-wide Sri Lankan fern flora. As a result, Ranil *et al.* (2010a; 2010b) have described two new pteridophyte species from Sri Lanka and identified conservation priorities for Sri Lankan tree ferns in 2011 (Ranil *et al.*, 2011). Ranil *et al.*, (in prep.) reviewed and revised the list of endemic pteridophytes in Sri Lanka.

Currently, about 348 pteridophyte taxa from 30 families have been recorded from Sri Lanka, of which 50 taxa are reported to be endemic to the country (Shaffer-Fehre, 2006). Among Asian countries, Sri Lanka is second only to Taiwan in terms of the number of pteridophyte species per 10,000 km<sup>2</sup> (Ranil *et al.*, 2008a). Geographical isolation, and a wide range of climatic, elevational and soil type variation in Sri Lanka may have resulted in rich diversity of pteridophyte flora as well along with exceptionally high level of endemism. It is reported that Sri Lankan pteridophytes have strong phyto-geographical relationships with South Indian species. Further, both the Sri Lankan and the South Indian pteridophyte flora also have phyto-geographical relationship with three regions, namely the Sino-Himalayan flora, the Malesian flora from South East Asia, and an African element connected with the Seychelles, Mascarenes, Madagascar and East Africa (Fraser-Jenkins, 1984). Despite historical and recent information on pteridophyte flora of Sri Lanka, this is the first instance that the pteridophyte flora has been assessed based on the national Red Listing criteria.

## Taxonomy

The present knowledge of pteridophytes is largely based on Shaffer-Fehre (2006) which is mainly based on morphology and specimens of existing herbarium collections rather than new information. It has been prepared during 1993-1995 period but published in 2006. However, with the advancement of plant molecular studies, taxonomic status of many fern species have changed and many revisions have been made. On the other hand, recently an extensive field survey of South Indian fern flora has been carried out, though such information has not been widely published yet. Recent review of endemic pteridophyte flora in Sri Lanka parallel to information generated through South Indian survey via personal communication revealed that the changes of number of endemic taxa from 50 (Shaffer-Fehre, 2006) to 44 (Ranil *et al.*, in prep.). All these indicated the need of a systematic review of the taxonomy of Sri Lankan pteridophytes based on detailed field works and existing herbarium collections and also considering with advances of taxonomy and systematics due to molecular studies on pteridophytes. For the red listing process, except for three families, namely Aspleniaceae, Cyatheaceae and Thelypteridaceae (where there is no agreement among pteridologists to place Sri Lankan species within families, hence followed Shaffer-Fehre (2006), all species have been arranged based on the linear sequence of extant families and genera of lycophytes and ferns proposed by Christenhusz *et al.*, (2011). Changes of genera and families according to Christenhusz *et al.* (2011) are given in Table 1.

Table 1: Changes of genera and families based on recent classification proposed by Christenhusz *et al.* (2011).

Taxa	Flora of Ceylon (2006) by Shaffer-Fehre (2006)	Redlist (2012) based on Christenhusz <i>et al.</i> (2011)
<b>Genera</b>		
<i>Antrophyum</i>	Vittariaceae	Pteridaceae
<i>Arthropteris</i>	Oleandraceae	Tectariaceae
<i>Athyrium</i>	Woodsiaceae	Athyriaceae
<i>Bolbitis</i>	Lomariopsidaceae	Dryopteridaceae
<i>Ceratopteris</i>	Parkeriaceae	Pteridaceae
<i>Deparia</i>	Woodsiaceae	Athyriaceae
<i>Diplazium</i>	Woodsiaceae	Athyriaceae
<i>Elaphoglossum</i>	Lomariopsidaceae	Dryopteridaceae
<i>Hypodematum</i>	Woodsiaceae	Hypodematiaceae
<i>Leucostegia</i>	Davalliaceae	Hypodematiaceae
<i>Lindsaea</i>	Dennstaedtiaceae	Lindsaeaceae
<i>Loxogramme</i>	Loxogrammaceae	Polypodiaceae
<i>Lygodium</i>	Schizaeaceae	Lygodiaceae
<i>Monogramma</i>	Vittariaceae	Pteridaceae
<i>Nephrolepis</i>	Oleandraceae	Nephrolepidaceae
<i>Pteridrys</i>	Dryopteridaceae	Tectariaceae
<i>Sphenomeris</i>	Dennstaedtiaceae	Lindsaeaceae
<i>Tectaria</i>	Dryopteridaceae	Tectariaceae
<i>Teratophyllum</i>	Lomariopsidaceae	Dryopteridaceae
<i>Vittaria</i>	Vittariaceae	Pteridaceae
<b>Family</b>		
Grammitidaceae	Grammitidaceae	Polypodiaceae

## Distribution

Limited research has been conducted to identify distribution of pteridophyte flora in Sri Lanka. About 81% of pteridophyte specimens in the National Herbarium have been collected from the wet zone area of the country (Jayasekera and Wijesundara, 1993). The wet zone which accounts for only one third of the country's total land area also contains almost all endemic pteridophytes except one species (Ranil *et al.*, in prep.). Further, study on distribution pattern of endemic pteridophyte flora of Sri Lanka revealed that those are more-or-less equally distributed among the wet zone areas of the up, mid and low countries with 34, 31 and 32 taxa, respectively (Ranil *et al.*, 2008a). Majority of endemic pteridophytes (78%) of Sri Lanka had been collected from the Central Province where Nuwara Eliya district alone provided the highest number of endemic taxa collected with 34 taxa followed by Sabaragamuwa and Southern provinces. Even though some species occur in a few districts, their known occurrence has been limited only to a few isolated localities (i.e. *Cyathea hookeri*, *C. sinuata*, *C. sledgei* and *C. srilankensis*; Ranil *et al.*, 2010a; 2010b). Long duration of rainfall and high relative humidity associated with elevational gradient may be one of the reasons for the presence of higher number of endemic taxa in the wet zone and the Central Province. In addition, close proximity to the Botanical Gardens of Peradeniya and Hakgala had also influenced a higher number of species collections from the Central Province and Nuwara Eliya district.



### Endemic and endangered tree ferns in lowland rainforests.

- A: *Cyathea sledgei* Ranil *et al.*: A recently described new endemic tree fern species in Kanneliya MAB reserve.
- B: *Cyathea srilankensis* Ranil: A recently discovered new endemic tree fern species in Beraliya proposed forest reserve.
- C: *Cyathea sinuata* Hook. & Grew.: The only known simple leaf tree ferns in the world.



### Two endemic ferns species in southern lowland rainforests.

- A: *Tectaria thwaitesii* (Bedd.) Ching: An endemic fern species in roadside banks of Kottawa forest reserve.
- B: *Oreogrammits sledgei* (Parris) Parris: An endemic fern species grows on moist rock in Sinharaja world heritage site.

## Threats

Vast majority of pteridophyte flora and almost all endemic pteridophytes in Sri Lanka are confined to the wet zone areas of the lowland, sub montane and montane regions. However, most of the remaining forests in the wet zone area are fragmented and small. They are continued to be degraded due to illegal encroachment and suffer further fragmentation due to higher population densities in such areas. The area is highly subjected to habitat loss, spread of alien-invasive species, soil erosion and environmental pollution. These are considered as the most immediate threats to the pteridophyte flora of Sri Lanka. In areas such as the Knuckles region, the forest understorey which is the main habitat for pteridophytes has been cleared for cardamom cultivation whereas in Udawattakele forest understorey is invaded by alien-invasive species; also make significant threats to regeneration of pteridophytes. Another threat of increasing importance is the illicit removal and over exploitation of ornamentally important rare ferns from the wild. These problems will be worsening by change of climate and increasing human population pressure.

## Conservation issues

The effective conservation of Sri Lankan pteridophyte flora will depend largely on how effective the conservation of natural forests in the wet zone areas of the country. For this, minimizing of fragmentation and habitat loss through effective land use planning and a sound policy framework is a must. Further, according to the present Red Listing, of the 335 pteridophyte species, 219 species (66%) are listed as threatened species (20, 41, 87 and 71 species are critically endangered and possibly extinct (CR(PE)) critically endangered (CR), endangered (EN) and vulnerable (VU). Another 40 species are listed as near threatened (NT). This highlighted that, in addition to conservation of natural forests in the wet zone areas, monitoring of populations of at least threatened species is a necessary to understand effectiveness of the *in situ* conservation of pteridophyte flora. At present, *ex situ* conservation is limited to a few local species at the Royal Botanic Gardens, Peradeniya and Botanic Gardens of Hakgala and Henerathgoda. Therefore, strengthening of ferneries of the network of the National Botanic Gardens is urgently required as a supplementary conservation measure for Sri Lankan pteridophytes.

## Research gaps and needs

Further enhancement of current knowledge and understanding of pteridophytes flora needs several measures. As highlighted a comprehensive taxonomic revision need to be carried out in the light of recent floral survey in the South Asia and recent advances of taxonomy due to use of molecular investigations. A close collaboration between pteridologists in India (as well as elsewhere) and Sri Lanka is a pre-requisite. Much of the specimens of pteridophytes have been collected from 1847 to 1900 by European pteridologists and deposited in herbaria of elsewhere than the National Herbarium. Thus, an island-wide floristic survey on pteridophyte taxa is urgently required in Sri Lanka which helps to revise the taxonomy, distribution and other conservation issues of the island pteridophyte flora. Upgrading of the collection of the National Herbarium is also a must and should be carried out parallel to the floristic survey. Further, recent work by Ranil *et al.*, (2008b) provides encouraging results on domestication of *C. walkerae* and need to expand to other species which has commercial potentials. Public awareness programs on the conservation and sustainable use of pteridophytes should also be initiated promoting *in situ* and *ex situ* conservation.

## Conclusions and Recommendations

Lowland rainforests, sub-montane and montane forests are the major natural vegetation types supporting the biodiversity of Pteridophytes in Sri Lanka. However, these ecosystems are heavily affected by various biotic and abiotic influences and already highly fragmented. Increasing population pressure and climate change further worsen the situation. These facts highlight the importance of conserving the remaining forest ecosystems of the wet zone of the country. It is also essential to conduct further research to fill the gaps of knowledge of Sri Lankan pteridophytes which will provide a basis to resolve many of the taxonomic and conservation issues pteridophytes face today.

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**Table 13: Summary of the Status of Pteridophytes in Sri Lanka**

(Endemics are shown in bracket)

Family	EX	EW	CR (PE)	CR	EN	VU	NT	DD	LC	Total Threatened	Total Species
Aspleniaceae			4 (1)	3	6 (1)	7	4		5	16 (1)	29 (2)
Athyriaceae				3	9	7	4	1	2	19 (3)	26 (5)
Blechnaceae				2	1	1			2	4	6
Cyatheaceae				1	5	1				7 (4)	7 (5)
Davalliaceae			1	1	1	1			1	3	5
Dennstaedtiaceae			3	2	1	1			3	4	10 (1)
Dryopteridaceae			1	6	12	7	3		2	25 (6)	31 (8)
Equisetaceae						1				1	1
Gleicheniaceae								1	1	0	2
Hymenophyllaceae				4	9	5	1			18 (3)	19 (3)
Hypodematiaceae					1			1		1	2
Isoetaceae					1					1	1
Lindsaeaceae				4	3	2		1	2	9 (2)	12 (2)
Lycopodiaceae				1	7	3	1	1	1	11	14
Lygodiaceae						1	1		1	1	3
Marattiaceae					1		1			1	2
Marsileaceae				1					1	1	2
Nephrolepidaceae						1	1	1	1	1	4
Oleandraceae						1				1	1
Ophioglossaceae				1	8					9	9
Osmundaceae					1					1 (1)	1 (1)
Polypodiaceae			2	9	6	7	6	2	14	22 (5)	46 (9)
Psilotaceae						1				1	1
Pteridaceae			6	1	4	8	8	2	17	13 (4)	46 (4)
Schizaeaceae							1			0	1
Selaginellaceae						2	5		2	2 (1)	9 (1)
Tectariaceae			1	1	3	3		1	3	7 (1)	12 (2)
Thelypteridaceae			3	2	9	10	4	1	5	21 (2)	34 (6)
<b>Totals</b>			<b>21 (5)</b>	<b>42 (10)</b>	<b>88 (11)</b>	<b>70 (12)</b>	<b>40 (9)</b>	<b>12 (1)</b>	<b>63 (1)</b>	<b>200 (33)</b>	<b>336 (49)</b>

**Table 14: List of Pteridophytes in Sri Lanka**(Endemic species are marked in **Bold** letters )

Family/ Scientific Name	Common name	NCS	Criteria	GCS
<b>Family : Lycopodiaceae</b>				
<i>Huperzia ceylanica</i> (Spring) Trevis.	S: Kuda-hedaya	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Huperzia hamiltonii</i> (Spreng.) Trevis.	S: Kuda-hedaya	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Huperzia phlegmaria</i> (L.) Rothm.	S: Maha-hedaya	VU	B1ab(i,ii,iii)	
<i>Huperzia phyllantha</i> (Hook. & Arn.) Holub	S: Maha-hedaya	VU	B1ab(i,ii,iii)	
<i>Huperzia pinifolia</i> Trevis.	S: Kuda-hedaya	CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Huperzia pulcherrima</i> (Hook. & Grev.) Pichi.-Serm.	S: Kuda-hedaya	VU	B1ab(i,ii,iii)	
<i>Huperzia serrata</i> (Thunb. ex Murray) Trevis.	S: Kuda-hedaya	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Huperzia squarrosa</i> (G. Forst.) Trevis.	S: Kuda-hedaya	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Huperzia subulifolia</i> (Wall. ex Hook. & Grev.) Trevis.	S: Kuda-hedaya	EN	B1ab(i,ii,iii)	
<i>Huperzia vernicosa</i> (Hook. & Grev.) Trevis.	S: Kuda-hedaya	DD		
<i>Lycopodiella caroliniana</i> (L.) Pichi.-Serm.		NT		
<i>Lycopodiella cernua</i> (L.) Pichi.-Serm.	S: Badal-hanassa, Badal-wanassa	LC		
<i>Lycopodium japonicum</i> Thunb. ex Murray		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Lycopodium wightianum</i> Wall. ex Grev. & Hook.		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b>Family : Isoetaceae</b>				
<i>Isoetes coromandelina</i> L.f.		VU	B1ab(i,ii,iii)	LC
<b>Family : Selaginellaceae</b>				
<b><i>Selaginella calostachya</i></b> (Hook. & Grev.) Alston		NT		
<i>Selaginella ciliaris</i> (Retz.) Spring		LC		
<i>Selaginella cochleata</i> (Hook. & Grev.) Spring		LC		
<i>Selaginella crassipes</i> Spring		NT		
<i>Selaginella integerrima</i> (Hook. & Grev.) Spring		NT		
<i>Selaginella involvens</i> (Sw.) Spring		NT		
<b><i>Selaginella latifolia</i></b> (Hook. & Grev.) Spring		VU	B1ab(i,ii,iii)	
<i>Selaginella praetermissa</i> Alston		NT		
<i>Selaginella wightii</i> Hieron.		VU	B1ab(i,ii,iii)	
<b>Family : Equisetaceae</b>				
<i>Equisetum debile</i> Roxb. ex Vaucher		VU	B1ab(i,ii,iii)	
<b>Family : Ophioglossaceae</b>				
<i>Botrychium daucifolium</i> Wall. ex Hook. & Grev.		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Botrychium lanuginosum</i> Wall. ex Hook. & Grev.		CR	B2ab(i,ii,iii)	
<i>Helminthostachys zeylanica</i> (L.) Hook.	S: Thani-wel	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Ophioglossum costatum</i> R.Br.	S: Ek-pethi-pium	EN	B2ab(i,ii,iii)	
<i>Ophioglossum gramineum</i> Willd.		EN	B2ab(i,ii,iii)	
<i>Ophioglossum nudicaule</i> L.fil.	S: Diya-gabbalu	EN	B2ab(i,ii,iii)	
<i>Ophioglossum pendulum</i> L.	S: Pati-dhathu	EN	B2ab(i,ii,iii)	
<i>Ophioglossum petiolatum</i> Hook.		EN	B2ab(i,ii,iii)	
<i>Ophioglossum reticulatum</i> L.		EN	B2ab(i,ii,iii)	LC

Family/ Scientific Name	Common name	NCS	Criteria	GCS
<b>Family : Psilotaceae</b>				
<i>Psilotum nudum</i> (L.) P. Beauv.		VU	B1ab(i,ii,iii)	
<b>Family : Marattiaceae</b>				
<i>Angiopteris evecta</i> (Forst.) Hoffm.	S: Wal-meda	NT		
<i>Marattia fraxinea</i> Smith		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b>Family : Osmundaceae</b>				
<i>Osmunda collina</i> Sledge		EN	B2ab(i,ii,iii)	
<b>Family : Hymenophyllaceae</b>				
<i>Abrodictyum obscurum</i> (Blume) Ebihara & K.Iwats. (Syn: <i>Selenodesmium obscurum</i> (Blume) Copel.)		VU	B1ab(i,ii,iii)	
<i>Crepidomanes bipunctatum</i> (Poir.) Copel. (Syn: <i>Crepidomanes bilabiatum</i> (Nees & Blume) Copel.)		CR	B2ab(i,ii,iii)	
<i>Crepidomanes campanulatum</i> (Roxb.) Jayasekara		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Crepidomanes intramarginale</i> (Hook.fil & Grev.) Copel.		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Crepidomanes kurzi</i> (Bedd.)Tagawa & Iwatsuki		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b><i>Crepidomanes kurzii</i></b> (Bedd.) Tagawa & K. Iwats.		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Crepidomanes proliferum</i> (Blume) Bostock (Syn: <i>Gonocormus prolifer</i> (Blum.) Prantl)		EN	B2ab(i,ii,iii)	
<i>Crepidomanes saxifragoides</i> (C.Presl.) P.S.Green (Syn: <i>Gonocormus saxifragoides</i> (Presl.) Bosch)		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Didymoglossum bimarginatum</i> (Bosch) Ebihara & K.Iwats. (Syn: <i>Microgonium bimarginatum</i> Bosch)		EN	B2ab(i,ii,iii)	
<i>Didymoglossum exiguum</i> (Bedd.) Copel		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Didymoglossum motleyi</i> (Bosch) Ebihara & K.Iwats. (Syn: <i>Microgonium motleyi</i> Bosch)		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b><i>Didymoglossum wallii</i></b> (Thwaites) Copel		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Hymenophyllum denticulatum</i> Sw. (Syn: <i>Meringium denticulatum</i> (Sw.) Copel.)		VU	B1ab(i,ii,iii)	
<i>Hymenophyllum exsertum</i> Wall. ex Hook. (Syn: <i>Mecodium gardneri</i> (Bosch) Jayasekara)		VU	B1ab(i,ii,iii)	
<i>Hymenophyllum javanicum</i> A.Sperng. (Syn: <i>Mecodium javanicum</i> (Spreng.) Copel.)		VU	B1ab(i,ii,iii)	
<b><i>Hymenophyllum macroglossum</i></b> Bosch (Syn: <i>Meringium macroglossum</i> (Bosch) Copel.)		VU	B1ab(i,ii,iii)	
<i>Hymenophyllum nitidulum</i> (Bosch) Ebihara & K.Iwats. (Syn: <i>Microtrichomanes nitidulum</i> (Bosch) Copel.)		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Hymenophyllum pallidum</i> (Blume) Ebihara & K.Iwats. (Syn: <i>Pleuromanens pallidum</i> (Blume) C.Presl.)		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Hymenophyllum polyanthos</i> (Sw.) Sw. (Syn: <i>Mecodium polyanthos</i> (Sw.) Copel.)		NT		
<b>Family : Gleicheniaceae</b>				
<i>Dicranopteris lineairs</i> (Burm.f.) Underw. var. <i>linearis</i>	S: Kakilla	LC		
<i>Dicranopteris lineairs</i> (Burm.f.) Underw. var. <i>montana</i>	S: Kakilla	DD		

Family/ Scientific Name	Common name	NCS	Criteria	GCS
<b>Family : Lygodiaceae</b>				
<i>Lygodium circinnatum</i> (Burm. f.) Sw.	S: Maha-pamba	VU	B1ab(i,ii,iii)	
<i>Lygodium flexuosum</i> (L.) Sw.	S: Pamba-wel	NT		
<i>Lygodium microphyllum</i> (Cav.) R. Br.	S: Pamba-wel	LC		
<b>Family : Schizaeaceae</b>				
<i>Schizaea digitata</i> (L.) Sw.		NT		
<b>Family : Marsileaceae</b>				
<i>Marsilea coromandelina</i> Willd.		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Marsilea minuta</i> L.	S: Hathara pethiya	LC		
<b>Family : Cyatheaceae</b>				
<i>Cyathea crinita</i> (Hook.) Copel.	S: Gini-hota, Gini-watara	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Cyathea gigantea</i> (Wall. ex Hook.) Holttum	S: Gini-hota, Gini-watara	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Cyathea hookeri</i> Thwaites	S: Gini-hota, Gini-watara	CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Cyathea sinuata</i> Hook. & Grev.	S: Gini-hota, Gini-watara	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Cyathea sledgei</i> Ranil, Pushpakumara & Fras.-Jenk.	S: Gini-hota, Gini-watara	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Cyathea srilankensis</i> Ranil	S: Gini-hota, Gini-watara	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Cyathea walkerae</i> Hook.	S: Gini-hota, Gini-watara	VU	B1ab(i,ii,iii)	
<b>Family : Lindsaeaceae</b>				
<i>Lindsaea caudata</i> Hook.		VU	B1ab(i,ii,iii)	
<i>Lindsaea cultrata</i> (Willd.) Sw.		VU	B1ab(i,ii,iii)	
<i>Lindsaea ensifolia</i> subsp. <i>ensifolia</i> Sw.		LC		
<i>Lindsaea glandulifera</i> Alderw.		DD		
<i>Lindsaea hetrophylla</i> Dryand.		CR	B2ab(i,ii,iii)	
<i>Lindsaea odorata</i> Roxb.var. <i>odorata</i>		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Lindsaea orbiculata</i> (Lam.) Mett. ex Kuhn		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Lindsaea repens</i> (Bory)Thwaites var. <i>pectinata</i> (Blume) Mett. ex Kuhn		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Lindsaea schizophylla</i> (Baker) H.Christ		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Lindsaea venusta</i> Kaulf. ex Kuhn		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Lindsaea walkerae</i> Hook.		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Sphenomeris chinensis</i> var. <i>chinensis</i> (L.) Maxon		LC		
<b>Family : Dennstaedtiaceae</b>				
<i>Dennstaedtia scabra</i> (Wall. ex Hook.) T.Moore		VU	B1ab(i,ii,iii)	
<i>Histiopteris incisa</i> (Thunb.) J.Sm.		LC		
<i>Hypolepis glandulifera</i> Brownsey & Chinnock		LC		
<i>Microlepia dubia</i> (Roxb.) C.V.Morton		CR(PE)		
<i>Microlepia majuscula</i> (Lowe) T.Moore		CR(PE)		
<i>Microlepia platyphylla</i> (D.Don) J.Sm.		CR(PE)		

Family/ Scientific Name	Common name	NCS	Criteria	GCS
<i>Microlepia rhomboidea</i> (Hook.) C.Presl ex Prantl		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Microlepia speluncae</i> (L.) T.Moore		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Microlepia strigosa</i> (Thunb. ex Murray) C.Presl		CR	B2ab(i,ii,iii)	
<i>Pteridium revolutum</i> (Blume) Nakai	S: Waralla, An-kakilla, Monara Kakilla	LC		
<b>Family : Pteridaceae</b>				
<i>Acrostichum aureum</i> L.		LC		LC
<i>Acrostichum speciosum</i> Willd.		DD		
<i>Actiniopteris radiata</i> (Sw.) Link		VU	B1ab(i,ii,iii)	
<i>Adiantum capillus-veneris</i> L.		LC		
<i>Adiantum caudatum</i> L.	S: Thuda-vediya	LC		
<i>Adiantum flabellulatum</i> L.		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Adiantum hispidulum</i> Sw.		LC		
<i>Adiantum indicum</i> J. Ghatak		NT		
<i>Adiantum philippense</i> L.		LC		
<i>Adiantum zollingeri</i> Mett. ex Kuhn		LC		
<i>Anogramma leptophylla</i> (L.) Link		CR(PE)		
<i>Antrophyum plantagineum</i> (Cav.) Kaulf.		NT		
<i>Antrophyum reticulatum</i> (G.Forst.) Kaulf.		LC		
<i>Ceratopteris thalictroides</i> (L.) Brongn.		NT		LC
<i>Cheilanthes anceps</i> Blanf.		VU	B1ab(i,ii,iii)	
<i>Cheilanthes bicolor</i> (Roxb.) Griff. ex Fras.-Jenk.		DD		
<i>Cheilanthes bullosa</i> Kunze		VU	B1ab(i,ii,iii)	
<i>Cheilanthes krameri</i> Franch. & Sav.		VU	B1ab(i,ii,iii)	
<i>Cheilanthes opposita</i> Kaulf.		LC		
<i>Cheilanthes tenuifolia</i> (Burm.f.) Sw.		LC		
<i>Cheilanthes thwaitesii</i> Mett. ex Kuhn		LC		
<b>Coniogramme serra</b> Fée		VU	B1ab(i,ii,iii)	
<i>Doryopteris concolor</i> (Langsd. & Fisch.) Kuhn		NT		
<i>Hemionitis arifolia</i> (Burm.) T.Moore (Syn: <i>Parahemionitis arifolia</i> (Burm.) Panigrahi )		LC		
<i>Idiopteris hookeriana</i> (Agardh) T.G.Walker		NT		
<i>Monogramma paradoxa</i> (Fée) Bedd.		CR(PE)		
<i>Pellaea boivinii</i> Hook.		CR(PE)		
<i>Pellaea falcata</i> (R.Br.) Fée		CR(PE)		
<i>Pteris argyraea</i> T.Moore		EN	B2ab(i,ii,iii)	
<i>Pteris baurita</i> L.		LC		
<i>Pteris confusa</i> T.G.Walker		LC		
<i>Pteris cretica</i> L.		EN	B2ab(i,ii,iii)	
<i>Pteris ensiformis</i> Burm.f.		LC		
<b>Pteris gongalensis</b> T.G.Walker		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Pteris longipes</i> D.Don		CR(PE)		

Family/ Scientific Name	Common name	NCS	Criteria	GCS
<i>Pteris mertensioides</i> Willd.		CR(PE)		
<i>Pteris multiaurita</i> J.Agardh		LC		
<b><i>Pteris praetermissa</i></b> T.G.Walker		VU	B1ab(i,ii,iii)	
<i>Pteris quadriaurita</i> Retz.		LC		
<b><i>Pteris reptans</i></b> T.G.Walker		VU	B1ab(i,ii,iii)	
<i>Pteris tripartita</i> Sw.		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Pteris vittata</i> L.		LC		
<i>Taenitis blechnoides</i> (Willd.) Sw.		VU	B1ab(i,ii,iii)	
<i>Vittaria elongata</i> Sw.		NT		
<i>Vittaria microlepis</i> Hieron.		NT		
<i>Vittaria scolopendrina</i> (Bory) Thwaites		NT		
<b>Family : Aspleniaceae</b>				
<i>Asplenium aethiopicum</i> (Burm. f.) Bech.		VU	B1ab(i,ii,iii)	
<i>Asplenium affine</i> Sw.		VU	B1ab(i,ii,iii)	
<i>Asplenium bipinnatum</i> (Sledge) Philcox		VU	B1ab(i,ii,iii)	
<i>Asplenium cheilosorum</i> Kunze ex Mett.		VU	B1ab(i,ii,iii)	
<i>Asplenium decorum</i> Kunze		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Asplenium decrescens</i> Kunze		LC		
<b><i>Asplenium disjunctum</i></b> Sledge		CR(PE)		
<i>Asplenium ensiforme</i> Wall. ex Hook. & Grev.		VU	B1ab(i,ii,iii)	
<i>Asplenium erectum</i> (Bory ex Willd.) in L.		LC		
<i>Asplenium excisum</i> C. Presl.		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Asplenium formosum</i> Willd.		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Asplenium gardneri</i> Baker		VU	B1ab(i,ii,iii)	
<i>Asplenium grevillii</i> Hook. & Grev.		CR(PE)		
<i>Asplenium inaequilaterale</i> Willd.		NT		
<i>Asplenium indicum</i> Sledge		VU	B1ab(i,ii,iii)	
<i>Asplenium laciniatum</i> D.Don		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b><i>Asplenium longipes</i></b> Fée		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Asplenium nidus</i> L.	S: Gal-Palu	NT		
<i>Asplenium nitidum</i> Sw.		CR(PE)		
<i>Asplenium normale</i> D.Don		NT		
<i>Asplenium obscurum</i> Blume		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Asplenium pellucidum</i> Lam.		CR(PE)		
<i>Asplenium polyodon</i> G.Frost.		LC		
<i>Asplenium serricula</i> Fée		LC		
<i>Asplenium tenerum</i> G.Forst.		LC		
<i>Asplenium tenuifolium</i> D.Don		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Asplenium unilaterale</i> Lam.		NT		
<i>Asplenium yoshinagae</i> Makino		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Asplenium zenkerianum</i> Kunze		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	

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<b>Family : Thelypteridaceae</b>				
<b><i>Amauropelta hakgalensis</i></b> Holttum		DD		
<i>Ampelopteris prolifera</i> (Retz.) Copel.		VU	B1ab(i,ii,iii)	
<i>Amphineuron opulentum</i> (Kaulf.) Holttum		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Amphineuron terminans</i> (Hook.) Holttum		LC		
<i>Christella dentata</i> (Forssk.) Brownsey & Jermy		LC		
<i>Christella hispidula</i> (Decne.) Holttum		VU	B1ab(i,ii,iii)	
<i>Christella meeboldii</i> (Rosenst.) Holttum		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Christella papilio</i> ( C.Hope ) Holttum		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Christella parasitica</i> (L.) H.Lév.		LC		
<i>Christella subpubescens</i> (Blume) Holttum		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Christella zeylanica</i> (Fée) Holttum		CR(PE)		
<i>Cyclosorus interruptus</i> (Willd.) H.Ito		NT		
<i>Macrothelypteris torresiana</i> (Gaudich.) Ching		NT		
<i>Metathelypteris flaccida</i> (Blume) Ching		VU	B1ab(i,ii,iii)	
<i>Parathelypteris beddomei</i> (Baker) Ching		VU	B1ab(i,ii,iii)	
<i>Pneumatopteris truncata</i> (Poir.) Holtt.		VU	B1ab(i,ii,iii)	
<i>Pronephrium articulatum</i> (Houlston & T.Moore) Holttum		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b><i>Pronephrium gardneri</i></b> Holttum		CR(PE)		
<i>Pronephrium thwaitesii</i> (Hook.) Holttum		CR(PE)		
<i>Pronephrium triphyllum</i> (Sw.) Holttum		VU	B1ab(i,ii,iii)	
<i>Pseudocyclosorus tyloides</i> (Kunze) Ching		VU	B1ab(i,ii,iii)	
<i>Pseudophegopteris pyrrorhachis</i> (Kunze) Ching		VU	B1ab(i,ii,iii)	
<i>Sphaerostephanos arbuscula</i> (Willd.) Holttum		LC		
<i>Sphaerostephanos subtruncatus</i> (Bory) Holttum		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Sphaerostephanos unitus</i> (L.) Holttum		LC		
<i>Stegnogramma pozoi</i> (Lag.) K.Iwats var. <i>petiolata</i> (Ching) Sledge		EN	B1ab(i,ii,iii)	
<i>Thelypteris confluens</i> (Thunb.) T.Morton		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b><i>Trigonospora angustifrons</i></b> Sledge		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Trigonospora calcarata</i> (Blume) Holttum		VU	B1ab(i,ii,iii)	
<i>Trigonospora caudipinna</i> (Ching) Sledge		VU	B1ab(i,ii,iii)	
<i>Trigonospora ciliata</i> (Wall. ex Benth.) Holttum		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b><i>Trigonospora glandulosa</i></b> Sledge		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b><i>Trigonospora obtusiloba</i></b> Sledge		NT		
<b><i>Trigonospora zeylanica</i></b> (Ching) Sledge		NT		
<b>Family : Blechnaceae</b>				
<i>Blechnum colensoi</i> (Hook f.) N.A.Wakef.		VU	B1ab(i,ii,iii)	
<i>Blechnum divis</i> (Kunze) Christenh. (Syn: <i>Doodia dives</i> Kunze)		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Blechnum orientale</i> L.	S: Baru-koku	LC		
<i>Blechnum spinulosum</i> Poir. (Syn: <i>Doodia caudata</i> (Cav.) R. Br.)		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	



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<i>Blechnum zeelandicum</i> Christenh. (Syn: <i>Doodia squarrosa</i> Col.)		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Stenochlaena palustris</i> (Burm.) Beddo.		LC		
<b>Family : Athyriaceae</b>				
<i>Athyrium anisopterum</i> Christ		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Athyrium cumingianum</i> (C. Presl) Ching		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Athyrium hohenackerianum</i> (Kunze) T.Moore		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Athyrium praetermissum</i> Sledge		VU	B1ab(i,ii,iii)	
<i>Athyrium puncticaule</i> (Blume) T.Moore		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Athyrium setiferum</i> C. Chr.		VU	B1ab(i,ii,iii)	
<i>Athyrium solenopteris</i> (Kunze) T.Moore		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Athyrium wardii</i> (Hook) Mak.		VU	B1ab(i,ii,iii)	
<i>Deparia boryana</i> (Willd.) M. Kato		VU	B1ab(i,ii,iii)	
<i>Deparia lancea</i> (Thunb. ex Murray) Fraser-Jenk.		VU	B1ab(i,ii,iii)	
<i>Deparia petersenii</i> (Kunze) M.Kato subsp. <i>petersenii</i>		NT		
<b><i>Deparia polyrhizos</i></b> (Baker) Seriz.		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Deparia zeylanica</i> (Hook) M. Kato.		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b><i>Diplazium beddomei</i></b> C. Chr.		NT		
<i>Diplazium brachylobum</i> (Sledge) Manickam & Irudayaraj		DD		
<b><i>Diplazium cognatum</i></b> (Hieron.) Sledge		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b><i>Diplazium decurrens</i></b> Bedd.		NT		
<i>Diplazium dilatatum</i> Blume		LC		
<i>Diplazium esculentum</i> (Retz.) Sw.		NT		
<i>Diplazium javanicum</i> (Blume) Makino		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Diplazium muricatum</i> (Mett.) Alderw.		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b><i>Diplazium paradoxum</i></b> Fée		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Diplazium polypodioides</i> Blume		LC		
<i>Diplazium procumbens</i> Holttum		VU	B1ab(i,ii,iii)	
<i>Diplazium sylvaticum</i> (Bory) Sw.		VU	B1ab(i,ii,iii)	
<i>Diplazium travancoricum</i> Bedd.		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b>Family : Hypodematiaceae</b>				
<i>Hypodematium crenatum</i> (Forssk.) Kuhn in von Decken subsp. <i>crenatum</i>		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Leucostegia immersa</i> C.Presl		DD		
<b>Family : Dryopteridaceae</b>				
<i>Arachniodes amabilis</i> (Blume) Tindale		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Arachniodes aristata</i> (Forst.f.) Tindale		LC		
<i>Arachniodes tripinnata</i> (Goldm.) Sledge		NT		
<i>Bolbitis angustipinna</i> (Hayata) H.Ito		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Bolbitis appendiculata</i> subsp. <i>appendiculata</i> (Willd.) K.Iwats.		EN	B2ab(i,ii,iii)	
<b><i>Bolbitis subcrenata</i></b> (Hook. & Grev.) Ching in C.Chr.		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b><i>Ctenitis thwaitesii</i></b> Holttum		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Diacalpe aspidioides</i> Blume		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	

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<i>Dryopsis obtusiloba</i> (Bak.) Holttum & Edwards		VU	B1ab(i,ii,iii)	
<i>Dryopteris approximata</i> Sledge		CR	B2ab(i,ii,iii)	
<i>Dryopteris deparioides</i> (T. Moore) Kuntze.		VU	B1ab(i,ii,iii)	
<i>Dryopteris hirtipes</i> (Blume) Kuntze.		VU	B1ab(i,ii,iii)	
<i>Dryopteris macrochlamys</i> (Fée) Fras.-Jenk.		LC		
<i>Dryopteris pulvinulifera</i> (Bedd.) Kuntze.		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Dryopteris sledgei</i> Fraser-Jenk.		CR(PE)		
<i>Dryopteris sparsa</i> (Buch.-Ham. ex D. Don) Kuntze.		VU	B1ab(i,ii,iii)	
<i>Dryopteris wallichiana</i> subsp. <i>madrasensis</i> (Fraser-Jenk.) Fraser-Jenk.		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Elaphoglossum angulatum</i> (Bl.) T.Moore		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Elaphoglossum ceylanicum</i> Krajina ex Sledge		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Elaphoglossum commutatum</i> (Mett. ex Kuhn) Alderw.		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Elaphoglossum spathulatum</i> (Bory) T.Moore		CR	B1ab(i,ii,iii)	
<i>Lastreopsis rufescens</i> (Bl.) Ching		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Lastreopsis tenera</i> (R.Br.) Tindale		VU	B1ab(i,ii,iii)	
<i>Polystichum amabile</i> (Blume) J.Sm.		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Polystichum anomalum</i> (Hook. & Arn.) J. Smith		VU	B1ab(i,ii,iii)	
<i>Polystichum biaristatum</i> (Blume) T.Moore		VU	B1ab(i,ii,iii)	
<i>Polystichum harpophyllum</i> (Zenker ex Kunze) Sledge		NT		
<i>Polystichum mucronifolium</i> (Blume) C.Presl.		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Polystichum piceo-paleaceum</i> Tag.		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Polystichum walkerae</i> (Hook.) Sledge		NT		
<i>Teratophyllum aculeatum</i> Mett.; Kuhn var. <i>aculeatum</i>		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b>Family : Nephrolepidaceae</b>				
<i>Nephrolepis biserrata</i> (Sw.) Schott		DD		
<i>Nephrolepis cordifolia</i> (L.) C.Presl		NT		
<i>Nephrolepis falcata</i> (Cav.) C.Chr.		VU	B1ab(i,ii,iii)	
<i>Nephrolepis hirsutula</i> (G. Forst.) C.Presl		LC		
<b>Family : Tectariaceae</b>				
<i>Arthropteris palisotii</i> (Desv.) Alston		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Pteridrys syrmatica</i> (Willd.) C.Chr. & Ching		DD		
<i>Pteridrys zeylanica</i> Ching in C.Chr. & Ching		CR(PE)		
<i>Tectaria coadunata</i> (J.Sm.) C.Chr.		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Tectaria decurrens</i> (C.Presl) Copel.		LC		
<i>Tectaria devexa</i> (Kunze ex Mett.) Copel.		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Tectaria paradoxa</i> (Fée) Sledge		LC		
<i>Tectaria polymorpha</i> (Wall. ex Hook.) Copel.		VU	B1ab(i,ii,iii)	
<i>Tectaria subtriphylla</i> (Hook. & Arn.) Copel.		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Tectaria thwaitesii</i> (Bedd.) Ching		VU	B1ab(i,ii,iii)	
<i>Tectaria trimenii</i> (Bedd.) C.Chr.		VU	B1ab(i,ii,iii)	

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<i>Tectaria zeilanica</i> (Houtt.) Sledge		LC		
<b>Family : Oleandraceae</b>				
<i>Oleandra musifolia</i> (Blume) C. Presl		VU	B1ab(i,ii,iii)	
<b>Family : Davalliaceae</b>				
<i>Davallia denticulata</i> Mett. ex Kuhn var. <i>denticulata</i>		VU	B1ab(i,ii,iii)	
<i>Davallia hymenophylloides</i> Kuhn		EN	B1ab(i,ii,iii)	
<i>Davallia pulchra</i> D.Don		CR(PE)		
<i>Davallia repens</i> Kuhn		LC		
<i>Davallia solida</i> Sw.		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b>Family : Polypodiaceae</b>				
<i>Calymmodon glabrescens</i> Copel.		NT		
<i>Chrysogrammitis glandulosa</i> (J.Sm.) Parris		CR(PE)		
<i>Ctenopterella</i> (?) <i>thwaitesii</i> (Bedd.) Parris (Syn: <i>Ctenopteris thwaitesii</i> (Beddome) Sledge)		VU	B1ab(i,ii,iii)	
<i>Ctenopterella blechnoides</i> (Grev.) Parris (Syn: <i>Ctenopteris blechnoides</i> (Grev.) W.H.Wagner & Grether)		VU	B1ab(i,ii,iii)	
<i>Ctenopterella cornigera</i> (Baker) Parris (Syn: <i>Xiphopteris cornigera</i> (Baker) Copel.)		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Dasygrammitis mollicoma</i> (Nees & Blume) Parris (Syn: <i>Ctenopteris mollicoma</i> (Nees & Blume) Kunze)		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Drynaria quercifolia</i> (L.) J. Smith	S: Benduru	LC		
<i>Drynaria sparsisora</i> (Desv.) T.Moore	S: Benduru	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Lepisorus amaurolepidus</i> (Sledge) Bir & Trikha		LC		
<i>Lepisorus mucronatus</i> (Fée) Li Wang (Syn: <i>Belvisia mucronata</i> (Fée) Copel var <i>mucronata</i> )		DD		
<i>Lepisorus nudus</i> (Hook.) Ching		LC		
<i>Lepisorus spicatus</i> (L.f.) Li Wang (Syn: <i>Belvisia spicata</i> (L.f) Mirbel ex Copel.)		NT		
<i>Leptochilus decurrens</i> Blume		LC		
<i>Leptochilus macrophyllus</i> var. <i>pedunculatus</i> (Hook. & Grev.) Noot		VU	B1ab(i,ii,iii)	
<i>Loxogramme cuspidata</i> (Zenker) Price		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Loxogramme parallela</i> Copel.		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Microsorium insigne</i> (Blume) Copel.		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Microsorium membranaceum</i> (D.Don) Ching		NT		
<i>Microsorium membranifolium</i> (R. Br.) Ching		LC		
<i>Microsorium pteropum</i> (Blume) Copel.		CR	B2ab(i,ii,iii)	
<i>Microsorium punctatum</i> (L.) Copel.		NT		
<i>Microsorium scolopendrium</i> (Burm. f.) Copel.		LC		
<i>Oreogrammitis attenuata</i> (Kunze) Parris (Syn: <i>Grammitis attenuata</i> Kunze)		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	

Family/ Scientific Name	Common name	NCS	Criteria	GCS
<b>Oreogrammitis medialis</b> (Baker) Parris (Syn: <b>Grammitis medialis</b> (Baker) Ching )		VU	B1ab(i,ii,iii)	
<b>Oreogrammitis reinwardtii</b> (Blume) Parris (Syn: <i>Grammitis reinwardtii</i> Blume)		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b>Oreogrammitis sledgei</b> (Parris) Parris (Syn: <b>Grammitis sledgei</b> Parris)		VU	B1ab(i,ii,iii)	
<b>Oreogrammitis wallii</b> (Beddome) Parris (Syn: <b>Grammitis wallii</b> (Bedd.) Copel.)		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<b>Oreogrammitis zeylanica</b> (Fée ) Parris (Syn: <b>Grammitis zeylanica</b> Fée)		NT		
<i>Pleopeltis lanceolata</i> Kaulf.		EN	B2ab(i,ii,iii)	
<i>Prosaptia alata</i> (Blume) Christ		LC		
<b>Prosaptia ceylanica</b> Parris		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Prosaptia contigua</i> (G.Forst.) C.Presl		LC		
<i>Prosaptia obliquata</i> (Blume) Mett.		LC		
<i>Pyrosia ceylanica</i> (Giesenh.) Sledge		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Pyrosia gardneri</i> (Mett.) Sledge		LC		
<i>Pyrosia heterophylla</i> (L.) Price	S: Panam-pethi, Kasi-pethi	LC		
<i>Pyrosia lanceolata</i> (L.) Farw.		LC		
<b>Pyrosia pannosa</b> (Mett .ex Kuhn) Ching		NT		
<i>Pyrosia porosa</i> (C.Presl) Hovenkamp var. <i>porosa</i>		LC		
<b>Radiogrammitis beddomeana</b> (Alderw.) Parris (syn: <b>Grammitis beddomeana</b> (Alderw.) Ching)		CR(PE)		
<i>Scleroglossum pusillum</i> (Blume) Alderw.		DD		
<i>Scleroglossum sulcatum</i> (Kuhn) Alderw.		CR	B2ab(i,ii,iii)	
<i>Selliguea montana</i> (Sledge) Hovenkamp		LC		
<i>Tomophyllum epaleatum</i> (Parris) Parris (Syn: <i>Ctenopteris epaleata</i> Parris)		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
<i>Tomophyllum perplexum</i> (Parris) Parris (Syn: <i>Ctenopteris perplexa</i> Parris)		VU	B1ab(i,ii,iii)	
<i>Tomophyllum repandulum</i> (Mett.) Parris (Syn: <i>Ctenopteris repandula</i> (Mett.) C.Chr. & Tardieu)		VU	B1ab(i,ii,iii)	

## Present Status of Dry-zone Flora in Sri Lanka

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### A. Introduction to the ecosystem

The dry land of Sri Lanka which is classically described as the dry and intermediate zones of the country, extends over about 66% of the total land area, but nearly 85% of the natural vegetation-cover of the country exists within this region (Legg and Jewell, 1995). Three major natural terrestrial vegetation types are found in the dry land of Sri Lanka; viz, dry forests, savanna and grasslands. Depending on the variability in their location, climate, edaphic characteristics and biotic impacts, it appears that several sub-categories of the above vegetation types can be identified.

### Dry forest ecosystems

Sri Lankan dry forests are a part of the tropical rainforest biome. These exhibit characteristic features of tropical semi-deciduous or tropical seasonal forests of the world vegetation types described by Longman and Jenik (1987), in Archibold, (1995). Tropical semi-deciduous forests grow in low moisture conditions (e.g. annual rainfall < 1200 mm) and are mainly found in Bundala National Park (Figure 1), southern part of Yala National Park and north-eastern part of Wilpaththu National Park. Presence of deciduous or leaf exchanging species in the forest canopy is a salient feature of these forests.

In contrast, tropical seasonal forests (Figure 2) occur in areas where comparatively higher rainfall (mean annual rainfall of 1200-1500 mm) is received and the major portion of the dry forests of the country falls into this forest category. These forests grow taller than tropical semi-deciduous forests and show a clear stratification. Moreover, some evergreen species may be present in the canopy. However, the deviations in recorded physical features such as soil type and elevation (Alwis and Eriyagama, 1969) as well as the slope of the terrain appear to result in spatial heterogeneity in the soil moisture contents. This has resulted in the formation of different forest communities which deviated from the typical *Manilkara hexandra-Chloroxylon swietenia-Drypetes sepiaria* community of lowland tropical seasonal forests.

It has been reported that most of the dry forests in the lowlands had grown after the destruction of hydraulic civilization in the area around 13<sup>th</sup> century (Brohier, 1941; de Rosayro, 1961) and therefore, are secondary in origin. Also, these forests are heavily disturbed by human activities such as timber logging and frequent shifting cultivation (de Jong *et al.*, 2001; de Rosayro, 1961; Perera *et al.*, 1995; Perera, 2001a) resulting in secondary forests or successional forests at different ages (de Rosayro, 1961; Perera, 1998, 2001a). Natural regeneration of Sri Lankan dry forest species is reported to be very poor (de Rosayro, 1959; Holmes, 1957; Perera *et al.*, 1995; Perera, 2001a; Rutnam, 1959) which is attributed to the poor quality and quantity of the seed rain (Perera, 1998, 2004), soil seed bank (Perera, 1998a, 2000, 2004, 2005) and the seedling bank (Perera, 2001b, 2004). Repeated disturbances in secondary forests and lack of regeneration of high forest species may result in scrub jungle *plagioclimaxes* through deflected succession but these are not a true *climax* vegetation type of the dry land of Sri Lanka. Such

scrub jungles grow up to 3-4 m and mainly consist of deciduous or semi-deciduous species forming a single stratum (Figure 3).

### **Savanna ecosystems**

Savanna ecosystems of Sri Lanka are situated in the dry and intermediate zones of Sri Lanka at elevations between 300-1000 m (Gunatilleke *et al.*, 2008). Savanna is a vegetation type in the tropics in which grasses form a conspicuous ground cover (Archibold, 1991). According to Cole (1986), tropical savannas are classified into several structural formations by considering features such as the major life form categories dominating them, the height and density of trees, spacing between trees and the height and cover of grasses. It appears that, the savannas found in Sri Lanka could be described as Savanna woodlands (Figures 4 & 5) as the spacing of the trees is about or a little higher than the diameters of the tree crowns with a considerable extent of tall mesophytic grass cover.

Tall trees (> 8 m high) of deciduous and semi-deciduous species together with tall mesophytic grasses (> 80 cm high) are common in Sri Lankan savanna woodlands. These occur as patches of varying sizes of about 2-1000 ha, spreading intermittently with dry forests (G.G.C. Premalal and G.A.D. Perera, unpublished data) but depending on their floristic and some abiotic features, these can be assigned into two major types as upland savanna and lowland savanna woodlands. Upland savanna woodlands (Figure 5) occur at the slope of the central massif at Balangoda while the lowland savanna woodlands (Figure 6) are found at Nilgala, Nellikele and Bibile in Monaragala district. *Careya arborea*, *Phyllanthus emblica*, *Terminalia bellirica* and *T. chebula* are prominent members of these ecosystems but towards higher elevations, *Anogeissus latifolius* occur more frequently than in the lowlands (G.G.C. Premalal and G.A.D. Perera, unpublished data). However, the two savanna ecosystem types, *i.e.* in lowland and upland savanna woodlands show differences in the vegetation structure, density of individuals and species abundance rather than the floristic composition of the woody perennials.

### **Grassland ecosystems**

Grassland ecosystems in the dry land of Sri Lanka include both edaphic climaxes and disclimaxes of anthropogenic origin. Of these, the edaphic climaxes are mainly governed by the depth of the soil and the soil moisture content which is an artifact of frequent or occasional flooding, their close proximity to water bodies, rivers, abandoned irrigation tanks, and water holes and/or due to soil characteristics such as the presence of alluvial soil.

Four major grassland ecosystem types can be identified in the dry land of Sri Lanka namely, dry (*Damana*) grasslands, occasionally flooded dry grasslands, seasonally flooded damp grasslands and grassland disclimaxes maintained by fire and/or grazing. Natural grasslands (edaphic climaxes) are more diverse compared to grassland disclimaxes. Moreover, the grasslands occur at wetter conditions contain many different grass and sedge species.

*Damana* grasslands are reported as natural edaphic climaxes formed due to edaphic features but prolonged periods of drought in these areas may also contribute in the formation of these grasslands (Sezchowycz, 1954). The presence of saline soil with high osmotic pressure in





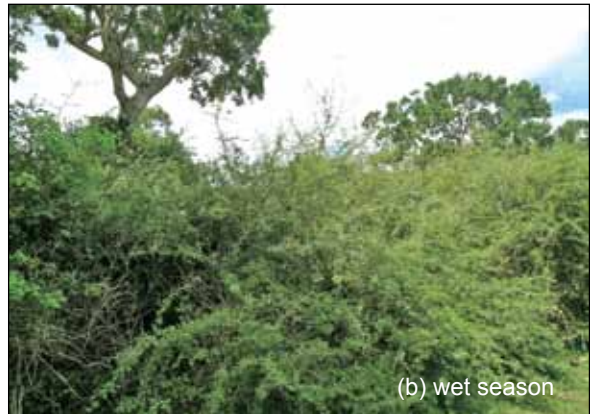
Figure 1. Tropical semi-deciduous forest in Bundala National Park with a single species (*Manilkara hexandra*) dominant canopy



Figure 2. Tropical seasonal forest at the western part of the Wilpattu National Park



(a) dry season



(b) wet season

Figure 3. Scrubland *plagioclimaxes* at Bundala National Park



Figure 4. An upland savanna woodland at Belihuloya (Photograph by courtesy of Mr. G.G.C. Premalal)



Figure 5. A lowland savanna woodland at Nilgala (Photograph by courtesy of Mr. G.G.C. Premalal)

the soil solution and the insolubility of soil minerals such as iron, phosphorus and magnesium are given as reasons for the formation of edaphic climaxes. These could be artifacts of impenetrable 'C' horizon in the soil profile and subsequent water logging during wet conditions and bad aeration (Sezchowycz, 1954). These are mainly dominated with *Imperata cylindrica* and *Cymbopogon nardus* but the presence of scattered or clumped trees (e.g. *M. hexandra*, *Limonia acidissima*) is a salient feature of this ecosystem.

*Villus* found in Wilpaththu National Park, and at the Mahaweli flood plains are a specific natural, grass dominated, wetland ecosystem found in the dry zone of Sri Lanka. Swampy areas in *villus* are surrounded by seasonally flooded damp grasslands while occasionally flooded dry grasslands are located next to these up to the forest edge.

On the other hand, grassland disclimaxes are recorded to have originated after the destruction of forests in the past and subsequent repeated cultivation and accompanying frequent burning and heavy grazing (de Rosayro, 1961; Pemadasa, 1990). *Imperata cylindrica* is a common species in such grasslands but in some areas, such as Udawalawe National Park, these have been replaced by *Panicum maximum*. Annual herbs such as *Croton hirtus*, *Eleutheranthera ruderalis* grow with perennials such as *Tephrosia purpurea*, *Abutilon indicum* and some Poaceae species and as a result, a clear seasonal variation in the vegetation can be observed. However, *Heteropogon contortus* may dominate if the grasslands are intensively and annually burnt over a long period of time (Perera and Wijesooriya, 2007).

## **B. Prominent plants (families)**

### **In Dry forest ecosystems**

Euphorbiaceae species are the most prominent in dry forest vegetations and their proportional abundance is high in areas where more harsh environments exist (Table below). *Drypetes sepiaria* is a universally distributed Euphorbiaceae member which dominates the forest understorey. *M. hexandra* (Sapotaceae) is also a unique species in the dry zone which dominate in dry areas but the species is either rare or absent in cooler and moist conditions. In comparatively wetter areas, a mixture of Annonaceae, Ebenaceae, Melastomataceae and Sapindaceae species tend to grow more frequently with some Euphorbiaceae, Rutaceae or Sapotaceae species.

The composition of species and plant families in secondary forests do not vary much with the forest type, their location and the abiotic conditions. At early seral stages, individuals of Euphorbiaceae (e.g. *Flueggea leucopyrus*, Figure 6c), Rubiaceae (e.g. *Catunaregam spinosa*, *Tarenna asiatica*) and Rhamnaceae (e.g. *Ziziphus oenoplia*) are prominent but Rubiaceae (e.g. *Benkara malabarica*, *Haldina cordifolia*) Tiliaceae (e.g. *Diplodiscus verrucosus*, *Grewia spp.*), Verbenaceae (e.g. *Premna spp.*) and Sterculiaceae (e.g. *Pterospermum suberifolium*) species are prominent in late seral forests. Scrub jungle plagioclimaxes contains many species that are common in early seral secondary forests but Fabaceae (e.g. *Cassia auriculata*, Figure 6a; *Dichrostachys cinerea*, Figure 6b), Euphorbiaceae (e.g. *Flueggea leucopyrus*, Figure 6c) and Rhamnaceae species dominate in them.



## Prominent plant families in dry forests of Sri Lanka

Major forest type	Prominent plant families
Tropical semi-deciduous forests	Euphorbiaceae, Sapotaceae
Tropical seasonal forests*	Euphorbiaceae, Sapotaceae, Rutaceae, Lauraceae, Sapindaceae, Ebenaceae, Melastomataceae, Annonaceae, Myrtaceae
Secondary forest under progressive succession	
Fallow forests <5 yr old	Euphorbiaceae, Asclepiadaceae, Asteraceae, Malvaceae
Early seral vegetation	Euphorbiaceae, Rhamnaceae, Rubiaceae
Late seral vegetation	Rubiaceae, Sterculiaceae, Tiliaceae, Verbenaceae,
Scrub jungles ( <i>Plagioclimaxes</i> )	Euphorbiaceae, Fabaceae, Rhamnaceae

\* prominent plant families may vary with the locality/available soil moisture content

### In Savanna ecosystems

A peculiar feature of the woody flora common to all savanna woodlands is the dominance of the members of the families Combretaceae, Euphorbiaceae and Lecythidaceae. Poaceae, Asteraceae and Malvaceae species are prominent in the herbaceous component.

### In Grassland ecosystems

As the name implies, these ecosystems are dominated with Poaceae members. For instance, around 60% of the individuals in *damana* and dry land grassland disclimaxes are Poaceae species. The rest mainly consists of Fabaceae, Asteraceae, Malvaceae and Euphorbiaceae species. More than 75% of the species in occasionally flooded dry land grasslands belong to the family Poaceae but there are several Cyperaceae and Fabaceae species as well (Perera and Wijesooriya, 2007). In contrast, Cyperaceae and Poaceae species are prominent in seasonally flooded damp grasslands.

### C. Distribution

A peculiar feature in the lowland dry land of Sri Lanka is that many natural forest plant species, especially more light demanding species are rather common in all over the dry land of the country but their abundance may vary from region to region or over the available soil moisture gradients. Dry forests at comparatively high precipitation or soil moisture levels are richer in species and harbour more endemic species than the very dry areas of the island. Thus, the tropical seasonal forests are richer in species than the tropical semi-deciduous forests while northern lowland is richer in species than its eastern and southern counterparts. Similarly, the riparian and hill forest communities are rich in species with the presence of many endemic species (Alwis and Eriyagama, 1969; Fernando, 2010; Jayasuriya, 1984; Jayasingham and Wijesundara, 2007). Presence of evergreen tropical rain forest species of the country is a typical feature of these dry zone hill forests (Fernando, 2010; Jayasuriya, 1984; Jayasingham and Wijesundara, 2007) while these harbour plants and animals rarely encountered in the plains below (Gunatilleke *et al.*, 2008).



(a) *Cassia auriculata* (Fabaceae),



(b) *Dichrostachys cinerea* (Fabaceae)



(c) *Flueggea leucopyrus* (Euphorbiaceae)

Figure 6. Common scrubland species

Forests in drier areas of the country possess comparatively a high taxic diversity in terms of plant genera which are mostly represented by a single species. For instance, 48 plant species were recorded from Bundala National Park which belongs to 47 plant genera. In contrast, the forests that grow in moist areas are rich in species but the diversity of plant genera decreases due to the presence of congeneric species. For instance, *Dimocarpus gardneri* and *D. longan* and *Strychnos minor* and *S. trichocalyx* grow in Kilinochchi forest which is comparatively wetter than the forests at Bundala.



Figure 7 *Derris parviflora*, an endemic liana species with magnificent inflorescences

According to the plant records available in the Flora of Ceylon (Dassanayake and Fosberg (1980-2004), 43 woody plants endemic to the country grow in the dry land of Sri Lanka. These include 26 tree, 2 liana and 15 shrub species. Of these, 33 are also found from the wet zone of the country but 10 species have been reported only in the dry land. However, 7 of the 10 species are restricted to wet localities in the lowlands or in hill forests of the intermediate zone but the other 3 species, *i.e.* *Canthium puberulum*, *Diplodiscus verrucosus* and *Memecylon petiolatum* are recorded only from the dry zone. Some endemic species such as *Derris parviflora* (Figure 7) produce magnificent inflorescences and thus have a potential ornamental value. Point endemics are not common in the dry land of the country as in the wet zone. Three point endemic species, each known only from a single site <100 km<sup>2</sup> are reported mostly at comparatively wetter places in the intermediate zone of the country. Of these, *Wrightia flavido-rosea* (Apocynaceae) and *Hopea brevipetiolaris* (Dipterocarpaceae) are found from Dolukanda while *Oplismenus thwaitesii* (Poaceae) is found at Nalanda (Gunatilleke *et al.*, 2008). *Hopea cordifolia* (Dipterocarpaceae) is also a noteworthy endemic species found from the southern part of the country, restricted to the gallery forest along the Walawe Ganga and Kirindi Oya and their tributaries in the dry zone of the Uva Province.

#### D. Threats

Habitat destruction, degradation and fragmentation are among the major threats in the wilderness areas of the Sri Lankan dry land which are among the most threatened ecosystems of the country. Conversion of natural ecosystems to other land use types is a noteworthy threat in the dry zone at present. Thus, the extent of savanna woodlands in Nilgala Valley has been reduced (Jayasingham and Wijesundara, 2007) while the damana grasslands of Ampara have been fragmented due to the establishment of human settlements. Similarly, a considerable area under natural dry forests has been destroyed for socio-economic developmental projects in addition to clearance for shifting cultivation. Shifting cultivation is proven to be an inappropriate agricultural practice resulting in the depletion of biodiversity in dry forests (Perera 2001) but the practice still continues illegally.

Selective logging of canopy dominants is also a major harmful anthropogenic activity in dry forests. Extraction of canopy dominant timber species such as *Diospyros ebenum* and *Manilkara hexandra* has led to the decrease in their population densities in the wild. Selective logging would also change the forest microclimate so that the climax forest species are not naturally regenerated satisfactorily in the wild. For instance, *Chloroxylon swietenia*, is becoming rarer in the wild due to heavy selective logging and consequent lack of adequate parent trees for seed production, and also due to heavy seed predation (Perera, 1998). Over-extraction of fruits of *Terminalia bellirica*, *T. chebula* and *Phyllanthus emblica* in savanna ecosystems (Jayasingham and Wijesundara, 2007) and the unsustainable harvesting of fruits of *Dialium ovoideum* and *M. hexandra* in dry forests are severe threats as these may cause a reduction of the availability of propagules for their perpetuity in the wild.

Repeated disturbances in any disturbed ecosystem may lead to formation of disclimaxes. Thus, grassland disclimaxes are retained by annual fires (Figure 8a) while frequent clearance and/or burning in degraded dry forests would lead to formation of scrub jungle plagioclimaxes dominated with light demanding shrub species. These repeated disturbances prevent the recolonization of climax vegetation but may facilitate alien exotics to invade the area. Several invasive plant species are reported in different dry land ecosystems and these invaders may



(a) Fire in a *P. maximum* dominated grassland at Mawuara, Udawalawe



(b) *Prosopis juliflora* invaded land in Bundala forest.

Figure 8



Figure 9. The dreadful invader: *Bambusa bambos* in Minneriya Forest



Figure 10. Die-back of *M. hexandra* in Bundala National Park (Photograph by courtesy of Mr. Udaya Gunarathne)

vary from region to region. Thus, *Prosopis juliflora* is found in coastal dry forests at Hambanthota and Mannar districts (Figure 8b) while *Bambusa bambos* is a common invader in Minneriya and Girithale forests in Polonnaruwa district (Figure 9). In contrast, *Lantana camara* is universally distributed across the whole dry land of the country.

Heavy grazing and trampling by feral cattle and buffaloes are serious threats in occasionally flooded dry land grasslands and seasonally flooded damp grasslands. Frequent grazing and trampling expose the soil and facilitate the seeds of invasive species to grow. These ungulates act as the seed dispersal agents of invasive species as well. Thus, *L. camara* invades in grasslands at Udawalawe National Park while *P. juliflora* has invaded the areas closer to lagoons in Hambanthota District.

Forest die-back is commonly seen in tropical semi-deciduous forests where the canopy dominant *M. hexandra* trees are dying back (Figure 10). As the canopy of these forests consists of only *M. hexandra*, its die-back would affect the forest structure and the micro-climate and



is very likely to devastate this ecosystem in the near future. Change of the global climate may exaggerate this situation but this has not been adequately examined so far.

All the above mentioned threats directly or indirectly lead to the extinction of threatened species from the dry land of the country. More than forty locally threatened plant species are found from the dry land of Sri Lanka. Threats in the dry land habitats pose a greater impact on endemic and rare plant species. For instance, nearly 30% of the endemic plants that grow in the Sri Lankan dry land are under a the threat of extinction.

### **E. Conservation priorities**

Conservation of dry zone terrestrial ecosystems is of prime importance for conserving the species in these habitats. Using satellite imagery analyses, Legg and Jewel (1995) stated that closed forests of the dry land of Sri Lanka covers 524,900 ha . The majority of these are protected by the Department of Wildlife Conservation and the Forest Department of Sri Lanka. However, the wilderness is still being converted to other land uses from time to time while unplanned and uncontrolled human activities are playing a significant role in their degradation. Therefore, policies should be formulated and implemented to halt the conversion of wilderness areas to other land use types and to prevent selective logging, shifting cultivation and cattle ranching in protected areas. Moreover, the strengthening of relevant institutions is vital for the protection of these ecosystems.

### **F. Research gaps and research needs**

Some ecosystems of the country, especially the savanna and grassland ecosystems, are not adequately investigated. The exact locations and the extent of these ecosystems are not accurately documented while the ecological data required in preparing management guidelines of these ecosystems hardly exist. The species composition, the eco-physiological requirements of constituent species, biotic and abiotic factors that affect species composition, distribution and vegetation successions and disturbance responses in these ecosystems should be examined. Compared to these, the dry forest ecosystems have been studied to a certain extent, but more studies should be conducted to fill certain gaps in the knowledge. Thus, future research should focus on the eco-physiological requirements of dry forest plant species, pollination biology and diseases as well as pathogens. Moreover, it is vital to investigate the impacts of climate change and the potential for carbon sequestration in all these major dry land ecosystems. Also, the restoration of degraded dry land ecosystems and sustainable harvesting mechanisms for non-timber forest products should also be investigated in depth.

### **G. Conclusions and recommendations**

Dry forests, savanna and grasslands are the three major natural terrestrial vegetation types found in the dry land of Sri Lanka. Biodiversity in these ecosystems are adversely affected by various biotic and abiotic influences such as habitat destruction, degradation and fragmentation, biotic invasions, forest die-back, over-extraction of forest products and climate change. These facts highlight the importance of conserving the remaining natural dry land ecosystems of the country. Protection of dry zone ecosystems should be strictly followed without converting the remaining natural dry zone ecosystems to other land use types. Human impacts especially, the shifting cultivation, selective logging and grazing by feral cattle should be stopped by

implementing proper regulations. Meanwhile, the local people should be directed to establish home gardens and to incorporate timber, medicinal, fodder and fuel wood species in their home gardens. The institutes responsible for preventing illegal human activities in natural ecosystems and conserving these should be further strengthened by providing basic infrastructure and human resources. However, it is also essential to conduct further research to fill the gaps of knowledge of Sri Lankan dry land ecosystems while rehabilitating the degraded ecosystems.

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## Present status of Lowland Wet Zone Flora of Sri Lanka

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### Introduction

Sri Lanka has an outstanding biodiversity because of its tropical climate, soil, topographical variations, geographical location and its striking biogeographic history. Together with the Western Ghats in India, Sri Lanka is considered as one of the 34 biodiversity hotspots in the world because of the high degree of endemism in fauna and flora and serious amount of habitat loss (Ashton *et al.*, 1997; Gunatilleke *et al.*, 2004). The diverse array of ecosystems in Sri Lanka harbors a wealth of plant species and they provide a habitat for many other species as yet undiscovered.

Sri Lanka also has a diversity of climatic and floristic regions showing spatial variations in rainfall, altitude and soil. Lowland wet zone represents the area below 1,000 m in elevation, spreading in the southwestern quarter of Sri Lanka (Figure 1), mainly in the Colombo, Gampaha, Kalutara, Galle, Matara, Kegalle districts and part of Ratnapura (Gunatilleke and Ashton, 1987b; Ministry of Forestry and Environment, 1999).

Flora of the lowland wet zone of Sri Lanka is largely distributed in the tropical lowland rainforests - forests below 1,000 m altitude (Figure 1). These forests have an aseasonal wet climate and generally receive 2500 – 5000 mm of mean annual rain fall without prominent dry spells. Mean annual temperature is about 27°C at sea level. The lowland wet zone forests are classified by de Rosayro (1950) as wet evergreen forest climax by Koelmeyer (1957) and Holmes (1956) as wet tropical evergreen forests . These forests are confined to 2.14% (141,506 ha) of the total land area of Sri Lanka (Ministry of Forestry and Environment, 1999).

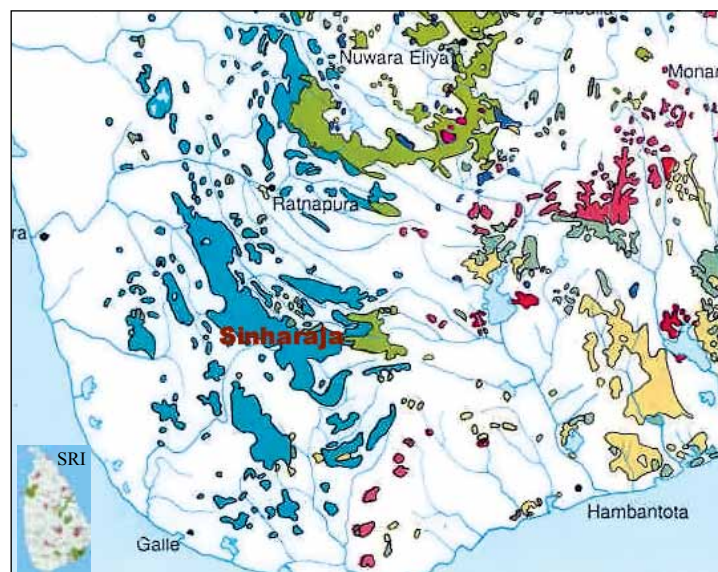


Figure. 1 Map showing the forests in the south-west of Sri Lanka. Blue = Fragmented lowland rain forests remaining in Sri Lanka, Green = Montane rain forests, Brown = Intermediate zone forests, Yellow = Dry zone forests (Source: Somasekaram *et al.*, 1997).

Floristic richness in Sri Lanka is significantly high in the lowland regions compared to the other parts of the country. Even within the wet zone, the distribution of indigenous floristic elements shows remarkable localization and one quarter of the angiosperm flora of Sri Lanka is endemic and also concentrated in the perhumid southwest of the island (Gunatilleke and Gunatilleke, 1990).

Floristic elements in the lowland wet zone of Sri Lanka are relic and primeval in origin. Their origin dates back to the Deccan plate and shares Gondwana-Deccan ancestry and are, by far, the most species-rich biome in the whole of south Asia (Gunatilleke and Ashton, 1987a). Remnants of these Deccan flora are now restricted to the fragments of lowland wet zone in Sri Lanka and the south west region of India, and important in revealing biogeographic history of South Asia.

### Prominent plant taxa

*Dipterocarpus* community and the *Mesua-Shorea* (Doona) community are the two prominent floristic communities in Sri Lankan lowland wet zone forests that comprise of dominant lowland wet zone flora. In addition to that, lowland wet zone flora also exists in *Camptosperma* and other species community and *Vitex-Dillenia-Chaetocarpus-Anisophylla* community, especially in the early successional secondary forests (de Rosayro, 1942; Gunatilleke and Ashton, 1987b). Dominant plant species of these floristic communities are listed in the table below.

### Dominant plant species of the different floristic communities in lowland wet zone forests in Sri Lanka (de Rosayro, 1942; Gunatilleke and Ashton, 1987b).

Floristic community	Dominant plant species
<i>Dipterocarpus</i> community	<i>Dipterocarpus zeylanicus</i> , <i>Dipterocarpus hispidus</i> , <i>Vitex pinnata</i> , <i>Chaetocarpus castanocarpus</i> , <i>Dillenia retusa</i> , <i>Dillenia triquetra</i> , <i>Myristica dactyloides</i> , <i>Semecarpus gardneri</i>
<i>Mesua-Shorea</i> (Doona) community	<i>Mesua ferrea</i> , <i>Mesua thwaitesii</i> , <i>Shorea trapezifolia</i> , <i>Shorea zeylanica</i> , <i>Chaetocarpus castanocarpus</i> , <i>Palaquium petiolare</i> , <i>Mangifera zeylanica</i> , <i>Myristica dactyloides</i> , <i>Garcinia echinocarpa</i> , <i>Agrostistachys coriacea</i> , <i>Lasianthus strigosus</i> , <i>Aporosa lindleyana</i> , <i>Humboldtia laurifolia</i>
<i>Camptosperma</i> and other species community	<i>Camptosperma zeylanica</i> , <i>Chaetocarpus castanocarpus</i> , <i>Palaquium petiolare</i> , <i>Myristica dactyloides</i> , <i>Dillenia triquetra</i> , <i>Gaertnera vaginans</i> , <i>Schumacheria castanaefolia</i> , <i>Thottea siliquosa</i> , <i>Syzygium neesianum</i> ,
<i>Vitex-Dillenia-Chaetocarpus-Anisophylla</i> community	<i>Vitex pinnata</i> , <i>Dillenia triquetra</i> , <i>Chaetocarpus castanocarpus</i> , <i>Anisophyllea cinnamomoides</i> , <i>Dillenia retusa</i> , <i>Myristica dactyloides</i> , <i>Semecarpus gardneri</i> , <i>Gyrinops walla</i> , <i>Cullenia</i> spp., <i>Mangifera zeylanica</i> , <i>Ochna wightiana</i> , <i>Xylopia championii</i> , <i>Garcinia echinocarpa</i> , <i>Diospyros insignis</i> , <i>Gaertnera vaginans</i> , <i>Thottea siliquosa</i> , <i>Schumacheria castanaefolia</i> , <i>Humboldtia laurifolia</i> , <i>Syzygium corymbosum</i> , <i>Symplocos spicata</i>

Dipterocarpaceae, Clusiaceae, Myrtaceae, Bombacaceae, Dilleniaceae, Euphorbiaceae and Sapotaceae are the dominant plant families in lowland wet zone of Sri Lanka.



## Distribution

High degree of endemism is a distinctive feature of wet zone flora in Sri Lanka. Distribution of endemic species in different climatic zones of Sri Lanka reveal that the wet lowlands harbour 156 endemic tree species, 82 shrub species and 88 endemic herbs having the highest number of endemics among all the climatic zones in Sri Lanka (Peeris, 1975; Gunatilleke and Gunatilleke, 1990).

Many of the endemic flora in the lowland wet zone shows distinctive and extraordinary localized patterns of species distribution confined to a single forest or a single cluster of forests blocks within a highly dissected and variable topographic landscape from lowland coastal plains to high altitude regions (Gunatilleke and Ashton, 1987a; Gunatilleke and Gunatilleke, 1991). Most of these endemic taxa have very low population densities. 17% of the wet zone lowland endemic flora is confined to the south-western front ranges of the southern block hills (Gunatilleke and Ashton, 1987a). *Stemonoporus moonii*, a species of an endemic genus, and *Mesua stylosa* are only recorded in Walauwatta-Waturana fresh water swamp forest in Bulathsinghala. Most of the endemic Dipterocarps, and Clusiaceae species also show very restricted distribution patterns.

Flora of lowland wet zone of Sri Lanka shows a great specialization and are subjected to strong habitat-based selection, resulting in many of the species with special ecological and environmental niches and allowed closely related species to co-exist by occupying different ecological niches. Sympatric distributions of congeneric species are remarkable features of most tropical rainforests, also common among the lowland wet zone flora in Sri Lanka (Gunatilleke *et al.*, 2006). Species of *Shorea* section *Doona*, common canopy dominants in lowland wet zone forests in Sri Lanka are good examples for sympatric distribution.

Distribution of lowland wet zone flora shows striking variations in relation to environmental factors; disturbance, soil and altitude (Gunatilleke and Ashton, 1987b). De Rosyro (1942) also identified that soils play an important role for species distribution in lowland wet zone in Sri Lanka. *Dipterocarpus* consociation is best distributed in coastal plains, valleys, and lower slopes of lowland hills and rarely occurs above 750 m. *Mesua-Shorea (Doona)* community is characteristic on skeletal soils on steep slopes between 450 – 900 m.

## Threats and conservation priorities

Sri Lanka also has one of the densest human populations in Asia, with the result that much of its original forests have been cleared for settlement, cultivation and production of timber. The forest cover has decreased from 84% in 1881 to 23.9% in 1992 (Anon., 1995). Out of this, only about 141,506 ha (2.14%) of lowland rain forests are now remaining in the island are fragmented, degraded and isolated throughout the lowland wet zone in Sri Lanka.

Habitat destruction, fragmentation of natural habitats, introduction of exotic or invasive species, and over-exploitation of forest resources are some of the direct threats to the lowland wet zone ecosystem.

The wet zone forests of Sri Lanka are still the most productive timber yielding forests. As a result, most of them have been already reduced to isolated fragments (Gunatilleke and

Gunatilleke, 1991). High population density of the lowland wet zone and the development activities associated with the rapid increase of population and extensive dependence on subsistence agriculture have caused considerable pressure on this biologically rich ecosystem of the country. Human encroachment by communities living in the peripheral areas is another major threat for this ecosystem. Habitat disturbance together with the fragmentation of the forests caused several negative impacts to the ecosystem, for instance restricted dispersal, isolation of populations, genetic erosion *etc.*

Considering the floristic wealth of lowland wet zone of Sri Lanka, *in situ* conservation of nationally and globally threatened endemic plant species with special emphasis on their population sizes should have high priority. A study conducted in nine different sites of lowland wet zone revealed that 93% of endemic plant species are either endangered, vulnerable, or rare according to the IUCN Red List criteria (Gunatilleke and Gunatilleke, 1991). To provide *in situ* conservation for many of these threatened endemics, the preservation of representative samples of rain forests in different regions is strongly recommended (Gunatilleke and Gunatilleke, 1991).

In the past, natural forests were largely used for the extraction of timber. Little attention was then paid to other useful resources, largely non-timber, that were traditionally being extracted by the peripheral communities around forests. However, these non-timber resources contributed to the livelihood of the local people, who depended on the forests for their food, medicine and other domestic requirements for generations (Anon., 1995; Gunatilleke *et al.*, 1994). Conservation of non-timber forest products through an effective buffer zone management system around the lowland wet zone forests would certainly reduce the pressure on the ecosystem.

Sri Lanka has a strong tradition in conservation practiced by communities in harmony with, and partial dependence on, the natural forests. Thus, it provides an excellent setting to examine how these tropical rain forests can be managed for multiple uses, following a system that is socially acceptable, ecologically sustainable and economically viable (Gunatilleke *et al.*, 1994). The multiple use management of natural forests, aims to increase the sustainable flow of both timber and non-timber forest products, while maintaining their value for non-product services such as biodiversity conservation, soil and water conservation, amenity and socio-cultural values from natural forests for the benefit of the rural people (Gunatilleke *et al.*, 1995). Experience and the scientific and technical expertise in multiple use forest management systems are currently lacking in Sri Lanka. Buffer zones can be recognized as one of the most suitable and important areas to implement multiple use forest management, while providing a variety of goods and services.

### **Research gaps and research needs**

Considerable amount of research has been carried out, especially on lowland wet zone flora, over the last 3-4 decades. These studies have substantially increased our understanding on of the distribution of species, ecology, forest dynamics and silvicultural and management practices of this ecosystem. However, following research gaps could be identified;

- Systematics and inventory of lower plants in lowland wet zone of Sri Lanka
- Phylogenetics and evolutionary studies on plant taxa to elucidate the phylogenetic relationships, biogeographic history *etc.*

- Taxonomic research on closely related and problematic plant taxa using molecular markers
- Population studies on threaten plant species
- Phenology and reproductive biology of plants
- Research on natural compounds obtained from lowland wet zone flora
- Ethnobotanical research

## Conclusions

Lowland wet zone flora of Sri Lanka are extraordinary in terms of species richness, distribution, high degree of endemism and their biogeographic history. Dipterocarpaceae, Clusiaceae, Myrtaceae, Bombacaceae, Dilleniaceae, Euphorbiaceae and Sapotaceae are some of the dominant plant families in lowland wet zone of Sri Lanka. They dominate the lowland rainforests that are fragmented, degraded and isolated throughout the lowland wet zone in Sri Lanka. Habitat destruction, fragmentation of natural habitats, introduction of exotic or invasive species, and over exploitation of forest resources are some of the direct threats to the lowland wet zone ecosystem.

Conservation of nationally and globally threatened endemic plant species with special emphasis on their population sizes is an urgent need. Multiple-use forest management systems can be successfully applied to manage these ecosystem in a sustainable manner. Research on lowland wet zone flora has substantially increased our understanding on the value and the importance this ecosystem. However, research has to be more strengthened and extended to fully appreciate and implement meaningful conservation strategies for this precious ecosystem.

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## Present Status of Montane Forests in Sri Lanka

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In Sri Lanka the montane forests, also known as upper montane forests, occur at elevations beyond 1500 m above mean sea level. They share an average temperature of about 16 degrees Celsius and rainfall of above 2000 mm without any marked dry periods, and humidity above 80%.

It is characterized by a short canopy of about 13 m, with a dense shrub layer of about 3-4 m. Gnarled and twisted trees with rounded (umbrella-shaped) crowns with tiny, leathery leaves to accommodate the strong winds that prevail. High density of epiphytes, epiphylls, mosses, bryophytes and lichens are commonly found. Soils are red-yellow podzols. Keena (*Calophyllum walkeri*), Damba (*Syzygium revolutum*) and *S. rotundifolium* make the abundant tree species with Wal sapu (*Magnolia nilagrica*), Mihiriya (*Gordonia ceylanica*). Gregariously flowering Nelu (*Strobilanthes spp.*) form a prominent shrub layer, while Usnea (Old man's beard) is a distinct lichen; epiphytic orchids such as *Eria bicolor*, *Robiquetia brevifolia*, and filmy ferns are common; Sudu Binara (*Exacum walkeri*) is a distinct herbaceous flower. Pigmy forests or elfin forests are found on top of Hakgala, Totapola and Knuckles, made of stunted trees of *Ilex*, *Eurya*, *Syzygium* and shrubs such as *Rhodomyrtus*, *Osbeckia*, and *Hedyotes* (Wijesundara, 1991)

Montane forests once formed a more or less continuous cover or cap extending over almost the entire third peneplain of Sri Lanka, encompassing the Pedro, Totapola and Adam's peak ranges, and the isolated Knuckles range (de Rosayro, 1946). At present only 3000 ha of montane forests are left in the island. In addition to their role in water retention and release in catchment areas in this country, montane forests are also the home of about 500 endemic plant species which constitute about 50% of all the endemics in Sri Lanka (Peeris, 1975). Trees in the montane forests are covered with mosses and lichens enabling them to intercept mist effectively. According to some hydrological studies done, 25% of the precipitation received by the montane forests in Horton Plains is due to mist interception (Gunawardena *et al*, 1998). Despite their biological and hydrological importance, vast areas of these montane forests have been cleared during the latter part of the 19th century for introduction of plantation crops such as tea. Only about 3,100 ha of montane forests are remaining at present (MENR, 2009).

### Flora and origin of the montane zone

More than half the species of our montane zone are endemic to it and not found in Nilgiri or other hills of the Indian peninsula. However, about 20 species and 44 genera are common to the South Indian and Sri Lankan hills (Blasco, 1971). There is not a single genus endemic to the hills of either country or both combined, and the flora of Indo-Sri Lankan high lands is considered as a southward extension of the Himalayan flora.

Dr. J. C. Willis, a former Director of Royal Botanic Gardens, Peradeniya (1896-1912), analyzed the hill top floras of Sri Lanka and supposed that the high degree of endemism in the montane zone was due to isolation (Willis, 1908). He tabulated the proportion of hill top species with

different dispersal methods and found 6.5% wind dispersed species, 25.0% animal dispersed species and 68.5% species with doubtful dispersal mechanisms.

A former Assistant Conservator of Forests, Mr. C.H. Holmes suggested that the montane forest probably originated and developed as a lowland wet evergreen forest which subsequently became much modified; the montane region, he believed, has been lifted upward by a tectonic upheaval (Holmes, 1948). This was in accordance with an earlier view that the highlands were formed comparatively recently by vertical block uplift of the crust along a very large fault (Wadia, 1941). Holmes (1956) suggested that the montane forest was a post-climax of the a lowland wet evergreen forest, and considers a) the floristic affinities of the region, b) difficulties of natural regeneration, c) better performance of sub-tropical or temperate species in the montane zone and d) theories on geological prehistory, in support of his theory. It is clear that this theory recognised the third peneplain which houses the montane forest as the youngest erosional terrace, as suggested by Wadia purely on geomorphological grounds. Subsequent studies, based on the structural and morphological aspects of the third peneplain, strongly suggested that differential upwarping and differential erosion could account for the major levels of denudation rather than block uplift (Vitanage, 1970).

### **Threats to Montane Vegetation**

At present, natural forests in the montane zone are threatened by the rapid expansion of vegetable gardens in their vicinity encroaching upon them and the excessive extraction of firewood from them (Wijesundara, 1991). Strict control of such destructive activities is imperative if the remaining areas of this forest type in the country are to be preserved for the future.

### **Human Disturbances**

Montane forests are surrounded by several villages and as a result many people enter into them for various purposes. Gathering firewood from the forest for heating the houses and cooking is very frequent. In addition to this, many trees are cut by the local inhabitants for various other domestic purposes such as fencing and staking their cultivations. Illicit gem mining is another activity destroying the montane habitats. If these activities take place in a sustainable manner the effects to the natural vegetation will be minimal. Unfortunately, the scale of these activities has now gone beyond the sustainable level. Although all montane forests are protected areas, these activities are going on without much hindrance.

The Forest Department and the Department of Wild Life Conservation, which administer these reserves, do not seem to have sufficient staff and other resources to prevent these destructive activities. They are also struggling to protect the forests from illicit encroachers who are trying to clear the land belonging to the reserves for vegetable cultivation. Despite many protests by the public and the authorities, recently, large areas belonging to Hakgala SNR were cleared at Rendapola, Ambewela, Sita Eliya and Hakgala sides.

## Death of trees in the montane forests

The dying of trees in Totapolakande forest of the montane zone imparting an unhealthy appearance to the forests has been observed by a former Conservator of Forests, Mr. W.R.H. Perera (Perera, 1978). The dying of trees in montane forests has also been reported by de Rosayro (1946). Perera (1978) reported that over 50% of the dominant Kina (*Calophyllum*) and Damba (*Syzygium*) trees on the slopes and summit of Totapolakande were dead or dying, but trees of *Rhododendron arboreum* ssp. *zeylanicum*, common even in montane grasslands, a large number of Nelu (*Strobilanthes*.) species and other shrubs in the lower strata of the forest were found to grow well while the forest tree species failed to regenerate. Several studies have been conducted on the dieback of montane forests in Sri Lanka (Werner, 1988; Adikaram *et al*, 1999; Ranasinghe *et al.*, 2009)

Widespread forest decline due to die-back is now a severe problem in many parts of the world. Some of these countries include Europe, North America, New Zealand, former Soviet Union and Pacific Islands. In Germany, it is reported that about 52% of the forest surveyed are affected by this phenomenon.

In some cases the tree-death is due to natural causes. Die-back stands in such areas may represent a senescing stage in the forest life cycle. Drastic changes in the climate such as severe drought or flood can also cause natural die-back in forests (Werner, 1988). However, in most industrial countries the death of forest trees is mainly due to human induced environmental changes such as the pollution of atmosphere.

A study conducted by us (Wijesundara and Samarasinghe 1993) to examine floristic composition of forest gaps in Horton Plains revealed that Nelu (*Strobilanthes*) species are found in almost all gaps created by dieback. Gaps created by fire are different from those as they are occupied by a fern, *Pteridium revolutum*. It was also observed that alien invasive species such as *Ageratina riparia*, *Austroeupatorium inulifolium* and *Cestrum aurantiacum* are invading the dieback gaps. Dieback of canopy trees was also observed in the Hakgala SNR, which is a similar montane forest in the same region. Over 50% of the species were affected by dieback. Observations made during the past two decades in the areas affected by forest dieback reveal that the following changes have been taken place in the dieback stands.

- a) Regeneration of the montane forest
- b) Formation of a pigmy forest
- c) Colonization of gaps by Nelu (*Strobilanthes* spp.)
- d) Colonization of gaps by alien invasive species

Regeneration of montane forest can be seen in certain places where the number of dead trees is less. New shoots are formed on the defoliated trunks and at the bases of the trees. A formation of a pigmy forest in the gaps can be observed in areas where the wind action is severely felt. In the area where the gaps are colonized by Nelu, a lesser number of tree seedlings were observed. The dense growth of Nelu may suppress establishment of tree seedlings. These nelu stands, which die *en mass* after several years, are being invaded by grasses in some areas (Wijesundara, 1991).

Although the causal factors are not fully understood, widespread die-back could seriously damage the vegetation in these areas (Adikaram *et al.*, 1999). Whether the die-back stands represent a senescing stage of the forest life cycle or whether it is due to human induced environmental changes is not known. If it is a cyclic vegetational change where the gaps formed by die-back stands represent only a regenerative phase, it is not harmful to the vegetation. However, if the cycle is interrupted by an outside factor diverting it into a different direction the existing vegetation will be affected. In other words, if an aggressive species invades the gaps the natural regeneration will not take place. Tussocks of Gawara Mana (*Chrysopogon nodulibarbis*) were observed in die back stands in the Horton Plains area, (Totapolakande and Kirigalpotte) and in Pidurutalagala. On the peak of Hakgala Strict Natural Reserve also, there is a small patch of grassland in the middle of a die-back stand.

Since the montane forests and wet patana grasslands are present side by side, there is always a chance for propagules from each type to cross their boundaries. The stand level die-back in the upper altitudes of the montane forests in Sri Lanka can lead to a decrease in the biodiversity. Floristic composition and the structure of the affected areas will also be changed as a result. More research is needed to determine whether the edaphic factors in die-back stands are conducive to the establishment of grassland species. In some areas in the montane zone, the origin of grassland could have been due to the stand level forest die-back (Wijesundara, 1991).

In the montane region the boundary between forest and the grassland is sharp; this is true for other countries as well (Richards, 1963; Blasco, 1971). The sharpness of the edge of montane forests is sometimes attributed to anthropogenic fire. Some speculate that in Sri Lanka the present line of demarcation of forest and grassland is not the original line but a result of human disturbances at a later stage.

### **Invasive species**

The other serious threat to the montane vegetation is caused by the exotic species that have escaped mainly from the Hakgala Botanic Gardens (Wijesundara, 1999). When a gap is formed in the forest there is always a possibility of an exotic species with higher reproductive vigour getting established there. This is taking place along the periphery of the Hakgala SNR and already there are populations of such species that have invaded into the reserve. In the southern areas there are large patches of *Cestrum aurantiacum* which sometimes spread into the forest interior. The flowers of this species are pollinated by the endemic bird, Sri Lanka white eye (*Zosterops ceylonensis*) and the seeds are dispersed by another endemic bird, Yellow-eared bulbul (*Pycnonotus penicillatus*). It will be interesting to study the effect of the changes of food preferences of these birds on the regeneration of natural forest plant species (Wijesundara, 1991).

Almost all the foot paths in open areas and even the streams of some motane forests are lined with such exotic weeds as *Ageratina riparia* and *Aristea ecklonii*. *Aristea ecklonii* is also found in more open areas such as hill tops and grassland. More recently several other invasive species were observed in the montane region. These include *Calliandra calothyrsus*, *Miconia calvescens*, *Psidium litorale*, *Pennisetum clandestinum*, and *Austro eupatorium inulifolium*. The effects of these alien species on the local vegetation should be an important study.



Conservation of our mountain forests for future has now become a priority more than in any other time. Since it is a rapidly dwindling natural resource, timely steps should be taken to prevent the destruction of what is remaining. If not, this important eco-system would disappear from earth even before the intricacies of it are fully understood.

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## Present Status of Fresh Water Aquatic Flora in Sri Lanka

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### Introduction

Sri Lanka is an island surrounded by the Indian Ocean. However, only four percent of the country's land area is covered by water (FAO, 2011). Those land areas that are permanently or seasonally inundated together with its floral and faunal communities are considered as an aquatic ecosystem. The fresh aquatic ecosystems of the country include rivers, streams, marshes, swamp forests and *villu*. Apart from these natural habitats, man-made tanks, reservoirs, and rice fields also contribute to the diversity. Based on the definition of the RAMSAR convention (1987), all these ecosystems are broadly defined as wetlands.

Sri Lanka has an extensive network of rivers and streams, most of which arise from the south-central massif that rises to 2500 m above sea level. In all, there are 103 distinct natural rivers many of which are perennial, while those in the dry zone are seasonal. The Mahaweli river basin which drains 16% of the island (Madduma Bandara, 2000), carries water from the wet zone to the dry zone, supporting many marshes, riverine vegetation, and flood plains. A fresh water marsh is a shallow depression receiving water from a river either directly or by surface run-off of river floods and ground water seepage. The Muthurajawela marsh is the longest peat bog in Sri Lanka and, together with the Negombo estuary, forms an integrated coastal wetland ecosystem extending over 6,232 ha (CEA/Euroconsult, 1994a). Several fresh water marshes are found within the Wilpattu National Park in the lowland dry zone. Horton Plains represent montane grassland marshes at an altitude of 2000 m. The late succession stage of a fresh water marsh is referred as a fresh water swamp forest. Fresh water swamps comprise of trees that are adapted to grow in shallow stagnant water and are inundated seasonally with river water. Fresh water swamps are considered the rarest wetland type in Sri Lanka and the Walauwatta-Wathurana swamp forest, located in the Kalu Ganga river basin, is a typical example that extends 12 ha in the southwestern part of the island (CEA/Euroconsult, 1994b). Even though there are no large natural lakes in the island, a number of flood plain lakes that are commonly referred to as *villu*, occur in the dry zone. These extend over a total area of 12,500 ha, the largest being the inter-connected Handapan and Pendiya *villu* system of the Mahaweli *villu* system (CEA/Euroconsult, 1995).

Owing to its unique hydraulic civilization, Sri Lanka is endowed with a rich array of man-made lakes and canals accounting over 10,000 countrywide, covering more than 127,070 ha (Jayasinghe, 2000), especially in the dry zone. They range from small and medium sized tanks such as Thithawella tank (Kurunegala) to larger tanks/reservoirs such as the Parakrama Samudraya. Associated with these are paddy fields characterized by the presence of seasonal standing waters contributing to agronomically managed marshes that extend over 12% (708,000 ha) of total land area. Paddy is cultivated in all the agro-ecological zones except at very high elevations. Victoria, Randenigala, Rantambe and Kotmale are recent reservoirs that were added into the list. Man-made wetlands are broadly categorized into three groups, which are further divided in to nine different wetland types: Aqua-cultural (fish and shrimp ponds), Agricultural (farm/small tanks, irrigated land, and seasonal flooded fields) and Industrial/urban

(salt pans, reservoirs, gravel/brick pits, sewage/treatment ponds and canals) (Kotagama and Bambaradeniya, 2006).

Wetland ecosystems are amongst the most productive ecosystems in the world that support many kinds of life. Wetlands always have influenced humans from the time of early civilization, which first arose along the edges of rivers in the fertile soils of the flood plains. They provide an array of human benefits including food and drinking water, raw material, and medicinal herbs. Further, many waterfalls and major rivers have been utilized for generating hydro-electricity. Wetlands are considered as the transitional zone between land and water and provide several ecological functions such as ground water buffering and reducing pollution. They also provide recreation sites full of wildlife; Bundala National Park, Anawilundawa Sanctuary and Wilpattu National Park being few of them. Aquatic flora play a key role in these wetland ecosystems providing habitats to fauna. Amongst the total inland vertebrate species in Sri Lanka, about 30% are ecologically dependent on wetlands (Kotagama and Bambaradeniya, 2006). Further, over 50% of the migratory birds that visit Sri Lanka annually are directly dependent on wetlands for food and shelter. Moreover, the future survival of approximately 32% of the nationally threatened vertebrate species in Sri Lanka is dependent on wetland ecosystems of the island (Kotagama and Bambaradeniya, 2006).

### **Prominent plants and Distribution**

The definition of the term "aquatic" can be subject to various interpretations. Aquatic plants or wetland plants themselves however, do not always fit rigid definitions. Aquatic plants are also referred to as hydrophytes or aquatic macrophytes. The wetland plants do not belong to a particular plant family, have rather derived from several terrestrial families, and are adapted to live in aquatic environments by developing similar modifications. These include large air spaces within their leaves, stems and roots, presence of both underwater and floating leaves, thin and often finely dissected leaves, thick waxy leaves, and specialized pollination mechanisms. In addition, many aquatic plants also show a great variation in growth patterns. For instance Water-hyacinth, floating at the water surface has typical bulbous leaf petiole, but when rooted the leaf-petiole elongates losing its bulbous form. The species composition and the appearance of an aquatic ecosystem vary both with time and among the wetland sites. The marshes are characterized by tall grasses, sedges and herbaceous plants while lake vegetation is characterized by emergent plants towards the periphery and floating aquatics dominating the water surface.

Four categories (growth forms) of aquatic plants may be recognized on the basis of their attachment to the soil and their position in relation to the water surface:

- (1) Free-floating plants: Plants that are floating at the surface or beneath the surface. They are typically not rooted to the soil at the bottom, but in shallow water or where they are stranded on the shore by a drop in the water level, they may become rooted. The leaves may stand above the surface (*e.g. Pistia* and *Eichhornia*), at the surface (*e.g. Wolffia*), or the whole plant may float beneath the surface (*e.g. Ceratophyllum*). These plants occur in shallow or deep water.
- (2) Plants rooted at the bottom, with leaves floating at the surface: These plants could be either with short or long rhizomes at the bottom, and large leaf-blades at the ends of long

petioles (e.g. *Nymphaea*), or with long stems rising through the water, bearing leaves with relatively short petioles (e.g. *Nymphoides*).

- (3) Submerged plants: Plants that are generally rooted at the bottom, and the vegetative parts entirely submerged. At the time of flowering, the flowers and some leaves may emerge from the water. These plants could be thallus-like, attached to rocks (members of the family Podostemaceae), with long stems rising through the water bearing leaves, and rooting at the nodes (e.g. *Hydrilla*), or with short stems bearing leaves in a basal rosette, and often producing stolons (e.g. *Blyxa*). These plants are restricted to depths where sufficient light reaches them through the water for photosynthesis.
- (4) Emergent plants: Often with rhizomes, rooted in mud, with shoots emerging above the water (grasses and sedges). These plants occur in relatively shallow water or towards the periphery of a water-body.

Sri Lanka harbors over 370 aquatic or wetland plant species of which 12% are endemic to the country. The aquatic flora include 135 Eudicots, 205 Monocots, 4 members belonging to super-orders Nymphaeanae and Ceratophyllanae, and 28 ferns and fern allies. The island's aquatic flora is taxonomically placed under 64 families of which 28 are Eudicot families, 24 are Monocot families while 14 are ferns and fern allied families. The families with entirely aquatic members include Alismataceae, Aponogetonaceae, Cabombaceae, Ceratophyllaceae, Hydrocharitaceae, Menyanthaceae, Najadaceae, Nymphaeaceae, Nelumbonaceae, Podostemaceae, and Potamogetonaceae. The largest aquatic plant family, the Cyperaceae (Sedges), has 69 species followed by the Scrophulariaceae and Poaceae (Grasses). Hydrocharitaceae, Eriocaulaceae, Lentibulariaceae, Commelinaceae and Asteraceae also have a considerable number of aquatic members. All these aquatic species are native to the country, except for few species such as *Eichhornia crassipes* (Mart.) Solms-Laub., *Limnocharis flava* (L.) Buchenau and *Salvinia molesta* D. Mitch., that are recent introductions and have spread rapidly and become naturalized in many parts of the country. Forty one (41%) percent of the island's aquatic flora are now threatened and listed under different categories during the present Red Listing. This needs to be considered seriously during the preparation and implementing of the wetland conservation and management plan. Three percent (3%) of aquatics are considered under the Probably Extinct category (CR(PE)) while 5.6% are considered under the Critically Endangered (CR). Most plants under both these categories are distributed in the lowland wet zone in and along small and large streams, and rivers, swamps, marshes and paddy fields, especially in the Kalutara, Colombo, Ratnapura and Kegalle districts. The rocky rapids of the Mahaweli river in the Gannoruwa-Hallolluwa area in Kandy are another site that harbors many of these plants. The Endangered category (EN) accounts for 12% of aquatic flora while the Vulnerable and the Near Threatened categories (NT) account for 10% and 10.6% respectively.

The family Araceae harbors the highest number of endemics which include 10 species of the genus *Cryptocoryne* and 7 *Lagenandra* species. *Cryptocoryne* is a very vulnerable genus where all of its members have been recognized as threatened in the past and present evaluations for Red Listing. The *Cryptocoryne* mainly occurs in the south-western lowland ever-green rain forests, central midlands, central western lowlands in the semi-deciduous monsoon forests having a seasonal change in precipitation and few are scattered in the dry zone riverine forests. These species mostly thrive in slow running water or seasonally inundated soils. They occur both submerged or emerged depending on the growth stage, vegetative or reproductive. Five *Cryptocoryne* are placed under the Critically Endangered

category (CR); three under Endangered category (EN), while the other two under Vulnerable (VU) category. Many of these species are restricted to the Kalutara and Ratnapura districts in the low wetlands and the banks of the Mahaweli river in Gannoruwa-Hallolluwa area, Kandy. One of the six endemics in the genus *Lagenandra* is recognized under Critically Endangered category (CR) while the others are under the Endangered category (EN). All these species are restricted to the wet zone and occur mainly along the river banks. *Lagenandra erosa* de Wit is listed under the Critically Endangered category (CR) with concern as its locality is unknown. However, it evidently occurs in the wetzone of the country (<http://crypts.home.xs4all.nl/Lagenandra/Gallery/distribution.html>). *Lagenandra thwaitesii* Engler with a silver margin on its blade is restricted to Kalutara, Galle and Ratnapura districts, and has a high demand as an ornamental aquatic. *Woffia arrhiza* (L.) Horkel ex Wimmer is a minute free-floating native plant of the family Araceae with a thallus of about 1 mm in width and is considered to be the smallest vascular plant on the earth. The plant produces a minute flower with a single stamen and pistil. It often multiplies vegetatively, where the rounded part buds off into a new individual. The plant occurs in the North Central province and is considered Endangered (EN). The genus *Lemna* harbors two species of which *L. gibba* L., recorded from Colombo, is now considered under Probably Extinct category (CR(PE)).

The 69 species recorded in the family Cyperaceae are distributed among 17 genera where *Cyperus* records the highest number of 17 species, followed by the genus *Fimbristylis* (12 species). The family includes five endemics, of which *Eleocharis lankana* T. Koyama confined to lowland marshes, especially Colombo district, *Fimbristylis zeylanica* T. Koyama confined to the marshes of the Wilpattu National Park and *Mapania immersa* (Thw.) Benth ex Clarke that confined to the Kalutara district are listed as Critically Endangered. In addition, three other natives, *Eleocharis confervoides* (Poir.) T. Koyama, *Rhynchospora chinensis* Nees & Meyen ex Nees and *R. triflora* Vahl are now considered under Probably Extinct category (CR(PE)).

The family Scrophulariaceae bears 33 species belonging to 11 genera of which three are endemic. *Adenosma subrepens* (Thw.) Benth. ex Hook. f., a very highly threatened endemic restricted to Ratnapura district, and *Limnophila chinensis* (Osbeck) Merr., a native confined to wet places, including paddy fields, in the Kalutara and Badulla districts are now listed under the Probably Extinct category (CR(PE)).

The Grass family or the Poaceae records 30 species belonging to 20 genera with two Endangered (EN) endemic species, *Arundinaria densifolia* Munro and *Eulalia thwaitesii* (Hack.) Kuntze; both are confined to Nuwara Eliya district.

The family Eriocaulaceae with a capitulum-like inflorescence and wind pollinated flowers superficially resembles the grasses, sedges, and rushes. Five endemic members are among the sixteen aquatics in the genus *Eriocaulon* where one species, *Eriocaulon fergusonii* (Moldenke) S.M. Phillips, was recorded from marshlands of Colombo and Galle districts and is considered under Probably Extinct category (CR(PE)). *Eriocaulon trimeni* Hook.f. is a very rare species recorded from the Matale district and is listed under Critically Endangered category (CR).

The family Aponogetonaceae is represented by four members of the genus *Aponogeton*, with two endemic members. *Aponogeton jacobsenii* Bruggen is restricted to the highlands, especially Nuwara Eliya and the Horton plains and considered as Critically Endangered while *A. rigidifolius*

Bruggen is restricted to the lowland wet zone and Endangered (EN). However, although not endemic, *A. natans* (L.) Engler & Krause and *A. crispus* Thunb. are both considered as rare and threatened due to over exploitation in the wild and are in the Vulnerable category (VU).

Podostemaceae is a family with plants of very unusual vegetative form. Seven members are recorded in the country with two endemics. They are more or less thalloid, growing on rocks in fast-flowing rivers or cataracts and could be considered a highly threatened group of plants. The rapids of the Mahaweli river at Gannoruwa-Hallolluwa area, Kandy provide the habitat for six of these species including the endemics. Both endemics, *Farmeria metzgerioides* (Trimen) Willis ex Hook.f. and *Polypleurum elongatum* (Gardner) J.B.Hall are considered as Vulnerable (VU), while *Polypleurum stylosum* (Wight) J.B. Hallis is listed as Critically Endangered (CR). However, *Zeylanidium lichenoides* (Kurz) Engl., recorded as confined to the river rapids of the montane region, is now considered under Probably Extinct category (CR(PE)).

Two aquatic carnivorous plant families are recorded in the island. The family Droseraceae includes insectivorous herbs with leaves set with sticky glandular hairs holding down and digesting insects. *Drosera burmanni* Vahl and *D. indica* L. show a wider distribution but are still recognized under the Vulnerable category (VU) due to threats on its habitats, while *D. peltata* Smith, restricted to the highlands, especially Nuwara Eliya and Badulla districts, is listed under Endangered category (EN). The genus *Utricularia* (Lentibulariaceae) harbors fifteen carnivorous herbs with specialized organs (traps/bladders) to capture and digest small organisms. *Utricularia moniliformis* P. Taylor is the only endemic member listed under the Vulnerable category (VU) and is restricted to Kandy and Nuwara Eliya districts while the other species show a wider distribution in lowland dry and wet zones. However, due to the habitat disruption, many of the native species have also been affected; seven of them are now listed under various categories during the present Red Listing.

## Threats

The aquatic ecosystems have been affected throughout the history by various anthropogenic threats, habitat deterioration/degradation, over exploitation of species and alien invasions. The Directory of Asian Wetlands (Scott, 1989) documents several threats where siltation has been a frequently reported threat for the listed wetland sites of the island. Considering different ecosystems, the aquatic ecosystem is unique as it is vulnerable to direct human activities as well as many indirect human activities that are distant-based rather than on-site.

**Habitat deterioration/degradation:** Habitat deterioration/degradation is caused by on-site activities as well as distant-based human activities. The aquatic ecosystems are vulnerable mostly due to the latter. Kotagama and Bambaradeniya (2006) identified reclamation, clearing of vegetation, water pollution (through organic pollution, other chemical effluents and sewage disposal), regulation of water flow, unplanned irrigation structures and mining as the major causes for wet land deterioration/degradation. Reclamation for infrastructure development, construction of aquaculture ponds, more recently due to security reasons and further dumping of domestic and municipal waste have affected wetlands, especially those in urban areas such as Bellanwilla-Attidiya marsh (CEA/ Euroconsult, 1993). This site is one of the recorded sites for Critically Endangered endemic sedge *Eleocharis lankana* T. Koyama, confined to lowland marshes. Illegal reclamation for human settlement, dumping of garbage, chemical pollution

and eutrophication (due to agricultural fertilizers and pesticides, and residues from illegal breweries) are major threats identified for the Muthurajawela marshes (IUCN Sri Lanka and CEA, 2006). This marsh is a habitat for threatened aquatics, *Aponogeton natans* (L.) Engler & Krause, *Murdannia gigantea* (Vahl) G. Bruckn. and *Nympoides aurantiacea* (Dalz.) Krutze.

Construction of dams across major rivers, especially the Mahaweli, has affected the downstream vegetation. Due to further diversion and impoundments in the upstream areas of the Mahaweli river, the water flow has been reduced causing the drying up of about one third of the *villu* in the Mahaweli *villu* system and affecting the aquatics. Further, this has facilitated the spread of alien plants such as *Eichhornia crassipes*, *Xanthium indicum* Koenig and *Salvinia molesta* affecting the natural *villu* vegetation (IUCN Sri Lanka and CEA, 2006). These *villu* also harbor wild relatives of rice such as *Oryza rufipogon* Griffith and *O. eichingeri* Peter.

Apart from these threats, construction of mini-hydropower plants at a rapid rate during the past few years has added to deterioration of many habitats of aquatic plants. One of the most affected groups being the family Podostemaceae, a group of flowering plants that only grows on stones in rapidly flowing streams and rivers with changing water levels. Due to this habitat preference, it occurs only in few specific localities and is difficult to be conserved under in situ conditions. The richest site for these members at Gannoruwa-Hallolluwa area of the Mahaweli river is presently being disturbed by the construction of a mini-hydropower plant. *Farmeria metzgerioides* (Trimen) Willis ex Hook.f. and *Polypleurum elongatum* (Gardner) J.B.Hall are endemic members of the seven species of Podostemaceae recorded in Sri Lanka while six of them, including the two endemics, are found at this location. The blasting of large rocks in the river has directly affected the aquatic vegetation while the resulting reduction of water flow will affect the downstream vegetation. In addition four *Cryptocoryne* species have been recorded as occurring in the rapids at this location. *Cryptocoryne parva* de Wit grows closest to the water where the course is rapid. *Cryptocoryne walkeri* Schott grows in a little further up, but is also rather exposed, while *C. beckettii* Trimen and *C. undulata* Wendt. are found even further up on the banks. The hybrid, *C. x willisii* Reitz is found in several locations, both low and high, in the shade and the sun (Jacobsen, 1986). The construction of the Upper Kotmale hydropower project and restriction of downstream water flow have affected many downstream plants including *Zeylanidium subulatum* (Gardner) C. Cusset and *Z. olivaceum* (Gardner) Engl. of the Podostemaceae.

Further, illegal constructions and dumping of soils along water courses, including the main rivers, cause a serious threat to riverine vegetation, including species such as *Lagenandra* and *Hygrophila*. The Mahaweli river along Peradeniya to Katugastota, on both sides of the bank, could be identified as one of the severely affected areas due to development activities along the river bank. This stretch once again includes the Gannoruwa-Hallolluwa area, one of the richest aquatic floral habitats providing home to three Critically Endangered (two endemics and one native), three Endangered (one endemic and two native), three Vulnerable (endemic) and one native Endangered species. Encroachments for settlement, building of hotels bordering the river, and utilising of the river banks for waste disposal and dumping could be witnessed and are still continuing at an alarming rate.

**Over-exploitation of species:** Many aquatic plants, especially the species with an ornamental value, are being extracted from the wild. Over-exploitation of species has led to a decline in

populations of species such as *Cryptocoryne*, *Aponogeton* and *Lagenandra*. Even though rules and regulations exist, many exporters have their own undisclosed suppliers and areas for collection which include the Kelani Valley basin and small streams in areas such as Mawanelle, Avissawella, Bulathkohupitiya, Ruwanwella and Yatiyantota in the Lowland and central wet zone of Sri Lanka (Seneviratne, 2002) and dry zone rivers including Malwathu oya and Kuda oya.

**Alien invasions:** Many ornamental aquatic Invasive Alien Species (IAS) have been encountered in the country's water bodies in the past, where 'Japan Jabara' or Water hyacinth (*E. crassipes*) is one of the best examples which has become a menace to aquatic ecosystems. *Salvinia molesta*, a free floating water fern, has also established its name in the invasive alien species list being only second to *E. crassipes*. *Pistia stratiotes*, even though it has not set records, is another alien invasive species that has got established in local water bodies drawing considerable attention. These plants still continue to cause a threat to the native aquatics in many wetlands including Bellanwila-Attidiya marshes, Anaiwilundawa, and Kalametiya & Lunama Kalpuwa wetlands, and many reservoirs. Several dry zone lakes have been infested with *E. crassipes* during the restoration of tanks for agriculture in the recent years. Further, the floods in 2011 in the dry zone have facilitated the spread of *E. crassipes* into new destinations, infesting new water bodies.

Apart from these invasives, several other plants could be identified as naturalized aquatics in local water bodies, notably *Vallisneria spirallis* L., *Egeria densa* Planch. and *Cabomba caroliniana* A.Gray. Yakandawala and Yakandawala (2007) reported three other additions *Ludwigia sedioides* (Humb. & Bonpl.) H.Hara, *Mayaca fluviatilis* Aubl. and *Echinodorus* spp., found in the local water bodies in the Western Province of Sri Lanka. All three plants are popular aquatics in aquariums and landscaping. The most recent addition to the list is of great interest as it opened up a new chapter in invasive alien plant research in Sri Lanka while highlighting the importance of Plant Systematics and proper identification of organisms. The flawed identification of a violet flowered water-lily as *Nymphaea nouchali* Burm.f. and subsequently narrating as the national flower of Sri Lanka ('Nil manel'), have overlooked its threat to the local biota and invasiveness. This exotic violet flowered water lily has been silently invading the local water bodies where it went unnoticed due to the erroneous identification and its popularity as an ornamental plant. Studies have further revealed hybrid populations between the native *N. nouchali* and the alien violet flowered *Nymphaea* with intermediate characters (Yakandawala and Yakandawala, 2011). Global researches have attributed the origin of invasiveness to hybridization, especially between a native and invasive alien species and where the native is at a risk of extinction (Yakandawala and Yakandawala, 2011 and references therein). The detection of hybrid populations of *Nymphaea* has opened up avenues to initiate studies locally on this novel area of hybridization between natives and invasive alien species.

Even though Sri Lanka harbors a larger number of naturally occurring aquatics, there is a high demand for certain exotic aquatic plants in the export market. This has resulted in the private sector importation of exotic plants into the country for propagation and exportation. According to recent studies 386 plant species are traded as ornamental aquatic plants in the country (Yakandawala, *et al.*, unpublished). The plants belongs to 46 plant families that included 39 angiosperm families with 64 genera, 6 fern/fern allies with 6 genera and 1 liverwort. Of the recorded ornamental aquatic plants, 76% were non-natives or exotics. The list included two plants that are currently listed on the IAS list in Sri Lanka of which one is on the global



IAS list (*Eichhornia crassipes*). The list also includes two exotic *Salvinia* sp. Further three plant species, *Ludwigia sedioides*, *Mayaca fluviatilis*, and *Echinodorus* spp., are identified as potential invasive plants in the country (Yakandawala and Yakandawala, 2007). Even a small fragment of 2 cm in length of *M. fluviatilis* is capable of developing into a new plant. Therefore, the mechanical control of these plants should be carried out with utmost care (Yakandawala and Dissanayake, 2010). It is also noted with caution that 35 *Echinodorus* species, including varieties, are currently circulated in the local market. The plants exhibit an effective mode of reproduction by developing plantlets from florets of the submerged inflorescence in large numbers. According to the Global Compendium of Weeds (Randall 2012) 32% of the plants traded in Sri Lanka as ornamental aquatic plants are recognized for their invasive behavior elsewhere in the world.

### **Conservation priorities**

Amidst the conservation initiatives, majority of the wetlands and other aquatic ecosystems in Sri Lanka are under threat due to adverse anthropogenic activities. Within the context of speedy development and population growth, conservation of wetlands together with its biodiversity is a challenge.

At present, several government and non-government organizations are involved in wetland conservation and management related activities in the country. The Directory of Asian Wetlands (Scott, 1989) lists 41 wetlands as critically important due to their high biodiversity and extent to which they are threatened by anthropogenic causes. The National Wetland Steering Committee (NWSC), through national workshops and surveys, recognised another 45 wetland sites to the list. Sri Lanka signed the RAMSAR Convention on Conservation of Internationally important wetlands in 1971, but this was ratified only in 1990. At present three wetlands, Bundala National Park, Anaiwilundawa ancient cascading tank system and the Maduganga estuary and mangrove ecosystem have hitherto been declared as RAMSAR wetland sites. The National Wetland Conservation Project of the Central Environmental Authority resulted in the preparation of wetland site reports, management plans and guiding texts for a number of wetlands. Presently, the Wetland Management Unit of the Central Environmental Authority is in the process of updating and maintaining the wetland data base which would be the basis for upgrading the National Wetland Directory.

As conservation priorities the following could be highlighted; (1) Based on the existing wetland site reports and conservation management plans, identification of vulnerable wetlands with rich biodiversity have to be made with the view of upgrading their conservation status, (2) Preparation of wetland site reports and conservation management plans for other wetlands that were not covered by previous surveys would facilitate the demarcation of boundaries and construction of site maps. Demarcation of boundaries or reservation areas, especially for the riverine vegetation, should be considered as high priority. The riverine vegetation is declining in an alarming rate owing to habitat destruction as a consequence of development activities and dumping, (3) Surveying wetland sites in the North and Northeast of the island should be initiated immediately in order to address critical management issues since development activities have already been initiated, (4) In the event of a large scale disturbance to a wetland habitat (*i.e.* filling of wetlands for development, alteration in the downstream flow during construction of dams, *etc.*), the aquatic vegetation must be managed in a systematic manner. This will



The rapids of the Mahaweli river at Gannoruwa-Hallolluwa area, Kandy - a site for many threatened aquatics, before being disturbed by the constructions of the a mini-hydropower plant. Note the members of the family Podostemaceae on the rock surface close to water.



The rapids of the Mahaweli river at Gannoruwa-Hallolluwa area, Kandy – after being disturbed by the construction of the mini-hydropower plant.



*Ludwigia sedioides* and *Echinodorus* spp., invading natural water bodies in the lowlands



Native *Nymphaea nouchali* Burm. f. – at present is threatened by an exotic water lily

enable the conservation of vulnerable species in the habitat, (5) As a solution for the loss of vulnerable endemic ornamental aquatic plants due to over-exploitation, mass propagation of plants in demand must be encouraged, and (6) Monitoring of aquatic plant propagation units, and introduction of a code of conduct for aquatic plant nurseries will reduce the risk of plant propagules entering local water bodies.

### Research gaps and research needs:

A considerable amount of research has been conducted on the wetlands of Sri Lanka over the years, covering many aspects. However, a few areas that need focus are,

- Detailed taxonomic studies on wetland plants with their correct identification need to be completed. This will also answer several other questions and gaps:
  - Probable location of aquatic plants listed under CR(PE) and CR categories
  - Descriptions of poorly known aquatic plants species
  - Completion of aquatic plant species list for each wetland site in the island
  - Early detection of any potential threats from alien species
  - Taxonomic revision of aquatic taxa with ambiguities

- With the introduction of exotic aquatic species into the wetlands, studies of possible hybridization between natives and invasive alien species must be initiated.
- Identifying native plants with potential ornamental value and, developing mass propagation techniques to reduce the risk of over exploitation from the wild.
- Introducing molecular tools for rapid identification of aquatic plants that are exported, especially as bulbs or plantlets at the exit points.
- Further research into wetland processes, dynamics and management.

## Conclusions and recommendations

The wetland site reports and conservation management plans under the Wetland Conservation project - Sri Lanka (IUCN Sri Lanka and CEA, 2006 and other wetland site reports), the National Symposium on Wetland Conservation and Management (IUCN Sri Lanka, 2004) and Van Zon (2004) have identified several conservation priorities and made recommendations for the conservation and management of wetlands in Sri Lanka. Identification of the difficulties in implementing these recommendations should be a priority, apart from the following:

- Conduct a policy, legal and institutional analysis related to wetland conservation and management plans and identify short comings (capacity, infrastructure *etc.*). This would strengthen inter-institutional mechanisms, legislative frameworks and law enforcement. Inter-sectorial linkages should be established among essential authorities who are the custodians of the wetland ecosystems in order to achieve sustainable development associated with wet lands.
- Promote community and stakeholder participation, and private sector involvement in conservation of wetlands.
- Regulate and manage the species exploitation for trade.
- Compile a comprehensive inventory on wetland plant species through a systematic field survey.
- Establish a sustainable financing mechanisms through local and foreign sources for the management and setting up of monitoring programmes.
- Initiate pathways for effective implementation of research findings by the relevant stakeholders to address conservation and management issues of the wetland ecosystems.
- Focus awareness programmes on all components *viz.*, avifauna, aquatic flora and recreational potential that constitute to the importance of a wetland, in order to change the public's attitude towards aquatic plants. Currently, wetlands are treasured by the general public owing to its recreational value and avifauna.

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## Present Status of Mangroves in Sri Lanka

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Mangroves are woody shrubs and trees that are salt and flood tolerant and hence dominate intertidal areas of lagoons, estuaries and sheltered bays along tropical and subtropical coastlines (Ball, 2002; Tomlinson, 1986; Tuffers *et al.*, 2001). In the past, mangrove ecosystems were considered as a marshy wastelands; then in the 1970s, as a valuable eco-system; and presently, as precious but threatened eco-systems (Cormier Salem 1994).

Being an island in the Indian ocean with more than hundred rivers starting from central highlands and radiating towards the sea, Sri Lanka possess a large number of lagoons and estuaries along its coastline of 1760km. As the coastline runs through different climatic zones and different geomorphological settings, the diversity of mangrove habitats is remarkably higher and hence the species diversity in mangroves is also comparatively higher. The total number of true mangrove species reported from Sri Lanka is almost one third of the global diversity of true mangroves in the world (Jayatissa *et al.*, 2002). However, as the total annual range of tidal variations is less than 1m, the mangrove coverage of the country is small. The present extent of mangroves in Sri Lanka has variously been estimated at over 4,000 ha (Arulchelvam 1968) to over 10,000 ha (Jayawardene 1968). Largest mangrove areas of the country are reported from, north, north western and east coasts.

Depending on the geomorphological setting of the habitat and the composition of common species, De Silva, (1985) has recognized five kinds of mangroves in Sri Lanka: as riverine mangroves, fringing mangroves, basin mangroves, scrub mangroves, and over-wash mangroves. However, the first two are the most common in Sri Lanka. Mangrove species are commonly classified into two broad categories as follows;

1. True mangroves (species restricted to mangrove habitats)
2. Mangrove associates (not confined to the intertidal areas and occur in terrestrial vegetation also)

The list of true mangroves recorded from Sri Lanka is given in the Table with the abundance scale. (However the demarcation of mangroves and mangrove associates may be on tenterhooks because according to the literature these two categories vary and there are very suspicious points and confusion. For this report, the categorization of species into true mangroves and mangrove associates are adopted from Tomlinson, 1986, except the genus *Acrostichum*). It is difficult to give a clear limit for the list of mangrove associates as the composition of mangrove associates could vary depending on the edaphic and climatic factors of the habitat. However, *Acanthus ilicifolius*, *Acrostichum aureum*, *Clerodendron inerme*, *Hibiscus tiliaceus*, *Premna integrifolia*, and *Thespesia populnea* are given as the most common mangrove associates in Sri Lanka (Jayatissa *et al.*, 2002). In mangrove forests, they may occur as a transitional vegetation between true mangroves and the terrestrial vegetation. There is no any endemic species among true mangrove species or mangrove associates in Sri Lanka.

## The list of true mangrove species recorded from Sri Lanka

Species	Family	Category
<i>Aegiceras corniculatum</i> (L.) Blanco	Myrsinaceae	LC
<i>Avicennia marina</i> (Forsk.) Vierh.	Avicenniaceae	LC
<i>Avicennia officinalis</i> L.	Avicenniaceae	NT
<i>Bruguiera cylindrica</i> (L.) Blume	Rhizophoraceae	EN
<i>Bruguiera gymnorrhiza</i> (L.) Lamk.	Rhizophoraceae	VU
<i>Bruguiera sexangula</i> (Lour.) Poir.	Rhizophoraceae	VU
<i>Ceriops tagal</i> (Perr.) C.B. Robinson	Rhizophoraceae	NT
* <i>Ceriops decandra</i> (Griffith) Ding Hou	Rhizophoraceae	CR
<i>Excoecaria agallocha</i> L.	Euphorbiaceae	LC
<i>Heritiera littoralis</i> Dryand.	Sterculiaceae	NT
<i>Lumnitzera littorea</i> (Jack) Voigt	Combretaceae	CR
<i>Lumnitzera racemosa</i> Willd.	Combretaceae	NT
<i>Nypa fruticans</i> (Thunb.) Wurmb	Arecaceae	VU
<i>Pemphis acidula</i> Forst.	Lythraceae	NT
<i>Rhizophora apiculata</i> BL.	Rhizophoraceae	NT
<i>Rhizophora mucronata</i> Lamk.	Rhizophoraceae	LC
<i>Sapium indicum</i> Willd. (Syn <i>Excoecaria indica</i> )	Euphorbiaceae	VU
<i>Sonneratia alba</i> J. Smith	Sonneratiaceae	EN
<i>Sonneratia caseolaris</i> (L.) Engler	Sonneratiaceae	LC
<i>Xylocarpus granatum</i> König	Meliaceae	EN
<i>Scyphiphora hydrophyllacea</i> Gaertn.f.	Rubiaceae	VU

\*Not reported in Jayatissa *et al.*, 2002. This is a new addition by Jayatissa (pers.comm)

Mangrove forests rank among the most threatened of coastal habitats, particularly for developing countries in tropical regions (Saenger *et al.*, 1983). The major human impacts have been identified as filling for land-based development, and deforestation for wood products, to accommodate aquaculture or to established harbor facilities (Hather *et al.*, 1989). It is reported that mangrove areas have been reduced by 20% to 75% in many developing tropical countries in the northern Indian Ocean, South East Asia and the Caribbean during the last century. Hence, a figure of 1% decline per year has been given as a conservative estimate for the Asia Pacific region (Ong 1995). Due to continued disturbance, altered soil conditions and limited dispersal, natural recovery may be slow (Kaly 1998). Mangrove preservation has been recognized as a high priority in local management plans for developing countries (Eong 1991).

Although studies on mangroves particularly in Sri Lanka is comparatively low, a substantial amount of research on the mangrove forests in the world has been done over the last few

decades, aiming at increasing the understanding of the ecology of this important ecosystem and providing information for sustainable management. Although much has been learned from them, significant gaps still exist in our understanding of the ecology of these systems, and particularly, of the likely effects of climate change.

If the impacts of climate-change will not be considered now, the efforts on mangrove protection and conservation may just be wasted in the long-run. Hence it is recommended to continue the studies on mangroves aiming for protection, conservation and sustainable use, with particular emphasis on likely impacts of climate change.

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## **Present Status of Family Orchidaceae in Sri Lanka**

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### **Introduction**

Family Orchidaceae is one of the largest flowering plant families in the world, containing about 25,000 -30,000 species. The family has a worldwide distribution except in the Polar Regions. The highest species diversity is recorded in the tropical areas, particularly in rainforests and associated ecosystems.

In Sri Lanka, Orchidaceae is among the largest families in the country with 189 known species, belonging to 78 genera, including 55 endemic species (Fernando and Ormerod, 2008; Soto Arenas and Cribb, 2010). All these species are herbs or small shrubs, having epiphytic or terrestrial life forms. Few species are found as Mycoheterotrophic and some as climbers. Orchids grow in many habitat types, with the highest representation in diverse ecosystems found in the wet zone.

### **History of Sri Lankan orchid research**

Although Paul Hermann's (1646-1695) collection contained two orchid species, orchid discoveries in Sri Lanka were made largely during the British colonial period, after the establishment of the Botanical Gardens in the country. The early Superintendents of Royal Botanic Gardens, Peradeniya, Alexander Moon (1817-1825) and James Macrae (?-1830) made many orchid collections, among other plant species, and sent them to England.

Subsequent Superintendents and Directors of Botanic Gardens, George Gardner (1812-1849), G. H. K. Thwaites (1812-1882) and Henry Trimen (1843- 1896) collected and described the majority of Sri Lankan orchids. Many specimens sent to Kew are included in J. D. Hooker's (1817-1911) monumental work on the Flora of British India series in which he has described and stated their distribution in relation to the Indian sub continent.

The most recent comprehensive taxonomic work was done by D.M.A. Jayaweera in the late 1970s (published in 1981).

### **Taxonomy**

The most recent systematic treatment of Sri Lankan orchids was conducted by Jayaweera (1981) three decades ago. Fernando and Ormerod, in 2008, presented an updated checklist using available literature and referring to some herbarium specimens. According to the above checklist, the following deviations from Jayaweera's treatment were significant: i) many name changes with reference to some global and regional generic treatments, ii) marked reduction of a number of Sri Lankan endemic species due to many regional findings, especially from the Indian sub-continent and iii) increased number of total species by addition to many new species to the country's list.



Currently, at a global level, new knowledge in molecular taxonomy has created a vast leap in information, leading to dramatic changes in orchid taxonomy and classification. Development of the regional botanical surveys in neighboring countries also has led to new knowledge on species entities and their distribution patterns. However, at present, the majority of Sri Lankan species have not been subjected to such new revisions. Fernando and Ormerod (2008) stated many such taxonomic discrepancies which need further studies using cross comparative modern taxonomic revisions along with other congeners.

Along with their generic treatments, some of the Sri Lankan taxa have been recently revised, using records and specimens deposited in other herbaria. In most of the recent global revisions, Sri Lankan materials have been omitted due to difficulty of access to specimens. Very few species of Sri Lankan orchids are subjected to modern taxonomic treatments.

## Distribution

The distribution of family Orchidaceae has mostly correlated with the distribution pattern of the main bioclimatic zones which is governed by the amount and intensity of rainfall and altitude.

**Dry zone:** The recorded lowest number of orchid species (ca 15). *Vanda tessellata*, *Vanilla walkeriae* and *Habenaria plantaginea*, have been recorded as the most dominant species. There are no zonal restricted species to this zone.

**Intermediate zone:** This zone lies between the dry and wet zones. The recorded orchid diversity is much higher than the dry zone (ca 28) *Oberonia thwaitesii*, and *Luisia birchea*, can be considered as restricted to this zone. The eastern part of intermediate zone is associated with the Savannah grassland vegetation. The species like *Rhynchosstylis retusa*, *Aerides ringens* and *Habenaria roxburghii* have been mainly recorded in the eastern part of the intermediate zone among grasslands.

**Low wet zone:** With the aseasonally wet conditions, there is a rich variety of both epiphytes and ground orchids found in this zone (ca 80).

*Eria articulata*, *Bromheadia srilankensis*, *Phaius luridus*, *Cleisostoma tenuifolium* and *Taeniophyllum gilimalense* are restricted species to low wet zone. The diversity of saprophytic orchids is also high in this zone.

**Lower mountain zone:** This zone represents an altitudinal belt of 900 -1500m between the low wet zone and montane zone. This area contains the highest orchid diversity with numerous endemics (ca 110) in Sri Lanka. The zonal restricted number of species is also high in this zone *Bulbophyllum petiolare*, *Habenaria pterocarpa* and *Phreatia jayaweerae* are some restricted members to this zone.

**Montane zone:** (ca 55) Area above 1500m has been recognized as this zone. In this zone, orchids are very common but have a lower diversity than the lower montane zone. The cool climate adapted species are found in this region.

**Isolated Hills in dry and intermediate zones:** These relatively small hills contain a rich variety of orchid diversity (ca 60), a combination of dry zone / intermediate zone species and wet zone species. The lower area of the hill is common with typical dry and intermediate zone species, while the hill-top contains mostly wet zone species including many endemics Ritigala,

Monaragala, Kokagala and Doluwakanda are examples of such isolated hills. *Phalaenopsis mysorensis* is recorded in such hill sites.

## Threats

Orchids have complex and critical relationships with some other species in their habitat, such as mycorrhizal association in their roots and flower adaptations for the attraction of a specific pollinator. Thus, mainly habitat related threats affect orchid survival.

**Habitat destruction:** Spread of lowland tea cultivation to natural forest habitats significantly affect many lowland orchid species in the South Western wet zone.

In the montane and submontane areas, forests and grasslands are cleared for vegetable cultivation, this being the main agriculture-based threat. Forest felling for firewood is another main issue for orchid survival. In the savannah forest of the Eastern Intermediate zone, encroachment for *chena* cultivation, illegal settlements and garbage dumping are the main habitat related threats to native orchid survival.

**Direct exploitation:** Many showy orchids are collected for their flowers *Phaius wallichii* (Star orchid), *Dendrobium maccarthiae* (Vesak orchid), *Rhynchostylis retusa* (Fox tail), and *Vanda tessellata* are commonly collected by growers and flower enthusiasts. *Habenaria crinifera* (Naarilatha), *Ipsea speciosa* (Nagamaru ala), *Anoectochilus* spp. (Wanaraja), *Zeuxine* spp. (Iruiraja), are subjected to removal from the wild for medicinal purposes and due various mythological beliefs connected to each species.

**Impact of invasive species:** The spread of invasive species has created a considerable impact for many orchid-rich habitats. Impact of *Clusia rosea* has been demonstrated as a highly effective invader threatening lower montane orchid habitats. Presently, around Ginigathena, Hantana and Dolosbage and part of Peak Wilderness can be considered as a high impact areas. Similarly, in Rakwana hills, *Psidium cattleianum* spreading as monostands shows similar habitat alternation. Invasion of *Panicum maximum* is one of the main threats facing the grassland and savannah orchids.

**Pollution:** Most species of the family are highly sensitive to environmental changes. The excessive use of agro chemicals is believed to have a considerable impact on the survival of the orchid populations. Mainly fungicides destroy the mycorrhizal fungi, and use of insecticide increases harmful impact on orchid pollinators.

The present National Red List summarizes how orchids are affected by all of the above combination of threats mentioned. Four species likely to be extinct (CR (PE)) have not been recorded for a considerable time but their possible habitats still remain to some extent. 16 species are critically endangered for future extinction (CR), 54 species are categorized as endangered (EN) in the wild, and 60 spp. fall in the vulnerable category (VU). Most importantly, 12 species could not be assessed due to uncertainty of present taxonomic positions or lack of knowledge about their other ecological parameters (DD).

## Conservation priorities

In order to conserve wild orchids, there is a combination of actions needed to be taken.

The most important conservation action regarding wild orchids is to identify a Protected Area (PA) network covering the habitats of all orchid species found in the country. At present, under the PA system, most orchid rich PAs fall under proposed reserves (PR) or other state forests (OSF), which have the least legal protection. By combining geographical occurrence data collected during the present red listing process, the Ministry of Environment together with the Departments of Wildlife and Forest Conservation can recognize new thematic PA systems which highlight the orchid diversity among other biota. The establishment of a set of park management criteria by prioritizing orchid conservation is also needed for such thematic PAs.

The establishment of systematically planned *ex-situ* conservation centers is also of prime importance. 90% of the indigenous orchid diversity can be protected in this manner. Presently, there are no *ex-situ* conservation centers for indigenous orchids apart from a few private *ad hoc* collections. The botanic garden network distributed throughout the country is the most viable institution for this task. Within such centers, other ecological and taxonomic researches can also be implemented.

Presently, there is adequate legal protection for native orchids, the whole family being protected under the Fauna and Flora Protection Ordinance (Amend. Act No 2 of 2009). Under the Forest Ordinance, Extraordinary Gazette Notification No. 05.12.2005 issued by The Forest Department, orchids are forest produce which require permission for any removal. Sri Lanka is a ratified country under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); all species of our orchids are under Appendix II which require permits in the case of exporting.

However, due to lack of awareness and knowledge on legal status and identification of native orchids, a significant weakening of the protection of the target group is observable. Therefore, the rise of awareness regarding orchids at all levels is important, primarily through law enforcement officers.

## Research gaps and research needs

Apart from species identification and distribution records, all other types of researches related to orchids conducted in the country are inadequate. Among many other research areas needed, the following are some of the important aspects which require attention:

- Comparable with current global orchid taxonomic knowledge, molecular base systematic update of our endemic species is a prime need.
- Studies on orchid habitats and their ecological requirements have not been conducted. Therefore, planned researches on understanding habitat and ecology conditions, phenology patterns and interactions of pollinators and associations with mycorrhizal species are needed.
- Studies on effects of climate change and environmental sensitivity on native orchids are also needed.

## **Conclusions and recommendations:**

**The nomenclature and enrich the collection in the National Herbarium should be updated.**

- The National Herbarium needs to be established as a CITES registered scientific institution facilitating loaning and exchanging of specimens to other herbaria in the world.
- The endemic species categorized as threatened under the present National Red Listing Assessment, are important for inclusion in the Global Red List.

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**Table 15: Summary of the Status of Angiosperms of Sri Lanka**

(Endemics are shown in bracket)

Family	EX	EW	CR (PE)	CR	EN	VU	NT	DD	LC	Total Threat- ened	Total Species
Acanthaceae	1 (1)		15 (10)	11 (5)	17 (12)	12 (5)	7 (4)	2	40 (4)	40 (22)	105 (41)
Achariaceae									3 (3)	0	3 (3)
Adoxaceae					2					2	2
Aizoaceae							2		2	0	4
Alismataceae				1					1	1	2
Amaranthaceae			2 (1)	2	2 (1)	2	10		9	6 (1)	27 (2)
Amaryllidaceae				1	1	2			3	4	7
Anacardiaceae			1 (1)	1 (1)	2 (1)	6 (5)	1 (1)		8 (6)	9 (7)	19 (15)
Ancistrocladaceae					1 (1)					1 (1)	1 (1)
Anisophyllaceae							1			0	1
Annonaceae		1 (1)	3 (1)		5 (3)	11 (7)	7 (3)		13 (4)	17 (11)	40 (19)
Apiaceae			2 (1)	1	1 (1)	2		1	2	4 (1)	9 (2)
Apocynaceae			6 (2)	6 (3)	15 (2)	13 (4)	4 (1)	2	22 (2)	33 (9)	68 (14)
Aponogetonaceae				1 (1)	1 (1)	2				4 (2)	4 (2)
Aquifoliaceae					2 (1)		1		1	2 (1)	4 (1)
Araceae			1	11 (7)	12 (9)	5 (4)	3	2	10 (1)	28 (20)	44 (21)
Araliaceae				1	1 (1)	1 (1)	2 (1)	1	2	3 (2)	8 (3)
Arecaceae					5 (5)	8 (5)	1		2	13 (10)	16 (10)
Aristolochiaceae							1		2	0	3
Asclepiadaceae			5	5	12	4	1	1	11	21	39
Asparagaceae				4	2 (1)	2	3		3	8 (1)	14 (1)
Asteraceae	1 (1)		4 (3)	1 (1)	12 (5)	21 (10)	13 (5)	3	31 (4)	34 (16)	86 (29)
Balanophoraceae				1						1	1
Balsaminaceae			2 (2)	3 (2)	5 (4)	8 (4)	3 (2)		3 (1)	16 (10)	24 (15)
Basellaceae					1					1	1
Begoniaceae				1	2 (1)	1	1			4 (1)	5 (1)
Berberidaceae						3	(1)			3	3 (1)
Bignoniaceae							1		3	0	4
Boraginaceae			3 (1)	1	2	4	1	1	9	7	21 (1)
Burmanniaceae				2 (1)	1	1	1			4 (1)	5 (1)
Burseraceae			1		1	1 (1)			2	2 (1)	5 (1)
Buxaceae						2 (1)				2 (1)	2 (1)
Cactaceae						1				1	1
Calophyllaceae				2 (2)	3 (2)	5 (5)	2 (1)		4 (2)	10 (9)	16 (12)
Campanulaceae			2			1	1		5	1	9
Cannabaceae						1			4	1	5
Capparaceae				1	4	1	3		6	6	15
Caprifoliaceae				2 (1)	2					4 (1)	4 (1)
Caryophyllaceae			2	2		1	1	2	4	3	12

Family	EX	EW	CR (PE)	CR	EN	VU	NT	DD	LC	Total Threat- ened	Total Species
Celastraceae			1 (1)		9 (3)	3 (2)	3 (2)		7 (3)	12 (5)	23 (11)
Centroplacaceae								1	2 (2)	0	3 (2)
Ceratophyllaceae									1	0	1
Chloranthaceae									1	0	1
Cleomaceae				1					5	1	6
Clusiaceae					3 (3)	2 (1)	2		1 (1)	5 (4)	8 (5)
Colchicaceae									2	0	2
Combretaceae			1	1			3		5	1	10
Commelinaceae			2	2 (1)	11 (1)	8	5 (1)		11	21 (2)	39 (3)
Connaraceae					1 (1)		1 (1)	1	2	1 (1)	5 (2)
Convolvulaceae			2	1 (1)	5 (1)	8	2	3	20 (2)	14 (2)	41 (4)
Cornaceae					2 (2)	2 (1)	1		1	4 (3)	6 (3)
Costaceae									1	0	1
Crassulaceae				1				1		1	2
Crypteroniaceae						1 (1)				1 (1)	1 (1)
Cucurbitaceae			3 (1)		3	8	1		9	11	24 (1)
Cymodoceaceae							3			0	3
Cyperaceae			16 (1)	7 (5)	27 (5)	28	14	3	73	62 (10)	168 (11)
Daphniphyllaceae				1						1	1
Dichapetalaceae							1 (1)		1	0	2 (1)
Dilleniaceae				3 (3)	4 (4)	3 (2)			5 (1)	10 (9)	15 (10)
Dioscoreacea					2 (2)	2	1	1	3	4 (2)	9 (2)
Dipterocarpaceae		1 (1)		14 (14)	24 (24)	18 (18)	1 (1)			56 (56)	58 (58)
Droseraceae					1	2				3	3
Ebenaceae				1 (1)	15 (12)	7 (4)	3	1	5 (1)	23 (17)	32 (18)
Elaeagnaceae									1	0	1
Elaeocarpaceae					5 (5)	2 (2)	1 (1)		1	7 (7)	9 (8)
Elatinaceae							1		1	0	2
Ericaceae					1	2 (1)				3 (1)	3 (1)
Eriocaulaceae			2 (2)	4 (3)	2 (2)	6 (3)	1		6	12 (8)	21 (10)
Erythroxylaceae						1	2		2 (1)	1	5 (1)
Euphobiaceae			5 (2)	1	4 (2)	10 (4)	4 (1)	5	40 (7)	15 (6)	69 (16)
Fabaceae	1 (1)		14 (1)	18 (2)	23 (3)	31 (1)	27 (3)	22	85 (2)	72 (6)	221 (13)
Flacourtiaceae					2 (2)	1 (1)			1 (1)	3 (3)	4 (4)
Flagellariaceae									1	0	1
Gentianaceae			1 (1)	1	7 (4)	4 (1)	3 (1)		2	12 (5)	18 (7)
Geraniaceae				1						1	1
Gesneriaceae				1 (1)	3 (3)	8 (5)	1			12 (9)	13 (9)
Gisekiaseae									1	0	1
Goodeniaceae							1		1	0	2
Haloragaceae			1 (1)	1		1			1	2	4 (1)
Hemandiaceae						1			1	1	2
Hydrocharitaceae					1	2	3	1	6	3	13

Family	EX	EW	CR (PE)	CR	EN	VU	NT	DD	LC	Total Threat- ened	Total Species
Hydroleaceae							1			0	1
Hypericaceae					1		1			1	2
Hypoxidaceae						1			1	1	2
Icacinaceae						2	1			2	3
Juncaceae						2			1	2	3
Lamiaceae			6 (2)	2 (2)	4	8 (3)	10 (3)	6	34 (5)	14 (5)	70 (15)
Lauraceae			2	1	9 (7)	17 (15)	5 (4)		6 (3)	27 (22)	40 (29)
Lecythidaceae								1	4	0	5
Lentibulariaceae				1	2	4 (1)	2	1	5	7 (1)	15 (1)
Linaceae						1			1	1	2
Linderniaceae				1	2 (2)	2 (1)	4		7	5 (3)	16 (3)
Loganiaceae			1 (1)			4 (2)	3 (1)		1	4 (2)	9 (4)
Loranthaceae			1 (1)	1 (1)	3 (3)	7 (4)	4 (2)		5	11 (8)	21 (11)
Lythraceae				1	2	1	5	1	6	4	16
Magnoliaceae						1				1	1
Malpighiaceae					1				1	1	2
Malvaceae			3	3 (1)	8 (3)	7 (2)	8		42 (3)	19 (6)	71 (9)
Marantaceae			2 (1)		1					1	3 (1)
Melastomataceae			2 (2)	11 (10)	38 (31)	10 (7)	5 (4)		5 (3)	59 (48)	71 (57)
Meliaceae				2 (1)	2	3 (1)	2		4	7 (2)	13 (2)
Menispermaceae					3	5		1	4	8	13
Menyanthaceae					2				2	2	4
Molluginaceae						1			5	1	6
Monimiaceae				1(1)	1 (1)	1 (1)				3 (2)	3 (3)
Moraceae					2	6 (1)	4		21 (3)	8 (1)	33 (4)
Musaceae					2					2	2
Myristicaceae						2 (1)			2	2 (1)	4 (1)
Myrtaceae			4 (4)	11 (10)	4 (4)	12 (10)	5 (4)	1 (1)	19 (13)	26 (24)	56 (46)
Nelumbonaceae									1	0	1
Nepenthaceae						1 (1)				1 (1)	1 (1)
Nyctaginaceae							1		3	0	4
Nymphaeaceae						1			1	1	2
Ochnaceae									4 (1)	0	4 (1)
Olacaceae						2 (1)	1	1	2	2 (1)	6 (1)
Oleaceae			1		1	2 (1)			6	3 (1)	10 (1)
Onagraceae								1	4	0	5
Opiliaceae									2	0	2
Orchidaceae			4 (1)	16 (6)	54 (24)	60 (12)	26 (4)	12 (3)	12	130 (42)	184 (50)
Orobanchaceae			2 (1)	2	7 (2)	2	3		2	11 (2)	18 (3)
Oxalidaceae					1	1	1		2	2	5
Pandanaceae					1	2 (2)	2 (1)		2	3 (2)	7 (3)
Papaveraceae								1		0	1
Passifloraceae						1			1	1	2

Family	EX	EW	CR (PE)	CR	EN	VU	NT	DD	LC	Total Threat- ened	Total Species
Pedaliaceae				1					2	1	3
Pentaphragaceae					5 (2)	1 (1)	1			6 (3)	7 (3)
Phrymaceae					1					1	1
Phyllanthaceae			3 (2)	2	5 (5)	9 (4)	6 (3)	2 (1)	42 (12)	16 (9)	69 (27)
Picrodendraceae									1	0	1
Piperaceae			1 (1)		3 (1)	4	2 (1)		2 (1)	7 (1)	12 (4)
Pittosporaceae						1	1			1	2
Plantaginaceae			3 (1)	3			2 (1)	3	12	3	23 (2)
Plumbaginaceae									1	0	1
Poaceae			10 (5)	10 (4)	27 (5)	44 (4)	20 (1)	31 (2)	120 (1)	81 (13)	262 (22)
Podestemaceae			1	1	2	3 (2)				6 (2)	7 (2)
Polygalaceae					4 (3)	2	2	2	5 (1)	6 (3)	15 (4)
Polygonaceae								5	7	0	12
Pontederiaceae							1		1	0	2
Portulacaceae						1			4	1	5
Potamogetonaceae									3	0	3
Primulaceae				2 (1)	5 (1)	4 (2)	4 (1)		9 (4)	11 (4)	24 (9)
Proteaceae					1 (1)					1 (1)	1 (1)
Putranjivaceae					2 (1)		1 (1)		3 (1)	2 (1)	6 (3)
Ranunculaceae			2	1		3 (1)	1			4 (1)	7 (1)
Rhamnaceae				1 (1)	1	2 (1)	4		6 (1)	4 (2)	14 (3)
Rhizophoraceae				1	2 (1)	2	3		2	5 (1)	10 (1)
Rosaceae			1 (1)		1	4	5	1	5 (1)	5	17 (2)
Rubiaceae			15 (12)	8 (5)	27 (21)	39 (25)	24 (17)	8 (3)	58 (19)	74 (51)	179 (102)
Ruppiaceae									1	0	1
Rutaceae					5	3	2 (1)		19 (1)	7	29 (2)
Sabiaceae						2				2	2
Salicaceae				1 (1)	1 (1)	1	1		6 (2)	3 (2)	10 (4)
Salvadoraceae							1		1	0	2
Sapindaceae				2	3 (1)	1 (1)	2		3 (2)	6 (2)	11 (4)
Sapotaceae				(1)	1 (7)	4 (8)	1		12	5 (16)	18 (16)
Schizandraceae				1	9	11	3	1		21	25
Scrophulariaceae					1					1	1
Sentalaceae				2	(1)			1		2 (1)	3 (1)
Simaroubaceae				1		1			1	2	3
Smilacaceae						1			2	1	3
Solanaceae						2		5	4	2	11
Sphenocleaceae									1	0	1
Staphyleaceae									1	0	1
Stemonaceae			1							0	1
Stemonuraceae						1	2 (1)			1	3 (1)
Stylidiaceae			1							0	1
Surianaceae			1							0	1



Family	EX	EW	CR (PE)	CR	EN	VU	NT	DD	LC	Total Threat- ened	Total Species
Symplocaceae				3 (1)	7 (6)	2 (2)			1	12 (9)	13 (9)
Tamaricaceae								1	1	0	2
Tetramelaceae									1	0	1
Theaceae					4 (4)			1		4 (4)	5 (4)
Thymelaeaceae				1			1		2	1	4
Triuridaceae				1	1			1		2	3
Typhaceae									1	0	1
Ulmaceae							1			0	1
Urticaceae			6 (1)	2	4	7	2	1	5 (1)	13	27 (2)
Vahliaceae					1					1	1
Verbanaceae			1						1	0	2
Violaceae	2 (1)		1	1 (1)		2			2	3 (1)	8 (2)
Vitaceae					2		4 (1)		11 (2)	2	17 (3)
Xanthorrhoeaceae									1	0	1
Xyridaceae					1	1	1		1	2	4
Zingiberaceae			5 (4)		6 (4)	6 (4)	2 (1)	1	1	12 (8)	21 (13)
Zygophyllaceae									1	0	1
<b>Total</b>	<b>5 (4)</b>	<b>2 (2)</b>	<b>177 (72)</b>	<b>218 (102)</b>	<b>552 (272)</b>	<b>615 (220)</b>	<b>350 (83)</b>	<b>143 (10)</b>	<b>1,091 (130)</b>	<b>1,385 (594)</b>	<b>3,154 (894)</b>

**Table 16: List of Gymnosperms in Sri Lanka**

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
Family : Cycadaceae					
<i>Cycas zeylanica</i> (J.Schust.) A.Lindstr. & K.D.Hill	Maha Madu	CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	VU	A2bc
<i>Cycas nathorstii</i> J.Schust.	Madu	VU	A2cd+ B1ab(i,ii,iii)	VU	A2cd; C1

**Table 17: List of Angiosperms in Sri Lanka**(Endemic species are marked in **Bold** letters and global categories older than 3.1 are marked as !)

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
Family : Acanthaceae					
<i>Acanthus ilicifolius</i> L.	S: Ikili, Katu-Ikili	LC		LC	
<i>Andrographis alata</i> (Vahl) Nees		LC			
<i>Andrographis echioides</i> (L.) Nees	S: Hakan	LC			
<i>Andrographis macrobotrys</i> Nees		CR	B2ab(i,ii,iii)		
<i>Andrographis paniculata</i> (Burm.f.) Wall. ex Nees	S: Heen-Bin-Kohomba; T: Nilavempu	CR(PE)			
<i>Asystasia chelonoides</i> Nees		LC			
<i>Asystasia gangetica</i> (L.) T. Anders.	S: Puruk; T: Peypatchotti	LC			
<i>Asystasia variabilis</i> (Nees) Trimen		LC			
<i>Avicennia marina</i> (Forssk.) Vierh.	T: Kannamaram, Kanna, Vendanda, Venkandal, Kanamaram	LC		LC	
<i>Avicennia officinalis</i> L.	E: White Mangrove; T: Kanna, Upatha	NT		LC	
<i>Barleria amottiana</i> Nees		VU	B1ab(i,ii,iii)		
<i>Barleria involucrata</i> Nees		VU	B1ab(i,ii,iii)		
<i>Barleria lanceata</i> (Forssk.) C.Chr.		VU	B1ab(i,ii,iii)		
<i>Barleria mysorensis</i> Roth	S: Katu-Nelu; T: Ikkiri, Kikkiri, Kiri-Mulla	LC			
<i>Barleria nitida</i> Nees		CR	B1ab(i,ii,iii)+ 2ab(i,ii,iii)		
<i>Barleria nutans</i> Nees		CR(PE)			
<i>Barleria prionitis</i> L.	S: Katu-Karanda, Katu- Karandu	LC			
<i>Barleria strigosa</i> Willd.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Barleria tomentosa</i> Roth		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Barleria vestita</i> T.Anders.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Blepharis integrifolia</i> (L.f.) E. Meyer ex Krauss		LC			
<i>Blepharis maderaspatensis</i> (L.) Roth		LC			
<b><i>Brillantaisia thwaitesii</i></b> (T. Anders.) Cramer		CR(PE)			
<i>Crossandra infundibuliformis</i> (L.) Nees		LC			
<b><i>Dicliptera neesii</i></b> (Trimen) Cramer		NT			
<i>Dicliptera zeylanica</i> Nees		VU	B2ab(i,ii,iii)		
<i>Dipteracanthus patulus</i> (Jacq.) Nees		LC			
<i>Dipteracanthus prostratus</i> (Poir.) Nees	S:Nil-Puruk	LC			
<i>Dyschoriste depressa</i> Nees	T: Paduvan, Padvan	LC			
<i>Dyschoriste madurensis</i> (Brum.f.) Kuntze	T: Paraddai	VU	B2ab(i,ii,iii)		
<i>Ecbolium ligustrinum</i> (Vahl) Vollesen		LC			
<i>Elytraria acaulis</i> (L.f.) Lindau		LC			
<i>Eranthemum capense</i> L.		LC			
<b><i>Gymnostachyum ceylanicum</i></b> Arn. & Nees		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Gymnostachyum hirsutum</i></b> T.Anders.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Gymnostachyum paniculatum</i></b> T. Anders.		VU	B1ab(i,ii,iii)		
<b><i>Gymnostachyum sanguinolentum</i></b> (Vahl) T. Anders.		VU	B1ab(i,ii,iii)		
<b><i>Gymnostachyum thwaitesii</i></b> T. Anders.		CR(PE)			
<i>Hemiadelphis polysperma</i> (Roxb.) Nees		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Hemigraphis latebrosa</i> (Roth) Nees		DD			
<i>Hygrophila balsamica</i> (L.f.) Raf.		LC			
<i>Hygrophila helodes</i> Heine		DD			
<i>Hygrophila ringens</i> (L.) R. Br. ex Steud.	S:Nil-Puruk	LC			
<i>Hygrophila schulli</i> (Buch.-Ham.) M. R. & S. N. Almeida	S: Katu-Ikiriya; T:Nirmulli	LC		LC	
<i>Justicia adhatoda</i> L.	E: Malabar Nut; S: Agal-Adara, Wenepala; T: Adhatodai, Pavettai	LC			

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Justicia betonica</i> L.	S: Sudu Puruk	LC			
<b><i>Justicia capitata</i></b> (T.Anders. ex Hook.f.) Cramer		CR(PE)			
<b><i>Justicia ceylanica</i></b> (Nees) T. Anders.		VU	B1ab(i,ii,iii)		
<i>Justicia diffusa</i> Willd.		LC			
<i>Justicia glabra</i> Koenig ex Roxb.		VU	B1ab(i,ii,iii)		
<b><i>Justicia hookeriana</i></b> (Nees) T.Anders.		NT			
<i>Justicia procumbens</i> L.	S: Mayani	LC			
<i>Justicia prostrata</i> (Clarke) Gamble		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Justicia royeniana</i></b> (Nees) Clarke		NT			
<i>Justicia tranquebariensis</i> L. f.		LC			
<b><i>Lepidagathis ceylanica</i></b> Nees		CR(PE)			
<i>Lepidagathis fasciculata</i> (Retz.) Nees		LC			
<b><i>Lepidagathis hyalina</i></b> Nees		CR	B1ab(i,ii,iii)		
<b><i>Lepidagathis walkeriana</i></b> Nees		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Monothecium aristatum</i> (Wall. ex Nees) T.Anders.		EN	B1ab(i,ii,iii)		
<i>Phaulopsis imbricata</i> (Forssk.) Sweet		CR	B1ab(i,ii,iii)	LC	
<i>Pseuderanthemum angustifolium</i> Ridley		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Pseuderanthemum latifolium</i> (Vahl) Hansen		NT			
<b><i>Ptyssiglottis sanguinolenta</i></b> (Vahl) B.Hansen		CR(PE)			
<b><i>Rhinacanthus flavovirens</i></b> Amarasinghe & Wijesundara		VU	B1ab(i,ii,iii)		
<i>Rhinacanthus nasutus</i> (L.) Kurz	S: Anitta; T: Nagamulli	LC			
<b><i>Rhinacanthus polonnaruwensis</i></b> Cramer		LC			
<i>Rungia apiculata</i> Beddome		CR(PE)			
<i>Rungia longifolia</i> Nees	S: Gada-Puruk	VU	B1ab(i,ii,iii)		
<i>Rungia parviflora</i> (Retz.) Nees		LC			
<i>Rungia repens</i> (L.) Nees	S: Sulu-Nayi	LC			

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Staurogyne zeylanica</i> (Nees) Kuntze		CR(PE)			
<i>Stenosiphonium cordifolium</i> (Vahl) Alston	S:Bu-Nelu, Nelu; T: Nelu	LC			
<b><i>Strobilanthes adenophora</i></b> Nees		VU	B1ab(i,ii,iii)		
<i>Strobilanthes anceps</i> Nees		LC			
<b><i>Strobilanthes arnottiana</i></b> Nees		CR(PE)			
<b><i>Strobilanthes calycina</i></b> Nees		LC			
<b><i>Strobilanthes caudata</i></b> T.Anders.		EX			
<b><i>Strobilanthes deflexa</i></b> T.Anders.		CR(PE)			
<b><i>Strobilanthes diandra</i></b> (Nees) Alston		NT			
<b><i>Strobilanthes exserta</i></b> C.B.Clarke		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Strobilanthes gardneriana</i> (Nees) T.Anders.		CR(PE)			
<b><i>Strobilanthes habracanthoides</i></b> J.R.I.Wood		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Strobilanthes helicoides</i></b> (Nees) T.Anders.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Strobilanthes hookeri</i></b> Nees		LC			
<b><i>Strobilanthes hypericoides</i></b> J.R.I.Wood		CR(PE)			
<b><i>Strobilanthes laxa</i></b> T.Anders.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Strobilanthes lupulina</i> Nees		LC			
<b><i>Strobilanthes nigrescens</i></b> T.Anders.		CR(PE)			
<b><i>Strobilanthes nockii</i></b> Trimen		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Strobilanthes pentandra</i></b> J.R.I.Wood		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Strobilanthes pulcherrima</i></b> T.Anders.		LC			
<b><i>Strobilanthes punctata</i></b> Nees		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Strobilanthes rhamnifolia</i></b> (Nees) T.Anders.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Strobilanthes rhytisperma</i></b> C.B.Clarke		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Strobilanthes sexennis</i> (Nees) T.Anders.		LC			
<b><i>Strobilanthes stenodon</i></b> Clarke		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Strobilanthes thwaitesii</i> T.Anders.		CR(PE)			
<i>Strobilanthes vestita</i> Nees		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Strobilanthes viscosa</i> (Arn. ex Nees) T.Anders.		LC			
<i>Strobilanthes walkeri</i> Arn. ex Nees		NT			
<i>Strobilanthes willsii</i> Canine		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Strobilanthes zeylanica</i> T.Anders.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Thunbergia fragrans</i> Roxb.		LC			
<i>Thunbergia laevis</i> Wall. ex Nees	S: Saban-Pichcha	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Achariaceae</b>					
<i>Hydnocarpus octandra</i> Thw.	S: Wal-Divul, Wal-Dul	LC		VU <sup>1</sup>	A1c
<i>Hydnocarpus venenata</i> Gaertn.	S: Makulu; T: Makul	LC			
<i>Trichadenia zeylanica</i> Thw.	S: Ketu-Kesali, Hal-Milla, Tetti-Gas, Titta-Eta, Titta, Tolol	LC		VU <sup>1</sup>	A1c
<b>Family : Adoxaceae</b>					
<i>Viburnum cylindricum</i> Buch.-Ham. ex D.Don		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Viburnum erubescens</i> Wall. ex DC.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Aizoaceae</b>					
<i>Sesuvium portulacastrum</i> (L.) L.	S: Maha-Sarana; T: Vankiruvilai	NT			
<i>Trianthema decandra</i> L.	S: Maha-Sarana; T: Charania	NT			
<i>Trianthema portulacastrum</i> L.	S: Heen-Sarana	LC			
<i>Trianthema triquetra</i> Rottler ex Willd.		LC			
<b>Family : Alismataceae</b>					
<i>Caldesia oligococca</i> (F. Muell.) Buchenau		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<i>Limnophyton obtusifolium</i> (L.) Miq.		LC		LC	
<b>Family : Amaranthaceae</b>					
<i>Achyranthes aspera</i> L.	S: Gas-Karal-Heba, Wel-Karal-Sebo, Gaskaralheba, Karalsebo, Wal-Karal-Heba; T: Nayururi	LC			

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Achyranthes bidentata</i> Blume		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Achyranthes diandra</i></b> Roxb.		EN	B2ab(i,ii,iii)		
<i>Aerva javanica</i> (Burm f.) Juss. ex Schult.	S: Pol-Kudu-Pala, Pol-Pala; T: Sirm-Pulai	CR	B2ab(i,ii,iii)		
<i>Aerva lanata</i> (L.) Juss. ex Schult.	S: Pol-Kudu-Pala, Pol- Pala	LC			
<i>Allmania nodiflora</i> (L.) R.Br. ex Wight	S: Wenni-Wella, Kumatiya	LC			
<i>Alternanthera sessilis</i> (L.) DC.	S: Mukunu-wenna, Mugunuwenna; T: Ponankani	LC		LC	
<i>Amaranthus spinosus</i> L.	S: Katu-Tampala, Thampala, Katukera, Kura-Tampala; T: Mudkirai	LC			
<i>Amaranthus viridis</i> L.	S: Kuru-Tampala, Kura- Tampala, Sulukura; T: Araikkirai	LC			
<i>Atriplex repens</i> Roth	T: Elichchevi	NT			
<i>Celosia argentea</i> L.	S: Kiri-Henda	LC			
<i>Celosia polygonoides</i> Retz.		LC			
<i>Celosia pulchella</i> Moq.		VU	B1ab(i,ii,iii)		
<i>Centrostachys aquatica</i> (R. Br.) Wall. ex Moq.		CR(PE)			
<b><i>Cyathula ceylanica</i></b> Hook. f.		CR(PE)			
<i>Cyathula prostrata</i> (L.) Blume	S: Bin- Karal-Heba, Bin- Karalsebo	VU	B1ab(i,ii,iii)		
<i>Digera muricata</i> (L.) Mart.	T: Toggil	NT			
<i>Halosarcia indica</i> (Willd.) P.G.Wilson	T: Kotanai	NT			
<i>Nothosaerva brachiata</i> (L.) Wight	S: Tampala; T: Chirupilai	NT			
<i>Psilotrichum elliotii</i> Baker		NT			
<i>Psilotrichum scleranthum</i> Thw.		NT			
<i>Pupalia lappacea</i> (L.) Juss.	S: Wel-Karal-Heba; T: Kummidiil, Pichu Kodiya	LC			
<i>Salicornia brachiata</i> Roxb.		NT			
<i>Suaeda maritima</i> (L.) Dumort.	T: Umiri, Umuddi, Umunddi	NT			
<i>Suaeda monoica</i> Forssk. ex J.F.Gmelin		NT			

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Suaeda vermiculata</i> Forssk. ex J.F.Gmelin	T: Umiri, Umuddi, Umunddi	NT			
<i>Trichurus monsoniae</i> (L. f.) C.C. Towns.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Amaryllidaceae</b>					
<i>Allium hookeri</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Crinum asiaticum</i> L.	S: Tolabo; T: Vichamunkil	LC			
<i>Crinum defixum</i> Ker-Gawl.	S: Heen-Tolabo	LC			
<i>Crinum latifolium</i> L.	S: Goda-Manel	VU	B2ab(i,ii,iii)		
<i>Crinum zeylanicum</i> (L.) L.		VU	B2ab(i,ii,iii)		
<i>Pancratium biflorum</i> Roxb.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Pancratium zeylanicum</i> L.	S: Wal-Lunu	LC			
<b>Family : Anacardiaceae</b>					
<i>Buchanania axillaris</i> (Desr.) Ramamoorthy	S: Kiri-Palu; T: Kolamau	EN	B1ab(i,ii,iii)		
<i>Camposperma zeylanicum</i> Thw.	S: Aridda	LC			
<i>Lanea coromandelica</i> (Houtt.) Merr.	S: Hik; T: Odi	LC			
<i>Mangifera pseudoindica</i> Kosterm.		CR(PE)			
<i>Mangifera zeylanica</i> (Blume) Hook.f.	S: Et-Amba, Wal-Amba; T: Kaddu-Ma	LC		VU <sup>i</sup>	A1c
<i>Nothopegia beddomei</i> Gamble	S: Andum Telageddi, Bala	LC			
<i>Semecarpus acuminata</i> Thw.	S: Badulla	VU	B1ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Semecarpus coriacea</i> Thw.	S: Badulla	VU	B1ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Semecarpus gardneri</i> Thw.	S: Badulla	LC		VU <sup>i</sup>	A1c
<i>Semecarpus marginata</i> Thw.		NT		VU <sup>i</sup>	A1c
<i>Semecarpus moonii</i> Thw.		VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c, B1+2c
<i>Semecarpus nigro-viridis</i> Thw.		LC		VU <sup>i</sup>	A1c
<i>Semecarpus obovata</i> Moon	S: Kalu-Badulla	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	VU <sup>i</sup>	A1c, B1+2c
<i>Semecarpus parvifolia</i> Thw.		LC		VU <sup>i</sup>	A1c
<i>Semecarpus pseudo-emarginata</i> Kosterm.		CR	B1ab(i,ii,iii)	CR <sup>i</sup>	B1+2c



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<i>Semecarpus pubescens</i> Thw.		VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Semecarpus subpeltata</i> Thw.	S: Maha-Badulla	VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Semecarpus walkeri</i> Hook.f.		LC		VU <sup>i</sup>	A1c
<i>Spondias pinnata</i> (L.f.) Kurz	E: Hog Plum; S: Wal-Amberella; T:Ampallai	VU	B1ab(i,ii,iii)		
<b>Family : Ancistrocladaceae</b>					
<i>Ancistrocladus hamatus</i> (Vahl) Gilg	S: Gona-Wel, Yakada-Wel	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family :Anisophyllaceae</b>					
<i>Anisophyllea cinnamomoides</i> (Gardner & Champ.) Alston	S: Weli-Piyana	NT			
<b>Family : Annonaceae</b>					
<i>Alphonsea hortensis</i> H. Huber		EW			
<i>Alphonsea sclerocarpa</i> Thw.		NT			
<i>Alphonsea zeylanica</i> Hook .f. & Thoms.		VU	B1ab(i,ii,iii)		
<i>Anaxagorea luzonensis</i> A. Gray		CR(PE)			
<i>Artabotrys hexapetalus</i> (L.f.) Bhandari	S: Yakada-Wel	VU	B1ab(i,ii,iii)		
<i>Artabotrys zeylanicus</i> Hook.f. & Thoms.	S: Kalu-Bambara-Wel, Patika-Wel, Yakada-Wel	LC			
<i>Cyathocalyx zeylanica</i> Champ. ex Hook. f. & Thoms.	S: i-Petta, Kekala, Kotala	LC			
<i>Desmos elegans</i> (Thw.) Safford	S: Kudu-mirissa, Kukurmanā (Kukuruman)	VU	B1ab(i,ii,iii)		
<i>Desmos zeylanica</i> (Hook.f. & Thoms.) Safford		NT			
<i>Enicosanthum acuminata</i> (Thw.) Airy Shaw	S: Ini-Pettu, I-Pettu, Mal-Lawulu, Malolu	LC			
<i>Goniothalamus gardneri</i> Hook.f. & Thoms.	S: Kalu-Kera	VU	B1ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Goniothalamus hookeri</i> Thw.		VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c, B1+2c
<i>Goniothalamus salicina</i> Hook.f. & Thoms.		VU	B1ab(i,ii,iii)		
<i>Goniothalamus thomsonii</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Goniothalamus thwaitesii</i> Hook.f. & Thoms.	S: Kalu-Kera	NT			
<i>Milium indica</i> Leschen. ex A. DC.	S: Kekili-Messa	LC			
<i>Milium tomentosa</i> (Roxb.) Sinclair		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Miliusa zeylanica</i> Gardner ex Hook.f. & Thoms.		VU	B1ab(i,ii,iii)	VU'	A1c
<i>Mitrephora heyneana</i> (Hook.f. & Thoms.) Thw.		NT			
<i>Orophea zeylanica</i> Hook.f. & Thoms.		CR(PE)			
<i>Phoencanthus coriacea</i> (Thw.) H.Huber		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Phoencanthus obliqua</i> (Hook.f. & Thoms.) Alston		NT			
<i>Polyalthia cerasoides</i> (Roxb.) Beddome	S: Patta-UI-Kenda	LC			
<i>Polyalthia coffeoides</i> (Thw. ex Hook.f. & Thoms.) Thw.	S: Omara; T: Katilla, Nedunari	LC			
<i>Polyalthia korinti</i> (Dunal) Thw.	S: Mi-Wenna, UI-Kenda; T: Uluvintai	LC			
<i>Polyalthia longifolia</i> (Sonn.) Thw.	S: Devadara, I-Petta, O-lila, O-wila; T: Assathi, Marai- Illipa, Mara-Iluppai	LC			
<i>Polyalthia moonii</i> Thw.		CR(PE)			
<i>Polyalthia persicaefolia</i> (Hook.f. & Thoms.) Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Polyalthia suberosa</i> (Roxb.) Thw.	S: Kalati; T: Kalatti	EN	B2ab(i,ii,iii)		
<i>Sageraea thwaitesii</i> Hook.f. & Thoms.		VU	B1ab(i,ii,iii)	EN	B1+2c
<i>Sageraea zeylanica</i> Heusden		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Uvaria cordata</i> (Dunal) Alston		VU	B1ab(i,ii,iii)		
<i>Uvaria macropoda</i> Hook.f. & Thoms.	S: Attu-Muddah	NT			
<i>Uvaria narum</i> (Dunal) Wall.	S: Pangan	VU	B1ab(i,ii,iii)		
<i>Uvaria semecarpifolia</i> Hook. f. & Thoms.	S: Kara-Bambara	LC			
<i>Uvaria sphenocarpa</i> Hook. f. & Thoms.		LC			
<i>Uvaria zeylanica</i> L.	S: Palanga, Palu-Kan; T: Kalu- Veppal, Karu- -Veppal	LC			
<i>Xylopia championii</i> Hook.f. & Thoms.	S: Dat-Ketiya	LC			
<i>Xylopia nigricans</i> Hook.f. & Thoms.	S: Heen-Kenda; T: See-Vindai	NT			
<i>Xylopia parvifolia</i> (Wight) Hook. f. & Thoms.	S: Atu-Ketiya, Netawu; T: Chiddavintai	LC			
<b>Family : Apiaceae</b>					
<i>Bupleurum ramosissimum</i> Wight & Arn.	S: Wal-Enduru	VU	B1ab(i,ii,iii)		

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<i>Bupleurum hakgalense</i> Klack.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Centella asiatica</i> (L.) Urban	S: Gotukola, Heen-Gotukola; T: Vallarai	LC			
<i>Heracleum ceylanicum</i> Gardner ex Clarke		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Peucedanum ceylanicum</i> Gardner		CR(PE)			
<i>Pimpinella heyneana</i> Wall.	S: Wal-Asamodagam	LC			
<i>Pimpinella leschenaultii</i> DC.		VU	B1ab(i,ii,iii)		
<i>Sanicula elata</i> Ham. ex D.Don		CR(PE)			
<i>Trachyspermum stictocarpum</i> (Clarke) H. Wolff		DD			
<b>Family : Apocynaceae</b>					
<i>Aganosma cymosa</i> (Roxb.) G.Don	S: Muwa-Kiri-Wel	LC			
<i>Alstonia scholaris</i> (L.) R.Br.	S: Ruk- Attana , Eth-mada; T:Elilaipattai, Elilaippalai, Mukanpelai	LC		LC <sup>i</sup>	
<i>Anodendron paniculatum</i> A.DC.	S: As-Wel, Dul, Girandi-UI	VU	B1ab(i,ii,iii)		
<i>Anodendron rhinosporum</i> Thw.		EN	B2ab(i,ii,iii)	CR <sup>i</sup>	B1+2c
<i>Brachystelma lankana</i> Dassanayake & Jayasuriya		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Calotropis gigantea</i> (L.) R. Br.	S: Ela-Wara, Hela- Wara,Wara, Mudu-Wara; T: Errukalai, Manakkovil, Urukkovil	LC			
<i>Caralluma adscendens</i> (Roxb.) Haw.	T: Mankalli	CR	B2ab(i,ii,iii)		
<i>Caralluma umbellata</i> Haw.	S: Weluk	EN	B2ab(i,ii,iii)		
<i>Carissa carandas</i> L.	S: Maha-Karamba; T:Kalaka, Perunkila	DD			
<i>Carissa Inermis</i> Vahl		VU	B1ab(i,ii,iii)		
<i>Carissa spinarum</i> L.	S: Heen-Karamba; T: Chirukila, Chirukula, Kilatti	LC			
<i>Catharanthus pusillus</i> (Murr.) G.Don		VU	B1ab(i,ii,iii)		
<i>Cerbera odollam</i> Gaertn.	S: Gon-Kaduru; T: Nangi-Ma	LC			
<i>Ceropegia candelabrum</i> L.	S: Muttu-Pala,Wel-Mottu	LC			
<i>Ceropegia elegans</i> Wall.		EN	A2; B1(i,ii,iii) +2ab(i,ii,iii)		
<i>Ceropegia juncea</i> Roxb.		DD			

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<i>Ceropegia parviflora</i> Trimen		CR(PE)			
<i>Ceropegia taprobanica</i> Huber		CR	B2ab(i,ii,iii)		
<i>Ceropegia thwaitesii</i> Hook.		CR(PE)			
<i>Chonemorpha fragrans</i> (Moon) Alston	S: Bu-Kiri-Wel, Eulu-Wel-Anguna, Bu-Wal-Anguna	VU	B1ab(i,ii,iii)		
<i>Cleghornia acuminata</i> Wight		VU	B1ab(i,ii,iii)		
<i>Cosmotigma racemosum</i> (Roxb.) Wight		CR	B2ab(i,ii,iii)		
<i>Cryptolepis buchananii</i> Roem.& Schult.	S: Wel-Rukattana, Kiri-Vel	VU	B1ab(i,ii,iii)		
<i>Cynanchum alatum</i> Wight & Arn. ex Wight		CR(PE)			
<i>Cynanchum tunicatum</i> (Retz.) Alston	S: Kan-Kumbala	EN	A2; B2ab(i,ii,iii)		
<i>Dischidia nummularia</i> R. Br.		CR(PE)			
<i>Gymnema lactiferum</i> (L.) R. Br. ex Schult.	T: Kurinnan	LC			
<i>Gymnema pergularioides</i> (Thw.) Hook.f.		VU	B1ab(i,ii,iii)		
<i>Gymnema rotundatum</i> Thw.		EN	B2ab(i,ii,iii)		
<i>Gymnema sylvestre</i> (Retz.) R. Br. ex Schult.	S: Mas-Bedde, Mas-Bedda, Muva-Kiri-Vel	VU	B2ab(i,ii,iii)		
<i>Hemidesmus indicus</i> (L.) R. Br.	S: Iramusu, Heen-Iramusu; T: Nannari	LC			
<i>Heterostemma tanjorensis</i> Wight & Arn. ex Wight		VU	B2ab(i,ii,iii)		
<i>Holarrhena mitis</i> (Vahl) Roem. & Schult.	S: Kalinda, Kiri-Mawara, Kiri-Walla	VU	B1ab(i,ii,iii)		
<i>Holostemma annulare</i> (Roxb.) Schum.		EN	B2ab(i,ii,iii)		
<i>Hoya ovalifolia</i> Wight & Arn. ex Wight	S : Gonu-Ke	VU	B1ab(i,ii,iii)		
<i>Hoya pauciflora</i> Wight	S: Heen -Aramessa	EN	B1ab(i,ii,iii)+ 2ab(i,ii,iii)		
<i>Hunteria zeylanica</i> ( Retz.) Gardner ex Thw.	S: Wal-Waraka, Mediya,Wal-Mediya	NT			
<i>Ichnocarpus frutescens</i> ( L.) R. Br.	S: Gerandi-Dul, Gerandi-Wel, Gopi, Priyawana, Kiri-Wel	LC			
<i>Leptadenia reticulata</i> (Retz.) Wight & Arn. ex Wight	T: Pala, Palai	LC			
<i>Marsdenia brunoniana</i> Wight & Arn. ex Wight	S: Et-Anguna	EN	B2ab(i,ii,iii)		
<i>Marsdenia tenacissima</i> (Roxb.) Moon	T: Muruva, Muruwa-Dul	EN	B2ab(i,ii,iii)		
<i>Ochrosia oppositifolia</i> (Lam.) Schum.	S: Gonna, Mudu-Kaduru	VU	B1ab(i,ii,iii,v) +2ab(i,ii,iii,v)		

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<i>Oxystelma esculentum</i> (L.f.) R.Br. ex Schult.	S: Usepale; T:Kulappalai	LC			
<i>Pagiantha dichotoma</i> (Roxb.) Markgraf	E: Eve's Apple, Forbidden Fruit; S: Divi Kaduru; T : Nanthia-Vattai	LC			
<i>Parsonsia alboflavescens</i> (Dennst.) Mabb.	S: Kiri-Anguna, Val-anguna	LC			
<i>Pentatropis capensis</i> (L.f.) Bullock		LC			
<i>Pergularia daemia</i> (Forssk.) Chiov.	S:Langali, Maha-Medahangu, Meda-Hangu, Wissani; T: Uttamakam, Veliparatii	LC			
<b><i>Petchia ceylanica</i></b> (Wight) Livera	S: Kukul-Kaduru, Vasa-Kaduru, Wal-Kaduru	NT			
<i>Rauvolfia densiflora</i> (Wall.) Benth. ex Hook. f.		LC			
<i>Rauvolfia serpentina</i> (L.) Benth. ex Kurz	S: Ekaweriya, Nakula, Rath-Ekaweriya; T: Chivan-Ampelpodi, Co-Vannamilpori	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sarcostemma brunonianum</i> Wight & Arn. ex Wight	S:Muwakeeriya, Mudu-Kanda	NT			
<i>Secamone emetica</i> (Retz.) R. Br. ex Schult.	S: Mudu-Kiriya	LC			
<i>Toxocarpus kleinii</i> Wight & Arn. ex Wight		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Tylophora cordifolia</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Tylophora fasciculata</i> Buch. -Ham. ex Wight		CR	B2ab(i,ii,iii)		
<i>Tylophora indica</i> (Burm.f.) Merr.	S: Mudu Bin-Nuga, Apa-Sith	LC			
<i>Tylophora multiflora</i> (Wight & Arn. ex Wight) Alston		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Tylophora pauciflora</i> Wight & Arn. ex Wight		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Tylophora tenuissima</i> (Roxb.) Wight & Arn. ex Wight		LC			
<i>Tylophora zeylanica</i> Decne.		CR(PE)			
<i>Vallis solaranacea</i> (Roth) Kuntze		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Walidda antidysenterica</i></b> (L.) M. Pichon	S: Sudu-Idda, Idda, Kelidha, Wal-idda	LC			
<i>Wattakaka volubilis</i> (L.f.) Stapf	S: Kirianguna, Anguna, Thitha-Anguna, Anukkola; T:Kodi-Palai, Kurincha	LC			
<b><i>Willughbeia cirrhifera</i></b> Abeywick.	S: Kiri-Gedi, Kiri-Wel	VU	B1ab(i,ii,iii)	VU <sup>†</sup>	A1c
<b><i>Wrightia angustifolia</i></b> Thw.		LC			

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<i>Wrightia flavido-rosea</i> Trimen		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Wrightia puberula</i> (Thw.) Ngan		CR(PE)			
<i>Wrightia arborea</i> (Dennst.) Mabb.	T: Pal-Madankai	NT			
<b>Family : Aponogetonaceae</b>					
<i>Aponogeton crispus</i> Thunb.	S: Kekatiya	VU	A2d	LC	
<i>Aponogeton jacobsenii</i> Bruggen	S: Kekatiya	CR	B1ab(i,ii,iii)		
<i>Aponogeton natans</i> (L.) Engler & Krause		VU	A2d	LC	
<i>Aponogeton rigidifolius</i> Bruggen	S: Kekatiya, Kokati	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Aquifoliaceae</b>					
<i>Ilex denticulata</i> Wall.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Ilex knucklesensis</i> Philcox		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Ilex walkeri</i> Wight & Gardner ex Thw.		LC			
<i>Ilex zeylanica</i> (Hook. f.) Maxim.	S: Andunwenna	NT			
<b>Family : Araceae</b>					
<i>Alocasia fornicata</i> (Roxb.) Schott		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicolson var. <i>campanulatus</i> (Decne) Sivadasan		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Amorphophallus paeoniifolius</i> var. <i>paeoniifolius</i>	S: Kidaran; T: Karunai	DD			
<i>Amorphophallus sylvaticus</i> (Roxb.) Kunth		NT			
<i>Arisaema constrictum</i> Barnes		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Arisaema leschenaultii</i> Blume	S: Wal-Kidaran	VU	B1ab(i,ii,iii)		
<i>Arisaema tortuosum</i> (Wall.) Schott	S: Wal-Kidaran	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Colocasia esculenta</i> (L.) Schott	E: Taro; S: Gahala	LC		LC	
<i>Cryptocoryne alba</i> de Wit		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Cryptocoryne beckettii</i> Trimen		VU	B1ab(i,ii,iii)		
<i>Cryptocoryne bogneri</i> Rataj		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Cryptocoryne nevillei</i> Trimen ex Hook.f.		EN	B2ab(i,ii,iii)		

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Cryptocoryne parva</i> de Wit		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Cryptocoryne thwaitesii</i> Schott		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Cryptocoryne undulata</i> Wendl.		CR	B1ab(i,ii,iii)		
<i>Cryptocoryne walkeri</i> Schott		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Cryptocoryne waseri</i> Kettner		DD			
<i>Cryptocoryne wendtii</i> de Wit		VU	B1ab(i,ii,iii)		
<i>Cryptocoryne x willisii</i> Reitz		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Lagenandra bogneri</i> de Wit	S: Wana-Ketella	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Lagenandra erosa</i> de Wit		CR	A2d		
<i>Lagenandra jacobsenii</i> de Wit		EN	A2d; B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Lagenandra Koenigii</i> (Schott) Thw.		EN	A2d; B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Lagenandra lancifolia</i> (Schott) Thw.	S: Ati-Udayan	EN	A2d; B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Lagenandra ovata</i> (L.) Thw.	S: Kethala	LC		LC	
<i>Lagenandra praetermissa</i> de Wit	S: Kethala	LC			
<i>Lagenandra thwaitesii</i> Engl.		EN	A2d; B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Lasia spinosa</i> (L.) Thw.	S: Angili Kohila, Kohila, Maha-Kohila	LC		LC	
<i>Lemna gibba</i> L.		CR(PE)		LC	
<i>Lemna perpusilla</i> Torrey	S: Diya-Panshi	LC		LC	
<i>Pistia stratiotes</i> L.	E: Water Lettuce; S: Diya-Paradel	LC			
<i>Pothos hookeri</i> Schott		VU	B1ab(i,ii,iii)		
<i>Pothos parvispadix</i> Nicolson		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Pothos remotiflorus</i> Hook.		VU			
<i>Pothos scandens</i> L.	S: Pota-Wel	LC			
<i>Remusatia vivipara</i> (Roxb.) Schott		VU	B1ab(i,ii,iii)		

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<i>Rhaphidophora decursiva</i> (Roxb.) Schott	S: Dada-Kehel, Wel-Kohila	CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Rhaphidophora pertusa</i> (Roxb.) Schott	S: Nil-Walla, Nil-wella	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Spirodela polyrrhiza</i> (L.) Schleid.		LC		LC	
<i>Theriophonum minutum</i> (Willd.) Baill.		LC			
<i>Typhonium flagelliforme</i> (Lodd.) Blume	S: Panu-Ala	CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<i>Typhonium roxburghii</i> Schott	S: Polong-Ala	NT			
<i>Typhonium trilobatum</i> (L.) Schott	S: Panu-Ala	LC			
<i>Wolffia arrhiza</i> (L.) Horkel ex Wimm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<b>Family : Araliaceae</b>					
<i>Aralia leschenaultii</i> (DC.) J. Wen		DD			
<i>Hydrocotyle javanica</i> Thunb.	S: Maha-Gotukola	NT			
<i>Hydrocotyle sibthorpioides</i> Lam.		LC			
<i>Polyscias acuminata</i> (Wight) Seemann		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Schefflera emarginata</i> (Moon) Harms		VU	B1ab(i,ii,iii)		
<i>Schefflera exaltata</i> (Thw.) Frodin		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Schefflera hererobotrya</i> Frodin	S: Itha	NT			
<i>Schefflera stellata</i> (Gaertn.) Baill.	S: Itha, Itta, Itta-Wel, Maha-Itta-Waela	LC			
<b>Family : Arecaceae</b>					
<i>Areca concinna</i> Thw.	S: Lenatheriya, Lenteri, Lenteri-Puwak	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Calamus delicatulus</i> Thw.	S: Nara-Wel	VU	B1ab(i,ii,iii)		
<i>Calamus digitatus</i> Becc.	S: Kukulu-Wel	VU	B1ab(i,ii,iii)		
<i>Calamus ovoideus</i> Thw. ex Trimen	S: Sudu-Wewel, Tambutu-Wel, Thudarena	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Calamus pachystemonus</i> Thw.	S: Kukulu-Wel	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Calamus pseudotenuis</i> Becc.	S: Kola-Hangala, Heen-Wewel	VU	B1ab(i,ii,iii)		
<i>Calamus radiatus</i> Thw.	S: Kukulu-Wel	VU	B1ab(i,ii,iii)		
<i>Calamus rivalis</i> Thw. ex Trimen	S: Ela-Wel, Ela-Wewel, Kaha-Wewel	VU	B1ab(i,ii,iii)		



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<i>Calamus rotang</i> L.	S: Heen-Wewel, Polonnaru -Wewel, Wewel; T: Pirambu	NT			
<i>Calamus thwaitesii</i> Becc.	S: Kath-Wel, Ma-Wewel, Puwak-Wel; T: Periya Pirambu	VU	A2d; B1ab(i,ii,iii)		
<b><i>Calamus zeylanicus</i></b> Becc.	S: Thambotu-Wel	EN	B1ab(i,ii,iii)		
<i>Caryota urens</i> L.	E: Fish Tail Palm; S: Kitul; T: Kitul Tippilipana	LC			
<b><i>Loxococcus rupicola</i></b> (Thw.) H. Wendl. & Drude	S:Dothalu, Dotalu-Gas, Ran-Dotalu	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Nypa fruticans</i> Wurmb	E: Water Coconut; S:Gin-Pol	VU	B1ab(i,ii,iii)		
<b><i>Oncosperma fasciculatum</i></b> Thw.	S: Katu-Kitul, Rata-Kitul	VU	B1ab(i,ii,iii)		
<i>Phoenix pusilla</i> Gaertn.	S: Indi; T: Inchu	LC			
<b>Family : Aristolochiaceae</b>					
<i>Aristolochia bracteolata</i> Lam.	S: Sapsanda; T: Aduthinnapalai, Adutintappalai	NT			
<i>Aristolochia indica</i> L.	E: Indian Birthworth; S: Sapsanda; T: Isuru, Neya, Perumarrindu, Adagam, Isadesatti, Isuruver, Isurumli, Iyavari, Karudakkodi, Kirttikodi, Perumarindu, Perumaruntu, Perunkiarge, Sasugade	LC			
<i>Thottea siliquosa</i> (Lam.) Ding Hou	S: Thapasara Bulath	LC			
<b>Family : Asparagaceae</b>					
<i>Asparagus falcatus</i> L.	S: Hatawariya	LC			
<i>Asparagus gonocladus</i> Baker		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Asparagus racemosus</i> Willd.	S: Hathawariya; T: Chattavari	LC			
<i>Chlorophytum heynei</i> Rottler ex Baker		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Chlorophytum laxum</i> R. Br.		VU	B2 ab (I,ii,iii)		
<i>Chlorophytum tuberosum</i> (Roxb.) Baker		CR	B2 ab (I,ii,iii)		
<i>Dipcadi montanum</i> (Dalz.) Barker		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Disporum cantoniense</i> (Lour.) Merr.		VU	B1ab(i,ii,iii)		

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<i>Dracaena thwaitesii</i> Regel		NT			
<i>Drimia indica</i> (Roxb.) Jessop		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Drimia rupicola</i></b> (Trimen) Dassanayake		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Ophiopogon intermedius</i> D.Don		LC			
<i>Sansevieria zeylanica</i> (L.) Willd.	E: Bow-String Hemp; S: Niyanda; T: Maral	NT			
<i>Scilla hyacinthina</i> (Routh) Macbride		NT			
<b>Family : Asteraceae</b>					
<i>Adenostemma angustifolium</i> Arn.		DD			
<i>Adenostemma lavenia</i> (L.) Kuntze	S: Laveniya	VU	B1ab(i,ii,iii)		
<i>Adenostemma macrophyllum</i> (Blume) DC.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Adenostemma parviflorum</i> (Blume) DC.		DD			
<i>Anaphalis brevifolia</i> DC.		VU	B1ab(i,ii,iii)		
<b><i>Anaphalis fruticosa</i></b> Hook. f.		CR(PE)			
<i>Anaphalis marcescens</i> (Wight) C.B. Clarke		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Anaphalis pelliculata</i></b> Trimen		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Anaphalis pseudocinnamomea</i></b> Grierson		VU	B1ab(i,ii,iii)		
<i>Anaphalis subdecurrens</i> (DC.) Gamble		NT			
<b><i>Anaphalis sulphurea</i></b> (Trimen) Grierson		NT			
<b><i>Anaphalis thwaitesii</i></b> C.B. Clarke		NT			
<b><i>Anaphalis zeylanica</i></b> C.B. Clarke		NT			
<i>Anaphalis "species X"</i> Grierson		DD			
<i>Artemisia dubia</i> Wall. ex Bess.	E: Mugwort; S: Wal-Kolundu	LC			
<i>Bidens biternata</i> (Lour.) Merr. & Sherff		LC			
<i>Blainvillea acmella</i> (L.) Philipson	S: Agada, Tumba	LC			
<i>Blepharispernum petiolare</i> DC.		VU	B1ab(i,ii,iii)		
<b><i>Blumea angustifolia</i></b> Thw.		EX			

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<i>Blumea axillaris</i> (Lam.) DC.	S: Kukula	LC			
<i>Blumea barbata</i> DC.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Blumea bifoliata</i> (L.) DC.		LC			
<b><i>Blumea crinita</i></b> Arn.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Blumea hieracifolia</i> var. <b><i>flexuosa</i></b> (D.Don) DC.		VU	B1ab(i,ii,iii)		
<i>Blumea lacera</i> (Burm.f.) DC.		LC			
<i>Blumea lanceolaria</i> (Roxb.) Druce		VU	B1ab(i,ii,iii)		
<i>Blumea membranacea</i> Wall. ex DC.		NT			
<i>Blumea obliqua</i> (L.) Druce	S: Muda-Mahana; T: Nara-Karamba	LC			
<i>Blumea virens</i> Wall. ex DC.		VU	B1ab(i,ii,iii)		
<b><i>Blumea zeylanica</i></b> (Hook.f.) Grierson		CR(PE)			
<i>Eclipta prostrata</i> (L.) L.	S: Kikirindi, Sindu-Kirindi; T: Kaikechi, Kaivichillai, Karichalankanni, Karippan	LC			
<i>Elephantopus scaber</i> L.	S: Et-Adi; T: Anichovadi	LC			
<b><i>Emilia alstonii</i></b> Fosberg		LC			
<b><i>Emilia baldwinii</i></b> Fosberg		NT			
<b><i>Emilia exserta</i></b> Fosberg	S: Hulan-Tala, Kadupara; T: Elunthani, Ilaip Patti, Inumpatti-Pillu, Musalkal- Pillu	LC			
<i>Emilia sonchifolia</i> (L.) DC.	S: Kadu Pahara	LC			
<b><i>Emilia speeseae</i></b> Fosberg		VU	B1ab(i,ii,iii)		
<i>Emilia zeylanica</i> C.B.Clarke		LC			
<i>Epaltes divaricata</i> (L.) Cass.	S: Heen-Mudu-Mahana	LC			
<i>Epaltes pygmaea</i> DC.		VU	B1ab(i,ii,iii)		
<i>Erigeron sublyratus</i> DC.	T: Nara-Karamba	VU	B1ab(i,ii,iii)		
<i>Glossogyne bidens</i> (Retz.) Alston		CR(PE)			
<i>Grangea maderaspatana</i> (L.) Poir.		NT			

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Gynura hispida</i> Thw.	T: Mookuthi, Pangi Pillu, Singula Tunda, Thandu Cheddi, Pattu-Nal	VU	B1ab(i,ii,iii)		
<i>Gynura lycopersicifolia</i> DC.	S: Hulan-Tala, Wal-Tampala; T: Mookuthi, Pangi Pillu, Singula Tunda, Thandu cheddi, Pattu-Nal	LC			
<i>Gynura zeylanica</i> Trimen		VU	B1ab(i,ii,iii)		
<i>Helichrysum buddleioide</i> DC. var. <i>hookerianum</i> (Wight & Arn.) Hook.f.		VU	B1ab(i,ii,iii)		
<i>Kleinia grandiflora</i> (Wall. ex DC.) N.Rani		LC			
<i>Lagenophora gracilis</i> Steetz		VU	B1ab(i,ii,iii)		
<i>Laggera alata</i> (D.Don) Sch. Bip. ex Oliver		NT			
<i>Launaea intybacea</i> (Jacq.) Beauv.		VU	B1ab(i,ii,iii)		
<i>Launaea sarmentosa</i> (Willd.) Sch. Bip. ex Kuntze		LC			
<i>Moonia heterophylla</i> Arn.		NT			
<i>Myriactis wightii</i> DC. Wight		VU	B1ab(i,ii,iii)		
<i>Notonia walkeri</i> (Wight) C.B. Clarke		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Pseudoconyza viscosa</i> (Miller) D'Arcy		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Psiadia ceylanica</i> (Arn.) Grierson	S: Pupula	LC			
<i>Senecio corymbosus</i> Wall. ex DC.		LC			
<i>Senecio gardneri</i> (Thw.) C.B. Clarke		CR(PE)			
<i>Senecio ludens</i> C. B. Clarke		LC			
<i>Senecio scandens</i> Buch.-Ham. ex D.Don		NT			
<i>Senecio zeylanicus</i> DC.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sphaeranthus africanus</i> L.	S: Vel-Mudda	LC			
<i>Sphaeranthus amaranthoides</i> Burm.f.	T: Chiva-Charantai	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sphaeranthus indicus</i> L.	S: Aet-Maha-Mahana, Mudu Mahana	LC			
<i>Spilanthes calva</i> DC.	E: Toothache Plant; S: Maha-Akmella	LC			
<i>Spilanthes iabadicensis</i> A. H. Moore		LC			
<i>Spilanthes paniculata</i> Wall. ex DC.		LC			

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<i>Vernonia anceps</i> C. B. Clarke		VU	B1ab(i,ii,iii)		
<i>Vernonia arborea</i> Buch.-Ham.	S: Kobo-Mella, Mal-Gedumba	VU	B1ab(i,ii,iii)		
<i>Vernonia cinerea</i> (L.) Less.	S: Mangul-Kumburu-Venna, Monara-Kudumbiya, Vatu-Pala; T: Chitivyarchenkalainir, Neichatti-Kirai, Neichatti Pillu, Neisudi-Kirai	LC			
<i>Vernonia gardneri</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Vernonia hookeriana</i> Arn.		NT			
<i>Vernonia lankana</i> Grierson		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Vernonia nemoralis</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Vernonia pectiniformis</i> DC. subsp. <i>puncticulata</i> (DC.) Grierson		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Vernonia setigera</i> Arn.		NT			
<i>Vernonia thwaitesii</i> C. B. Clarke		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Vernonia wightiana</i> Arn.	S: Konde	VU	B1ab(i,ii,iii)		
<i>Vernonia zeylanica</i> (L.) Less	S: Henn-Botiya, Papula, Pupula; T: Kappilay, Kuppilay	LC			
<i>Vicoa indica</i> (L.) DC.	S: Ran-Hiriya	LC			
<i>Wedelia biflora</i> (L.) DC.	S:Moodu-Gam-Palu	LC			
<i>Wedelia chinensis</i> (Osbeck) Merr.	S: Ranwan Kikirindi	LC			
<i>Xanthium indicum</i> Koenig	S: Wal-Rambutang, Uru-Kossa	LC			
<i>Youngia fuscipappa</i> Thw.		NT			
<b>Family : Balanophoraceae</b>					
<i>Balanophora fungosa</i> J. R. & G. Forst.		CR	A2cd		
<b>Family : Balsaminaceae</b>					
<i>Hydrocera triflora</i> (L.) Wight & Arn.	S: Diya Kudalu, Wal-kudalu	LC			
<i>Impatiens acaulis</i> Arn.	E:Balsam	VU	A2; B1ab(i,ii,iii)		
<i>Impatiens appendiculata</i> Arn.		NT			
<i>Impatiens arnottii</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Impatiens ciliifolia</i> Grey- Wilson		VU	B1ab(i,ii,iii)		
<i>Impatiens cornigera</i> Arn.		VU	B1ab(i,ii,iii)		
<i>Impatiens cuspidata</i> Wight & Arn. subsp. <b><i>bipartita</i></b>		LC			
<i>Impatiens elongata</i> Arn.		VU	B1ab(i,ii,iii)		
<i>Impatiens flaccida</i> Arn.	S: Kudalu Mal	VU	B1ab(i,ii,iii)		
<i>Impatiens grandis</i> Heyne ex Wall.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Impatiens henslowiana</i> Arn.		VU	B1ab(i,ii,iii)		
<i>Impatiens janthina</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Impatiens leptopoda</i> Arn.		LC			
<i>Impatiens leucantha</i> Thw.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Impatiens linearis</i> Arn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Impatiens macrophylla</i> Gardner		VU	B1ab(i,ii,iii)		
<i>Impatiens oppositifolia</i> L.		NT			
<i>Impatiens repens</i> Moon	S: Gal-Demata	CR	A2c; B1ab(i,ii,iii)		
<i>Impatiens subcordata</i> Arn.		CR(PE)			
<i>Impatiens taprobanica</i> Hiern		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Impatiens thwaitesii</i> Hook.f. ex Grey- Wilson		VU	B1ab(i,ii,iii)		
<i>Impatiens truncata</i> Thw.		NT			
<i>Impatiens walkeri</i> Hook.		CR(PE)			
<b>Family : Basellaceae</b>					
<i>Basella alba</i> L.	S: Niviti; T: Pasalai	EN	B2ab(i,ii,iii)		
<b>Family : Begoniaceae</b>					
<i>Begonia cordifolia</i> (Wight) Thw.	S: Gal-Ambala	VU	B1ab(i,ii,iii)		
<i>Begonia dipetala</i> R.Graham		EN	B1ab(i,ii,iii)+ 2ab(i,ii,iii,v)		
<i>Begonia malabarica</i> Lam.	S: Hak-Ambala, Maha-hak-Ambala	NT			
<i>Begonia subpeltata</i> Wight		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Begonia tenera</i> Dryander		EN	B1ab(i,ii,iii) +2ab(i,ii,iii,v)		
<b>Family : Berberidaceae</b>					
<i>Berberis ceylanica</i> Schneider	E: Barberry	NT			
<i>Berberis tinctoria</i> Leschen.	E: Barberry	DD			
<i>Berberis wightiana</i> Schneider	E: Barberry	DD			
<b>Family : Bignoniaceae</b>					
<i>Dolichandrone spathacea</i> (L.f) K.Schum	S: Diya-Danga; T: Vil- Padri	NT		LC	
<i>Oroxylum indicum</i> (L.) Vent.	S: Totila	LC			
<i>Stereospermum colais</i> (Dillwyn) Mabb.	S: Dunu-madala, Lunu Madala; T: Padri	LC			
<i>Stereospermum suaveolens</i> DC.	S: Ela-Palol, Palol	DD			
<b>Family : Boraginaceae</b>					
<i>Carmona retusa</i> (Vahl) Masamune	S: Heen-Thambala; T: pakkuvetti	LC			
<i>Coldenia procumbens</i> L.	T: Chirupaddi	LC			
<i>Cordia dichotoma</i> Forst. f.	S: Lolu; T: Naruvilli, Vidi	LC			
<i>Cordia monoica</i> Roxb.	T: Naruvili, Ponnaruvili	LC			
<i>Cordia nevillei</i> Alston		CR(PE)			
<i>Cordia oblongifolia</i> Thw.		NT			
<i>Cordia sinensis</i> Lam.		VU	B1ab(i,ii,iii)		
<i>Cordia subcordata</i> Lam.		EN	B2ab(i,ii,iii)	LC <sup>1</sup>	
<i>Cynoglossum furcatum</i> Wall.	E: Forget-Me-Not; S: Bu-Katu-Henda	VU	B1ab(i,ii,iii)		
<i>Cynoglossum zeylanicum</i> Thunb. ex Lehm.	S: Bu-Katu-Henda	VU	B1ab(i,ii,iii)		
<i>Ehretia laevis</i> Roxb.	T: Addula, Chiru-Pulichchul	LC			
<i>Heliotropium curassavicum</i> L.		LC			
<i>Heliotropium indicum</i> L.	S: Et-Honda, Et-Setiya, Dimi-biya; T: Tedkodukku	LC			
<i>Heliotropium scabrum</i> Retz.		LC			
<i>Heliotropium supinum</i> L.		CR(PE)			

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Heliotropium zeylanicum</i> (Burm. f.) Lam.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Rotula aquatica</i> Lour.		DD			
<i>Tournefortia argentea</i> L. f.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Tournefortia walkerae</i> Clarke</b>		CR(PE)			
<i>Trichodesma indicum</i> (L.) Smith	T: Kavil-Tumpai	VU	B1ab(i,ii,iii)		
<i>Trichodesma zeylanicum</i> (Burm. f.) R. Br.		LC			
<b>Family : Burmanniaceae</b>					
<i>Burmannia championii</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Burmannia coelestis</i> D. Don		CR	C2a; B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<i>Burmannia disticha</i> L.	S: Mediya-Jawala	VU	B1ab(i,ii,iii)	LC	
<i>Burmannia pusilla</i> (Wall. ex Miers) Thw.		NT		LC	
<b><i>Thismia gardneriana</i> Hook. f. ex Thw.</b>		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Burseraceae</b>					
<i>Boswellia serrata</i> Roxb. ex Colebr.		CR(PE)			
<b><i>Canarium zeylanicum</i> (Retz.) Blume</b>	S: Dik-Kakuna, Kekuna; T: Pakkilipal	VU	B1ab(i,ii,iii)	Vu <sup>i</sup>	A1c
<i>Commiphora berryi</i> (Arn.) Engl.	T: Mulkiluvai	LC			
<i>Commiphora caudata</i> (Wight & Arn.) Engl.	T: Kilivai	LC			
<i>Scutinanthe brunnea</i> Thw.	S: Maha-Bulu- Mora	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	LR/ LC <sup>i</sup>	
<b>Family : Buxaceae</b>					
<i>Sarcococca brevifolia</i> (Muell.Arg.) Stapf ex Gamble		VU	B1ab(i,ii,iii)		
<b><i>Sarcococca zeylanica</i> Baill.</b>		VU	B1ab(i,ii,iii)		
<b>Family : Cactaceae</b>					
<i>Rhipsalis baccifera</i> (J.S.Mueller ) Stearn	S: Wal-Nawahandi	VU	B1ab(i,ii,iii)		
<b>Family : Calophyllaceae</b>					
<i>Calophyllum acidus</i> Kostem.	S: Dehi-Kina, Batu-Kina	NT			
<b><i>Calophyllum bracteatum</i> Thw.</b>	S: Walu-Keena	NT			



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<i>Calophyllum calaba</i> L.	S: Guru-Keena, Heen Keena; T: Chirupunnai	LC			
<i>Calophyllum cordato-oblongum</i> Thw.	S: Kalu-Keena	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Calophyllum cuneifolium</i> Thw.	S: Keena	CR	B2ab(i,ii,iii)		
<i>Calophyllum inophyllum</i> L.	E: Alexandrian Laurel; S: Domba, Tel-Domba; T: Dommakottai, Punnai, Punnaigam	LC			
<i>Calophyllum lankaensis</i> Kosterm.		EN	B2ab(i,ii,iii)		
<i>Calophyllum moonii</i> Wight	S:Domba-Keena, Mapal-Keena	VU	B1ab(i,ii,iii)		
<i>Calophyllum thwaitesii</i> Planch. & Triana	S: Batu-Keena	VU	B1ab(i,ii,iii)		
<i>Calophyllum tomentosum</i> Wight	S: Keena, Tel-Keena; T: Pongu	VU	B1ab(i,ii,iii)		
<i>Calophyllum trapezifolium</i> Thw.	S: Keena	VU	B1ab(i,ii,iii)		
<i>Calophyllum walkeri</i> Wight	S: Keena, Tel-Keena; T: Pongu	VU	B1ab(i,ii,iii)		
<i>Calophyllum zeylanicum</i> Kosterm.	S: Keena	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Mesua ferrea</i> L.	S: Na; T: Naka	LC			
<i>Mesua stylosa</i> (Thw.) Kosterm.	S: Suwanda	CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Mesua thwaitesii</i> Planch. & Triana	S: Diya-Na	LC			
<b>Family : Campanulaceae</b>					
<i>Asyneuma fulgens</i> (Wall.) Briq.		CR(PE)			
<i>Campanula benthamii</i> Wall. ex Kitam.		CR(PE)			
<i>Lobelia alsinoides</i> Lam.		LC			
<i>Lobelia chinensis</i> Lour.		NT			
<i>Lobelia heyneana</i> Roem. & Schult.		LC		LC	
<i>Lobelia leschenaultiana</i> (Presl) Skottsbo.		VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Lobelia nicotianifolia</i> Roth ex Roem. & Schult.	S: Rasni	LC			
<i>Lobelia zeylanica</i> L.		LC		LC	
<i>Wahlenbergia marginata</i> (Thunb.) DC.	E: Hare-Bell	LC			
<b>Family: Cannabaceae</b>					
<i>Aphananthe cuspidata</i> (Blume) Planch.	S: Wal-Muna Mal	VU	B1ab(i,ii,iii)		

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<i>Celtis philippensis</i> Blanco	S: Meditella; T: Vellathorasay	LC			
<i>Celtis timorensis</i> Span.	S: Gurenda; T: Pinari	LC			
<i>Gironniera parvifolia</i> Planch.	S: Akmediya	LC			
<i>Trema orientalis</i> (L.) Blume	E: Charcoal Tree ; S: Gadumba	LC			
<b>Family : Capparaceae</b>					
<i>Cadaba fruticosa</i> (L.) Druce	T: Vili	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Cadaba trifoliata</i> (Roxb.) Wight & Arn.	T: Maya Adikkuruntu, Oothi Perali	VU	B1ab(i,ii,iii)		
<i>Capparis brevispina</i> DC.	S: Wal-Dehi	NT			
<i>Capparis divaricata</i> Lam.	S: Torikei	LC			
<i>Capparis floribunda</i> Wight		CR	B2ab(i,ii,iii)		
<i>Capparis grandis</i> L.f.	T: Mudkondai	NT			
<i>Capparis heyneana</i> Wall.	S: Wal-Dehi, Leeniya Dehi	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Capparis moonii</i> Wight	S: Rudanti	EN	B2ab(i,ii,iii)		
<i>Capparis rotundifolia</i> Rottler	S: Balal-Katu; T: Karunchurai, Pichchuvilatti	LC			
<i>Capparis roxburghii</i> DC.	S: Kalu-Illan-Gedi; T: Punai-Virandi, Velungiriya	LC			
<i>Capparis sepiaria</i> L.	S: Rila-Katu; T: Karunchurai	LC			
<i>Capparis tenera</i> Dalz.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Capparis zeylanica</i> L.	S: Sudu-Welangiriya, Welangiriya; T: Kattoddi, Vennachchi	LC			
<i>Crateva adansonii</i> DC.	S: Lunu-Warana; T: Navala, Navilankai	LC			
<i>Maerua arenaria</i> Hook.f. & Thoms.		NT			
<b>Family : Caprifoliaceae</b>					
<i>Dipsacus walkeri</i> Arn.		CR	B1ab(i,ii,iii)		
<i>Valeriana moonii</i> Arn. ex Clarke		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<b>Family : Caryophyllaceae</b>					
<i>Cerastium fontanum</i> Baumg. subsp. <i>vulgare</i> (Hartm.) Greuter & Burdet		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Cerastium glomeratum</i> Thuill.		LC			
<i>Cerastium indicum</i> Wight & Arn.		NT			
<i>Drymaria cordata</i> (L.) Roem. & Schult. subsp. <i>diandra</i> (Blume) Duke	S: Kukulū-Pala	LC			
<i>Polycarpaea aurea</i> Wight & Arn.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Polycarpaea corymbosa</i> (L.) Lam.		LC			
<i>Polycarpaea spicata</i> Wight & Arn.		CR(PE)		LC	
<i>Polycarpon prostratum</i> (Forssk.) Asch. & Schweinf.		VU	B1ab(i,ii,iii)		
<i>Polycarpon tetraphyllum</i> subsp. <i>tetraphyllum</i> (L.) L.		LC			
<i>Sagina saginoides</i> (L.) Karsten		DD			
<i>Stellaria pauciflora</i> Zoll. & Moritzi		CR(PE)			
<i>Vaccaria hispanica</i> (Mill.) Rauschert		DD			
<b>Family : Celastraceae</b>					
<i>Cassine balae</i> Kosterm.	S: Nareloo, Neraloo; T: Perun, Piyaree	LC			
<i>Cassine congylos</i> Kosterm.		VU	B1ab(i,ii,iii)		
<i>Cassine glauca</i> (Rottb.) Kuntze	S: Neralu; T:Piyari, Perunpiyari	LC			
<i>Celastrus paniculatus</i> Willd.	S: Duhundu	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Euonymus revolutus</i> Wight		NT			
<i>Euonymus thwaitesii</i> Lawson		VU	B1ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Euonymus walkeri</i> Wight		LC		VU <sup>i</sup>	A1c
<i>Glyptopetalum zeylanicum</i> Thw. var. <i>zeylanicum</i>		VU	B1ab(i,ii,iii)		
<i>Kokoona zeylanica</i> Thw.	S: Kokun, Wana-Potu	EN	A2 acd, B1ab(i,ii,iii)		
<i>Loeseneriella africana</i> (Willd.) Wilczek		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Loeseneriella amottiana</i> (Wight) A. C. Smith	S: Sudu-Nawu-Wel	EN	B2ab(i,ii,iii)		
<i>Loeseneriella macrantha</i> (Korth.) A. C. Smith	S: Diya-Kirindi-Wel	EN	B2ab(i,ii,iii)		

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<i>Maytenus emarginata</i> (Willd.) Ding Hou		LC			
<b><i>Maytenus fruticosa</i></b> (Thw.) Loes		CR(PE)			
<i>Microtropis wallichiana</i> Wight ex Thw.		LC			
<b><i>Microtropis zeylanica</i></b> Merr. & Freem.		NT			
<i>Pleurostyliia opposita</i> (Wall.) Alston	S: Panakka, Piyari; T:Chiru, Piyari	LC			
<i>Reissantia indica</i> (Willd.) Halle		LC			
<b><i>Salacia acuminatissima</i></b> Kosterm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Salacia chinensis</i> L.	S: Heen-Himbutu Wel	NT			
<b><i>Salacia diandra</i></b> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Salacia oblonga</i> Wall. ex Wight & Arn.	S: Himbutu, Gal-Himbutu	EN	B2ab(i,ii,iii)		
<i>Salacia reticulata</i> Wight	S: Himbutu, Himbutu-Wel, Kotala-Himbutu	EN	B2ab(i,ii,iii)		
<b>Family: Centroplacaceae</b>					
<b><i>Bhesa ceylanica</i></b> (Arn. ex Thw.) Ding Hou	S: Et-Heraliya, Palen, Pelang, Uru-Honda; T:Konnai	LC		VU <sup>i</sup>	A1c
<i>Bhesa montana</i>		DD			
<b><i>Bhesa nitidissima</i></b> Kosterm.		LC		CR <sup>i</sup>	B1+2c
<b>Family : Ceratophyllaceae</b>					
<i>Ceratophyllum demersum</i> L.		LC		LC	
<b>Family : Chloranthaceae</b>					
<i>Sarcandra chloranthoides</i> Gardner		LC			
<b>Family : Cleomaceae</b>					
<i>Cleome aspera</i> Koenig ex DC.		LC			
<i>Cleome chelidonii</i> L. f.	S: Wal-Aba	LC			
<i>Cleome gynandra</i> L.	S: Wela; T: Tayirvalai	LC			
<i>Cleome monophylla</i> L.		LC			
<i>Cleome tenella</i> L. f.		CR	B2ab(i,ii,iii)		
<i>Cleome viscosa</i> L.	S: Wal-Aba, Ran-Manissa	LC			

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<b>Family : Clusiaceae</b>					
<i>Garcinia echinocarpa</i> Thw.	S: Madol	VU	B1ab(i,ii,iii)		
<b><i>Garcinia hermonii</i></b> Kosterm.	S: Madol, Kana-Goraka	VU	B1ab(i,ii,iii)		
<i>Garcinia morella</i> (Gaertn.) Desr.	E: Gamboge; S: Kana-Gorake, Kokatiya, Gokatu	NT			
<b><i>Garcinia quaesita</i></b> Pierre	S: Goraka, Rat-Goraka; T: Korakkaipuli	LC			
<i>Garcinia spicata</i> (Wight & Arn.) Hook.f.	S: Ela-Gokatu, Gonapana; T: Kokottai	NT			
<b><i>Garcinia terpnophylla</i></b> (Thw.) Thw.		EN	B2ab(i,ii,iii)		
<b><i>Garcinia thwaitessii</i></b> Pierre		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Garcinia zeylanica</i></b> Roxb.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Colchicaceae</b>					
<i>Gloriosa superba</i> L.	S: Niyangala; T: Kartikai Kilanku, Ventonti	LC			
<i>Iphigenia indica</i> (L.) A.Gray ex Kunth		LC			
<b>Family : Combretaceae</b>					
<i>Anogeissus latifolius</i> (Roxb.) Beddome	S: Dawu, T: Vekkali, Velai-Naga	LC			
<i>Combretum acuminatum</i> Roxb.		CR(PE)			
<i>Combretum albidum</i> G.Don	S: Kaduru-Ketiya-Wel	NT			
<i>Combretum latifolium</i> Blume	S: Geta-kaha	NT			
<i>Lumnitzera littorea</i> (Jack) Voigt		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Lumnitzera racemosa</i> Willd.	S: Beriya; T: Tipparuthin	NT			
<i>Terminalia arjuna</i> (Roxb.) Wight & Arn.	S: Kumbulu, Kumbuk; T: Marutu	LC			
<i>Terminalia bellirica</i> (Gaertn.) Roxb.	E: Myrabalans; S: Bulu; T: Ahdan-Koddai, Tanti	LC			
<i>Terminalia chebula</i> Retz.	E: Gall-Nut, Ink Nut, Myrabalans; S: Aralu; T: Kadukkay	LC			
<i>Terminalia zeylanica</i> van Heurck & Muell. Arg.	S: Hampalanda, Hanpalanda	LC			
<b>Family : Commelinaceae</b>					
<i>Commelina appendiculata</i> Clarke		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Commelina attenuata</i> Vahl		LC			

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<i>Commelina benghalensis</i> L.	S: Diya-Meneriya	LC		LC	
<i>Commelina clavata</i> Clarke		VU	B1ab(i,ii,iii)	LC	
<i>Commelina diffusa</i> Burm.f.	S: Gira Pala	LC		LC	
<i>Commelina ensifolia</i> R.Br.		LC			
<i>Commelina indehiscens</i> E.Barnes	S: Gira Pala	NT			
<i>Commelina kurzii</i> Clarke		LC			
<i>Commelina paludosa</i> Blume		CR(PE)			
<i>Commelina petersii</i> Hassk.		LC			
<i>Cyanotis adscendens</i> Dalz.		VU	B1ab(i,ii,iii)		
<i>Cyanotis axillaris</i> (L.) Sweet		LC		LC	
<i>Cyanotis burmanniana</i> Wight		VU	B1ab(i,ii,iii)		
<b><i>Cyanotis ceylanica</i></b> Hassk.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Cyanotis cristata</i> (L.) D.Don	S: Bol-Hinda	LC		LC	
<i>Cyanotis obtusa</i> (Trimen)Trimen		EN	B2ab(i,ii,iii)		
<i>Cyanotis pilosa</i> Schult.f.		EN	B2ab(i,ii,iii)		
<i>Cyanotis racemosa</i> Heyne ex Hassk.		VU	B1ab(i,ii,iii)		
<i>Cyanotis thwaitesii</i> Hassk.		NT			
<i>Cyanotis villosa</i> (Spreng.) Schult.f.		NT			
<i>Dictyospermum montanum</i> Wight		VU	B1ab(i,ii,iii)		
<i>Dictyospermum ovalifolium</i> Wight		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Floscopa scandens</i> Lour.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<b><i>Murdannia audreyae</i></b> Faden		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Murdannia blumei</i> (Hassk.) Brenan		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Murdannia dimorphoides</i></b> Faden		NT			
<i>Murdannia esculenta</i> (Wall. ex Clarke) R.S.Rao & Kammathy		NT		LC	
<i>Murdannia gigantea</i> (Vahl) G.Brückn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Murdannia glauca</i> (Thw. ex Clarke) G.Brückn.		CR(PE)			
<i>Murdannia lanceolata</i> (Wight) Kammathy		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	VU	D2
<i>Murdannia loriformis</i> (Hassk.) R.S.Rao & Kammathy		VU	B1ab(i,ii,iii)		
<i>Murdannia nudiflora</i> (L.) Brenan		LC			
<i>Murdannia simplex</i> (Vahl) Brenan		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Murdannia spirata</i> (L.) G.Brückn.		LC		LC	
<i>Murdannia striatipetala</i> Faden		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Murdannia vaginata</i> (L.) G.Brückn.		LC		LC	
<i>Murdannia zeylanica</i> (Clarke) G.Brückn		VU	B1ab(i,ii,iii)		
<i>Pollia secundiflora</i> (Blume.) Bakh.f.		VU	B1ab(i,ii,iii)		
<i>Rhopalephora scaberrima</i> (Blume) Faden		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Connaraceae</b>					
<i>Connarus championii</i> Thw.	S: Wel-Radaliya, Radaliya	NT			
<i>Connarus monocarpus</i> L.	S: Radaliya; T: Chettupulukodi	LC			
<i>Ellipanthus unifolius</i> (Thw.) Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Rourea minor</i> (Gaertn.) Alston	S: Kirindi-Wel, Goda-Kirindi	LC			
<b>Family : Convolvulaceae</b>					
<i>Argyreia choisyana</i> Wight ex Clarke		DD			
<i>Argyreia elliptica</i> Choisy		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Argyreia hancorniaefolia</i> Gardner		EN	B2ab(i,ii,iii)		
<i>Argyreia hirsuta</i> Arn.		LC			
<i>Argyreia osyrensis</i> (Roth) Choisy		LC			
<i>Argyreia pomacea</i> Choisy	T: Unam-Kodhy	LC			
<i>Argyreia populifolia</i> Choisy	S: Giri-Tilla	LC			
<i>Argyreia splendens</i> (Roxb.) Sweet		CR(PE)			
<i>Argyreia thwaitesii</i> (Clarke) D.Austin	S: Ma-Banda, Ginitilla	LC			

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<i>Bonamia semidigyna</i> (Roxb.) Hall. f.		VU	B1ab(i,ii,iii)		
<i>Cressa cretica</i> L.		LC			
<i>Cuscuta chinensis</i> Lam.	E: Dodder S: Aga-Mula-Neti-Wel;	LC			
<i>Cuscuta campestris</i> Yunck.	E: Golden Dodder, Field Dodder S: Aga-Mula-Neti-Wel;	DD			
<i>Cuscuta reflexa</i> Roxb.	E: Dodder S: Aga-Mula-Neti-Wel;	VU	B1ab(i,ii,iii)		
<i>Erycibe paniculata</i> Roxb.	S: Atamberiya, Etamberiya, Eta-Miriya	LC			
<i>Evolvulus alsinoides</i> (L.) L.	S: Visnu-Kranti; T: Vichnu Kiranti	LC			
<i>Hewittia sublobata</i> (L.f.) O. Ktze.	S: Wal-Trasta-Walu	LC			
<i>Ipomoea aquatica</i> Forssk.	S: Kan-Kun	LC			
<i>Ipomoea campanulata</i> L.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Ipomoea coptica</i> (L.) Roem. & Schult.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<i>Ipomoea deccana</i> D.Austin		DD			
<i>Ipomoea eriocarpa</i> R. Br.		VU	B1ab(i,ii,iii)		
<b><i>Ipomoea jucunda</i></b> Thw.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Ipomoea littoralis</i> Blume	S: Tel-kola	NT			
<i>Ipomoea obscura</i> (L.) Ker-Gawl.	S: Waha-Tel, Tel-Vel, Tel-Kola	LC			
<i>Ipomoea pes-caprae</i> (L.) R.Br.	S: Mudu-bin-tamburu, Muhudu Bim Thamburu, Bin- Tamburu	LC			
<i>Ipomoea pes-tigridis</i> L.	S: Divi-Adiya, Divi-Pahura	LC			
<i>Ipomoea pileatea</i> Roxb.		VU	B1ab(i,ii,iii)		
<i>Ipomoea marginata</i> (Desr.) Verdc. (Syn. <i>Ipomoea sepiaria</i> Roxb.)	S: Rasa-Tel-Kola	LC			
<i>Ipomoea staphylina</i> Roem. & Schult.	S: Tel-Kola	CR(PE)			
<i>Ipomoea stolonifera</i> (Cyrill.) Gmelin		VU	B1ab(i,ii,iii)		
<i>Ipomoea tuberculata</i> Ker-Gawl.		VU	B1ab(i,ii,iii)		
<i>Ipomoea violacea</i> L.		LC			
<i>Ipomoea wightii</i> (Wall.) Choisy		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		



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<i>Merremia emarginata</i> (Burm. f.) Hall. f.		NT			
<i>Merremia hederacea</i> (Burm. f.) Hall. f.	S: Kaha-Tel-Kola	LC			
<i>Merremia tridentata</i> (L.) Hall. f.	S: Hawari-Madu, Heen-Madu; T: Mudiyakuntal	LC			
<i>Merremia umbellata</i> (L.) Hall. f.	S: Kiri Madu, Mahamadu	LC			
<i>Operculina turpethum</i> (L.) S. Manso	S: Trastawalu	LC			
<i>Rivea ornata</i> Choisy	T: Muchuddai	VU	B2ab(i,ii,iii)		
<i>Stictocardia tiliifolia</i> (Desr.) Hall.f.	S: Ma-Banda, Maha-Banda	VU	B1ab(i,ii,iii)		
<b>Family : Cornaceae</b>					
<i>Alangium salviifolium</i> (L. f.) Wangerin		NT			
<b><i>Mastixia congylos</i></b> Kosterm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Mastixia macrophylla</i> (Thw.) Kosterm.		VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c, B1+2c
<b><i>Mastixia montana</i></b> Kosterm.	S: Diya-Taleya, Diya-Taliya	VU	B1ab(i,ii,iii)		
<b><i>Mastixia nimalii</i></b> Kosterm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Mastixia tetrandra</i> (Wight ex Thw.) Clarke	S: Diyataliya, Maha-Tawara	LC		VU <sup>i</sup>	A1c
<b>Family : Costaceae</b>					
<i>Costus speciosus</i> (Koenig) Smith	S: Koltan, Tebu	LC			
<b>Family : Crassulaceae</b>					
<i>Kalanchoe floribunda</i> Wight & Arn. var. <i>glabra</i>		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Kalanchoe laciniata</i> (L.) Pers.		DD			
<b>Family : Crypteroniaceae</b>					
<b><i>Axinandra zeylanica</i></b> Thw.	S: Kekiri-Wara	VU	B1ab(i,ii,iii)		
<b>Family : Cucurbitaceae</b>					
<i>Citrullus colocynthis</i> (L.) Schrad.	E: Colocynth; S: Yak-Komadu; T: Peykkomadi, Peykkomakki, Peykummatti	VU	B2ab(i,ii,iii)		
<i>Coccinia grandis</i> (L.) J.Voigt	E: Ivy Gourd; S: Kowakka; T: Kovvai	LC			
<i>Corallocarpus epigaeus</i> (Am.) Hook.f.	S: Gopalanga	VU	B1ab(i,ii,iii)		
<i>Ctenolepis garcinii</i> (Burm.f.) Naud.	T: Mochu-Mochukkai, Mossumossuke	VU	B1ab(i,ii,iii)		

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<i>Diplocyclos palmatus</i> (L.) C.Jeffrey	S: Pasengilla	LC			
<i>Gymnopetalum integrifolium</i> (Roxb.) Kurz		VU	B1ab(i,ii,iii)		
<i>Gymnopetalum tubiflorum</i> (Wight & Arn.) Cogn.	S: Vel Kekiri	LC			
<i>Gynostemma pentaphyllum</i> (Thunb.) Makino		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Kedrostis courtallensis</i> (Arn.) C.Jeffrey	S: Kawudu-Kekiri	VU	B1ab(i,ii,iii)		
<i>Kedrostis foetidissima</i> (Jacq.) Cogn.		VU	B1ab(i,ii,iii)		
<i>Momordica charantia</i> L.	S: Batu-Karavila, Karavila; T: Pakal, Nuti-Pakal	LC			
<i>Momordica denudata</i> (Thw.) Clarke		LC			
<i>Momordica dioica</i> Roxb. ex Willd.	S: Mal-Tumba, Tumb-Karawila; T: Paluppakal, Tumpai	LC			
<i>Mukia leiosperma</i> (Wight & Arn.) Wight		CR(PE)			
<i>Mukia maderaspatana</i> (L.) M.Roemer	S: Gon-Kekiri, Heen-Kekiri, Lene-Kekiri, Kekiri; T: Mochumochukkai	NT			
<i>Solena amplexicaulis</i> (Lam.) Gandhi	S: Kawudu-Kekeiri, Tela Beriya; T: Peyppudal	LC			
<i>Trichosanthes anaimalaiensis</i> Beddome		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Trichosanthes cucumerina</i> L.	S: Dum-Mella, Kunu-Mella; T: Pudal	LC			
<b><i>Trichosanthes integrifolia</i> Thw.</b>		CR(PE)			
<i>Trichosanthes nervifolia</i> L.		CR(PE)			
<i>Trichosanthes tricuspida</i> Lour.	S: Titta-hondala; T: Anakoruthi	LC			
<i>Zanonia indica</i> L.	S: Wal-Rasakinda	VU	B1ab(i,ii,iii)		
<i>Zehneria maysorensis</i> (Wight & Arn.) Arn.		EN	B2ab(i,ii,iii)		
<i>Zehneria thwaitesii</i> (Schweinf.) C.Jeffrey		VU	B1ab(i,ii,iii)		
<b>Family : Cymodoceaceae</b>					
<i>Cymodocea serrulata</i> (R.Br.) Asch. & Magnus		NT		LC	
<i>Halodule uninervis</i> (Forssk.) Asch.		NT		LC	
<i>Syringodium isoetifolium</i> (Asch.) Dandy		NT		LC	
<b>Family : Cyperaceae</b>					
<i>Actinoscirpus grossus</i> (L.f.) Goetgn. & D.A.Simpson		LC		LC	

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Bulbostylis barbata</i> (Rottb.) Kunth ex Clarke	S: Uru-Hiri	LC			
<i>Bulbostylis densa</i> (Wall.ex Roxb.) Hand.-Mazz.		NT			
<i>Bulbostylis puberula</i> (Poir.) Kunth ex Clarke		LC			
<b>Carex arnottiana</b> Nees ex Drejer		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Carex baccans</i> Nees ex Wight		VU	B1ab(i,ii,iii)	LC	
<i>Carex breviscapa</i> Clarke		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Carex filicina</i> Nees		VU	B1ab(i,ii,iii)	LC	
<i>Carex indica</i> L.		VU	B1ab(i,ii,iii)		
<i>Carex jackiana</i> Boott		VU	B1ab(i,ii,iii)		
<i>Carex lateralis</i> Kukenth.		CR(PE)			
<i>Carex lenta</i> D. Don		CR(PE)			
<i>Carex leucantha</i> Arn. ex Boott		VU	B1ab(i,ii,iii)		
<i>Carex ligulata</i> Nees		VU	B1ab(i,ii,iii)		
<i>Carex lindleyana</i> Nees		VU	B1ab(i,ii,iii)		
<b>Carex lobulirostris</b> Drejer		EN	B2ab(i,ii,iii)		
<i>Carex longicuris</i> Nees		NT			
<i>Carex longipes</i> D.Don		DD			
<i>Carex maculata</i> Boott		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<i>Carex nubigena</i> D.Don		EN	B2ab(i,ii,iii)		
<i>Carex phacota</i> Spreng.		VU	B1ab(i,ii,iii)	LC	
<i>Carex rara</i> Boott subsp <b>patanicola</b> T.Koyama		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Carex spicigera</b> Nees		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Carex taprobanensis</b> T.Koyama		CR	B1ab(i,ii,iii)		
<i>Carex walkeri</i> Arn. ex Boott		VU	B1ab(i,ii,iii)		
<i>Cyperus alopecuroides</i> Rottb.		NT			
<i>Cyperus arenarius</i> Retz.	S: Mudu-Kalanduru	LC		LC	
<i>Cyperus articulatus</i> L.		DD			

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<i>Cyperus bifax</i> Clarke		LC			
<i>Cyperus brevifolius</i> (Rottb.) Hassk.		LC			
<i>Cyperus bulbosus</i> Vahl	T: Chilanti Arichi	LC			
<i>Cyperus castaneus</i> Willd.		LC		LC	
<i>Cyperus cephalotes</i> Vahl		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<i>Cyperus clarkei</i> Cook		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<i>Cyperus compactus</i> Retz.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Cyperus compressus</i> L.		LC			
<i>Cyperus conglomeratus</i> Rottb. subsp. <i>pachyrrhizus</i> (Nees) T. Koyama		CR	B1ab(i,ii,iii)		
<i>Cyperus corymbosus</i> Rottb.	S: Gal-Ehi	NT			
<i>Cyperus cuspidatus</i> Kunth		LC			
<i>Cyperus cyperinus</i> (Retz.) Vahl		LC			
<i>Cyperus cyperoides</i> (L.) Kuntze		VU	B1ab(i,ii,iii)	LC	
<i>Cyperus difformis</i> L.		LC		LC	
<i>Cyperus diffusus</i> Vahl		EN	B2ab(i,ii,iii)		
<i>Cyperus digitatus</i> Roxb.		LC		LC	
<i>Cyperus disruptus</i> C.B. Clarke		LC			
<i>Cyperus distans</i> L.f.		LC		LC	
<i>Cyperus dubius</i> Rottb.		LC		LC	
<i>Cyperus exaltatus</i> Retz.		LC			
<i>Cyperus haspan</i> L.	S: Hal-Pan	LC			
<i>Cyperus iria</i> L.	S: Wel-Hiri	LC			
<i>Cyperus javanicus</i> Houltt.	S: Ramba; T: Irampai	LC			
<i>Cyperus kyllingia</i> Endl.	S: Mottu-Tana	LC			
<i>Cyperus melanospermus</i> ( Nees) Valken		LC			
<i>Cyperus mitis</i> Steud.		LC		LC	

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<i>Cyperus nutans</i> Vahl		LC		LC	
<i>Cyperus pangorei</i> Rottb.	S: Hewan-Pan	LC		LC	
<i>Cyperus paniceus</i> (Rottb.) Boeckler		LC		LC	
<i>Cyperus pilosus</i> Vahl		LC		LC	
<i>Cyperus platyphyllus</i> Roem. & Schult.		NT		LC	
<i>Cyperus platystylis</i> R.Br.		NT			
<i>Cyperus procerus</i> Rottb.		LC		LC	
<i>Cyperus pulcherrimus</i> Willd. ex Kunth		NT			
<i>Cyperus pygmaeus</i> Rottb.		LC			
<i>Cyperus radians</i> Nees & Meyen ex Kunth		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Cyperus rotundus</i> L.	S: Kalanduru; T: Korai	LC		LC	
<i>Cyperus sesquiflorus</i> (Torr.) Mattfeld & Kükenth.		NT			
<i>Cyperus squarrosus</i> L.		LC		LC	
<i>Cyperus stoloniferus</i> Retz.		LC		LC	
<i>Cyperus tenuiculmis</i> Boeckeler		LC		LC	
<i>Cyperus tenuispica</i> Steud.		LC		LC	
<i>Cyperus triceps</i> (Rottb.) Endl.		LC			
<i>Cyperus umbellatus</i> Clarke		VU	B1ab(i,ii,iii)		
<i>Cyperus zollingeri</i> Steud.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<i>Diplacrum caricinum</i> R.Br.		NT		LC	
<i>Eleocharis actangula</i> (Roxb. ) Schult.		LC			
<i>Eleocharis confervoides</i> (Poir.) T. Koyama		CR(PE)			
<i>Eleocharis congesta</i> D.Don		NT			
<i>Eleocharis dulcis</i> (Burm.f.)Trin. ex Hensch.	S: Boru-Pan	LC			
<i>Eleocharis geniculata</i> (L.) Roem. & Schult.		LC		LC	
<b><i>Eleocharis lankana</i></b> T.Koyama		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	

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<i>Eleocharis ochrostachys</i> Steud.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<i>Eleocharis retroflexa</i> (Poir.) Urban		VU	B1ab(i,ii,iii)	LC	
<i>Eleocharis spiralis</i> (Rottb.) Roem. & Schult.		LC		LC	
<i>Eleocharis tetraquetra</i> Nees		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Fimbristylis acuminata</i> Vahl		LC		LC	
<i>Fimbristylis aestivalis</i> (Retz.) Vahl		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Fimbristylis argentea</i> (Rottb.) Vahl		LC		LC	
<i>Fimbristylis bisumbellata</i> (Frossk.) Bubani		VU	B1ab(i,ii,iii)	LC	
<i>Fimbristylis cinnamometorum</i> (Vahl) Kunth		LC			
<i>Fimbristylis complanata</i> (Retz.) Link		VU	B1ab(i,ii,iii)	LC	
<i>Fimbristylis consanguinea</i> Kunth		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<i>Fimbristylis cymosa</i> R.Br.		LC			
<i>Fimbristylis dichotoma</i> (L.) Vahl		LC			
<i>Fimbristylis dipsacea</i> (Rottb.) Clarke		CR(PE)			
<i>Fimbristylis dura</i> (Zoll. & Moritzi) Merr.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Fimbristylis eragrostis</i> (Nees & Meyen) Hance		LC			
<i>Fimbristylis falcata</i> (Vahl) Kunth		LC			
<i>Fimbristylis ferruginea</i> (L.) Vahl		LC			
<i>Fimbristylis fusca</i> (Nees) Clark		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Fimbristylis insignis</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Fimbristylis leptoclada</i> Benth.		CR(PE)			
<i>Fimbristylis miliacea</i> (L.) Vahl	S: Muduhai-Pan	LC			
<i>Fimbristylis monticola</i> Hochst. ex Steud.		VU	B1ab(i,ii,iii)		
<i>Fimbristylis nutans</i> (Retz.) Vahl		VU	B1ab(i,ii,iii)	LC	
<i>Fimbristylis ovata</i> (Burm.f.) Kern		LC		LC	
<i>Fimbristylis polytrichoides</i> (Retz.) Vahl		LC		LC	

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<i>Fimbristylis pubisquama</i> Kern		LC			
<i>Fimbristylis quinquangularis</i> (Vahl) Kunth		LC			
<i>Fimbristylis salbundia</i> (Nees) Kunth subsp <i>pentapetra</i> (Nees) T.Koyama		VU	B1ab(i,ii,iii)	LC	
<i>Fimbristylis schoenoides</i> (Retz.) Vahl		LC		LC	
<i>Fimbristylis tenera</i> Schult.		DD			
<i>Fimbristylis tetragona</i> R.Br.		LC		LC	
<i>Fimbristylis thouarsii</i> (Kunth) Merr.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Fimbristylis triflora</i> (L.) Schum. ex Engl.		LC			
<i>Fimbristylis umbellaris</i> (Lam.) Vahl	S: Hal-Pan	LC			
<b><i>Fimbristylis zeylanica</i></b> T.Koyama		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Fuirena capitata</i> (Burm.f.) T.Koyama		LC			
<i>Fuirena ciliaris</i> (L.) Roxb.		LC		LC	
<i>Fuirena umbellata</i> Rottb.		LC		LC	
<b><i>Hypolytrum longirostre</i></b> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Hypolytrum nemorum</i> (Vahl) Spreng.		VU	B1ab(i,ii,iii)		
<i>Hypolytrum scirpoides</i> (Presl) Merr.		EN	B2ab(i,ii,iii)		
<i>Hypolytrum turgidum</i> Clarke		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Isolepis fluitans</i> (L.) R.Br.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Lepironia articulata</i> (Retz.) Domin.	S: Eta-Pan	VU	B1ab(i,ii,iii)	LC	
<i>Lipocarpha chinensis</i> (Osbeck) Kern		LC		LC	
<i>Lipocarpha sphacelata</i> (Vahl) Kunth		LC			
<i>Machaerina rubiginosa</i> (Spreng.) T. Koyama subsp. <i>crassa</i> (Thw.) T.Koyama		CR(PE)			
<b><i>Mapania immersa</i></b> (Thw.) Benth. ex Clarke		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Mapania zeylanica</i> (Thw.) Benth.ex Clarke		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Pycneus flavidus</i> (Retz.) T.Koyama		LC			
<i>Pycneus polystachyos</i> (Rottb.) Beauv.		LC			

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<i>Pycreus pumilus</i> (L.) Nees	S: Go-Hiri	LC			
<i>Pycreus puncticulatus</i> (Vahl) Nees.		LC		LC	
<i>Pycreus sanguinolentus</i> (Vahl) Nees ex Clarke		NT			
<i>Pycreus stramineus</i> (Nees) Clarke		CR(PE)		LC	
<i>Queenslandiella hyalina</i> (Vahl) Ballard		VU	B1ab(i,ii,iii)	LC	
<i>Remirea maritima</i> Aublet		VU	B1ab(i,ii,iii)		
<i>Rhynchospora chinensis</i> Nees & Meyen ex Nees		CR(PE)			
<i>Rhynchospora corymbosa</i> (L.) Britt.		LC		LC	
<i>Rhynchospora gracillima</i> Thw.		CR(PE)			
<i>Rhynchospora rubra</i> (Lour.) Makino		NT			
<i>Rhynchospora rugosa</i> (Vahl) Gale subsp. <i>brownii</i> (Roem. & Schult.) T. Koyama		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Rhynchospora triflora</i> Vahl		CR(PE)			
<i>Rikliella squarrosa</i> (L.) Raynal		LC			
<i>Schoenoplectus articulatus</i> (L.) Palla	S: Maha Geta-Pan	LC			
<i>Schoenoplectus juncooides</i> (Roxb.) Palla		LC			
<i>Schoenoplectus littoralis</i> (Schrad.) Palla		LC			
<i>Schoenoplectus mucronatus</i> (L.) Palla		VU	B1ab(i,ii,iii)		
<i>Schoenoplectus supinus</i> (L.) Palla		LC			
<i>Scirpodendron ghaeri</i> (Gaertn.) Merr.		CR(PE)			
<i>Scleria biflora</i> Roxb.		CR(PE)			
<i>Scleria corymbosa</i> Roxb.		VU	B1ab(i,ii,iii)		
<i>Scleria levis</i> Retz.	S: Goda Karawu	VU	B1ab(i,ii,iii)		
<i>Scleria lithosperma</i> (L.) Sw.		LC			
<i>Scleria mikawana</i> Makino		VU	B1ab(i,ii,iii)	LC	
<b><i>Scleria multilacunosa</i></b> T.Koyama		CR	B2ab(i,ii,iii)		
<i>Scleria neesii</i> Kunth	S: Bakamunu Tana	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		



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<i>Scleria oblata</i> S.T.Blake		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Scleria parvula</i> Steud.		VU	B1ab(i,ii,iii)		
<i>Scleria pergracilis</i> (Nees) Kunth	S: Mehi-Wal	CR(PE)			
<b><i>Scleria pilosa</i></b> Boeckeler		CR(PE)			
<i>Scleria poaeformis</i> Retz.		LC			
<i>Scleria rugosa</i> R.Br.		NT			
<i>Scleria sumatrensis</i> Retz.		NT			
<i>Scleria terrestris</i> (L.) Fassett		LC			
<i>Scleria thwaitesiana</i> Boeckeler		VU	B1ab(i,ii,iii)		
<i>Trichophorum subcapitatum</i> (Thw. & Hook.) D.A.Simpson		CR(PE)		LC	
<i>Tricostularia undulata</i> (Thw.) Kern		CR(PE)			
<b>Family : Daphniphyllaceae</b>					
<i>Daphniphyllum glaucescens</i> Blume		CR	B2ab(i,ii,iii)		
<b>Family : Dichapetalaceae</b>					
<i>Dichapetalum gelonioides</i> (Roxb.) Engl.	S: Balal-Hula	LC			
<b><i>Dichapetalum zeylanicum</i></b> Kosterm.		NT			
<b>Family : Dilleniaceae</b>					
<b><i>Acrotrema dissectum</i></b> Thw. ex Hook. f.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Acrotrema intermedium</i></b> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Acrotrema lanceolatum</i></b> Hook.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Acrotrema lyratum</i></b> Thw. ex Hook. f.	S: Bin-Beru	CR	B2 ab (i,ii,iii)		
<b><i>Acrotrema thwaitesii</i></b> Hook.f. & Thoms. ex Hook.f.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Acrotrema uniflorum</i></b> Hook.	S: Passana, Ettadi, Gondawa, Bim- Beru	VU	B1ab(i,ii,iii)		
<b><i>Acrotrema walkeri</i></b> Wight ex Thw.	S: Ulwerreni, Bim-Beru	VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Dillenia indica</i> L.	S: Hondapara, Wam-Para; Tamil: Akku	LC			
<i>Dillenia retusa</i> Thunb.	S: Godapara	LC			
<i>Dillenia triquetra</i> (Rottb.) Gilg	S: Diyapara	LC		CR <sup>i</sup>	B1+2cd

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Schumacheria alnifolia</i> Hook.f. & Thoms.	S: Kekiri-Wara	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Schumacheria angustifolia</i> Hook.f. & Thoms.	S: Kikeriwera, Heen-kekiriwara	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Schumacheria castaneifolia</i> Vahl	S: Kekiri-Wara, Heen-Kekiri-Wara	LC			
<i>Tetracera akara</i> (Burm. f.) Merr.	S: Eth-Korassa-Wel	VU	B1ab(i,ii,iii)		
<i>Tetracera sarmentosa</i> (L.) Vahl	S: Korossa-Wal, Korasa, Korass-Wel	LC			
<b>Family : Dioscoreaceae</b>					
<i>Dioscorea bulbifera</i> L.	E: Aerial Yam, Potato Yam; S: Bakamuna-Wel, Panu-Kondol, Udala; T: Mothaka Valli(Wild), Rasa Valli (Cultivars)	LC			
<i>Dioscorea koyamae</i> Jayasuriya	S: Gonala, Kahata-Gonala, Kiri-Gonala	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Dioscorea oppositifolia</i> L.	S: Gonala, Hiritala, Kitala, Viala	NT			
<i>Dioscorea pentaphylla</i> L.	S: Katu-Ala, Katuwala-Ala; T: Allai	LC			
<i>Dioscorea spicata</i> Roth	S: Gonala	VU	B1ab(i,ii,iii)		
<i>Dioscorea tomentosa</i> Koenig ex Spreng.	S: Uyala	LC			
<i>Dioscorea trimenii</i> Prain & Burkill	S: Dahiya-Ala	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Tacca leontopetaloides</i> (L.) Kuntze	S: Garandi-Kidaran	DD			
<i>Trichopus zeylanicus</i> Gaertn.	S: Bim-Pol	VU	A2 d		
<b>Family : Dipterocarpaceae</b>					
<i>Balanocarpus brevipetiolaris</i> (Thw.) Alston		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Balanocarpus kitulgallensis</i> Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Dipterocarpus glandulosus</i> Thw.	S: Dorana	EN	B2ab(i,ii,iii)	CR <sup>i</sup>	A1cd, B1+2c
<i>Dipterocarpus hispidus</i> Thw.	S: Bu-hora	VU	B2ab(i,ii,iii)	CR <sup>i</sup>	A1cd
<i>Dipterocarpus insignis</i> Thw.	S: Weli-Dorana	EN	B2ab(i,ii,iii)	CR <sup>i</sup>	A1bcd, B1+2c
<i>Dipterocarpus zeylanicus</i> Thw.	S: Hora	NT		EN <sup>i</sup>	A1cd
<i>Doona affinis</i> Thw.	S: Pathuru Yakahalu, Beraliya-Dun, Miris-Dun	VU	B1ab(i,ii,iii,v)	EN <sup>i</sup>	A1cd
<i>Doona congestifolora</i> Thw.	S: Tiniya, Thinniya, Tiniya-Dun	VU	B1ab(i,ii,iii,v)		
<i>Doona gardneri</i> Thw.	E: Red Doon; S: Ratu-Dun; T: Konge-Koongili	VU	B1ab(i,ii,iii,v)	CR <sup>i</sup>	A1cd

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<i>Doona macrophylla</i> Thw.	S: Honda-Beraliya, Kana-Beraliya, Maha-Beraliya	VU	B1ab(i,ii,iii,v)	CR <sup>i</sup>	A1cd
<i>Doona nervosa</i> Thw.	E: Red Doon; S: Hal Beraliya, Kotikan-Beraliya	VU	B1ab(i,ii,iii,v)	CR <sup>i</sup>	A1cd
<i>Doona oblonga</i> Thw.		VU	B1ab(i,ii,iii,v)	EN <sup>i</sup>	A1cd
<i>Doona ovalifolia</i> Thw.	S: Pini-Beraliya	EW		CR <sup>i</sup>	A1cd, C2a
<i>Doona trapezifolia</i> Thw.	S: Yakahalu	VU	B1ab(i,ii,iii)	CR <sup>i</sup>	A1cd
<i>Doona venulosa</i> Thw.	S: Beraliya	VU	B1ab(i,ii,iii)	EN <sup>i</sup>	A1cd
<i>Doona zeylanica</i> Thw.	S: Dun; T: Koongili	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR <sup>i</sup>	A1cd, C2a
<i>Hopea cordifolia</i> (Thw.) Trimen	S: Mendora, Uva-Mendora	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	A1cd, B1+2c, D
<i>Hopea discolor</i> Thw.	S: Peely-Dun, Ratu-Dun	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	A1bcd, B1+2c, C1, D
<i>Hopea jucunda</i> Thw.	S: Rat-Beraliya	VU	B1ab(i,ii,iii)		
<i>Hopea modesta</i> (A.DC.) Kosterm.	S: Pini-Beraliya	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Shorea dyeri</i> Thw.	S: Nawara-Dun, Yakahalu-Dun, Yakahalu	VU	B1ab(i,ii,iii)		
<i>Shorea hulanidda</i> Kosterm.	S: Hulan-Idda, Nawa-Dun	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Shorea lissophylla</i> Thw.	S: Gal-Pana Mora, Mal-Mora	VU	B1ab(i,ii,iii)	CR <sup>i</sup>	A1cd, C2a
<i>Shorea oblongifolia</i> Thw.	S: Pana-Mora, Panadora, Pathuru-Yakkahalu	VU	B1ab(i,ii,iii)	CR <sup>i</sup>	A1cd
<i>Shorea pallescens</i> Ashton	S: Ratu-Dun	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR <sup>i</sup>	A1cd, C2a
<i>Shorea stipularis</i> Thw.	S: Hulan-Idda, Nawa-Dun, Nawada	VU	B1ab(i,ii,iii)	CR <sup>i</sup>	A1cd
<i>Stemonoporus acuminatus</i> (Thw.) Beddome		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	A1c
<i>Stemonoporus affinis</i> Thw.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR <sup>i</sup>	A1c
<i>Stemonoporus angustisepalum</i> Kosterm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	A1c
<i>Stemonoporus bullatus</i> Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	A1c
<i>Stemonoporus canaliculatus</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR	A1c
<i>Stemonoporus cordifolius</i> (Thw.) Alston	S: Iri Dorala	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	A1c
<i>Stemonoporus elegans</i> (Thw.) Alston		VU	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR <sup>i</sup>	A1c
<i>Stemonoporus gardneri</i> Thw.	S: Hal, Ugudu-Hal, Hal-Mandora	VU	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	A1c <sup>d</sup>
<i>Stemonoporus gilimalensis</i> Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR <sup>i</sup>	A1c, C2a
<i>Stemonoporus gracilis</i> Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR <sup>i</sup>	A1c, D

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<i>Stemonoporus kanneliyensis</i> Kosterm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	A1c, C2a
<i>Stemonoporus laevifolius</i> Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	A1c, B1+2c
<i>Stemonoporus lanceolatus</i> Thw.		CR	B1ab(i,ii,iii)	CR <sup>i</sup>	A1c, D
<i>Stemonoporus lancifolius</i> (Thw.) Ashton		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR <sup>i</sup>	A1c, D
<i>Stemonoporus latisepalum</i> Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR <sup>i</sup>	B1+2c, D
<i>Stemonoporus marginalis</i> Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR <sup>i</sup>	B1+2c, D
<i>Stemonoporus moonii</i> Thw.	S: Hora-Wel	CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR <sup>i</sup>	C2a, D
<i>Stemonoporus nitidus</i> Thw.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR <sup>i</sup>	A1c, D
<i>Stemonoporus oblongifolius</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	A1c
<i>Stemonoporus petiolaris</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR <sup>i</sup>	A1c+2c, C2a
<i>Stemonoporus reticulatus</i> Thw.	S: Hal-Mandora	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	A1c
<i>Stemonoporus revolutus</i> Trimen ex Hook.f.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	A1c
<i>Stemonoporus rigidus</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	A1c
<i>Stemonoporus scalarinervis</i> Kosterm.	S: Ugadu-Hal	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Stemonoporus scaphifolius</i> Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	A1c
<i>Stemonoporus wightii</i> Thw.	S: Hal-Mendora	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sunaptea scabriuscula</i> (Thw.) Trimen	S: Na-Mendora	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Vateria copallifera</i> (Retz.) Alston	S: Hal; T: Kungiliyam Pinai	VU	B1ab(i,ii,iii)	EN <sup>i</sup>	A1cd, C2a
<i>Vatica affinis</i> Thw.	S: Hal-Mendora	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR <sup>i</sup>	A1c, C2a
<i>Vatica lewisiana</i> (Trimen ex Hook.f.) Livera		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Vatica obscura</i> Trimen		VU	B1ab(i,ii,iii)	EN <sup>i</sup>	A1cd
<i>Vatica paludosa</i> Kosterm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Droseraceae</b>					
<i>Drosera burmannii</i> Vahl	E: Sundew; S: Wata-Essa	VU	C1	LC	
<i>Drosera indica</i> L.	E: Sundew; S: Kandulesa	VU	C1	LC	
<i>Drosera peltata</i> Smith	E: Sundew; S: Ada-Handa-Essa	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	

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<b>Family : Ebenaceae</b>					
<i>Diospyros acuminata</i> (Thw.) Kosterm.		VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Diospyros acuta</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Diospyros affinis</i> Thw.	S: Eta-Thimbiri, Kalu-Wella, Kalu-Welle ; T: Semelpnachai	NT			
<i>Diospyros albiflora</i> Alston		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Diospyros atrata</i> Alston		EN	B2ab(i,ii,iii)	VU <sup>i</sup>	B1+2c
<i>Diospyros attenuata</i> Thw.	S: Kadumberiya	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Diospyros chaetocarpa</i> Kosterm.	S: Kalu-Mediriya	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	VU <sup>i</sup>	A1c, B1+2c
<i>Diospyros crumenata</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Diospyros ebenuoides</i> Kosterm.	S: Kalu-Habaraliya; T: Irumpalai, Juwarai	EN	A2 ad,B2ab (i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Diospyros ebenum</i> Koenig	E: Ebony; S: Kaluwara ; T: Karunkali	EN	A2 ad	DD <sup>i</sup>	
<i>Diospyros hirsuta</i> L.f.		VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Diospyros insignis</i> Thw.	S: Gona, Porawa-Mara, Wal-Mediriya	LC	B1ab(i,ii,iii)		
<i>Diospyros koenigii</i> Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Diospyros malabarica</i> (Desr.) Kostel.	E : Gaub Persimmon; S: Timbiri; T :Panichchai	LC			
<i>Diospyros melanoxydon</i> Roxb.	S: Kadumberiya	EN	A2 ad,B1 B2 ab(i,ii,iii,v)		
<i>Diospyros montana</i> Roxb.	T: Katukanni, Mulkarunkali, Vakkana, Vakkani	NT			
<i>Diospyros moonii</i> Thw.	S: Kadumberiya, Kaluwella	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR <sup>i</sup>	B1+2c
<i>Diospyros nummulariifolia</i> Kosterm.		LC			
<i>Diospyros oblongifolia</i> (Thw.) Kosterm.		VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Diospyros okkesii</i> Kosterm.		DD			
<i>Diospyros oocarpa</i> Thw.	S: Ela-Thimbiri, Kalu-Kudumberiya; T: Velli-Karunkkali	NT			
<i>Diospyros oppositifolia</i> Thw.	S: Kalu-Mediriya, Kudumberiya	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Diospyros ovalifolia</i> Wight	S: Habara, Kunumella; T: Vedukkanari, Vedukunari	LC			

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<i>Diospyros pemadasai</i> Jayasuriya	S: Kola-Pellan	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Diospyros quaesita</i> Thw.	E: Calamander; S: Kalu-Mediriya	EN	B2ab(i,ii,iii)	VU <sup>i</sup>	A1cd
<i>Diospyros racemosa</i> Thw.	S: kahakala, Kaluwella; T: Vellai Thoverii	VU	B1ab(i,ii,iii)		
<i>Diospyros rheophytica</i> Kosterm.		EN	B2ab(i,ii,iii)	CR <sup>i</sup>	B1+2c
<i>Diospyros sylvatica</i> Roxb.	S: Hompilla, Sudu-Kudumberiya; T: Kurruppu-Thoveria	VU	B1ab(i,ii,iii)		
<i>Diospyros thwaitesii</i> Beddome	S: Boromala, Kadumberiya,	VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c, B1+2c
<i>Diospyros trichophylla</i> Alston		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	VU <sup>i</sup>	A1c, B1+2c
<i>Diospyros walkeri</i> (Wight) Guerke	E: Bastard Ebony; S: Porowa Mala, Kaluwelle	VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Maba buxifolia</i> (Rottb.) Juss		LC			
<b>Family : Elaeagnaceae</b>					
<i>Elaegnus latifolia</i> L.	S: Katu-Embilla, Wel-Embilla	LC			
<b>Family : Elaeocarpaceae</b>					
<i>Elaeocarpus amoenus</i> Thw.	S: Titta-Weralu	VU	B1ab(i,ii,iii)		
<i>Elaeocarpus coriaceus</i> Hook.	S: Gal-Weralu	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Elaeocarpus glandulifer</i> (Hook.) Masters	S: Gal-Weralu	VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Elaeocarpus hedyosmus</i> Zmarzty		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Elaeocarpus montanus</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Elaeocarpus serratus</i> L.	E: Wild Olive; S: Weralu	LC			
<i>Elaeocarpus subvillosus</i> Arn.	S: Gal-Weralu	NT			
<i>Elaeocarpus taprobanicus</i> Zmarzty		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Elaeocarpus zeylanicus</i> (Arn.) Masters		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Elatinaceae</b>					
<i>Bergia ammanioides</i> Roxb. ex Roth		NT			
<i>Bergia capensis</i> L.	S: Geta - Purukwila	LC			
<b>Family : Ericaceae</b>					
<i>Gultheria leschenaultii</i> DC.	S: Wel-Kapuru	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Rhododendron arboreum</i> Smith subsp. <b>zeylanicum</b> (Booth) Tagg	S: Ma-Ratmal	VU	B1ab(i,ii,iii)		
<i>Vaccinium leschenaultii</i> Wight	S: Boralu	VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Eriocaulaceae</b>					
<i>Eriocaulon atratum</i> Kornicke		VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eriocaulon brownianum</i> Mart.		VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eriocaulon catopsioides</i> S.M. Phillips		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eriocaulon ceylanicum</i> Kornicke		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eriocaulon cinereum</i> R. Br.		LC			
<i>Eriocaulon fergusonii</i> (Moldenke) S.M. Phillips		CR(PE)			
<i>Eriocaulon fluviatile</i> Trimen		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<i>Eriocaulon longicuspe</i> Hook.f.		VU	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<i>Eriocaulon odoratum</i> Dalz.		LC		LC	
<i>Eriocaulon philippo-coburgi</i> Szyszyl. ex Wawra		VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eriocaulon psammophilum</i> S.M. Phillips		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eriocaulon quinquangulare</i> L.	S: Heen-Kokmota	LC			
<i>Eriocaulon setaceum</i> L.	S: Penda	LC			
<i>Eriocaulon sexangulare</i> L.	S: Kokmota	LC			
<i>Eriocaulon subglaucum</i> Ruhland		CR(PE)			
<i>Eriocaulon thwaitesii</i> Kornicke		VU	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<i>Eriocaulon thysanocephalum</i> S.M. Phillips		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eriocaulon trimeni</i> Hook.f.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eriocaulon truncatum</i> Mart.		LC			
<i>Eriocaulon walkeri</i> Hook.f.		VU	BI ab(i,ii,iii)		
<i>Eriocaulon willdenovianum</i> Moldenke		NT			
<b>Family : Erythroxylaceae</b>					
<i>Erythroxylum lanceolatum</i> (Wight) Walp.		VU	B2ab(i,ii,iii)		
<i>Erythroxylum monogynum</i> Roxb.	S: Devadaram; T: Chemanatti	NT			

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<i>Erythroxylum moonii</i> Hochr.	S: Bata-Kirilla; T: Chiru-Chemannatti	NT			
<i>Erythroxylum obtusifolium</i> (Wight) Hook.f.		LC			
<b><i>Erythroxylum zeylanicum</i></b> O. Schulz		LC			
<b>Family : Euphorbiaceae</b>					
<i>Acalypha fruticosa</i> Forssk.		LC			
<i>Acalypha indica</i> L.	S: Kuppameniya; T: Kuppameni, Punairananki	LC			
<i>Acalypha lanceolata</i> Willd.		LC			
<i>Acalypha racemosa</i> Wall. ex Baill.		LC			
<i>Acalypha supera</i> Forssk.		DD			
<b><i>Adenochlaena zeylanica</i></b> (Baill.) Thw.		CR(PE)			
<b><i>Agrostistachys coriacea</i></b> Alston	S: Beru	LC		VU <sup>1</sup>	A1c
<b><i>Agrostistachys hookeri</i></b> (Thw.) Benth.	S: Diya-Beru, Kunu-Beru, Maha-Beru	LC		CR <sup>1</sup>	B1+2c
<i>Agrostistachys indica</i> Dalz.		LC			
<b><i>Agrostistachys intramarginalis</i></b> Philcox		LC			
<i>Chaetocarpus castanocarpus</i> (Roxb.) Thw.	S: Hedawaka, Hedoka	LC			
<b><i>Chaetocarpus coriaceus</i></b> Thw.	S: Gal-Hadoka, Hedawaka, Hedoka	LC		VU <sup>1</sup>	A1c
<b><i>Chaetocarpus ferrugineus</i></b> Philcox		VU	B1ab(i,ii,iii)		
<b><i>Chaetocarpus pubescens</i></b> (Thw.) Hook. f.		VU	B1ab(i,ii,iii)		
<i>Chrozophora plicata</i> (Vahl) A. Juss ex Spreng.		DD			
<i>Cleidion nitidum</i> (Muell. Arg.) Thw. ex Kurz		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Cleidion spiciflorum</i> (Burm.f.) Merr.	S: Okuru	VU	B1ab(i,ii,iii)		
<i>Croton aromaticus</i> L.	S: Wel-Keppetiyaya; T: Teppaddi	LC			
<i>Croton caudatus</i> Geisel	S: Vel-Keppetiyaya	EN	B2ab(i,ii,iii)		
<i>Croton laccifer</i> L.	S: Gas- Keppetiyaya, Keppetiyaya; T: Teppaddi	LC			
<b><i>Croton moonii</i></b> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Croton nigroviridis</i></b> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		



Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Croton officinalis</i> (Klotzsch) Alston		LC			
<b><i>Croton persimilis</i></b> Muell.Arg.	S: Akurella; T: Milla Kunari	VU	B1ab(i,ii,iii)		
<i>Croton zeylanicus</i> Muell.Arg.		CR(PE)			
<i>Dalechampia indica</i> Wight		CR	B2ab(i,ii,iii)		
<i>Dimorphocalyx glabellus</i> Thw.	S: Weli-Wenna; T: Tentuikki, Tentukki	LC			
<i>Euphorbia antiquorum</i> L.	S: Daluk; T: Chatura Kalli	LC			
<i>Euphorbia atoto</i> Forst.		CR(PE)			
<i>Euphorbia cristata</i> Heyne ex Roth		DD			
<i>Euphorbia granulata</i> Frossk.		DD			
<i>Euphorbia hirta</i> L.	S: Bu-Dada-Kiriya; T: Palavi	LC			
<i>Euphorbia indica</i> Lam.	S: Ela-Dada-Kiriya	LC			
<i>Euphorbia rosea</i> Retz.	S: Mudu-Dada-Kiriya	LC			
<i>Euphorbia rothiana</i> Spreng.		LC			
<i>Euphorbia thymifolia</i> L.	S: Bin-Dada-Kiriya, T: Chittirapalavi	LC			
<i>Euphorbia tortilis</i> Rottler ex Ainslie	S: Sinuk	CR(PE)			
<i>Euphorbia trigona</i> Haw.		VU	B1ab(i,ii,iii)		
<i>Excoecaria agallocha</i> L.	S: Tala-Kiriya, Tela Kiriya, Tel Kiriya; T: Tilai	LC		LC	
<i>Excoecaria oppositifolia</i> Griffith var. <i>crenulata</i> (Wight) Chakrab. & M.G.Ganop		VU	B1ab(i,ii,iii)		
<i>Fahrenheitia minor</i> (Thw.) Airy Shaw	S: Olu-Petta, Wal-Kekuna	LC			
<i>Fahrenheitia zeylanica</i> (Thw.) Muell.Arg.	S: Mawata, Olu-Petta	LC			
<i>Givotia moluccana</i> (L.) Sreem.	T: Puttalai	LC			
<i>Homalanthus populifolius</i> Graham	S: Gini-kanda, Kanda; T: Pramaram	LC			
<i>Homonoia riparia</i> Lour.		NT			
<i>Jatropha glandulifera</i> Roxb.	T: Atalai	NT			
<b><i>Macaranga digyna</i></b> (Wight) Muell.Arg.	S: Gal-Ota, Ota	NT			

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Macaranga indica</i> Wight	S: Kenda; T: Vattakanni	LC			
<i>Macaranga peltata</i> (Roxb.) Muell.Arg	S: Kenda, Pat-kenda; T: Vattakanni	LC			
<i>Mallotus distans</i> Muell.Arg.		DD			
<b><i>Mallotus eriocarpus</i></b> (Thw.) Muell.Arg.	S: Bulu-Petta, Vel-Keppetiya; T: Maratini	LC			
<b><i>Mallotus fuscescens</i></b> (Thw.) Muell.Arg.		LC			
<i>Mallotus philippensis</i> (Lam.) Muell. Arg.	S: Hamparila, Hamparilla; T: Kapila	LC			
<i>Mallotus repandus</i> (Willd.) Muell. Arg.		LC			
<b><i>Mallotus resinusus</i></b> (Blanco) Merr.	S: Ma-Endaru	LC			
<i>Mallotus rhamnifolius</i> (Willd.) Muell. Arg.	S: Molabe; T: Marai-Tinni, Maraitium	LC			
<i>Mallotus tetracoccus</i> (Roxb.) Kurz	S: Bu-Kenda; T: Mullupolavu	LC			
<i>Micrococca mercurialis</i> (L.). Benth.		LC			
<i>Micrococca oligandra</i> (Muell. Arg.) Prain		VU	B1ab(i,ii,iii)		
<b><i>Ptychopyxis thwaitesii</i></b> (Baill.) Croizat	S: Wal-Rambutan	VU	B1ab(i,ii,iii)		
<i>Sapium indicum</i> Willd.	S: Kiri-Makulu	VU	B1ab(i,ii,iii)		
<i>Sapium insigne</i> (Royle) Benth.	S: Kaduru, Tel-Kaduru	LC			
<i>Sebastiania chamaelea</i> (L.) Muell. Arg.	S: Rat Pita Wakka	LC			
<i>Suregada angustifolia</i> (Muell. Arg.) Airy Shaw		LC			
<i>Suregada lanceolata</i> (Willd.) Kuntze	T: Kakkaipalai, Potpattai	LC			
<i>Tragia hispida</i> Willd.	S: Wel-Kahabiliya	LC			
<i>Tragia involucreta</i> L.	S: Wel-Kahabiliya	LC			
<i>Tragia muelleriana</i> Pax & Hoffm.		CR(PE)			
<i>Tragia plukenetii</i> Radcliffe-Smith	S: Wel-Kahabiliya	NT			
<i>Trewia nudiflora</i> L.	E: Fever Tree; S: Opinna; T: Karachal-Maran, Tidimbi	VU	B1ab(i,ii,iii)		
<b><i>Trigonostemon diplopetalus</i></b> Thw.		CR(PE)			
<i>Trigonostemon nemoralis</i> Thw.		VU	B1ab(i,ii,iii)		
<b>Family : Fabaceae</b>					

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<i>Abarema abeywickramae</i> Kosterm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Abarema bigemina</i> (L.) Kosterm.	S: Kalatiya	LC			
<i>Abarema subcoriacea</i> (Thw.) Kosterm.	S: Mimini-Mara	VU	B1ab(i,ii,iii)		
<i>Abrus melanospermus</i> Hassk.	S: Ella-Olinda	LC			
<i>Abrus precatorius</i> L.	E: Crab's Eyes, Indian Liquorice; S: Olinda, Olinda-Wel; T: Kundu-Mani, Kuntu-Mani	LC			
<i>Acacia caesia</i> (L.) Willd.	S: Hinguru-Vel	LC			
<i>Acacia chundra</i> Willd.	S: Rat-Kihiriya; E: Red-cutch; T: karangali, kodalimurukai	LC			
<i>Acacia eburnea</i> (L. f.) Willd.	E: Cockspur Thorn; S: Kaludai, Udai-Vel	LC			
<i>Acacia lankaensis</i> Kosterm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Acacia leucophloea</i> (Roxb.) Willd.	S: Katu-Andara, Maha Andara; T: Velvalayam, Velve	LC			
<i>Acacia pennata</i> (L.) Willd.	S: Goda Hinguru, Hinguru	LC			
<i>Acacia planifrons</i> Wight & Arn.	E: Jungle Nail, Umbrella Tree; T: Odai, Udai	LC			
<i>Acacia tomentosa</i> Willd.	E: Elephant Thorn, Jungle Nail; T: Anaimulli	VU	B2ab(i,ii,iii)		
<i>Adenanthera bicolor</i> Moon	S: Mas-Mora	NT			
<i>Adenanthera pavonina</i> L.	S: Madatiya; T: Anaikuntumani, Anikundumani	LC			
<i>Aeschynomene aspera</i> L.	E: Pith Plant, Shola, Shola-Pith; S: Maha-Diya-Siyambala; T: Attuneddi	LC			
<i>Aeschynomene indica</i> L.	S: Diya-Siyambala, Heen-Diya-Siyambala	LC			
<i>Aganope heptaphylla</i> (L.) Polhill		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Albizia amara</i> (Roxb.) Boivin.	T: Thuringi, Usil Ujil, Uyil, Wienja	NT			
<i>Albizia chinensis</i> (Osbeck) Merr.	S: Kabal-Mara, Hulan-Mara; T: Pili Vagai	VU	B1ab(i,ii,iii)		
<i>Albizia lankaensis</i> Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Albizia lebbeck</i> (L.) Benth.	S: Mara, Suriya-Mara; T: Kona, Vakai, Vagei	NT			
<i>Albizia odoratissima</i> (L. f.) Benth.	S: Huriyi, Suriya-Mara; T: Ponnaimurankai	LC			

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Alysicarpus bupleurifolius</i> (L.) DC.	T: Kutiraival	DD			
<i>Alysicarpus heyneanus</i> Wight & Arn.		DD			
<i>Alysicarpus longifolius</i> (Rottler ex Spreng.) Wight & Arn.		DD			
<i>Alysicarpus monilifer</i> (L.) DC.		DD			
<i>Alysicarpus rugosus</i> (Willd.) DC.		DD			
<i>Alysicarpus scariosus</i> (Rottler ex Spreng.) Graham ex Thw.		DD			
<i>Alysicarpus vaginalis</i> (L.) DC.	S: Aswenna	LC			
<i>Aphyllodium biarticulatum</i> (L.) Gagnep.		LC			
<i>Atylosia albicans</i> (Wight & Arn.) Benth.	S: Wal-Kollu	NT			
<i>Atylosia rugosa</i> Wight & Arn.	S: Wal-Kollu	LC			
<i>Atylosia scarabaeoides</i> (L.) Benth.	S: Wal-Kollu, Wa- Undu, Wal-Undu-Wel	LC			
<i>Atylosia trinervia</i> (DC.) Gamble	S: Atta-tora, Et-tora	LC			
<i>Bauhinia racemosa</i> Lam.	E: Atti; S: Maila, Mayila	LC			
<i>Bauhinia tomentosa</i> L.	S: Kaha-Petan, Petan; T: Tiruvathi, Tiruvatti	LC			
<i>Butea monosperma</i> (Lam.) Taub.	E: Bengal Kino; S: Gas-Kela; T: Parasu, Murrakan	VU	B2ab(i,ii,iii)		
<i>Caesalpinia bonduc</i> (L.) Roxb.	E: Grey Nicker; S: Kalu-Vavuletiya, Kumburu-Wel, Wael-Kumburu; T: Punaikkalaichchi	LC			
<i>Caesalpinia crista</i> L.	S: Diya-Wavuletiya	VU	B1ab(i,ii,iii)		
<i>Caesalpinia decapetala</i> (Roth) Alston		NT			
<i>Caesalpinia digyna</i> Rottler	E: Tari Pods; S: Hinguru	CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Caesalpinia hymenocarpa</i> (Prain) Hattink	S: Goda-Wawuletiya, Rat-Kalabatu-Wel	NT			
<i>Caesalpinia major</i> (Medikus) Dandy & Excell	E: Yellow Nicker	VU	B1ab(i,ii,iii)		
<i>Caesalpinia sappan</i> L.	E: Sappan Wood; S: Patangi	DD			
<i>Canavalia cathartica</i> Thouars	E: Wild Bean	LC			
<i>Canavalia mollis</i> Wall. ex Wight & Arn.		DD			
<i>Canavalia rosea</i> (Sw.) DC.	S: Mudu-Awara	LC			

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Canavalia virosa</i> (Roxb.) Wight & Arn.	S: Mudu-Awara, Wal-Awara	LC			
<i>Cassia absus</i> L.	S: Bu-Tora	LC			
<i>Cassia aeschinomene</i> DC. ex Collad.		LC			
<i>Cassia auricoma</i> Graham ex Steyaert		VU	B1ab(i,ii,iii)		
<i>Cassia auriculata</i> L.	S: Ranawara; E: Matara Tea; T: Avarai	LC			
<i>Cassia hirsuta</i> L.		LC			
<i>Cassia italica</i> (Mill.) Spreng.	E: Italian senna; T: Nilavakai	DD			
<i>Cassia kleinii</i> Wight & Arn.	S; Bin-siyambala	LC			
<i>Cassia mimosoides</i> L.	S: Bin-Siyambala	LC			
<i>Cassia occidentalis</i> L.	E: Cofee-Senna, Cofee-Weed; S: Peni Tora, Hiwal Thora; T:Ponnantakarai	LC			
<i>Cassia roxburghii</i> DC.	S: Ratu-Wa; T: Vakai	LC			
<i>Cassia senna</i> L.	E: True senna	DD			
<i>Cassia siamea</i> Lam.	S: Aramana,Wa; E; Kassod tree; T: manga konnei, vakai	LC			
<i>Cassia sophera</i> L.	S:Uru-Kona; T:Munjal-Kona	LC			
<i>Cassia tora</i> L.	S: Peti-Tora, Tora	LC			
<i>Cathormion umbellatum</i> (Vahl) Kosterm.	T: Ichchavalai, Iyamalai	VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Clitoria ternatea</i> L.	S: Katarodu-Wal, Nil-Katarodu; T: Karuttappu	LC			
<i>Crotalaria albida</i> Heyne ex Roth		LC			
<i>Crotalaria angulata</i> Mill.		VU	B1ab(i,ii,iii)		
<i>Crotalaria berteriana</i> DC.		DD			
<i>Crotalaria bidiei</i> Gamble		VU	B1ab(i,ii,iii)		
<i>Crotalaria calycina</i> Schrank	S: Gorandiya	LC			
<i>Crotalaria clavata</i> Wight & Arn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Crotalaria evolvuloides</i> Wight ex Wight & Arn.		NT			
<i>Crotalaria ferruginea</i> Graham ex Benth.		LC			

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<i>Crotalaria hebecarpa</i> (DC.) Rudd	S: Bu-Gota-Kota	LC			
<i>Crotalaria juncea</i> L.	S:Hana; E: Hemp, Sunn-Hemp	DD			
<i>Crotalaria laburnifolia</i> L.	S: Yak-Beriya	LC			
<i>Crotalaria linifolia</i> L. f.		DD			
<i>Crotalaria lunulata</i> Heyne ex Wight & Arn.		LC			
<i>Crotalaria medicaginea</i> Lam.		NT			
<i>Crotalaria montana</i> Roth		DD			
<i>Crotalaria multiflora</i> (Arn.) Benth.		VU	B1ab(i,ii,iii)		
<i>Crotalaria mysorensis</i> Roth		CR(PE)			
<i>Crotalaria nana</i> Burm. f.		LC			
<i>Crotalaria pallida</i> Ait.		LC			
<i>Crotalaria prostrata</i> Rottler ex Willd.		EN	B2ab(i,ii,iii)		
<i>Crotalaria quinquefolia</i> L.		LC			
<i>Crotalaria retusa</i> L.	S: Kaha-Andana-Hiriya; T:Kilukiluppai	LC			
<i>Crotalaria scabrella</i> Wight & Arn.		VU	B1ab(i,ii,iii)		
<i>Crotalaria verrucosa</i> L.	E:Blue-Andana; S: Nil-Andana-Hiriya, Silibili; T:Kilukiluppai	LC			
<i>Crotalaria walkeri</i> Arn.		LC			
<i>Crotalaria wightiana</i> Graham ex Wight & Arn.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Crudia zeylanica</i></b> (Thw.) Benth.		EX			
<i>Cullen corylifolium</i> (L.) Medikus	S: Bodi; T: Karporgam, Kavothi, Kavoti	EN	B2ab(i,ii,iii)		
<i>Cyamopsis tetragonoloba</i> (L.) Taub.	E: Cluster Bean, Guar; T: Koth-Averay	DD			
<i>Cynometra iripa</i> Kostel.	S: Opolu; T: Attukaddupuli, Kadumpuli	VU	B2ab(i,ii,iii)		
<b><i>Cynometra zeylanica</i></b> Kosterm.		NT			
<i>Dalbergia candenatensis</i> (Dennst.) Prain		VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Dalbergia lanceolaria</i> L.f.	S: Bol-Mara, Kala, Huri Mara; T: Velaruvai	VU	B1ab(i,ii,iii)		
<i>Dalbergia pseudo-sissoo</i> Miq.	E: Hornet Creeper; S: Bambara-Wel	LC			

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<i>Dendrolobium triangulare</i> (Retz.) Schindl.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Dendrolobium umbellatum</i> (L.) Benth.		VU	B1ab(i,ii,iii)		
<i>Derris benthamii</i> (Thw.) Thw.	S: Han-Kala-Wel; T: Karapu-Tekel	VU	B1ab(i,ii,iii)		
<i>Derris canarensis</i> (Dalz.) Baker	S: Diya-Kala-Wel, Kalu-Kala-Wel	NT			
<b><i>Derris parviflora</i></b> Benth.	S: Kala-Vel, Sudu-Kala-Wel	LC			
<i>Derris scandens</i> (Roxb.) Benth.	S: Ala-Vel, Bo-Kala-Wel, Kala-Wel; T: Kalungu Kodi, Telil, Welan-Tekal	LC			
<i>Derris trifoliata</i> Lour.	S: Kala-Wel; T: Tekil, Tilankoddi, Uppu Thailan-Kodi	LC			
<i>Desmodium caudatum</i> (Thunb.) DC.		CR(PE)			
<i>Desmodium ferrugineum</i> Wall. ex Thw.		CR	B2ab(i,ii,iii)		
<i>Desmodium gangeticum</i> (L.) DC.		EN	B2ab(i,ii,iii)		
<i>Desmodium heterocarpon</i> (L.) DC.	S: Et-Udupiyali	LC			
<i>Desmodium heterophyllum</i> (Willd.) DC.	S: Maha-Udupiyaliaya	LC			
<b><i>Desmodium jucundum</i></b> Thw.		CR(PE)			
<i>Desmodium laxum</i> DC.		VU	B1ab(i,ii,iii)		
<i>Desmodium microphyllum</i> (Thunb.) DC.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Desmodium pryonii</i> DC.		LC			
<i>Desmodium repandum</i> (Vahl) DC.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Desmodium styracifolium</i> (Osbeck) Merr.		DD			
<i>Desmodium triflorum</i> (L.) DC.	S: Heen-Udupiyali	LC			
<i>Desmodium velutinum</i> (Willd.) DC.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Desmodium zonatum</i> Miq.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Dialium ovoideum</i> Thw.	E: Velvel Tamarind; S: Gal-Siyambala; T: Kaddupuli	VU	A1 d		
<i>Dichrostachys cinerea</i> (L.) Wight & Arn.	S: Andara; T: Vindattai	LC			
<i>Dioclea javanica</i> Benth.		CR(PE)			
<i>Dolichos trilobus</i> L.	S: Wal Dambala	NT			

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Dumasia villosa</i> DC. var. <i>leiocarpa</i> (Benth.) Baker		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Dunbaria ferruginea</i> Wight & Arn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Dunbaria heynei</i> Wight & Arn.		CR(PE)			
<i>Eleiotis monophyllos</i> (Burm.f.) DC.		CR	B1ab(i,ii,iii)		
<i>Entada pusaetha</i> DC.	S : Pus-Wel	LC			
<i>Entada zeylanica</i> Kosterm		VU	B1ab(i,ii,iii)		
<i>Erythrina fusca</i> Lour.	S: Yak-Erabadu	NT			
<i>Erythrina variegata</i> L.	E: Coral Tree, Indian Coral Tree,Thorny Dadap; S: Erabadu, Eramudu, Katu-Eramudu,Weta-Erabodu,Yak-Erabodu; T: Mulu-Murukku, Murukku, Murungu	LC			
<i>Flemingia lineata</i> (L.) Roxb.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Flemingia macrophylla</i> (Willd.) Merr.	S: Wal-Undu	CR(PE)			
<i>Flemingia strobilifera</i> (L.) Roxb	S: Hampilla, Hampinna	LC			
<i>Flemingia wightiana</i> Graham ex Wight & Arn.		DD			
<i>Galactia striata</i> (Jacq.) Urban		DD			
<i>Humboldtia laurifolia</i> (Vahl) Vahl	S: Gal-Karanda, Ruan-Karanda	LC			
<i>Indigofera aspalathoides</i> Vahl ex DC.	S: Rat Kohomba; T: Chivanarvempu, Sivanarvum	NT			
<i>Indigofera barberi</i> Gamble		DD			
<i>Indigofera colutea</i> (Burm.f.) Merr.		NT			
<i>Indigofera constricta</i> (Thw.) Trimen		CR(PE)			
<i>Indigofera galegoides</i> DC.	S: Veliveriya	NT			
<i>Indigofera glabra</i> L.		LC			
<i>Indigofera hirsuta</i> L.	S: Boo-Awari	LC			
<i>Indigofera karnatakana</i> Sanjappa		VU	B1ab(i,ii,iii)		
<i>Indigofera linifolia</i> (L.f.) Retz.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		



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<i>Indigofera linnaei</i> Ali	S: Bin-Avari, Binavari; T: Cheppunerenchi	LC			
<i>Indigofera nummulariifolia</i> (L.) Livera ex Alston		LC			
<i>Indigofera oblongifolia</i> Forssk.	T: Kuttukarasmatti, Nante	VU	B2ab(i,ii,iii)		
<i>Indigofera parviflora</i> Heyne ex Wight & Arn.		DD			
<i>Indigofera tinctoria</i> L.	E: Indigo; S: Nil-Awari; T: Nilam	LC			
<i>Indigofera trita</i> L. f.	S: Wal-Awari	LC			
<i>Indigofera wightii</i> Graham ex Wight & Arn.		CR(PE)			
<i>Lablab purpureus</i> (L.) Sweet	E: Bonavist Bean, Hyacinth Bean, Lablab Bean, Wild Bean; S: Ho-Dhambala, Kiri-Dambala, Kos-Ata-Dambala, Ratu-Peti-Dambala, Sudu-Peti Dambala; T: Minni, Motchai, Tatta-Payaru	LC			
<i>Macrotyloma axillare</i> (E. Meyer) Verdc.		CR	B2ab(i,ii,iii)		
<i>Macrotyloma ciliatum</i> (Willd.) Verdc.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Macrotyloma uniflorum</i> (Lam.) Verdc.	E: Horse Gram, Madras Gram; S: Kollu; T: Kollu	VU	B1ab(i,ii,iii)		
<i>Mucuna atropurpurea</i> (Roxb.) DC. ex Wight & Arn.	S: Buchariwa, Ginipus Eta, Bu-Chariya, Gini-Pus-Wel, Ginipus Wel, Buchariwa, Mudu- Evara; T: Pandatullai, P unnakalichi	NT			
<i>Mucuna gigantea</i> (Willd.) DC.	S: Kana-Pus-Waela	CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Mucuna monosperma</i> (Roxb.) DC.		CR(PE)			
<i>Mucuna pruriens</i> (L.) DC.	E: Cowage, Cowhage, Cowitch; S: Achariya, Achariya-Pala, Wanduru-Me, Wel-Damiya; T: Chunao-Avarai, Poonayakali, Punnaikkaali	LC			
<i>Mundulea sericea</i> (Willd.) A. Chevalier	S: Gal-Buruta, Kang-Bandi-Gas, Wal-Buruta, Gal-Burutu; T: Pilavaiam	NT			
<i>Neonotonia wightii</i> (Graham ex Wight & Arn.) Lackey	S: Goradiya	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Neptunia oleracea</i> Lour.	S: Diya-Nidikumba	LC			

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<i>Ormocarpum sennoides</i> (Willd.) DC.	S: Sudu Avariya	EN	B2ab(i,ii,iii)		
<b><i>Painteria nitida</i></b> (Vahl) Kosterm.	S: Diya-Mara	VU	B2ab(i,ii,iii)		
<i>Parochetus communis</i> Buch.-Ham. Ex D. Don	E: Hamrock Pea	EN	B2ab(i,ii,iii)		
<i>Pericopsis mooniana</i> (Thw.) Thw.	E: Nadun Wood; S: Nadun	VU	B1ab(i,ii,iii)		
<i>Phyllodium pulchellum</i> (L.) Desv.	S: Hampilla	NT			
<i>Pongamia pinnata</i> (L.) Pierre	E: Indian Beech, Mullikulam Tree; S: Gal-Karanda, Karanda, Magul-Karanda; T: Poona, Punka, Punku	LC			
<i>Pseudarthria viscida</i> (L.) Wight & Arn.	S: Gas Gonika	LC			
<i>Pterocarpus marsupium</i> Roxb.	S: Gammalu; T: Utera-Venkai, Venkai	VU	B1ab(i,ii,iii)		
<i>Pycnospora lutescens</i> (Poir.) Schindl.		VU	B1ab(i,ii,iii)		
<i>Rhynchosia acutissima</i> Thw.		CR(PE)			
<i>Rhynchosia aurea</i> (Willd.) DC.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Rhynchosia cana</i> (Willd.) DC.	S: Gas-Kollu	NT			
<i>Rhynchosia capitata</i> (Roth) DC.		DD			
<i>Rhynchosia densiflora</i> (Roth) DC.		CR(PE)			
<i>Rhynchosia hirta</i> (Andr.) Meikle & Verdc.	S: Heen-Garadiya	CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Rhynchosia minima</i> (L.) DC.	S: Maha-Wal-Kollu	LC			
<i>Rhynchosia nummularia</i> (L.) DC.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Rhynchosia rufescens</i> (Willd.) DC.		VU	B1ab(i,ii,iii)		
<i>Rhynchosia suaveolens</i> (L.f.) DC.		CR(PE)			
<i>Rhynchosia velutina</i> Wight & Arn.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Rhynchosia viscosa</i> (Roth) DC.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Rothia indica</i> (L.) Druce		LC			
<i>Saraca asoca</i> (Roxb.) de Wild.	S: Ashoka, Asoka, Diya-Rathambala, Diya-Ratmal; T: Asogam	VU	B1ab(i,ii,iii)		
<i>Sesbania bispinosa</i> (Jacq.) W.F. Wight		LC			
<i>Sesbania sericea</i> (Willd.) Link		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Shuteria vestita</i> Wight & Arn.		NT			
<i>Smithia conferta</i> Smith		VU	B1ab(i,ii,iii)		
<i>Smithia racemosa</i> Heyne ex Wight & Arn.		VU	B1ab(i,ii,iii)		
<i>Sophora tomentosa</i> L.	S; Mudu-Murunga	LC			
<b><i>Sophora violacea</i></b> Thw.		CR	B2ab(i,ii,iii)		
<b><i>Sophora zeylanica</i></b> Trimen		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Strongylodon siderospermus</i> Cordemoy		CR(PE)			
<i>Stylosanthes fruticosa</i> (Retz.) Alston	S; Wal-Nanu	LC			
<i>Tadehagi triquetrum</i> (L.) Ohashi	S: Baloliya	LC			
<i>Tephrosia maxima</i> (L.) Pers.		LC			
<i>Tephrosia pumila</i> (Lam.) pers.		LC			
<i>Tephrosia purpurea</i> (L.) Pers.	S: Pila, Gam-Pila; T: Kavilai, Kawati, Kolinchi	LC			
<i>Tephrosia senticosa</i> (L.) Pers.	S:Alu-Pila	NT			
<i>Tephrosia spinosa</i> (L. f.) Pers.	T: Mukavaliver	CR(PE)			
<i>Tephrosia tinctoria</i> (L.) Pers.	S: Alu-Pila	LC			
<i>Tephrosia villosa</i> (L.) Pers.	S: Bu-Pila	LC			
<i>Teramnus labialis</i> (L. f.) Spreng.	S: Wal-Kollu	LC			
<i>Teramnus mollis</i> Benth.	S: Wal-Kollu	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Uraria picta</i> (Jacq.) DC.		NT			
<i>Uraria rufescens</i> (DC.) Schindl.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Vigna aridicola</i> N. Tomooka & Maxted		EN	B2ab(i,ii,iii)		
<i>Vigna dalzelliana</i> (Kuntz) Verdcourt	-	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	-	-
<i>Vigna marina</i> (Burm.) Merr.		EN	B1ab(i,ii,iii)		
<i>Vigna radiata</i> var. <i>sublobata</i> (Roxb.) Verdc.,		NT			
<i>Vigna stipulacea</i> (Lam.) Kuntze		NT			
<i>Vigna trilobata</i> (L.) Verdc.	S: Bin-Me, Munwenna	NT			

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<i>Vigna trinervia</i> (Heyne ex Wight & Arnott) Tetaishi		EN	B1ab(i,ii,iii)		
<i>Zornia diphylla</i> (L.) Pers.		NT			
<i>Zornia gibbosa</i> Span.		LC			
<b><i>Zornia walkeri</i></b> Arn.		NT			
<b>Family : Flacourtiaceae</b>					
<b><i>Chlorocarpa pentaschista</i></b> Alston	S: Makulla, Gomma, Patma	VU	B2ab(i,ii,iii)		
<b><i>Dovyalis hebecarpa</i></b> (Gardner) Warb.	S: Ketambilla; E: Ceylon Gooseberry	EN	B2ab(i,ii,iii)		
<b><i>Erythrospermum zeylanicum</i></b> (Gaertn.) Alston	S: Dodan-Wenna	LC			
<b><i>Osmelia gardneri</i></b> Thw.		EN	B2ab(i,ii,iii)		
<b>Family : Flagellariaceae</b>					
<i>Flagellaria indica</i> L.	S: Goyi-Wel	LC			
<b>Family : Gentianaceae</b>					
<i>Canscora decussata</i> (Roxb.) Roem. & Schult.		VU	B2ab(i,ii,iii)		
<i>Canscora diffusa</i> (Vahl) R. Br.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Canscora heteroclita</i> (L.) Gilg		VU	B2ab(i,ii,iii)		
<i>Canscora roxburghii</i> Arn. ex Miq.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Crawfordia championii</i></b> (Gardner) Trimen		CR(PE)			
<i>Enicostema axillare</i> (Lam.) Raynal		LC			
<b><i>Exacum axillare</i></b> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Exacum macranthum</i></b> Arn. ex. Griseb.		VU	B1ab(i,ii,iii)		
<b><i>Exacum pallidum</i></b> (Trimen) Klack.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Exacum pedunculatum</i> L.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Exacum petiolare</i> Griseb.		LC			
<i>Exacum sessile</i> L.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Exacum trinervium</i></b> (Trimen) Cramer		NT			

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<i>Exacum walkeri</i> Arn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Fagraea ceilanica</i> Thunb.	S: Etamburu	NT			
<i>Gentiana quadrifaria</i> var. <i>zeylanica</i> Blume		NT			
<i>Hoppea fastigiata</i> (Griseb.) Clarke		VU	B2ab(i,ii,iii)		
<i>Swertia zeylanica</i> (Griseb.) Walker ex Clarke		EN	B2ab(i,ii,iii)		
<b>Family : Geraniaceae</b>					
<i>Geranium nepalense</i> Sweet		CR	B1ab(i,ii,iii)		
<b>Family : Gesneriaceae</b>					
<i>Aeschynanthus ceylanica</i> Gardner		VU	B1ab(i,ii,iii)		
<i>Championia reticulata</i> Gardner		VU	B1ab(i,ii,iii)		
<i>Chirita angusta</i> (Clarke) Theobald & Grupe		VU	B1ab(i,ii,iii)		
<i>Chirita moonii</i> Gardner		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Chirita walkeri</i> Gardner		VU	B1ab(i,ii,iii)		
<i>Chirita zeylanica</i> Hook.		VU	B1ab(i,ii,iii)		
<i>Didymocarpus floccosus</i> Thw.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Didymocarpus humboldtianus</i> Gardner		VU	B1ab(i,ii,iii)		
<i>Didymocarpus zeylanicus</i> R.Br.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Epithema carnosum</i> (G.Don) Benth.		VU	B1ab(i,ii,iii)		
<i>Rhynchoglossum gardneri</i> Theobald & Grupe		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Rhynchoglossum notonianum</i> (Wall.) Burt	S: Diya Nilla	NT			
<i>Rhynchochum permolle</i> (Nees) Burt		VU	B1ab(i,ii,iii)		
<b>Family : Gisekiaceae</b>					
<i>Gisekia pharmaceoides</i> L.	S: Atthiripala; T: Manikirai, Manali	LC			
<b>Family : Goodeniaceae</b>					
<i>Scaevola plumieri</i> (L.) Vahl	S: Heen-Takkada	NT			
<i>Scaevola taccada</i> (Gaertn.) Roxb.	S: Takkada	LC			

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<b>Family : Haloragaceae</b>					
<i>Laurembergia coccinea</i> (Blume) Kanitz		VU	B2ab(i,ii,iii)		
<i>Laurembergia minor</i> (Clarke) Philcox		CR(PE)			
<i>Laurembergia zeylanica</i> (Clarke) Schindler		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Myriophyllum indicum</i> Willd.		LC		LC	
<b>Family : Hernandiaceae</b>					
<i>Gyrocarpus americanus</i> Jacq.	S: Wal-Papol, Diya-labu-gas	LC			
<i>Hernandia nymphaeifolia</i> (Presl) Kubitzki	S; Palatu, Paluta	VU	B2ab(i,ii,iii)		
<b>Family : Hydrocharitaceae</b>					
<i>Blyxa auberti</i> Rich.	S: Diya-Hawari	LC			
<i>Blyxa octandra</i> (Roxb.) Planch. ex Thw.		LC			
<i>Enhalus acoroides</i> (L. f.) Royle		NT		LC	
<i>Halophila beccarii</i> Asch.		EN	B2ab(i,ii,iii)	VU	B2ab(iii) c(ii,iii)
<i>Halophila decipiens</i> Ostenfeld		NT		LC	
<i>Halophila ovalis</i> (R. Br.) Hook. f.		LC		LC	
<i>Hydrilla verticillata</i> (L. f.) Royle	S: Halpenni	LC		LC	
<i>Najas graminea</i> Del.		LC			
<i>Najas marina</i> L.		DD			
<i>Najas minor</i> All.		VU	B1ab(i,ii,iii)		
<i>Nechamandra alternifolia</i> (Roxb.) Planch. ex Thw.		VU	B1ab(i,ii,iii)	LC	
<i>Ottelia alismoides</i> (L.) Pers.		LC		LC	
<i>Thalassia hemprichii</i> (Ehrenb.) Asch.		NT			
<b>Family : Hydroleaceae</b>					
<i>Hydrolea zeylanica</i> (L.) Vahl	S: Diya-Kirilla	NT		LC	
<b>Family : Hypericaceae</b>					
<i>Hypericum japonicum</i> Thunb. ex Murray		NT			

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<i>Hypericum mysurense</i> Wight & Arn.	E: St.John's Wort	EN	B2ab(i,ii,iii)		
<b>Family : Hypoxidaceae</b>					
<i>Curculigo orchiooides</i> Gaertn.	S: Bim-Thal, Heen-Bin-Tal; T: Wolappanai	LC			
<i>Molineria trichocarpa</i> (Wight) Balakr.	S: Bu-Bim Thal, Ma-Bim Thal, Maha Bin Thal	VU	B1ab(i,ii,iii)		
<b>Family : Icacinaceae</b>					
<i>Apodytes dimidiata</i> E. Meyer ex Arn.		VU	B1ab(i,ii,iii)		
<i>Nothapodytes nimmoniana</i> (Graham) Mabb.		NT			
<i>Pyrenacantha volubilis</i> Hook.		VU	B1ab(i,ii,iii)		
<b>Family : Juncaceae</b>					
<i>Juncus effusus</i> L.		LC			
<i>Juncus leschenaultii</i> J.Gay ex Laharpe		VU	B1ab(i,ii,iii)		
<i>Juncus wallichianus</i> Laharpe		VU	B1ab(i,ii,iii)		
<b>Family : Lamiaceae</b>					
<i>Anisochilus carnosus</i> (L.f.) Wall. ex Benth.	S: Gal Kapuru Walliya	LC			
<i>Anisochilus paniculatus</i> Benth.		VU	B1ab(i,ii,iii)		
<b><i>Anisochilus velutinus</i></b> Trimen	S: Bolila, Bolvila	VU	B1ab(i,ii,iii)		
<i>Anisomeles indica</i> (L.) Kuntze	S: Yak Wanassa	LC			
<i>Anisomeles malabarica</i> (L.) R. Br. ex Sims	T: Pey Maruddi	LC			
<i>Basilicum polystachyon</i> (L.) Moench		LC			
<i>Callicarpa tomentosa</i> (L.) Murr.	S: Eela-Gas, Illa; T: Koat-Komal	LC			
<i>Clerodendrum inerme</i> (L.) Gaertn.	S: Wal Gurenda, Boerende, Gulinda; T: Sangam, Dangamkuppi, Pinari, Koika	LC			
<i>Clerodendrum infortunatum</i> L.	S: Gas Pinna, Pinna, Pinna Kole, Pine-Ette; T: Perugilai, Perumkila, Vata Madakki	LC			
<i>Clerodendrum phlomidis</i> L.	S: Gas-Pinna; T: Vata Madakkai, Talu Dala	NT			

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<i>Clerodendrum serratum</i> (L.) Moon	S: Kan Henda; T: Chiru Dekku, Chiru Tekku, Siri Tekku, Vatamadakki, Rata-Madakki, Kandu-Parangi	LC			
<i>Clinopodium umbrosum</i> (Bieb.) Koch		VU	B1ab(i,ii,iii)		
<b><i>Glossocarya scandens</i></b> (L.f.) Trimen		NT			
<i>Gmelina arborea</i> Roxb.	E: Kashmir Tree, Candahar Tree, Comb Tree, Snapdragon Tree, Malay Beachwood; S: At Demata; T: Gumadi, Kumil, Kainadi, Gumudu-Takku, Umi	NT			
<i>Gmelina asiatica</i> L.	E: Asiatic Beechberry; S: Demata, Gatta Demmata; T: Kumil, Kainadi, Gumadi, Nela-Kumi, Nilacumal, Nil-Kumi	LC			
<b><i>Isodon capillipes</i></b> (Benth.) H.Hara		CR(PE)			
<i>Isodon coetsa</i> (Buch.-Ham. ex D.Don.) Kudo		NT			
<i>Isodon hians</i> (Benth.) H.W.Li.		CR(PE)			
<i>Isodon nigrescens</i> (Benth.) H.Hara		LC			
<i>Isodon walkeri</i> (Am.) H. Hara		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Leucas angularis</i> Benth.		DD			
<i>Leucas biflora</i> (Vahl) Benth.	S: Geta-Tumba; T: Peyt-Tumpai	LC			
<i>Leucas longifolia</i> Benth.		CR(PE)			
<i>Leucas marrubioides</i> Desf.	S: Sudu Tumba	LC			
<i>Leucas mollissima</i> Wall. ex Benth.		DD			
<i>Leucas zeylanica</i> (L.) R. Br.	S: Geta Tumba; T: Mudi-Tumpai	LC			
<i>Mentha arvensis</i> L. var. <i>javanica</i> (Blume) Hook. f.	S: Odu-Talan	DD			
<i>Ocimum americanum</i> L.	E: Heen-Tala; S: Suwandu Tala	LC			
<i>Ocimum filamentosum</i> Forssk.		LC			
<i>Ocimum gratissimum</i> L.	S: Gas-Tala, O-Tala	LC			
<i>Ocimum tenuiflorum</i> L.	E: Sacred basil, S: Maduru-Tala	LC			
<i>Orthosiphon aristatus</i> (Blume) Miq.		DD			



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<i>Orthosiphon thymiflorus</i> (Roth) Sleesen		NT			
<i>Platostoma elongatum</i> (Benth.) A. J. Paton		VU	B1ab(i,ii,iii)		
<i>Platostoma menthoides</i> (L.) A. J. Paton		LC			
<i>Plectranthus barbatus</i> Andr.	S: Wal-Kapuru-Walliya	NT			
<b><i>Plectranthus crameri</i></b> Willemse.		VU	B1ab(i,ii,iii)		
<b><i>Plectranthus elongatus</i></b> (Trimen ) Willemse		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Plectranthus gardneri</i></b> Thw.		LC			
<i>Plectranthus glabratus</i> ( Benth.) Alston		CR(PE)			
<i>Plectranthus inflatus</i> ( Benth.) Willemse		LC			
<b><i>Plectranthus kanneliyensis</i></b> (Cramer & Balasubramaniam) Willemse		LC			
<i>Plectranthus malabaricus</i> ( Benth.) Willemse		LC			
<i>Plectranthus subincisus</i> Benth.		CR(PE)			
<i>Plectranthus zatarhendi</i> (Forssk.) E. A. Bruce var. <i>tomentosa</i> (Benth.) Codd	S: Iriweriya	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Pogostemon auricularius</i> (L.) Hassk.	S: Hemanilla	LC			
<i>Pogostemon heyneanus</i> Benth.	S: Gan-kollan-Kola, Gas-Kolan-Kola	LC			
<b><i>Pogostemon hirsutus</i></b> Benth.		LC			
<i>Pogostemon lythroides</i> (Diels) Press		DD			
<b><i>Pogostemon reflexus</i></b> Benth.		NT			
<b><i>Pogostemon rupestris</i></b> Benth.		NT			
<i>Pogostemon verticillatus</i> (Benth.) Bhatti & Ingrouille		LC			
<b><i>Premna alstoni</i></b> Moldenke	S: Mulla, Gal Kera	LC			
<i>Premna divaricata</i> Wall.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Premna latifolia</i> Roxb.	S: Maha Midi; T: Pachumullai	LC			
<i>Premna obtusifolia</i> R.Br	E: Headache Tree; S: Middee Gas, Maha Midi; T: Erumaimulla	LC			

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<i>Premna procumbens</i> Moon	S: Le-Kola-Pala; T: Mullai, Mulla	LC			
<i>Premna purpurascens</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Premna thwaitesii</i> Clarke	S: Mulla	CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Premna tomentosa</i> Willd.	S: Boo-Seru, Noo-Sairou, Boo Sera, Boo-Sairoo-Gas, Bu-Seru; T: Koluk-Kutti, Loluto-Kutti, Kollay-Cottaynellay, Kolkutti	LC			
<i>Priva cordifolia</i> (L.f.) Druce		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Scutellaria oblonga</i> Benth.		VU	B1ab(i,ii,iii)		
<i>Scutellaria robusta</i> Benth.		CR(PE)			
<i>Scutellaria violacea</i> Heyne ex Benth.		LC			
<i>Symphorema involucratum</i> Roxb.		DD			
<i>Teucrium tomentosum</i> Heyne ex Benth.		VU	B1ab(i,ii,iii)		
<i>Vitex altissima</i> L.f.	S: Kaha-Milla, Mililla-Gas, Milla, Miyan-Milla, Sapu-Milla ; T: Kaaddmanakku, Kadamanakku, Kadamananakku, Maila, Mayila	NT			
<i>Vitex leucoxylo</i> n L.f.	S: Nabudda, Nabada, Nebedda ; T: Kaddu-Nochchi, Kardu-Nochi, Nir, Kardu-Noch	LC			
<i>Vitex negundo</i> L.	S: Nika, Nikka, Nike, Helarika, Nil-Nika, Nirgundi, Sudu Nika; T: Nir-Nichchi, Nochchi, Vallai-Nochchi, Vennochchi	LC			
<i>Vitex trifolia</i> L.	E: Beach Vitex, Polinalina, Oval Leaved Chest Tree; S: Nieke, Nikki, Nochchi	NT			
<b>Family : Lauraceae</b>					
<i>Actinodaphne albifrons</i> Kosterm.		VU	B1ab(i,ii,iii)	VU <sup>1</sup>	A1c
<i>Actinodaphne ambigua</i> (Meissner) Hook.f.		LC			
<i>Actinodaphne candolleana</i> (Thw.) Meissner		NT			
<i>Actinodaphne elegans</i> Thw.		LC			

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<i>Actinodaphne glauca</i> Nees var. <i>subtriplinervis</i> (Meissner) Kosterm.		VU	B1ab(i,ii,iii)		
<i>Actinodaphne molochina</i> Nees		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Actinodaphne moonii</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Actinodaphne speciosa</i> Nees.	E: Elephants' Ears	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Actinodaphne stenophylla</i> Thw.	S: Nika-Daula	VU	B1ab(i,ii,iii)		
<i>Alseodaphne semecarpifolia</i> Nees	S: Wewaranai; T: Yavaranai, Ranai	VU	A2 (d)		
<i>Beilschmiedia zeylanica</i> (Thw.) Trimen	S: Kanu	NT			
<i>Cassytha capillaries</i> Meissner		CR(PE)			
<i>Cassytha filiformis</i> L.		LC			
<i>Cinnamomum capparucoronae</i> Blume	E: Camphor Cinnamon; S: Kappuru- Kurundu	VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c, B1+2c
<i>Cinnamomum citriodorum</i> Thw.	S: Pengiri- Kurundu	VU	B1ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Cinnamomum dubium</i> Nees	S: Sewel- Kurundu, Wal- Kurundu	VU	B1ab(i,ii,iii)		
<i>Cinnamomum litseaefolium</i> Thw.	S: Kudu-Kurundu	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Cinnamomum ovalifolium</i> Wight		VU	B1ab(i,ii,iii)		
<i>Cinnamomum rivulorum</i> Kosterm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR <sup>i</sup>	B1+2c
<i>Cinnamomum sinharajaense</i> Kosterm.		VU	B1ab(i,ii,iii)		
<i>Cinnamomum zeylanicum</i> Blume	E: Cinnamon; S: Kurundu;T: Kuruva, Kuruwa	VU	B2ab(i,ii,iii)		
<i>Cryptocarya membranacea</i> Thw.	S: Gal-Mora, Tawenna	VU	B1ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Cryptocarya wightiana</i> Thw.	S: Gal-mora, Golu-mora	NT		VU <sup>i</sup>	A1c
<i>Litsea fosbergii</i> Kosterm.		EN	B2ab(i,ii,iii)		
<i>Litsea gardneri</i> (Thw.) Meissner	S:Talan	VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Litsea glaberrima</i> (Thw.) Trimen		NT		EN <sup>i</sup>	B1+2c
<i>Litsea glutinosa</i> (Lour.) C.B.Robinson	S: Bombee, Bomee; T: Elumpurukki, Maida-Lakti	LC			
<i>Litsea iteodaphne</i> (Nees) Hook.f.	S: Kalu-Nika	VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Litsea ligustrina</i> (Nees) Kosterm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	VU <sup>i</sup>	B1+2c

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<i>Litsea longifolia</i> (Nees) Trimén	S:Rat-Keliya	LC		VU <sup>1</sup>	A1c
<i>Litsea monopetala</i> (Roxb.) Pers.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Litsea nemoralis</i> (Thw.) Trimén		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>1</sup>	B1+2c
<i>Litsea ovalifolia</i> (Wight) Trimén		NT			
<i>Litsea quinqueflora</i> (Dennst.) C.R.Suresh	S: Kosbsda, Landittan	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Litsea walkeri</i> (Meissner) Trimén		VU	B1ab(i,ii,iii)		
<i>Neolitsea cassia</i> (L.) Kosterm.	E: Wild Cinnamon; S: Dawul-Kurundu	LC			
<i>Neolitsea foliosa</i> (Nees) Gamble		CR(PE)			
<i>Neolitsea fuscata</i> (Thw.) Alston		VU	B1ab(i,ii,iii)		
<i>Neolitsea lancifolia</i> (Thw.) Kosterm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Persea macrantha</i> (Nees) Kosterm.	S: Ululu	VU	B1ab(i,ii,iii)		
<b>Family : Lecythidaceae</b>					
<i>Barringtonia acutangula</i> (L.) Gaertn.	S: Ela Midella, Era Midella; T: Adampu	LC			
<i>Barringtonia asiatica</i> (L.) Kurz	S: Mudilla	LC		LC <sup>1</sup>	
<i>Barringtonia racemosa</i> (L.) Spreng.	S: Goda-Midella, Diya-Midella, Midella	LC			
<i>Barringtonia waasii</i> P.Chantaranothai		DD			
<i>Careya arborea</i> Roxb.	E: Patana Oak; S: Kahata; T: Kachaddai	LC			
<b>Family : Lentibulariaceae</b>					
<i>Utricularia aurea</i> Lour.	S: Diya Pasi	LC		LC	
<i>Utricularia australis</i> R.Br.		DD		LC	
<i>Utricularia bifida</i> L.		NT		LC	
<i>Utricularia caerulea</i> L.	S: Nil-Monerassa	LC			
<i>Utricularia gibba</i> L.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<i>Utricularia graminifolia</i> Vahl		NT		LC	
<i>Utricularia hirta</i> Klein ex Link		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Utricularia minutissima</i> Vahl		EN	B1ab(i,ii,iii)		

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<i>Utricularia moniliformis</i> P.Taylor		VU	B1ab(i,ii,iii)		
<i>Utricularia polygaloides</i> Edgew.		LC			
<i>Utricularia reticulata</i> Sm.	S: Nil-Monerassa	LC		LC	
<i>Utricularia scandens</i> Benj.	S: Nil Monerassa	VU	B1ab(i,ii,iii)		
<i>Utricularia stellaris</i> L.f.		LC			
<i>Utricularia striatula</i> Sm.		VU	B1ab(i,ii,iii)		
<i>Utricularia uliginosa</i> Vahl.		VU	B1ab(i,ii,iii)		
<b>Family : Linaceae</b>					
<i>Hugonia ferruginea</i> Wight & Arn.		VU	B1ab(i,ii,iii)		
<i>Hugonia mystax</i> L.	S: Bu-Getiya, Maha-Getiya, Watti-Weti; T: Motirakanni	LC			
<b>Family: Lindernaceae</b>					
<i>Artanema longifolium</i> (L.) Vatke	S: Gas Kotala	LC			
<i>Lindernia anagallis</i> (Burm.f.) Pennell		LC			
<i>Lindernia angustifolia</i> (Benth.) Wettst.		NT			
<i>Lindernia antipoda</i> (L.) Alston	S: Wila	LC			
<i>Lindernia ciliata</i> (Colsmann) Pennell		NT			
<i>Lindernia crustacea</i> (L.) F. Muell.		LC			
<i>Lindernia hyssopioides</i> (L.) Haines		LC			
<i>Lindernia nummularifolia</i> (Don) Wettst.		VU	B1ab(i,ii,iii)		
<i>Lindernia pusilla</i> (Willd.) Boldingh		LC			
<i>Lindernia rotundifolia</i> (L.) Alston		LC			
<b><i>Lindernia srilankana</i></b> Cramer & Philcox		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Lindernia tenuifolia</i> (Colsmann) Alston		NT			
<i>Lindernia viscosa</i> (Hornem.) Boldingh		CR	B2ab(i,ii,iii)		
<b><i>Torenia aerinea</i></b> Alston		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Torenia cyanea</i></b> Alston		VU	B1ab(i,ii,iii)		

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<i>Torenia travancorica</i> Gamble	S: Kotala	NT			
<b>Family : Loganiaceae</b>					
<i>Mitrasacme indica</i> Wight		NT			
<b><i>Strychnos benthamii</i></b> C.B.Clarke		NT			
<b><i>Strychnos coriacea</i></b> Thw.		CR(PE)			
<i>Strychnos minor</i> Dennst.	S: Kaduru, Kaduru Ketiya-Wel; T: Kachchalkodi	LC			
<i>Strychnos nux-vomica</i> L.	E: Nux-Vomica; S: Godakaduru; T: Eddi, Kanchurai	VU	A2 (d)		
<i>Strychnos potatorum</i> L. f.	S: Ingini; T: Tetta	VU	A2 (d)		
<b><i>Strychnos tetragona</i></b> A.W. Hill		VU	B1ab(i,ii,iii)		
<b><i>Strychnos trichocalyx</i></b> A.W. Hill	S: Thelatiya, Gona-Karaba, Kaduru	VU	A2 (d)		
<i>Strychnos wallichiana</i> Steud. ex DC.	S: Wel-Beli, Eta-Kirindi-Wel	NT			
<b>Family : Loranthaceae</b>					
<b><i>Barathranthus mabaeoides</i></b> (Trimen) Danser		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Barathranthus nodiflorus</i></b> (Thw.) Tieghem		EN	B2ab(i,ii,iii)		
<i>Dendrophthoe falcata</i> (L.f.) Ethingsh.		LC			
<b><i>Dendrophthoe ligulata</i></b> (Thw.) Tieghem		VU	B1ab(i,ii,iii)		
<b><i>Dendrophthoe lonchiphyllus</i></b> (Thw.) Denser.		CR	A2c		
<i>Dendrophthoe neelgherrensis</i> (Wight & Arn.) Tieghem		LC			
<b><i>Dendrophthoe suborbicularis</i></b> (Thw.) Denser		VU	B1ab(i,ii,iii)		
<b><i>Helixanthera ensifolia</i></b> (Thw.) Danser		CR(PE)			
<i>Helixanthera hookeriana</i> (Wight & Arn.) Danser		NT			
<b><i>Macrosolen albicaulis</i></b> Wiens		VU	B1ab(i,ii,iii)		
<b><i>Macrosolen barlowii</i></b> Wiens		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Macrosolen capitellatus</i> (Wight & Arn.) Danser		NT			
<i>Macrosolen parasiticus</i> (L.) Danser		VU	B1ab(i,ii,iii)		
<b><i>Scurrula cordifolia</i></b> (Wall.) G.Don		NT			

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<i>Scurrula parasitica</i> L.		LC			
<i>Taxillus courtallensis</i> (Gamble) Danser		VU	B1ab(i,ii,iii)		
<i>Taxillus cuneatus</i> (Roth) Danser		LC			
<b><i>Taxillus incanus</i></b> (Trimen) Wiens		NT			
<i>Taxillus sclerophyllus</i> (Thw.) Danser		VU	B1ab(i,ii,iii)		
<i>Taxillus tomentosus</i> (Roth) Tieghem		LC			
<b><i>Tolypanthus gardneri</i></b> (Thw.) Tieghem		VU	B1ab(i,ii,iii)		
<b>Family : Lythraceae</b>					
<i>Ammannia baccifera</i> L.		LC		LC	
<i>Ammannia octandra</i> L. f.		LC		LC	
<i>Lagerstroemia speciosa</i> (L.) Pers.	E: Pride of India, Queen's flower; S: Murutu, Muruthagaha; T: Kadali, Pu-Maruthu	NT			
<i>Lawsonia inermis</i> L.	E: Camphire, Henna, Tree-Mignonette; S: Marutondi; T: Marathondi, Marutonti,	LC			
<i>Nesaea brevipes</i> Koehne		NT		LC	
<i>Nesaea lanceolata</i> (Heyne ex Clarke) Koehne		EN	B2ad(i,ii,iii)		
<i>Pemphis acidula</i> J.R. & G.Forst	T: Kiri-Maram	NT		LC	
<i>Rotala densiflora</i> (Roth ex. Roem. & Schult.) Koehne		LC		LC	
<i>Rotala indica</i> (Willd.) Koehne		DD		LC	
<i>Rotala rosea</i> (Poir.) Cook		LC		LC	
<i>Rotala verticillaris</i> L.		NT		LC	
<i>Sonneratia alba</i> J. Sm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonneratia apetala</i> Buch.-Ham.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonneratia caseolaris</i> (L.) Engl.	S: Kirilla	LC			
<i>Trapa bispinosa</i> Roxb.	E: Water Chestnut; S: Ikiliya	NT			
<i>Woodfordia fruticosa</i> (L.) Kurz	S: Malitta	VU	A2 d, B1ab(i,ii,iii)	LC <sup>i</sup>	
<b>Family : Magnoliaceae</b>					

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<i>Michelia nilagirica</i> Zenker	S: Wal-Sapu	VU	B1ad(i,ii,iii)		
<b>Family : Malpighiaceae</b>					
<i>Hiptage benghalensis</i> (L.) Kurz	S: Puwak-Gediya-Wel	LC			
<i>Hiptage parvifolia</i> Wight & Arn.		EN	B1ab(i,ii,iii)		
<b>Family : Malvaceae</b>					
<i>Abelmoschus angulosus</i> Wall. ex Wight & Arn.	S: Kapu-Kinissa	VU	B1ab(i,ii,iii)		
<i>Abelmoschus ficulneus</i> (L.) Wight & Arn. ex Wight		VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Abelmoschus moschatus</i> Medikus	S: Kapu Kinissa; T: Katukkasturi	NT			
<i>Abutilon crispum</i> (L.) Medikus		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Abutilon hirtum</i> (Lam.) Sweet	T: Vaddattutti	LC			
<i>Abutilon indicum</i> (L.) Sweet	S: Wal Anoda, Panagedi, Anoda; T: Peruntulli, Peruntutti, Vaddattutti	LC			
<i>Abutilon pannosum</i> (Forster f.) Schldl.		LC			
<b><i>Abutilon subumbellatum</i></b> Philcox		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Berrya cordifolia</i> (Willd.) Burret	E: Trincomalee Wood; S: Hal-Milla; T: Chavandalai	LC			
<i>Bombax ceiba</i> L.	E: Cotton Tree; S: Katu Imbul; T: Parutti, Kaddu- Olaga, Illavu	LC			
<i>Ceiba pentandra</i> var <i>pentandra</i> (L.) Gaertn.	E: Kapok Tree; S: Pulun- Imbul, Imbul	LC			
<i>Corchorus fascicularis</i> Lam.		EN	B2ab(i,ii,iii)		
<i>Corchorus olitorius</i> L.	E: Jute	VU	B1ab(i,ii,iii)		
<i>Corchorus trilocularis</i> L.		CR(PE)			
<i>Corchorus urticifolius</i> Wight & Arn.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Cullenia ceylanica</i></b> (Gardner) K. Schum.	S: Katu-Boda, Kata-Boda	LC		VU <sup>i</sup>	A1c
<b><i>Cullenia rosayroana</i></b> Kosterm.	S: Katu-Boda, Kata-Boda; T: Mullu-Pilaka	LC		LC <sup>i</sup>	
<b><i>Dicellostyles axillaris</i></b> (Thw.) Benth.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR	D
<b><i>Diplodiscus verrucosus</i></b> (Thw.) Kosterm.	S: Dik Andhe, Dik Wenna; T: Vid Pani, Yakada Maram	LC			



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<i>Eriolaena hookeriana</i> Wight & Arn.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Firmiana colorata</i> (Roxb.) R.Br.	E: Bonfire tree; S:Bataliya, Pataliya-Gas; T: Malaiparutti, Mulaipurathi	NT			
<i>Grewia bracteata</i> Heyne ex Roth		VU	B1ab(i,ii,iii)		
<i>Grewia carpinifolia</i> Juss.		LC			
<i>Grewia damine</i> Gaertn.	S: Daminiya; T: Cadachi, Chadachchi	LC			
<i>Grewia helicterifolia</i> Wall. ex G.Don	S: Bora Daminiya, Boru- Daminiya; T: Taviddai	LC			
<i>Grewia hirsuta</i> Vahl		CR(PE)			
<i>Grewia orientalis</i> L.	S: Wel Keliya, Wel-Mediya; T: Kodi Taviddai, Taviddai	LC			
<i>Grewia tenax</i> (Forssk.) Fiori	T: Achu, Katu Peratti, Achchu	NT			
<i>Helicteres isora</i> L.	E: Screw tree; S: Lihiniya, Liniya; T: Kawa, Vallampanai, Vallampuri, Vellampidi	NT			
<i>Heritiera littoralis</i> Dryander	E: Boat-Shaped Mangrove; S: Attona, Etuna, Ho- mediriya; T: Chonmuntiri	NT			
<i>Hibiscus eriocarpus</i> DC.	S: Kapu-Kinissa; T:paritti	LC			
<i>Hibiscus furcatus</i> Roxb.	S: Na Pirittha	LC			
<i>Hibiscus lobatus</i> (Murray) Kuntze		LC			
<i>Hibiscus lunariifolius</i> Willd.		VU	B1ab(i,ii,iii)		
<i>Hibiscus micranthus</i> L. f.	S: Bebila; T:Perumaddi	LC			
<i>Hibiscus panduriformis</i> Burm. f.		CR(PE)			
<i>Hibiscus surattensis</i> L.	S: Hin-Napiritta	LC			
<i>Hibiscus tiliaceus</i> L.	S: Beli-Patta; T: Aritia, Nir- Paratthi	LC			
<i>Hibiscus vitifolius</i> L.	S: Maha-Epala; T:Vaddattutti	LC			
<i>Julostylis angustifolia</i> (Arn.) Thw.	S: Kirella	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Malvastrum coromandelianum</i> (L.) Garcke		LC			
<i>Melochia corchorifolia</i> L.	S: Gal Kura, Maha-Galkura	LC			
<i>Microcos paniculata</i> L.	S: Keliya, Kohu-Kirilla; T: Kapila	LC			

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<b><i>Pavonia fryxelliana</i></b> Fosberg & Sachet		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Pavonia odorata</i> Willd.		LC			
<i>Pavonia procumbens</i> (Wight & Arn.) Walp.		EN	B2ab(i,ii,iii)		
<i>Pavonia zeylanica</i> (L.) Cav.		NT			
<i>Pentapetes phoenicea</i> L.	S: Bandu-Wada	LC			
<i>Pterospermum suberifolium</i> (L.) Willd.	S: Welang	LC			
<b><i>Pterygota thwaitesii</i></b> (Masters) Alston	S: Etaritiva, Galnawa	VU	B1ab(i,ii,iii)		
<i>Sida acuta</i> Burm. f.	S: Gas-Bebila	LC			
<i>Sida alnifolia</i> L.		LC			
<i>Sida cordata</i> (Burm. f.) Borssum Waalkes	S: Bevila; T: Palampadu, Palampasi	LC			
<i>Sida cordifolia</i> L.	S: Wal-Bevila, Heen Anoda; T: Cheevakanpudu	LC			
<i>Sida mysorensis</i> Wight & Arn.	S: Giriwadi-Bevila, Siriwedi-Bevila	LC			
<i>Sida rhombifolia</i> L.	S: Kotikan-Bevila, Bevila; T: Chittamaddi	LC			
<i>Sida spinosa</i> L.		LC			
<i>Sterculia balanghas</i> L.	S: Nawa	LC			
<i>Sterculia foetida</i> L.	S: Telambu, Telembu; T: Kadutenga, Kaduteynga, Pinari	LC			
<i>Sterculia urens</i> Roxb.	S: Dadiya, Kawali, Alaheraliya	NT			
<b><i>Sterculia zeylanica</i></b> Kosterm.	S: Kavali, Kavili, Tondi	EN	B2ab(i,ii,iii)		
<i>Thespesia lampas</i> (Cav.) Dalz. & Gibson	S: Wal-Kapu	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Thespesia populnea</i> (L.) Sol. ex Correa	S: Suriya, Gan Suriya, Tulip tree; T: Kavarachu, Puvarachu	LC			
<b><i>Triumfetta glabra</i></b> Rottler		VU	B1ab(i,ii,iii)		
<i>Triumfetta pentandra</i> A.Rich.	S: Epala, Kapu Kinissa	LC			
<i>Triumfetta pilosa</i> Roth		LC			
<i>Triumfetta rhomboidea</i> Jacq.	S: Epala	LC			

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<i>Urena lobata</i> L.	S: Patta-Epala, Epala	LC			
<i>Urena sinuata</i> L.	S: Patta-Epala, Heen- Epala	LC			
<i>Waltheria indica</i> L.		LC			
<i>Wissadula periplocifolia</i> (L.) Presl ex Thw.	S: Kiri-kaju	NT			
<b>Family : Marantaceae</b>					
<i>Phrynium rheedii</i> Suresh & Nicolson	S: Et-Bemi-Kiriya	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Schumannianthus virgatus</i> (Roxb.) Rolfe	S: Geta-Oluwa	CR(PE)			
<i>Stachyphrynium zeylanicum</i> (Benth.) K.Schum.	S: Hulan-Kiriya	CR(PE)			
<b>Family : Melastomataceae</b>					
<i>Kendrickia walkeri</i> (Wight ex Gardner) Triana		VU	B1ab(i,ii,iii)		
<i>Lijndenia capitellata</i> (Arn.) Bremer	S:Pini-Baru	VU	B1ab(i,ii,iii)		
<i>Lijndenia gardneri</i> (Thw.) Bremer		VU	B1ab(i,ii,iii)		
<i>Medinilla cuneata</i> (Thw.) Bremer & Lundin		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Medinilla fuchsoides</i> Gardner		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Medinilla maculata</i> Gardner		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Melastoma malabathricum</i> L.	S: Bovitiya, Katakaloowa, Maha-Bovitiya	LC			
<i>Memecylon angustifolium</i> Wight	E: Blue Mist; S: Kora Kaha	EN	B2ab(i,ii,iii)		
<i>Memecylon capitellatum</i> L.	S: Dedi-Kaha, Dodan- Kaha, Wel-Kaha, Weli- Kaha; T: Katti-Kaya, Pavaddai-Kaya, Venkali-Kaya	LC			
<i>Memecylon clarkeanum</i> Cong.		NT			
<i>Memecylon cuneatum</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Memecylon discolor</i> Cogn.		VU	B1ab(i,ii,iii)		
<i>Memecylon ellipticum</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Memecylon fuscescens</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Memecylon giganteum</i> Alston		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Memecylon gracillimum</i> Alston		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Memecylon grande</i> Retz.	S:Dedi-kaha, Dodan-Wenna	EN	B2ab(i,ii,iii)		
<i>Memecylon hookeri</i> Thw.	S: Kevitiya-Kera	VU	B1ab(i,ii,iii)		
<i>Memecylon leucanthemum</i> Thw.		EN	B2ab(i,ii,iii)		
<i>Memecylon macrocarpum</i> Thw.	S; Mahakuratiya	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Memecylon macrophyllum</i> Thw.		EN	B2ab(i,ii,iii)		
<i>Memecylon orbiculare</i> Thw.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Memecylon ovoideum</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Memecylon parvifolium</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Memecylon petiolatum</i> Trimen ex Alston		NT			
<i>Memecylon phyllanthifolium</i> Thw. ex Alston		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Memecylon procerum</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Memecylon revolutum</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Memecylon rhinophyllum</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Memecylon rivulare</i> Bremer		VU	B1ab(i,ii,iii)		
<i>Memecylon rostratum</i> Thw.	S: Hen-Kuetiya, Kin-Kuritiya, Kuritiya	NT			
<i>Memecylon rotundatum</i> (Thw.) Cogn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Memecylon royenii</i> Blume	S: Dedi-Kaha, Weli-Kaha; T: Kashamaram	LC			
<i>Memecylon sessile</i> Benth.		CR	B2ab(i,ii,iii)		
<i>Memecylon sylvaticum</i> Thw.		NT			
<i>Memecylon umbellatum</i> Burm.f.	E: Blue Mist; S: Kora-Kaha; T: Kaya, Kurre-Kaya, Pandikaya	LC			
<i>Memecylon urceolatum</i> Cogn.		EN	B2ab(i,ii,iii)		
<i>Memecylon varians</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Memecylon wightii</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Osbeckia aspera</i> (L.) Blume	S: Bowitiya	NT			
<i>Osbeckia buxifolia</i> Arn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Osbeckia lanata</i> Alston.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Osbeckia moonii</i> Thw.		CR	B2ab(i,ii,iii)		
<i>Osbeckia octandra</i> (L.) DC.	S: Bowitiya, Heen Bowitiya	LC			
<i>Osbeckia parvifolia</i> Arn.	S: Bowitiya	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Osbeckia rheedii</i> Gardner ex Thw.		CR	B2ab(i,ii,iii)		
<i>Osbeckia rubicunda</i> Arn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Osbeckia walkeri</i> Arn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Osbeckia zeylanica</i> L. f.		VU	B1ab(i,ii,iii)		
<i>Sonerila affinis</i> Arn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonerila arnottiana</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonerila cordifolia</i> Cogn.		CR(PE)			
<i>Sonerila crassicaulis</i> Lundin		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonerila firma</i> (Thw. ex Clarke in Hook.f.) Lundin		CR	B1ab(i,ii,iii)		
<i>Sonerila gardneri</i> Thw.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonerila glaberrima</i> Arn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonerila glabricaulis</i> (Thw. ex Clarke in Hook.f.) Lundin		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonerila guneratnei</i> Trimen		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonerila harveyi</i> Thw.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonerila hirsutula</i> Arn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonerila hookeriana</i> Arn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonerila lanceolata</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonerila pedunculosa</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonerila pilosula</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonerila pumila</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonerila rhombifolia</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonerila robusta</i> Arn.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Sonerila silvatica</i> Lundin		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sonerila tomentella</i> Thw.		CR(PE)			
<i>Sonerila wightiana</i> Arn.		CR	B1ab(i,ii,iii)		
<i>Sonerila zeylanica</i> Wight & Arn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Meliaceae</b>					
<i>Aglaiia apiocarpa</i> (Thw.) Hiern.		LC		VU <sup>1</sup>	A1c
<i>Aglaiia elaeagnoidea</i> (A.Juss.) Benth.	T: Kannakampu	LC		LC <sup>1</sup>	
<i>Aphanamixis polystachya</i> (Wall.) R. Parker	S: Ela-Hirilla, Hingul	VU	B1ab(i,ii,iii)	LC <sup>1</sup>	
<i>Chukrasia tabularis</i> A.Juss.	E: Chittagong Wood; S: Hiri-Kita, Hulan-Hik; T: Aglai, Kaloti	NT		LC <sup>1</sup>	
<i>Cipadessa baccifera</i> (Roth) Miq.	S: Hal-Bebiya; T: Pulippan-Cheddi	LC			
<i>Dysoxylum championii</i> Hook. f. & Thoms. ex Thw.	S: Gona-Pana	VU	B1ab(i,ii,iii)		
<i>Dysoxylum excelsum</i> Blume		VU	B1ab(i,ii,iii)		
<i>Dysoxylum ficiforme</i> (Wight) Gamble		NT		VU <sup>1</sup>	B1+2c
<i>Munronia pinnata</i> (Wall.) Theob.	S: Bin-Kohomba	EN	A2 d, B2ab(i,ii,iii)		
<i>Walsura gardneri</i> Thw.		CR		CR <sup>1</sup>	B1+2c
<i>Walsura trifoliolata</i> (A.Juss.) Harms	S: Kirikon, Mal-Petta; T: Chadavakku, Chokala, Kanjimaran, Malaivirali	LC			
<i>Xylocarpus granatum</i> Koenig	S: Mutti-Kadol; T: Kandal Anga, Kontalai, Somuntheri	EN	B2ab(i,ii,iii)	LC	
<i>Xylocarpus rumphii</i> (Kostel.) Mabb.	S: Mudu-Delun	CR	B2ab(i,ii,iii)		
<b>Family : Menispermaceae</b>					
<i>Anamirta cocculus</i> (L.) Wight & Arn.	S: Titta-Wel	LC			
<i>Cissampelos pareira</i> L.	S: Diya-Mitta; T: Appatta,	LC			
<i>Cocculus hirsutus</i> L. (Theob.)	T: Kattukkodi, Sirunkattukodi	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Coscinium fenestratum</i> (Gaertn.) Colebr.	E: False Calumba; S: Veni-Val-Gata, Weni-Wel, Bang-Wela	LC			
<i>Cyclea peltata</i> (Burm.f.) Hook.f. & Thoms.	S: Kehi-Pittan, Kessi-Pissan; T: Vouthuvullykodi	LC			
<i>Diploclisia glaucescens</i> (Blume) Diels	T: Kottaiyachachi	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Hypserpa nitida</i> Miers	S: Niri-Wel.	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Pachygone ovata</i> (Poir.) Hook.f. & Thoms.		VU	B2ab(i,ii,iii)		
<i>Stephania japonica</i> (Thumb.) Miers	S: Lunu-Ketiya-Wel	VU	B1ab(i,ii,iii)		
<i>Tiliacora acuminata</i> (Lam.) Miers	T: Manchone, Kocha-Kodi	VU	B1ab(i,ii,iii)		
<i>Tinospora cordifolia</i> (Willd.) Hook.f. & Thoms.	S: Rasakinda; T: Chintil	VU	B2ab(i,ii,iii)		
<i>Tinospora crispa</i> (L.) Hook.f. & Thoms.	S: Titta-Kinda	VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Tinospora sinensis</i> (Lour.) Merr.	S: Bu-Kinda, Wal-Kinda, Rasa-Kinda	DD			
<b>Family : Menyanthaceae</b>					
<i>Nympoides aurantiacea</i> (Dalz.) Kuntze		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Nympoides hydrophylla</i> (Lour.) Kuntze	S: Heen-Ambala, Heen-Olu	LC			
<i>Nympoides indica</i> (L.) Kuntze	S: Maha-Ambala, Olu	LC			
<i>Nympoides parviflora</i> (Griseb.) Kuntze	S: Bin Olu	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Molluginaceae</b>					
<i>Glinus lotoides</i> L.		LC			
<i>Glinus oppositifolia</i> (L.) A. DC.	S: Heen-Ala; T: Kachchantirai	LC			
<i>Mollugo cerviana</i> (L.) Seringe	S: Udetta; T: Kachchantirai, Pat-padakam	LC			
<i>Mollugo disticha</i> (L.) Seringe	S: Manal-Thishni	LC			
<i>Mollugo nudicaulis</i> Lam.		VU	B1ab(i,ii,iii)		
<i>Mollugo pentaphylla</i> L.		LC			
<b>Family : Monimiaceae</b>					
<i>Hortonia angustifolia</i> (Thw.) Trimen		VU	B1ab(i,ii,iii)		
<i>Hortonia floribunda</i> Wight ex Arn.	S: Wawiya	EN	B2ab(i,ii,iii)		
<i>Hortonia ovalifolia</i> Wight		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Moraceae</b>					
<i>Antiaris toxicaria</i> Leschen. var. <i>toxicaria</i>	E: Upas Tree; S: Riti; T: Netavili	NT			
<i>Artocarpus gomezianus</i> Wall. ex Trecul subsp. <i>zeylanicus</i> Jarrett	S: Kana-Gona; T: Monkey Ja, Arsini-Pala	NT			

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<i>Artocarpus nobilis</i> Thw.	S: Bedi-Del, Del, Hingala-Del, T: Arsini-pla	LC			
<i>Broussonetia zeylanica</i> (Thw.) Corner	S: Alandu	VU	B1ab(i,ii,iii)		
<i>Dorstenia indica</i> Wight		NT			
<i>Ficus amplissima</i> Smith	S: Ela-Nuga; T: Kalatti	LC			
<i>Ficus amottiana</i> (Miq.) Miq.	E: Banyan; S: Kaudu-Bo, Patana-Bo	LC			
<i>Ficus benghalensis</i> L.	E: Krishna Bo, Krishna'S Cup; S: Maha-Nuga; T: Al, Arla	LC			
<i>Ficus callosa</i> Willd.	S: Wal-Gona	LC			
<i>Ficus caulocarpa</i> Miq.		LC			
<i>Ficus costata</i> Ait.		NT			
<i>Ficus diversiformis</i> Miq.		LC			
<i>Ficus drupacea</i> Thunb. var. <i>pubescens</i> (Roth) Corner	S: Bu-Nuga	LC			
<i>Ficus exasperata</i> Vahl	E: Furniture Leaf; S: Bu-Thediya, Sewan-Mediya	LC			
<i>Ficus fergusonii</i> (King) Worthington	S: Kos-Gona, Nuga; T: Al, Arla	LC			
<i>Ficus heterophylla</i> L.f.	S: Wal-Ehetu	VU	B1ab(i,ii,iii)		
<i>Ficus hispida</i> L.f.	S: Kota-Dimbula	LC			
<i>Ficus laevis</i> Blume		LC			
<i>Ficus microcarpa</i> L.f.		LC			
<i>Ficus mollis</i> Vahl	S: Wal-Aralu	LC			
<i>Ficus nervosa</i> Heyne ex Roth	S: Kalu-Maduwa	LC			
<i>Ficus pubilimba</i> Merr.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Ficus racemosa</i> L.	S: Attikka; T: Atti	LC			
<i>Ficus talbotii</i> King		VU	B1ab(i,ii,iii)		
<i>Ficus tinctoria</i> Forst.f. subsp. <i>parasitica</i> (Willd.) Corner	S: Gas-Anguna, Gas-Netul, Wal-Ehetu	LC			
<i>Ficus trimenii</i> King		VU	B1ab(i,ii,iii)		
<i>Ficus tsjahela</i> Brum.f.	S: Kiri-Pela, Kiripella	LC			
<i>Ficus virens</i> Ait.		LC			



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<i>Maclura cochinchinensis</i> (Lour.) Corner		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Plecosperrum spinosum</i> Trecul	S: Katu-Timbol	VU	B1ab(i,ii,iii)		
<i>Streblus asper</i> Lour.	E: Crooked Rough-Bush; S: Geta-Netul; T: Papirai, Pirasu	LC			
<i>Streblus taxoides</i> (Heyne) Kurz	S: Gon-Gotu; E: Fig-Lime	LC			
<i>Streblus zeylanicus</i> (Thw.) Kurz		VU	B1ab(i,ii,iii)		
<b>Family : Musaceae</b>					
<i>Musa acuminata</i> L.A. Colla	S: Gal Kehel, Unel	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Musa balbisiana</i> L.A. Colla	S: Eti Kehel	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Myristicaceae</b>					
<i>Horsfieldia irya</i> (Gaertn.) Warb.	S: Iriya	LC		LC <sup>i</sup>	
<i>Horsfieldia iryagedhi</i> (Gaertn.) Warb.	S: Ruk, Malabodde, Malaboda, Ruk-Gedhi, Talan	VU	B1ab(i,ii,iii)	CR <sup>i</sup>	B1+2c
<i>Myristica ceylanica</i> A. DC.	S: Maloboda, Malabodde	VU	B1ab(i,ii,iii)	VU <sup>i</sup>	B1+2c
<i>Myristica dactyloides</i> Gaertn.	S: Malaboda, Perimavara; T: Palmanikam	LC		LC <sup>i</sup>	
<b>Family : Myrtaceae</b>					
<i>Cleistocalyx operculatus</i> (Roxb.) Merr. & Perry	S: Bata Damba, Kobo Mal, Diya-Damba	LC			
<i>Eugenia amoena</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	VU <sup>i</sup>	A1c+2c
<i>Eugenia floccifera</i> Thw.		CR(PE)			
<i>Eugenia fulva</i> Thw.		CR(PE)		VU <sup>i</sup>	A1c, B1+2c
<i>Eugenia glabra</i> Alston		CR(PE)		EN <sup>i</sup>	B1+2c
<i>Eugenia haeckeliana</i> Trimen		CR(PE)			
<i>Eugenia haputalense</i> Kosterm.		DD			
<i>Eugenia hypoleuca</i> Thw. ex Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Eugenia insignis</i> Thw.		CR	B2ab(i,ii,iii)	CR	B1+2c
<i>Eugenia mabaeoides</i> Wight		LC			
<i>Eugenia madugodaense</i> Kosterm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eugenia pedunculata</i> Trimen		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Eugenia phillyraeoides</i> Trimen		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eugenia pseudomabaeoides</i> Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eugenia rheophytica</i> Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eugenia rivulorum</i> Thw.		VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Eugenia rotundata</i> Trimen		NT		VU <sup>i</sup>	A1c, B1+2c
<i>Eugenia rufo-fulva</i> Thw.		EN	B2ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Eugenia sripadaense</i> Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Eugenia terpnophylla</i> Thw.		VU	B1ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Eugenia thwaitesii</i> Duthie		LC			
<i>Eugenia willdenowii</i> DC.		LC			
<i>Eugenia xanthocarpa</i> Thw.		CR	B2ab(i,ii,iii)		
<i>Rhodomyrtus tomentosa</i> (Ait.) Hassk.	E: Wild Guava	NT			
<i>Syzygium alubo</i> Kosterm.	S: Alu-Bo	NT			
<i>Syzygium amphoraecarpus</i> Kostermans	S: Wal-Jambu	NT			
<i>Syzygium assimile</i> Thw.	S: Damba	LC			
<i>Syzygium batadamba</i> Kosterm.		VU	B1ab(i,ii,iii)		
<i>Syzygium caryophyllatum</i> (L.) Alston	S: Heen-Dan, Rin-Dan, Dan	LC		EN <sup>i</sup>	B1+2c
<i>Syzygium cordifolium</i> (Wight) Walp.		VU	B1ab(i,ii,iii)		
<i>Syzygium cumini</i> Skeels	S: Madan, Maha Dan; T: Naval, Perunaval	LC			
<i>Syzygium cyclophyllum</i> (Thw. ex Duthie) Alston		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR <sup>i</sup>	B1+2c
<i>Syzygium cylindricum</i> (Wight) Alston		LC			
<i>Syzygium fergusonii</i> (Trimen) Gamble		VU	B1ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Syzygium firmum</i> Thw.	S: Wal Jambu	LC		VU <sup>i</sup>	A1c
<i>Syzygium gardneri</i> Thw.		LC			
<i>Syzygium hemisphericum</i> (Walp.) Alston		VU	B1ab(i,ii,iii)		
<i>Syzygium kanneliyensis</i> Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Syzygium lewisii</i> Alston		VU	B1ab(i,ii,iii)		
<i>Syzygium lissophyllum</i> Thw.		NT			
<i>Syzygium micranthum</i> Thw.		LC			
<i>Syzygium montis-adam</i> Kosterm		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Syzygium neesianum</i> Thw.	S: Panu Kera	LC		VU <sup>1</sup>	A1c
<i>Syzygium oliganthum</i> Thw.		VU	B1ab(i,ii,iii)	VU <sup>1</sup>	B1+2c
<i>Syzygium potamicum</i> Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Syzygium revolutum</i> Walp.		LC			
<i>Syzygium rotundifolium</i> Arn.		LC		VU <sup>1</sup>	A1c, B1+2c
<i>Syzygium sclerophyllum</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Syzygium spathulatum</i> Thw.		LC			
<i>Syzygium spissum</i> Alston		VU	B1ab(i,ii,iii)	VU <sup>1</sup>	B1+2c
<i>Syzygium turbinatum</i> Alston		VU	B1ab(i,ii,iii)	EN <sup>1</sup>	B1+2c
<i>Syzygium umbrosum</i> Thw.	S: Heen Damba, Vali-Damba; T: Naval	LC	B2ab(i,ii,iii)	EN <sup>1</sup>	B1+2c
<i>Syzygium wightianum</i> Wall. ex W. & Arn.		LC			
<i>Syzygium zeylanicum</i> ( L. ) DC.		LC			
<i>Syzygium zeylanicum</i> var. <i>lineare</i> DC.		VU	B1ab(i,ii,iii)		
<i>Syzygium zeylanicum</i> var. <i>zeylanicum</i> DC.	S: Yakul Maran	LC			
<b>Family : Nelumbonaceae</b>					
<i>Nelumbo nucifera</i> Gaertn.	E: Lotus, Sacred Beam; S: Nelum; T:Tamarai	LC			
<b>Family : Nepenthaceae</b>					
<i>Nepenthes distillatoria</i> L.	E: Pitcher Plant; S: Bandura Wel	VU	B1ab(i,ii,iii)	VU <sup>1</sup>	B1+2d
<b>Family : Nyctaginaceae</b>					
<i>Boerhavia diffusa</i> L.	S: Pita-Sudu-Pala, Pita Sudda; T: Karichcharanai, Mukkaraichchi	LC			
<i>Boerhavia erecta</i> L.		LC			
<i>Pisonia aculeata</i> L.	E: Lettuse Tree, Moluccan Cabbage; S: Vavul-Lairitiya	NT			

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Pisonia grandis</i> R.Br.	E: Lettuce Tree, Moluccan cabbage; S: Lechchakotta, Wathabanga; T: Chandi, Lechchai Kedda,	LC			
<b>Family : Nymphaeaceae</b>					
<i>Nymphaea nouchali</i> Burm.f.	E: Water Lily; S: Manel	VU	A2ae	LC	
<i>Nymphaea pubescens</i> Willd.	E: Egyptian Lotus, Water Lilly; S: Et-Olu, Olu	LC		LC	
<b>Family : Ochnaceae</b>					
<i>Gomphia serrata</i> (Gaertn.) Kanis	S: Bo-Kera, Kera, Go-kera; T:Katharai, Ramanchi	LC			
<b><i>Ochna Jabotapita</i></b> L.	S: Bo-Kera, Mal-Kera; T:Chilanti	LC			
<i>Ochna lanceolata</i> Spreng.	S: Gal Kena, Bo-Kera, Ge-Karal, Mal-kera; T: Katharai, Katkarai	LC			
<i>Ochna obtusata</i> DC.	S: Mal-kera; T: Chilanti, Sellindi	LC			
<b>Family : Olacaceae</b>					
<i>Olax imbricata</i> Roxb.	S: Telatiya	NT			
<i>Olax scandens</i> Roxb.	T: Kadalranchi	LC			
<i>Olax zeylanica</i> L.	S: Malla, Maila, Mella	LC			
<i>Strombosia ceylanica</i> Gardner	S: Pub-Beriya, Pathu-Bari	VU	B1ab(i,ii,iii)		
<b><i>Strombosia nana</i></b> Kosterm.		VU	B1ab(i,ii,iii)		
<i>Ximenia americana</i> L.	E: Hog-Plum, Monkey Plum, Tallow Nut; T: Chiru-Ilantai	DD			
<b>Family : Oleaceae</b>					
<b><i>Chionanthus albidiflora</i></b> Thw.	S: Embul-Korakaha, Gal-Metta, Taccada-Gas	VU	B1ab(i,ii,iii)		
<i>Chionanthus zeylanica</i> L.	S: Dambu, Geratiya, Geriata; T: Kattimuruchan	LC			
<i>Jasminum angustifolium</i> (L.) Willd.	E: Wild Jasmine; S: We-Kanda, Wal-Pichcha, Wal-Saman Pichcha	LC			
<i>Jasminum auriculatum</i> Vahl		LC			
<i>Jasminum bignoniaceum</i> Wall. ex G.Don		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Jasminum flexile</i> Vahl		LC			

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<i>Jasminum rotterianum</i> Wall. ex DC.		VU	B1ab(i,ii,iii)		
<i>Ligustrum robustum</i> (Roxb.) Blume	S: Bora	LC			
<i>Olea paniculata</i> R.Br.		CR(PE)			
<i>Olea polygama</i> Wight		LC			
<b>Family : Onagraceae</b>					
<i>Ludwigia adscendens</i> (L.) Hara	S: Beru-Diyanilla, Beru-Diya-Milla	LC			
<i>Ludwigia hyssopifolia</i> (G. Don) Exell		LC		LC	
<i>Ludwigia octovalvis</i> (Jacq.) Raven		LC			
<i>Ludwigia perennis</i> L.	S: Piduruwella	LC		LC	
<i>Ludwigia prostrata</i> Roxb.		DD			
<b>Family : Opiliaceae</b>					
<i>Cansjera rheedii</i> J.Gmelin	S: Eta-Mura	LC			
<i>Opilia amentacea</i> Roxb.		LC			
<b>Family : Orchidaceae</b>					
<i>Acampe ochracea</i> (Lindley) Hochr.		VU	B1ab(i,ii,iii)		
<i>Acampe praemorsa</i> (Roxb.) Blatter & Mc Cann		LC			
<i>Acampe rigida</i> (Buch.-Ham.ex J.E. Smith) P.F. Hunt		VU	B1ab(i,ii,iii)		
<i>Acanthephippium bicolor</i> Lindley		EN	B2ab(i,ii,iii)		
<b><i>Adrorhizon purpurascens</i></b> (Thw.) Hook.f.		VU	B1ab(i,ii,iii)		
<i>Aerangis hologlottis</i> (Schltr.) Schltr.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Aerides ringens</i> (Lindley) C.E.C Fischer		VU	B1ab(i,ii,iii)		
<b><i>Agrostophyllum zeylanicum</i></b> Hook.f.		VU	B1ab(i,ii,iii)		
<i>Angraecum zeylanicum</i> Lindl.		NT			
<i>Anoectochilus elatus</i> Lindl.		DD			
<i>Anoectochilus regalis</i> Blume	S.Wana-Raja	EN	A2cd; B2ab(i,ii,iii)		

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<i>Aphyllorchis montana</i> Reichb.f.		VU	B1ab(i,ii,iii)		
<i>Apostasia wallichii</i> R.Br.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Arundina minor</i></b> Lindl.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Bromheadia srilankensis</i></b> Kruizinga & de Vogel.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Bulbophyllum crassifolium</i></b> Thw. ex Trimen.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Bulbophyllum elegans</i> Gardner ex Thw.		VU	B1ab(i,ii,iii)		
<b><i>Bulbophyllum elliae</i></b> Reichb.f.		NT			
<b><i>Bulbophyllum jayaweerae</i></b> Fernando et Ormerod		DD			
<i>Bulbophyllum macraei</i> Reichb. f.		VU	B1ab(i,ii,iii)		
<i>Bulbophyllum maskeliyense</i> Livera		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Bulbophyllum petiolare</i></b> Thw.		VU	B1ab(i,ii,iii)		
<b><i>Bulbophyllum purpureum</i></b> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Bulbophyllum thwaitesii</i></b> Reichb.f.		VU	B2ab(i,ii,iii)		
<b><i>Bulbophyllum tricarinatum</i></b> Petch		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Bulbophyllum trimenii</i></b> (Hook.f.) J. J. Sm.		VU	B1ab(i,ii,iii)		
<b><i>Bulbophyllum wightii</i></b> Reichb.f.		VU	B1ab(i,ii,iii)		
<i>Calanthe sylvatica</i> (Thouars) Lindl.		VU	B1ab(i,ii,iii)		
<i>Calanthe triplicata</i> (Willemet) Ames		NT			
<i>Cheirostylis flabellata</i> Wight		CR	B2ab(i,ii,iii)		
<i>Cheirostylis parvifolia</i> Lindl.		VU	B1ab(i,ii,iii)		
<i>Chiloschista fasciata</i> (F.v. Mull.) Seidenf. & Ormerod.		VU	B1ab(i,ii,iii)		
<i>Chrysoglossum ornatum</i> Blume.		VU	B1ab(i,ii,iii)		
<i>Cleisostoma tenuifolium</i> (L.) Garay.		NT			
<i>Coelogyne breviscapa</i> Lindl.		VU	B1ab(i,ii,iii)		
<i>Coelogyne odoratissima</i> Lindl.		VU	B1ab(i,ii,iii)		
<i>Coelogyne zeylanica</i> Hook.f.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Conchidium articulatum</i> (Lindl.) Rauschert		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Conchidium braccatum</i> (Lindl.) Brieger		NT			
<i>Conchidium muscicola</i> (Lindl.) Rauschert		LC			
<i>Corymborkis veratrifolia</i> (Reinw.) Blume		CR	B2ab(i,ii,iii)		
<i>Cottonia peduncularis</i> (Lindl.) Rchb.f.		NT			
<i>Crepidium purpureum</i> (Lindl.)Szlach.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Cryptostylis arachnites</i> (Blume) Hassk.		VU	B1ab(i,ii,iii)		
<i>Cymbidium aloifolium</i> (L.) Sw.		LC			
<i>Cymbidium bicolor</i> Lindley		LC			
<i>Cymbidium ensifolium</i> (L.) Sw.		VU	B1ab(i,ii,iii)		
<i>Cyrtosia javanica</i> Blume		CR(PE)			
<b><i>Dendrobium maccarthiae</i></b> Thw.	S: Wesak-Mal	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Dendrobium panduratum</i> Lindley		NT			
<i>Dendrobium aphyllum</i> (Roxb.) C.E.C. Fisher.		LC			
<i>Dendrobium diodon</i> Reichb.f.		VU	B1ab(i,ii,iii)		
<i>Dendrobium heterocarpum</i> Wall. ex Lindley	E: Primrose Orchid	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Dendrobium nutantiflorum</i> A.D. Hawkes & A.H. Heller.		NT			
<i>Dendrobium salaccense</i> (Blume) Lindley		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Didymoplexis pallens</i> Griff.		CR	B2ab(i,ii,iii)		
<i>Didymoplexis seidenfadenii</i> Sathish & Ormerod.		DD			
<i>Dienia ophrydis</i> (J.Konig) Ormerod & Seidenf.		EN	B2ab(i,ii,iii)		
<i>Diplozentrum recurvum</i> Lindl.		DD			
<i>Diploprora championi</i> Hook.f.		NT			
<i>Disperis neilgherrensis</i> Wight.		VU	B1ab(i,ii,iii)		
<i>Epipogium roseum</i> (D.Don) Lindl.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eria bicolor</i> Lindl.		NT			

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<i>Eria lindleyi</i> Thw.		NT			
<i>Eria thwaitesii</i> Trimen		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eria tricolor</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Erythrodes latiloba</i> Ormerod		VU	B1ab(i,ii,iii)		
<i>Eulophia spectabilis</i> (Dennst.) Suresh		VU	B1ab(i,ii,iii)		
<i>Eulophia epidendreaea</i> (J. Koenig ex Retz.) C. E. C. Fischer		LC			
<i>Eulophia graminea</i> Lindl.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eulophia pulchra</i> (Thouars) Lindl.		VU	B1ab(i,ii,iii)		
<i>Eulophia zollingeri</i> (Rchb.f.) J.J.Sm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Flickingeria macraei</i> (Lindl.) Seidenf.		VU	B1ab(i,ii,iii)		
<i>Gastrochilus acaulis</i> (Lindl.) Kuntze		NT			
<i>Gastrodia zeylanica</i> Schltr.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Geodorum densiflorum</i> (Lam.) Schltr.		VU	B1ab(i,ii,iii)		
<i>Geodorum recurvum</i> (Roxb.) Alston		DD			
<i>Goodyera fumata</i> Thw.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Goodyera procera</i> (Ker-Gawl.) Hook.		VU	B1ab(i,ii,iii)		
<i>Goodyera stelidifera</i> Ormerod.		DD			
<i>Habenaria acuminata</i> (Thw.) Trimen.		VU	B1ab(i,ii,iii)		
<i>Habenaria barbata</i> Wight ex Hook.f.		EN	B2ab(i,ii,iii)		
<i>Habenaria crinifera</i> Lindl.		VU	B1ab(i,ii,iii)		
<i>Habenaria dichopetala</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Habenaria dolichostachya</i> Thw.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Habenaria macrostachya</i> Lindl.		VU	B1ab(i,ii,iii)		
<i>Habenaria plantaginea</i> Lindl.	E: Pigeon Orchid	NT			
<i>Habenaria pterocarpa</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Habenaria rhynchocarpa</i> (Thw.) Trimen		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		



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<i>Habenaria roxburghii</i> Nicolson.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Habenaria viridiflora</i> (Sw.) Spreng.		NT			
<i>Hetaeria oblongifolia</i> Blume.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Ipsea speciosa</i></b> Lindley	E: Daffodil Orchid	EN	A2d; B2ab(i,ii,iii)		
<i>Liparis caespitosa</i> (Lam.) Lindley		VU	B1ab(i,ii,iii)		
<i>Liparis atropurpurea</i> Lindley		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Liparis barbata</i> Lindley		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Liparis brachyglottis</i></b> Reichb.f. ex Trimen.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Liparis cespitosa</i> (Lam.) Lindl.		VU	B1ab(i,ii,iii)		
<i>Liparis elliptica</i> Wight		DD			
<i>Liparis nervosa</i> (Thunb.) Lindley		VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Liparis thwaitesii</i></b> Hook.f.		DD			
<i>Liparis viridiflora</i> Lindley		NT			
<i>Liparis walkeriae</i> R. Graham.		VU	B1ab(i,ii,iii)		
<i>Liparis wightiana</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Luisia birchea</i> Blume Rumphia.		VU	B1ab(i,ii,iii)		
<i>Luisia zeylanica</i> Lindl.		LC			
<i>Malaxis densiflora</i> (A.Rich.) Kuntze		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Malaxis discolor</i></b> (Lindley) Kuntze		VU	B1ab(i,ii,iii)		
<i>Malaxis thwaitesii</i> Bennet.		VU	B1ab(i,ii,iii)		
<i>Malaxis versicolor</i> (Lindley) Abeywick.		LC			
<i>Nervilia juliana</i> (Roxb.) Schlechter		DD			
<b><i>Oberonia claviloba</i></b> Jayaweera		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Oberonia dolabrata</i></b> Jayaweera		CR	B2ab(i,ii,iii)		
<b><i>Oberonia forcipata</i></b> Lindl.		VU	B1ab(i,ii,iii)		
<i>Oberonia fornicata</i> Jayaweera		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Oberonia longibracteata</i> Lindley		VU	B1ab(i,ii,iii)		
<i>Oberonia quadrilatera</i> Jayaweera		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Oberonia recurva</i> Lindley		VU	B1ab(i,ii,iii)		
<i>Oberonia scyllae</i> Lindley		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Oberonia tenuis</i> Lindley		VU	B1ab(i,ii,iii)		
<i>Oberonia thwaitesii</i> Hook.f.		NT			
<i>Oberonia truncata</i> Lindley		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Oberonia wallie-silvae</i> Jayaweera		CR	B2ab(i,ii,iii)		
<i>Oberonia weragamaensis</i> Jayaweera		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Oberonia wightiana</i> Lindley		NT			
<i>Oberonia zeylanica</i> Hook.f.		NT			
<i>Octarrhena parvula</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Papilionanthe cylindrica</i> (Lindl.) Seidenf.		VU	B1ab(i,ii,iii)		
<i>Peristylus aristatus</i> Lindley		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Peristylus brevilobus</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Peristylus cubitalis</i> (L.) Kraenzlin		VU	B1ab(i,ii,iii)		
<i>Peristylus densus</i> (Lindl.)		DD			
<i>Peristylus gardneri</i> (Hook.f.) Kraenzlin		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Peristylus plantagineus</i> (Lindley) Lindley		CR(PE)			
<i>Peristylus spiralis</i> A. Rich.		VU	B1ab(i,ii,iii)		
<i>Peristylus trimenii</i> (Hook.f.) Abeywick.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Phaius luridus</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Phaius wallichii</i> Lindl.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Phalaenopsis deliciosa</i> Rchb.f.		VU	B1ab(i,ii,iii)		
<i>Phalaenopsis mysorensis</i> C.J Sadanha.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Pholidota imbricata</i> Lindl.	S: Nari Ala	LC			

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<i>Phreatia elegans</i> Lindley		CR	B2ab(i,ii,iii)		
<i>Phreatia jayaweerae</i> Ormerod.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Podochilus saxatile</i></b> Lindley		NT			
<i>Podochilus falcatum</i> Lindley		VU	B1ab(i,ii,iii)		
<i>Podochilus malabaricum</i> Wight.		NT			
<i>Polystachya concreta</i> (Jacq.) Garay & Sweet		LC			
<i>Pomatocalpa maculosum</i> (Lindley) J. J. Sm.		NT			
<i>Pomatocalpa spicatum</i> Breda		VU	B1ab(i,ii,iii)		
<b><i>Pteroceras viridiflorum</i></b> (Thw.) Holttum		CR(PE)			
<i>Rhynchostylis retusa</i> Blume	E: Batticaloa Orchid, Fox-Tail Orchid	EN	B2ab(i,ii,iii)		
<b><i>Robiquetia virescens</i></b> (Gard. ex Lindley) Jayaweera		NT			
<b><i>Robiquetia brevifolia</i></b> (Lindley) Garay		VU	B1ab(i,ii,iii)		
<i>Robiquetia gracilis</i> (Lindley) Garay		EN	B2ab(i,ii,iii)		
<i>Robiquetia rosea</i> (Lindley) Garay		VU	B1ab(i,ii,iii)		
<i>Satyrium nepalense</i> D.Don	E: Hyacinth Orchid	NT			
<i>Schoenorchis nivea</i> (Lindley) Schltr.		NT			
<b><i>Schoenorchis tortifolia</i></b> (Jayaweera) Garay.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Seidenfadeniella filiformis</i> (Rechb. f.) E.A. Christenson & Ormerod		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sirhookera latifolia</i> (Wight) Kuntze		CR	B2ab(i,ii,iii)		
<i>Sirhookera lanceolata</i> (Wight) Kuntze		NT			
<i>Spiranthes sinensis</i> (Pers.) Ames.		NT			
<i>Stichorkis disticha</i> (Thouars) Pfitzer		VU	B1ab(i,ii,iii)		
<i>Taeniophyllum alwisii</i> Lindley		VU	B1ab(i,ii,iii)		
<b><i>Taeniophyllum gilimalense</i></b> Jayaweera		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Tainia bicornis</i> (Lindley) Reichb. f.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Taprobanea spathulata</i> (L.) Christenson.		VU	A2d		

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Thrixspermum pugionifolium</i> (Hook.f.) Schlechter		VU	B1ab(i,ii,iii)		
<i>Thrixspermum pulchellum</i> (Thw.) Schlechter		LC			
<i>Thrixspermum walkeri</i> Seidenf. & Ormerod.		VU	B1ab(i,ii,iii)		
<i>Trichoglottis tenera</i> (Lindley) Reichb.f.		VU	B1ab(i,ii,iii)		
<i>Tropidia bambusifolia</i> (Thw.) Trimen		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Tropidia thwaitesii</i> Hook. f.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Vanda tessellata</i> (Roxb.) Lodd. ex G. Don		VU	A2d		
<i>Vanda testacea</i> (Lindley) Reichb. f.		LC			
<i>Vanda thwaitesii</i> Hook. f.		CR(PE)			
<i>Vanda wightii</i> Rchb.f.		DD			
<i>Vanilla moonii</i> Thw.		EN	B2ab(i,ii,iii)		
<i>Vanilla walkerae</i> Wight		VU	B2ab(i,ii,iii)		
<i>Vanilla wightii</i> Lindl. ex White		DD			
<i>Zeuxine blatteri</i> C.E.C. Fischer.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Zeuxine longilabris</i> (Lindley) Trimen		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Zeuxine regia</i> (Lindley) Trimen	S: Iru Raja	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Zeuxine reginasilvae</i> Ormerod.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Zeuxine strateumatica</i> (L.) Schlecht.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<b>Family : Orobanchaceae</b>					
<i>Aeginetia indica</i> L.	S: Kolikarmal	CR(PE)			
<i>Aeginetia pedunculata</i> Wall.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Campbellia cytinoides</i> (Reuter) Wight		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Centranthera indica</i> (L.) Gamble	S: Dutu-Satutu	LC			
<i>Centranthera tranquebarica</i> (Spreng.) Merr.		NT		LC	
<i>Christisonia albida</i> Thw. ex. Benth.		CR(PE)			
<i>Christisonia bicolor</i> Gardner		VU	B1ab(i,ii,iii)		

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<i>Christisonia lawii</i> Wight		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Christisonia subacaulis</i> (Benth.) Gardner		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Christisonia thwaitesii</i></b> Trimen		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Christisonia tricolor</i></b> Gardner		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Legocia aurantiaca</i> (Wight) Livera		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Pedicularis zeylanica</i> Benth.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sopubia delphinifolia</i> (L.) G. Don		LC			
<i>Sopubia trifida</i> Buch.-Ham. ex D. Don		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Striga angustifolia</i> (Don) Saldanha		NT			
<i>Striga gesnerioides</i> (Willd.) Vatke		VU	B1ab(i,ii,iii)		
<i>Striga lutea</i> Lour.		NT			
<b>Family : Oxalidaceae</b>					
<i>Biophytum intermedium</i> Wight		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Biophytum nervifolium</i> Thw.		NT			
<i>Biophytum nudum</i> (Arn.) Wight		VU	B1ab(i,ii,iii)		
<i>Biophytum proliferum</i> (Arn.) Wight		LC			
<i>Biophytum reinwardtii</i> (Zucc.) Klotzsch	S: Gas-Nidikumba; S: Bin-Nelli	LC			
<b>Family : Pandanaceae</b>					
<b><i>Freycinetia pycnophylla</i></b> Solms	S: Kolla	VU	B1ab(i,ii,iii)		
<b><i>Freycinetia walkeri</i></b> Solms		NT			
<b><i>Pandanus ceylanicus</i></b> Solms	S: Watta-Keyiya, Dunu-Keyya, O-Keyiya	VU	B1ab(i,ii,iii)		
<i>Pandanus furcatus</i> Roxb.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Pandanus kaida</i> Kurz.	S: Watta-Keyiya, Arulu, Watta-Keyiya-Aralu, Weta-Keyiya	LC			
<i>Pandanus odoratissimus</i> L. f.	E: Screw-pine; S: Wetta-Keyiya; T: Talai	LC			
<i>Pandanus thwaitesii</i> Martelli	S: Duna-Keyiya, Dunu-Keyiya	NT			
<b>Family: Papaveraceae</b>					

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<i>Dicentra scandens</i> (D.Don) Walp		DD			
<b>Family : Passifloraceae</b>					
<i>Adenia hondala</i> (Gaertn.) de Wilde	S: Hondala	LC			
<i>Adenia wightiana</i> (Wall. ex Wight & Arn.) Engl.		VU	A2 d		
<b>Family : Pedaliaceae</b>					
<i>Pedaliium murex</i> L.	S: Eth-Nerenchi; T: Anai-nerinchi, Periru-Ar Nerenchi, Peru-Nerinchi	LC			
<i>Sesamum prostratum</i> Retz.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sesamum radiatum</i> Schum		LC			
<b>Family : Pentaphylaceae</b>					
<i>Adinandra lasiopetala</i> (Wight) Choisy	S: Ratu -Mihiriya	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eurya acuminata</i> DC.	E: Wild Tea; S: Wana-Halu	NT			
<i>Eurya ceylanica</i> Wight		VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eurya chinensis</i> R. Br.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eurya nitida</i> Korth		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Termstroemia emarginata</i> (Gardner) Choisy	S: Rathatiya	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Termstroemia gymnanthera</i> (White & Arn.) Beddome	S: Rattota, Rattiya, Pena- Mihiriya, Mihiriya	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Phrymaceae</b>					
<i>Peplidium maritimum</i> (L. f.) Asch.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Phyllanthaceae</b>					
<i>Actephila excelsa</i> (Dalz.) Muell. Arg.	S: Et-Pitawakka	LC			
<i>Antidesma alexiteria</i> L.	S: Heen-Embiliya	LC			
<i>Antidesma bunius</i> (L.) Spreng.	S: Karawala- Kebella	LC			
<i>Antidesma ghaesembilla</i> Gaertn.	S: Bu-Embilla	LC			
<i>Antidesma pyrifolium</i> Muell. Arg.		LC		VU <sup>i</sup>	A1c
<i>Antidesma thwaitesianum</i> Mulell. Arg.	S: Karawala- Kebella	VU	B1ab(i,ii,iii)		
<i>Antidesma walkeri</i> (Tul.) Pax & Hoffm.	S: Thimbiliya	LC			

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<i>Aporusa acuminata</i> Thw.		LC			
<i>Aporusa cardiosperma</i> (Gaertn.) Merr.	S: Mapat-Kabella, Kampotta, Pepiliya	LC		VU <sup>i</sup>	A1c
<i>Aporusa fusiformis</i> Thw.		VU	B1ab(i,ii,iii)		
<b><i>Aporusa lanceolata</i></b> (Tul.) Thw.	S: Heen Kebella, Veli-Mediya	LC		VU <sup>i</sup>	A1c
<i>Aporusa lindleyana</i> (Wight) Baill.	S: Barawa-Embilla, Kebella	LC			
<i>Bischofia javanica</i> Blume.		LC			
<i>Blachia umbellata</i> (Willd.) Baill.	S: Goda-Ratmale, Kosatta	LC			
<i>Breynia retusa</i> (Dennst.) Alston	S: Wa, Wal-Murunga	LC			
<i>Breynia vitis-idaea</i> (Burm.f.) C.E.C. Fischer	S: Gas-Kayila; T: Mmanipunati	LC			
<i>Bridelia moonii</i> Thw.	S: Patkela	LC		VU <sup>i</sup>	A1c
<i>Bridelia retusa</i> (L.) A. Juss.	S: Ketakala; T: Mul-Venkai	LC			
<i>Bridelia stipularis</i> (L.) Blume		CR(PE)			
<b><i>Cleistanthus acuminatus</i></b> (Thw.) Muell. Arg.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Cleistanthus ferrugineus</i></b> (Thw.) Muell. Arg.		LC		VU <sup>i</sup>	A1c
<b><i>Cleistanthus pallidus</i></b> (Thw.) Muell. Arg.	T: Visa	LC			
<i>Cleistanthus patulus</i> (Roxb.) Muell. Arg.	S: Wa	LC			
<b><i>Cleistanthus robustus</i></b> Muell. Arg.	S: Pala	VU	B1ab(i,ii,iii)	CR <sup>i</sup>	B1+2c
<i>Flueggea leucopyrus</i> Willd.	S: Heen-Katu-Pila; T: Mudpulanthi	LC			
<i>Flueggea virosa</i> (Roxb. ex Willd.) Voigt		DD			
<b><i>Glochidion acutifolium</i></b> Alston		NT			
<b><i>Glochidion coriaceum</i></b> Thw.		LC			
<b><i>Glochidion gardneri</i></b> Thw.		DD			
<b><i>Glochidion montanum</i></b> Thw.		LC			
<b><i>Glochidion mooni</i></b> Thw.		LC			
<b><i>Glochidion nemorale</i></b> Thw.		LC			
<b><i>Glochidion pachycarpum</i></b> Alston		LC			

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<b><i>Glochidion pycnocarpum</i></b> (Muell.Arg.) Beddome	S: Hunu Kirilla	LC			
<b><i>Glochidion stellatum</i></b> (Retz.) Beddome	S: Kirilla	LC			
<i>Glochidion zeylanicum</i> (Gaertn.) A.Juss.	S: Hunu Kirilla	LC			
<b><i>Margaritaria cyanospermus</i></b> (Gaertn.) Airy Shaw	S: Karawu	VU	B1ab(i,ii,iii)		
<i>Margaritaria indicus</i> (Dalz.) Airy Shaw		VU	B1ab(i,ii,iii)		
<i>Meineckia parvifolia</i> (Wight) G.L. Webster		NT			
<i>Phyllanthus amarus</i> Schum.	S: Pita-Wakka; T: Kilkaunelli	LC			
<i>Phyllanthus baillonianus</i> Mulell. Arg.	S: Kela-Karapincha	VU	B1ab(i,ii,iii)		
<b><i>Phyllanthus cinereus</i></b> Mulell. Arg.		VU	B1ab(i,ii,iii)		
<b><i>Phyllanthus dealbatus</i></b> Alston		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Phyllanthus debilis</i> Klein ex Willd.	S: Bim-Nelli, Pitawakka; T: Kulhainelli	LC			
<i>Phyllanthus emblica</i> L.	S: Nelli; T: Topu-Nelli	VU	B1ab(i,ii,iii)		
<i>Phyllanthus gardnerianus</i> (Wight) Baillon		NT			
<b><i>Phyllanthus hakgalensis</i></b> Thw. ex Trimen		CR(PE)			
<i>Phyllanthus heyneanus</i> Muell.Arg.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Phyllanthus maderaspatensis</i> L.		LC			
<b><i>Phyllanthus myrtifolius</i></b> (Wight) Muell. Arg.		VU	B1ab(i,ii,iii)		
<b><i>Phyllanthus oreophilus</i></b> Muell. Arg.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Phyllanthus pinnatus</i> (Wight) Webster		LC			
<i>Phyllanthus polyphyllus</i> Willd.	-	LC			
<i>Phyllanthus reticulatus</i> Poir.	S: Gas-Dummella, Kaila, Wel-Kayila; T: Mipullanti, Pula, Pullanti	LC			
<i>Phyllanthus rheedii</i> Wight		NT			
<i>Phyllanthus rotundifolius</i> Klein ex Willd.		LC			
<i>Phyllanthus simplex</i> Retz.		LC			
<i>Phyllanthus urinaria</i> L.	S: Rat Pita Wakka; T: Kilkaunelli	LC			
<b><i>Phyllanthus wheeleri</i></b> G. L. Webster		NT			



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<i>Phyllanthus zeylanicus</i> Muell. Arg.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sauropus androgynus</i> (L.) Merr.	S: Mella Dum Kola, Japan Batu	LC			
<i>Sauropus assimilis</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sauropus bacciformis</i> (L.) Airy Shaw	S: Bin-Delung, Et Pitawakka	LC			
<i>Sauropus quadrangularis</i> (Willd.) Muell. Arg.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sauropus retroversus</i> Wight		CR(PE)			
<i>Sauropus rigidus</i> Thw.	S: Ginihiriya	NT			
<b>Family : Picrodendraceae</b>					
<i>Mischodon zeylanicus</i> Thw.	S: Tammanna, Tammanua; T: Tampanai	LC			
<b>Family : Piperaceae</b>					
<i>Lepianthes umbellatum</i> (L.) Raf.	S: Mala-Labu	VU	B1ab(i,ii,iii)		
<i>Peperomia blanda</i> (Jacq.) Kunth		NT			
<i>Peperomia candolleana</i> Miq.		VU	B1ab(i,ii,iii)		
<i>Peperomia heyneana</i> Miq.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Peperomia pseudo-rhombea</i> C. DC.		VU	B1ab(i,ii,iii)		
<b><i>Peperomia species 6</i></b>		CR(PE)			
<i>Peperomia tetraphylla</i> (Forst.) Hook. & Arn.		VU	B1ab(i,ii,iii)		
<i>Piper hymenophyllum</i> Miq.		EN	B1ab(i,ii,iii)		
<i>Piper sylvestre</i> Lam.	S: Mala Miris, Mala-Miris-Wel, Wal-Gam-Miris-Wel	LC			
<i>Piper trineuron</i> Miq.		NT			
<i>Piper walkeri</i> Miq.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Piper zeylanicum</i> Miq.		LC			
<b>Family : Pittosporaceae</b>					
<i>Pittosporum ceylanicum</i> Wight	S: Ketiya	NT			
<i>Pittosporum tetraspermum</i> Wight & Arn.		VU	B2ab(i,ii,iii)		
<b>Family : Plantaginaceae</b>					
<i>Adenosma camphoratum</i> (Vahl) Hook. f.	S: Kaha-Gona-Kola	NT			

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<i>Adenosma indianum</i> (Lour.) Merr.		LC		LC	
<b><i>Adenosma subrepens</i></b> (Thw.) Benth.		CR(PE)			
<i>Bacopa floribunda</i> (R. Br.) Wettst.		DD		LC	
<i>Bacopa monnieri</i> (L.) Pennell	S: Lunuwila	LC		LC	
<i>Callitriche stagnalis</i> Scop.		CR	B2ab(i,ii,iii)		
<i>Dopatrium junceum</i> (Roxb.) Buch.-Ham. ex Benth.	S:Bimsavan	LC		LC	
<i>Dopatrium lobelioides</i> (Retz.) Benth.		LC			
<i>Dopatrium nudicaule</i> (Willd.) Benth.		LC		LC	
<i>Limnophila aquatica</i> (Roxb.) Alston	S: Reewul-Puruk-Wila	LC			
<i>Limnophila aromatica</i> (Lam.) Merr.		LC		LC	
<i>Limnophila chinensis</i> (Osbeck) Merr.		CR(PE)		LC	
<i>Limnophila heterophylla</i> (Roxb.) Benth.	T: Vanetchi	NT		LC	
<i>Limnophila indica</i> (L.) Druce	T: Thirai	LC		LC	
<i>Limnophila laxa</i> Benth.		DD		LC	
<i>Limnophila polystachya</i> Benth.		DD		LC	
<i>Limnophila repens</i> (Benth.) Benth.	S; Amba-Wila	LC		LC	
<i>Limnophila rugosa</i> (Roth) Merr		CR	B2ab(i,ii,iii)	LC	
<i>Limnophila sessiliflora</i> (Vahl) Blume		LC		LC	
<i>Microcarpaea minima</i> (Koenig ex Retz.) Merr.		LC		LC	
<i>Plantago erosa</i> Wall.		LC			
<i>Stemodia viscosa</i> Roxb.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Veronica javanica</i> Blume		CR(PE)			
<b>Family : Plumbaginaceae</b>					
<i>Plumbago zeylanica</i> L.	E: Ceylon Leadwort; S: Ela-Netul	LC			
<b>Family : Poaceae</b>					
<i>Acrachne racemosa</i> (Heyne ex Roem. & Schult.) Ohwi		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Acroceras munroanum</i> (Bal.) Henrard		DD			

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<i>Aeluropus lagopoides</i> (L.) Trin. ex Thw.		LC			
<i>Agrostis pilosula</i> Trin.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Alloteropsis cimicina</i> (L.) Stapf	S: Budeni-Tana; T: Unni Pul	LC			
<i>Alloteropsis semialata</i> (R. Br.) A. Hitchc.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Andropogon lividus</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Andropogon polyptychos</i> Steud.		VU	B1ab(i,ii,iii)		
<i>Apluda mutica</i> L.	S: Kuru-Kuda-Ana; T: Mungil-Pul	LC			
<i>Apocopis mangalorensis</i> (Hochst.) Henrard		LC			
<i>Aristida adscensionis</i> L.	S: Teli-Tana	VU	B1ab(i,ii,iii)		
<i>Aristida hystrix</i> L.f.		DD			
<i>Aristida setacea</i> Retz.	S: Et-Tuttiri	LC			
<i>Arthraxon castratus</i> (Griffith) Narayanawami ex Bor		VU	B1ab(i,ii,iii)		
<i>Arthraxon hispidus</i> (Thunb.) Makino		NT			
<b><i>Arundinaria debilis</i></b> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Arundinaria densifolia</i> Munro		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Arundinaria floribunda</i></b> Thw.	S: Mal-Bata	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Arundinaria scandens</i></b> Soderstrom & Ellis		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Arundinaria walkeriana</i> Munro		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Arundinella blephariphylla</i></b> (Trimen) Hook.f.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Arundinella laxiflora</i></b> Hook. f.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Arundinella leptochloa</i> (Steud.) Hook. f		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Arundinella metzii</i> Hochst. ex Miq.		DD			
<i>Arundinella pumila</i> (Hochst. ex A. Rich.) Steud.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Arundinella setosa</i> Trin.		DD			
<b><i>Arundinella thwaitesii</i></b> Hook.f.		DD			
<i>Arundinella villosa</i> Arn. ex Steud.		VU	B1ab(i,ii,iii)		

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<i>Bambusa bambos</i> (L.) Voss ex Vilmorin	E: Spiny Bamboo; S: Katu-Una; T: Mungil	LC			
<i>Bothriochloa bladhii</i> (Retz.) S.T.Blake		LC			
<i>Bothriochloa pertusa</i> (L.) A.Camus		LC			
<i>Bothriochloa pseudischaemum</i> (Nees ex Steud.) Henrard		DD			
<i>Brachiaria distachya</i> (L.) Stapf		LC			
<i>Brachiaria eruciformis</i> (Sm.) Griseb.		DD			
<i>Brachiaria kurzii</i> (Hk.f.) A.Camus		DD			
<i>Brachiaria paspaloides</i> (Presl) C.E.Hubb.		DD			
<i>Brachiaria ramosa</i> (L.) Stapf		LC			
<i>Brachiaria remota</i> (Retz.) Haines		LC			
<i>Brachiaria reptans</i> (L.) C.A. Gardner & C.E. Hubb.		LC			
<i>Brachiaria semiundulata</i> (Hochst. ex A. Rich.) Stapf		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Brachiaria semiverticillata</i> (Rottler ex Steud.) Alston		VU	B1ab(i,ii,iii)		
<i>Brachiaria subquadripa</i> (Trin.) A.Hitchc.		LC			
<i>Brachypodium sylvaticum</i> (Hudson) P.Beauv.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Calamagrostis srilankensis</i></b> Davidse		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Centotheca lappacea</i> (L.) Desv.		NT			
<i>Chionachne koenigii</i> (Spreng.)Thw.		LC			
<i>Chloris montana</i> Roxb.		LC			
<i>Chrysopogon aciculatus</i> (Retz.) Trin.	E:Love Grass; S:Tuttiri, T: Ottu-pul	LC			
<i>Chrysopogon fulvus</i> (Spreng.) Chiov.	S: Karu-vi	LC			
<i>Chrysopogon nodulibarbis</i> (Steud.) Henrard		VU	B1ab(i,ii,iii)		
<i>Chrysopogon orientalis</i> (Desv.) A.Camus		VU	B1ab(i,ii,iii)		
<i>Chrysopogon serrulatus</i> Trin.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Coelachne perpusilla</i> (Steud.)Thw.		VU	B1ab(i,ii,iii)		
<i>Coelachne simpliciuscula</i> (Steud.) Benth.		VU	B1ab(i,ii,iii)		

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Coelachyropsis lagopoides</i> (Burm. f.) Senaratne		LC			
<i>Coix gigantea</i> Roxb.	S: Heen-Kirindi	NT			
<i>Coix lacryma-jobi</i> L.	S: Kirindi	VU	B1ab(i,ii,iii)		
<i>Cymbopogn caesius</i> (Hook. & Arn.) Stapf		NT			
<i>Cymbopogn nardus</i> (L.) Rendle	E: New Citronella Grass; S: Heen-Pangiri, Lena Batu, Lena- Batu-Pengiri, Pegiri, Mana	LC			
<i>Cymbopogn polyneuros</i> (Steud.) Stapf		DD			
<i>Cynodon arcuatus</i> J.S.Presl ex C.Presl		LC			
<i>Cynodon barberi</i> Rang. & Tad.		NT			
<i>Cynodon dactylon</i> (L.) Pers	E: Bermuda Grass, Doob Grass; S: Ruha; T: Arugam- Pillu, Arugam-Pul	LC			
<i>Cyrtococcum deccanense</i> Bor		VU	B1ab(i,ii,iii)		
<i>Cyrtococcum oxyphyllum</i> (Hochst. ex Steud.) Stapf		NT			
<i>Cyrtococcum patens</i> (L.) A.Camus		DD			
<i>Cyrtococcum trigonum</i> (Retz.) A.Camus		LC			
<i>Dactyloctenium aegyptium</i> (L.) Willd.	S: Putu-Tana	LC			
<b><i>Davidsea attenuata</i></b> (Thw.) Soderstrom & Ellis		VU	B1ab(i,ii,iii)		
<b><i>Dendrocalamus cinctus</i></b> R.B.Majumder ex Soderstrom & Ellis		CR	B2ab(i,ii,iii)		
<i>Dichaetaria wightii</i> Nees ex Stude.		VU	B1ab(i,ii,iii)		
<i>Dichanthium caricosum</i> (L.) A.Camus	S: Geta Mana	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Dichanthium foveolatum</i> (Del.) Roberty		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Digitaria abyssinica</i> (A.Rich.) Stapf		EN	B2ab(i,ii,iii)		
<i>Digitaria cliaris</i> (Retz.) Koeler		DD			
<i>Digitaria bicornis</i> (Lam.) Loud.		LC			
<i>Digitaria ciliaris</i> (Retz.) Koeler	S: Guru- Tana; T: Akki-Pul, Arisi-Pul	LC			
<i>Digitaria cruciata</i> (Nees ex Steud.) A. Camus		DD			
<i>Digitaria fuscescens</i> (J.S. Presl in K.B. Presl) Henrard		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Digitaria griffithii</i> (Hook.f.) Henrard		DD			
<i>Digitaria longiflora</i> (Retz.) Pers.		LC			
<i>Digitaria stricta</i> Roth ex Roem. & Schult.		DD			
<b><i>Digitaria thwaitesii</i></b> (Hack) Henrard		DD			
<i>Digitaria tomentosa</i> (Koenig ex Willd.) Henrard		VU	B1ab(i,ii,iii)		
<i>Digitaria violascens</i> Link		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Digitaria wallichiana</i> (Steud.) Stapf		VU	B1ab(i,ii,iii)		
<i>Dimeria aristata</i> (Hack.) Senaratna		DD			
<i>Dimeria avenacea</i> (Retz.) C.E.C.Fischer		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Dimeria ballardii</i></b> Bor		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Dimeria fuscescens</i> Trin.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Dimeria gracilis</i> Steud.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Dimeria lehmannii</i> (Steud.) Hack.		VU	B1ab(i,ii,iii)		
<i>Dimeria leptorhachis</i> Hack.		CR	B2ab(i,ii,iii)		
<i>Dimeria pubescens</i> Hack.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Dimeria thwaitesii</i> Hack.		VU	B1ab(i,ii,iii)		
<i>Echinochloa colona</i> (L.) Link	S: Gira Tana; T: Adipul	LC			
<i>Echinochloa crusgalli</i> (L.) P.Beauv.		LC			
<i>Echinochloa stagnina</i> (Retz.) P.Beauv.		LC			
<i>Eleusine indica</i> (L.) Gaertn.	S: Bela-Tana, Wal-Mal-Kurakkan, Wal-Kurakkan	LC			
<i>Elytrophorus spicatus</i> (Willd.) A. Camus		DD			
<i>Enteropogon dolichostachyus</i> (Lagasca) Keng ex Lazarides		LC			
<i>Enteropogon monostachyos</i> (Vahl) K.Schum. ex Engl.		VU	B1ab(i,ii,iii)		
<i>Eragrostiella bifaria</i> (Vahl) Bor		LC			
<i>Eragrostiella brachyphylla</i> (Stapf) Bor		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eragrostis amabilis</i> (L.) Hook. & Arn.		LC			
<i>Eragrostis atrovirens</i> (Desf.)Trin. ex Steud.		LC			

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<i>Eragrostis cilianensis</i> (Allioni) Janchen		DD			
<i>Eragrostis ciliaris</i> (L.) R.Br.		LC			
<i>Eragrostis ciliata</i> (Roxb.) Nees		DD			
<i>Eragrostis curvula</i> (Schrad) Nees		DD			
<i>Eragrostis gangetica</i> (Roxb.) Steud.	S: Ela-Kuru-Tana	LC			
<i>Eragrostis japonica</i> (Thumb.) Trin.		LC			
<i>Eragrostis minor</i> Host		DD			
<i>Eragrostis nigra</i> Nees ex Steud.		VU	B1ab(i,ii,iii)		
<i>Eragrostis nutans</i> (Retz.) Nees ex Steud.		LC			
<i>Eragrostis pilosa</i> (L.) P.Beauv.		LC			
<i>Eragrostis riparia</i> (Willd.) Nees		LC			
<i>Eragrostis subsecunda</i> (Lam.) E. Fourn.		DD			
<i>Eragrostis tenuifolia</i> (A.Rich) Hochst. ex Steud.		VU	B1ab(i,ii,iii)		
<i>Eragrostis unioloides</i> (Retz.) Nees ex Steud.		LC			
<i>Eragrostis viscosa</i> (Retz.) Trin.		LC			
<i>Eragrostis zeylanica</i> Nees et Meyer.		DD			
<i>Eremochloa muricata</i> (Retz.) Hack.		NT			
<b><i>Eremochloa zeylanica</i></b> (Trimen) Hack.		VU	B2ab(i,ii,iii)		
<i>Eriachne trisetata</i> Nees ex Steud.	S: Pini Tuttiri	DD			
<i>Eriochloa procera</i> (Retz.) C.E. Hubb.		LC			
<i>Eulalia phaeothrix</i> (Hack.) Kuntze		NT			
<b><i>Eulalia thwaitesii</i></b> (Hack.) Kuntze		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Eulalia trispicata</i> (Schult.) Henrard		LC			
<i>Garnotia courtallensis</i> (Arn. & Nees) Thw.		VU	B2ab(i,ii,iii)		
<i>Garnotia exaristata</i> Gould		VU	B2ab(i,ii,iii)		
<i>Garnotia fergusonii</i> Trimen		NT			
<b><i>Garnotia fuscata</i></b> Thw.		CR(PE)			

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<b>Garnotia micrantha</b> Thw.		VU	B2ab(i,ii,iii)		
<b>Garnotia panicoides</b> Trimen		CR(PE)			
<b>Garnotia scoparia</b> Thw.		NT			
<i>Hackelochloa granularis</i> (L.) Kuntze		LC			
<i>Halopyrum mucronatum</i> (L.) Stapf		VU	B2ab(i,ii,iii)		
<i>Helictotrichon virescens</i> (Nees ex Steud.) Henarard		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Hemarthria compressa</i> (L.f.) R.Br.		VU	B2ab(i,ii,iii)		
<i>Hemisorghum venustum</i> (Thw.) W.D. Clayton		VU	B2ab(i,ii,iii)		
<b>Heteropholis nigrescens</b> (Thw.) C.E.Hubb.		VU	B2ab(i,ii,iii)		
<i>Heteropogon contortus</i> (L.) Roem. & Schult.	S: I-Tana	LC			
<i>Heteropogon triticeus</i> (R.Br.) Stapf		NT			
<i>Holcolemma canaliculatum</i> (Steud.) Stapf & C.E.Hubb.		LC			
<i>Hygroryza aristata</i> (Retz.) Nees	S: Go-Jabba	NT			
<i>Hymenachne amplexicaulis</i> (Rudge) Nees		LC			
<i>Hyparrhenia filipendula</i> (Hochst.) Stapf		VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Ichnanthus pallens</i> (Sw.) Munro ex Benth.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Imperata cylindrica</i> (L.) Rausch.	S: Illuk	LC			
<i>Isachne globosa</i> (Thunb.) Kuntze	S: Bata-Della	LC			
<i>Isachne kunthiana</i> (Wight & Arn. ex Steud.) Miq.		LC			
<b>Isachne multiflora</b> (Thw.) Ferguson		CR(PE)			
<i>Isachne walkeri</i> (Arn. ex Steud.) Wight & Arn. ex Thw.		NT			
<i>Ischaemum barbatum</i> Retz.		LC			
<i>Ischaemum ciliare</i> Retz.	S: Rat-Tana	LC			
<i>Ischaemum commutatum</i> Hack.		LC			
<i>Ischaemum dalzellii</i> Stapf ex Bor		DD			
<i>Ischaemum muticum</i> L.	S: Bada-Mal-Tana	LC			



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<i>Ischaemum polystachyum</i> J. & C.Presl		CR(PE)	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Ischaemum rugosum</i> Salisb.	S: Kudu Kedu	LC			
<i>Ischaemum timorense</i> Kunth	S: Rila-Rat-Tana	LC			
<i>Iseilema laxum</i> Hack.		LC			
<i>Iseilema prostratum</i> (L.) Andersson		LC			
<i>Jansenella griffithiana</i> (C.Mueller) Bor		LC			
<i>Leersia hexandra</i> Sw.	S: Layu, Lev	LC			
<i>Leptaspis urceolata</i> (Roxb.) R.Br.		NT			
<i>Leptaspis zeylanica</i> Nees ex steud.		NT			
<i>Leptochloa chinensis</i> (L.) Nees		LC			
<i>Leptochloa fusca</i> (L.) Kunth		LC			
<i>Leptochloa neesii</i> (Thw.) Benth.		LC			
<i>Leptochloa panicea</i> (Retz.) Ohwi		LC			
<i>Leptochloa srilankensis</i> N. Snow		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Leptochloa uniflora</i> Hochst. ex A.Rich		LC			
<i>Lepturus repens</i> (G.Forst.) R.Br.		NT			
<i>Lophatherum gracile</i> Brongn.		LC			
<i>Lopholepis ornithocephala</i> (Hook.) Steud.		VU	B1ab(i,ii,iii)		
<i>Melanocenchris monoica</i> (Koenig ex Rottler) C. Fischer		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Microstegium ciliatum</i> (Trin.) A. Camus		VU	B1ab(i,ii,iii)		
<i>Microstegium nudum</i> (Trin.) A. Camus		VU	B1ab(i,ii,iii)		
<i>Mnesithea laevis</i> (Retz.) Kunth		LC			
<i>Myriostachya wightiana</i> (Nees ex Steud.) Hook.f.		CR(PE)			
<b><i>Ochlandra stridula</i></b> Moon ex Thw.	S: Bata-Li, Bata	LC			
<i>Ophiuros exaltatus</i> (L.) Kuntze		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Oplismenus burmannii</i> (Retz.) P. Beauv.		LC			

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<i>Oplismenus compositus</i> (L.) P. Beauv.		LC			
<b><i>Oplismenus thwaitesii</i></b> Hook. f.		CR(PE)			
<i>Oplismenus undulatifolius</i> (Ard.) Roem. & Schult.		DD			
<i>Oropetium thomaeum</i> (L.f.) Trin.		LC			
<i>Oryza eichingeri</i> A. Peter		LC			
<i>Oryza granulata</i> Nees & Arn. ex G. Watt		EN	B2ab(i,ii,iii)		
<i>Oryza nivara</i> Sharma & Shastry		NT			
<i>Oryza rhizomatis</i> Vaughan		VU	B1ab(i,ii,iii)		
<i>Oryza rufipogon</i> W. Griffith		EN	B2ab(i,ii,iii)		
<i>Ottochloa nodosa</i> (Kunth) Dandy		VU	B2ab(i,ii,iii)		
<i>Panicum curviflorum</i> Hornem.	S: Wal-Meneri, Meneri; T: Shamai-Karunai	LC			
<i>Panicum brevifolium</i> L.		LC			
<i>Panicum gardneri</i> Thw.		LC			
<i>Panicum humile</i> Trin.		LC			
<i>Panicum luzonense</i> J. & C. Presl		CR(PE)			
<i>Panicum notatum</i> Retz.		LC			
<i>Panicum paludosum</i> Roxb.		LC			
<i>Panicum phoinclados</i> Naik & Patunkar		NT			
<i>Panicum repens</i> L.	S: Etora; T: Injii-Pul	LC			
<i>Panicum sparsicomum</i> Nees ex Steud.		LC			
<i>Paspalidium flavidum</i> (Retz.) A.Camus	E: Arisi-Pul; S: Ha-Thana	LC			
<i>Paspalidium geminatum</i> (Forssk.) Stapf		LC			
<i>Paspalidium punctatum</i> (Brum.f.) A. Camus		LC			
<i>Paspalum distichum</i> L.		LC			
<i>Paspalum longifolium</i> Roxb.		LC			
<i>Paspalum scrobiculatum</i> L.	S: Amu; T: Varagu, Waragu	LC			

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<i>Paspalum vaginatum</i> Sw.		LC			
<i>Perotis indica</i> (L.) Kuntze.		LC			
<i>Perotis junceum</i> (Roxb.) Ham		DD			
<i>Phragmites karka</i> (Retz.) Steud.	S: Nala-Gas	LC			
<i>Pogonatherum crinitum</i> (Thunb.) Kunth		LC			
<i>Pommereulla cornucopiae</i> L.f.		CR(PE)			
<i>Pseudanthistiria umbellata</i> (Hack.) Hook.f.		LC			
<i>Pseudechinolaena polystachya</i> (HBK) Stapf		DD			
<i>Pseudoraphis spinescens</i> (R. Br.) Vick.		LC			
<i>Pseudoxytenanthera monadelphica</i> (Thw.) Soderstrom & Ellis		VU	B2ab(i,ii,iii)		
<i>Rottboellia cochinchinensis</i> (Lour.) W.D. Clayton		LC			
<i>Saccharum arundinaceum</i> Retz.	S: Rambuk; T: Pey-Karunmu, Pi-Karumbu	CR(PE)			
<i>Saccharum spontaneum</i> L.	S: Wal-Uk	LC			
<i>Sacciolepis curvata</i> (L.) Chase		LC			
<i>Sacciolepis indica</i> (L.) Chase		LC			
<i>Sacciolepis interrupta</i> (Willd.) Stapf		LC			
<i>Sacciolepis myosuroides</i> (R.Br.) A.Camus		NT			
<i>Sehima nervosum</i> (Rottler) Stapf		LC			
<b><i>Setaria gracillima</i></b> Hook.f.		CR(PE)			
<i>Setaria intermedia</i> Roth ex Roem. & Schult.		LC			
<i>Setaria palmifolia</i> (Koenig) Stapf	S: Reli-Tana	LC			
<i>Setaria parviflora</i> (Poir.) M.Kerguelen	S: Kavalu, Kawalu	LC			
<i>Setaria pumila</i> (Poir.) Roem. & Schult.		LC			
<i>Setaria verticillata</i> (L.) P.Beauv.	S: Hiwal Tana	LC			
<i>Sorghum nitidum</i> (Vahl) Pers.		VU	B2ab(i,ii,iii)		
<i>Sorghum propinquum</i> (Kunth) A.Hitchc.		VU	B2ab(i,ii,iii)		

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<i>Sphaerocaryum malaccense</i> (Trin.) Pilger		VU	B2ab(i,ii,iii)		
<i>Spinifex littoreus</i> (Burm.f.) Merr.	S: Maha-Ravana-Ravula; T: Ravana-Meesai	LC			
<i>Sporobolus africanus</i> (Poir.) Robyns & Tournay		LC			
<i>Sporobolus coromandelianus</i> (Retz.) Kunth		LC			
<i>Sporobolus diander</i> (Retz.) P. Beauv.		LC			
<i>Sporobolus fertilis</i> (Steud.) Clayton		LC			
<i>Sporobolus maderaspatanus</i> Bor		VU	B2ab(i,ii,iii)		
<i>Sporobolus tremulus</i> (Willd.) Kunth		LC			
<i>Sporobolus virginicus</i> (L.) Kunth	S: Mudu-Etora	LC			
<i>Sporobolus wallichii</i> Munro ex Trimen		VU	B2ab(i,ii,iii)		
<i>Stenotaphrum dimidiatum</i> (L.) Brongn.		LC			
<i>Streptogyna crinita</i> P.Beauv.		VU	B2ab(i,ii,iii)		
<i>Themeda cymbaria</i> Hack.	S: Kara-Wata-Mana	LC			
<i>Themeda forskalii</i> Hackel		DD			
<i>Themeda tremula</i> (Steud.) Hack.	S: Pini-Bara-Tana	LC			
<i>Themeda triandra</i> Forssk.		LC			
<i>Thuarea involuta</i> (G.Forst.) R.Br. ex Roem. & Schult.		DD			
<i>Thysanolaena latifolia</i> (Roxb. ex Hornem.) Honda		NT			
<i>Trachys muricata</i> (L.) Trin.		LC			
<i>Tragus roxburghii</i> Panigrahi		LC			
<i>Tripogon bromoides</i> Roth ex Roem. & Schult		VU	B2ab(i,ii,iii)		
<i>Urochloa panicoides</i> P. Beauv.		VU	B2ab(i,ii,iii)		
<i>Urochloa setigera</i> (Retz.) Stapf		LC			
<i>Vetiveria zizanioides</i> (L.) Nash	E: Khas-Khas; S: Sawandara, Sevendara; T: Vettiver	LC			
<i>Zoysia matrella</i> (L.) Merr.		LC			

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<b>Family : Podostemaceae</b>					
<i>Dalzellia ceylanica</i> (Gardner) Wight		VU	B1ab(i,ii,iii)		
<i>Farmeria metzgerioides</i> (Trimen) Willis ex Hook.f.		VU	B1ab(i,ii,iii)		
<i>Polypleurum elongatum</i> (Gardner) J.B.Hall		VU	B1ab(i,ii,iii)		
<i>Polypleurum stylosum</i> (Wight) J.B.Hall		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Zeylanidium lichenoides</i> (Kurz) Engl.		CR(PE)			
<i>Zeylanidium olivaceum</i> (Gardner) Engl.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Zeylanidium subulatum</i> (Gardner) C.Cusset		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Polygalaceae</b>					
<i>Polygala arillata</i> Buch.-Ham. ex D.Don		LC			
<i>Polygala chinensis</i> L.		LC			
<i>Polygala elongata</i> Klein ex Willd.		DD			
<i>Polygala glaucoides</i> L.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Polygala glomerata</i> Lour.		VU	B1ab(i,ii,iii)		
<i>Polygala hirsutula</i> Arn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Polygala jacobii</i> Chandrab.		DD			
<i>Polygala javana</i> DC.	S: Tilo Guru	LC			
<i>Polygala longifolia</i> Poir		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Polygala macrolophos</i> Hassk.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Polygala rosmarinifolia</i> Wight & Arn.		NT			
<i>Polygala telephioides</i> Willd.		LC			
<i>Polygala triflora</i> L.		NT			
<i>Salomonina ciliata</i> (L.) DC.		VU	B1ab(i,ii,iii)		
<i>Xanthophyllum zeylanicum</i> Meijden	S: Palala	LC			
<b>Family : Polygonaceae</b>					
<i>Persicaria attenuata</i> (R. Br.) Sojak	S: Sudu-Kimbul-Wenna	LC		LC	
<i>Persicaria barbata</i> (L.) H.Hara	S: Ratu-Kimbul-Wenna	LC			

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<i>Persicaria capitata</i> (Buch.-Ham. in D.Don) H.Gross		LC			
<i>Persicaria decipiens</i> (R.Br.) K.L.Wilson		DD			
<i>Persicaria glabra</i> (Willd.) Gomez de la Maza		LC			
<i>Persicaria hydropiper</i> (L.) Spach		DD			
<i>Persicaria minor</i> (Hudson) Opiz		DD			
<i>Persicaria nepalensis</i> (Meissner) H.Gross		DD			
<i>Persicaria orientalis</i> (L.) Spach		LC			
<i>Persicaria praetermissa</i> (Hook.f.) H.Hara		DD			
<i>Persicaria strigosa</i> (R.Br.) Nakai		LC			
<i>Polygonum plebeium</i> R.Br.		LC		LC	
<b>Family : Pontederiaceae</b>					
<i>Monochoria hastata</i> (L.) Solms-Laub	S: Diya-Habarala, Jabara	NT		LC	
<i>Monochoria vaginalis</i> (Burm.f.) Presl	S: Diya habarala, Jabara	LC		LC	
<b>Family : Portulacaceae</b>					
<i>Portulaca oleracea</i> L.	S: Genda-kola; T: Pulikkirai, Pulichchankirai	LC			
<i>Portulaca quadrifida</i> L.	S: Heen-Genda-Kola	LC			
<i>Portulaca suffruticosa</i> Wall. ex Wight & Arn.		LC			
<i>Portulaca tuberosa</i> Roxb.	S: Uru-Genda	LC			
<i>Portulaca wightiana</i> Wall. ex Wight & Arn.		VU	B1ab(i,ii,iii)		
<b>Family : Potamogetonaceae</b>					
<i>Potamogeton nodosus</i> Poir.		LC		LC	
<i>Potamogeton pectinatus</i> L.		LC			
<i>Potamogeton perfoliatus</i> L.		LC			
<b>Family : Primulaceae</b>					
<i>Aegiceras corniculata</i> (L.) Blanco	S: Heen Kadol; T: Vitlikanna	LC			
<i>Ardisia colorata</i> Roxb.		CR	B1ab(i,ii,iii)		

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<i>Ardisia crenata</i> Sims		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Ardisia elliptica</i> Thunb.	S: Balu-Dan	LC			
<b><i>Ardisia gardneri</i></b> Clarke		LC			
<b><i>Ardisia lankaensis</i></b> Kosterm.		VU	B1ab(i,ii,iii)		
<i>Ardisia missionis</i> Wall.ex A.DC.		LC			
<b><i>Ardisia moonii</i></b> Clarke		LC			
<i>Ardisia pauciflora</i> Heyne		NT			
<b><i>Ardisia polylepis</i></b> Mez		EN	B2ab(i,ii,iii)		
<i>Ardisia solanacea</i> Roxb.	S: Balu-Dan	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Ardisia wightiana</i></b> (Wall. ex A.DC.) Mez		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Ardisia willisii</i></b> Mez	S: Lunu-Dan	VU	B1ab(i,ii,iii)		
<b><i>Ardisia zeylanica</i></b> Clarke		LC			
<i>Embelia aurantiaca</i> (Wall.) Wadhwa		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Embelia ribes</i> Burm. f.	S: Wel-Embilla	LC			
<i>Embelia tsjeriam-cottam</i> (Roem. & Schult.) A.DC.		NT			
<i>Lysimachia laxa</i> Baudo		VU	B1ab(i,ii,iii)		
<i>Lysimachia procumbens</i> Baudo		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Maesa indica</i> (Roxb.) A. DC.		LC			
<b><i>Myrsine ceylanica</i></b> (Mez) Wadhwa		NT			
<b><i>Myrsine robusta</i></b> (Mez) Wadhwa		LC			
<i>Myrsine thwaitesii</i> (Mez) Wadhwa		NT			
<i>Myrsine wightiana</i> Wall. ex A.DC.		VU	B1ab(i,ii,iii)		
<b>Family : Proteaceae</b>					
<b><i>Helicia ceylanica</i></b> Gardner		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Putranjivaceae</b>					
<b><i>Drypetes gardneri</i></b> (Thw.) Pax & Hoffm.	S: Eta-Wira, Gal-Wira	NT			
<b><i>Drypetes lanceolata</i></b> (Thw.) Pax & Hoffm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Drypetes longifolia</i> (Blume) Pax & Hoffm.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Drypetes sepiaria</i> (Wight & Arn.) Pax & Hoffm.		LC			
<i>Putranjiva roxburghii</i> Wall.	T: Karippalai, Vitchurunai	LC			
<b><i>Putranjiva zeylanica</i></b> (Thw.) Muell. Arg.	S: Pelan	LC			
<b>Family : Ranunculaceae</b>					
<i>Anemone rivularis</i> Buch.-Ham.		CR(PE)			
<i>Clematis gouriana</i> Roxb. ex DC.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Clematis smilacifolia</i> Wall.	S: Nara-Wel	CR(PE)			
<i>Naravelia zeylanica</i> (L.) DC	S: Nara-Wel	NT			
<b><i>Ranunculus sagittifolius</i></b> Hook.	E: Buttercup	VU	B1ab(i,ii,iii)		
<i>Ranunculus wallichianus</i> Wight & Arn.		VU	B1ab(i,ii,iii)		
<i>Thalictrum javanicum</i> Blume		VU	B1ab(i,ii,iii)		
<b>Family : Rhamnaceae</b>					
<i>Colubrina asiatica</i> (L.) Brongn.	S: Tel-Hiriya; T: Mayirmanikkam	VU	B1ab(i,ii,iii)		
<i>Gouania microcarpa</i> DC.		NT			
<b><i>Rhamnus arnottianus</i></b> Gardner ex Thw.		VU	B1ab(i,ii,iii)		
<i>Rhamnus wightii</i> Wight & Arn.		NT			
<i>Sageretia hamosa</i> (Wall.) Brongn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Scutia myrtina</i> (Burm.f.) Kurz	T: Tudari, Tuvadi	LC			
<i>Ventilago gamblei</i> Susseng.		LC			
<i>Ventilago madraspatana</i> Gaertn. var. <i>.madraspatana</i>	S: Yakada-Wel; T: Vempadam	LC			
<b><i>Ziziphus lucida</i></b> Moon ex Thw.	S: Eraminiya	CR	B2ab(i,ii,iii)		
<i>Ziziphus mauritiana</i> var <i>mauritiana</i> Lam.	S: Dabara, Maha-Debara, Masan; T: Ilantai, Allantai	LC			
<b><i>Ziziphus napeca</i></b> (L.) Willd.	S: Yak-Eraminiya	LC			
<i>Ziziphus oenoplia</i> (L.) Miller	S: Heen Eraminiya; T: Churai, Perilantai	LC			
<i>Ziziphus rugosa</i> Lam.	S: Maha Eraminiya; T: Churai	NT			



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<i>Ziziphus xylopyrus</i> (Retz.) Willd.	S: Kakuru; T: Nari-Ilantai	NT			
<b>Family : Rhizophoraceae</b>					
<i>Bruguiera cylindrica</i> (L.) Blume		EN	B2ab(i,ii,iii)	LC	
<i>Bruguiera gymnorhiza</i> (L.) Savigny	E: Mangrove; S:Mal-Kadol	VU	B2ab(i,ii,iii)		
<i>Bruguiera sexangula</i> (Lour.) Poir.		VU	B2ab(i,ii,iii)	LC	
<i>Carallia brachiata</i> (Lour.) Merr.	S: Dawata	NT			
<b><i>Carallia calycina</i></b> Benth.	S: Ubberiya	EN	B2ab(i,ii,iii)	VU <sup>i</sup>	A1c <sup>d</sup>
<i>Cassipourea ceylanica</i> (Gardner) Alston	S: Pana, Kos Daththa, Gal Guliya; T:Kannu	LC			
<i>Ceriops decandra</i> (Griffith) Ding Hou		CR	B2ab(i,ii,iii)	NT	
<i>Ceriops tagal</i> (Perr.) C.B.Rob.	T: Chiru-Kandal	NT		LC	
<i>Rhizophora apiculata</i> Blume	S: Kadol, Rana Kadol; T: Kandal	NT		LC	
<i>Rhizophora mucronata</i> Poir.	E: Mangrove; S:Kadol, Kandal	LC		LC	
<b>Family : Rosaceae</b>					
<b><i>Agrimonia zeylanica</i></b> Moon ex Hook.f.		VU	B1ab(i,ii,iii)		
<i>Alchemilla indica</i> Gardner		VU	B1ab(i,ii,iii)		
<i>Photinia integrifolia</i> Lindley	S: Lunu-Warala; T: Anreepawlaycody-Maram	LC			
<i>Potentilla polyphylla</i> Wall. ex Lehman		EN	B2ab(i,ii,iii)		
<i>Potentilla sundaica</i> (Blume) Kuntze		VU	B1ab(i,ii,iii)		
<i>Prunus ceylanica</i> (Wight) Miq.	S: Golu-Mora, Kankumbal-Ketiya	NT		EN <sup>i</sup>	B1+2c
<b><i>Prunus walkeri</i></b> (Wight) Kalkman	S: Golu-Mora, Kankumbal-Ketiya	LC		VU <sup>i</sup>	A1c
<i>Rubus ellipticus</i> Smith	E: False Blackberry, Ovel-Leaved Bramble; S: Nara-Bute	LC			
<i>Rubus fairholmianus</i> Gardner		NT			
<i>Rubus gardnerianus</i> Kuntz		NT			
<i>Rubus indicus</i> Thunb.	S: Vel-Batu	LC			
<i>Rubus leucocarpus</i> Arn.		NT			
<i>Rubus micropetalus</i> Gardner		VU	B1ab(i,ii,iii)		

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<i>Rubus niveus</i> Thunb.	E: Woody-Berried Bramble; S: Rodu-Ketambila	NT			
<i>Rubus rugosus</i> Smith		LC			
<i>Rubus sorbifolius</i> Maxim.		DD			
<b><i>Sanguisorba indicum</i></b> (Gardner)Tivr.		CR(PE)			
<b>Family : Rubiaceae</b>					
<b><i>Acranthera ceylanica</i></b> Arn. ex Meissner		LC			
<b><i>Aidia gardneri</i></b> (Thw.) Tivr.	S: Seru	VU	B1ab(i,ii,iii)		
<i>Anthocephalus chinensis</i> (Lam.) A. Rich. ex Walp.	S: Nawatha, Ambul Bakmi, Ela Bakmi, Kalamba	NT			
<i>Benkara malabarica</i> (Lam.) Tivr.	S: Pudan	LC			
<b><i>Byrsophyllum ellipticum</i></b> (Thw.) Hook. f.	S: Kalu Diyapara, Kalu Godapara	VU	B1ab(i,ii,iii)		
<b><i>Canthium campanulatum</i></b> Thw.		NT			
<i>Canthium coromandelicum</i> (Burm. f.) Alston	S: Kara; T: Karai	LC			
<b><i>Canthium macrocarpum</i></b> Thw.		CR(PE)			
<b><i>Canthium puberulum</i></b> Thw. ex Hook. f.		NT			
<i>Canthium rheedii</i> DC.		NT			
<i>Catunaregam spinosa</i> (Thunb.) Tirveng.	S: Kukuruman; T: Karai	LC			
<i>Ceriscoides turgida</i> (Roxb.) Tivr.	S: Pita Madu	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Chassalia curviflora</i> (Wall.) Thw.		LC			
<i>Dentella repens</i> J.R. & G. Forst.		LC		LC	
<b><i>Dichilanthe zeylanica</i></b> Thw.	S: Emberella	VU	B1ab(i,ii,iii)	EN <sup>1</sup>	
<b><i>Diplospora erythrospora</i></b> (Thw.) Hook. f.		VU	B1ab(i,ii,iii)		
<i>Discospermum sphaerocarpum</i> Dalz. ex Hook. f.	T: Vella	LC			
<b><i>Diyaminauclea zeylanica</i></b> (Hook. f.) Ridsd.	S: Diya-Mi	EN	B1ab(i,ii,iii)+ 2ab(i,ii,iii)		
<i>Exallage auricularia</i> (L.) Bremek.	S: Geta-Kola	VU	B1ab(i,ii,iii)		
<i>Fergusonia tetracocca</i> (Thw.) Baill.		CR(PE)			
<b><i>Gaertnera divaricata</i></b> (Thw.)Thw.		VU	B1ab(i,ii,iii)		

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<i>Gaertnera gardneri</i> Thw.		CR(PE)			
<i>Gaertnera rosea</i> Thw. ex Benth.		LC		VU <sup>1</sup>	A1c
<i>Gaertnera ternifolia</i> Thw.		VU	B1ab(i,ii,iii)	EN <sup>1</sup>	B1+2c
<i>Gaertnera vaginans</i> (DC.) Merr.		LC			
<i>Gaertnera walkeri</i> (Am.) Blume		NT		VU <sup>1</sup>	A1c, B1+2c
<i>Galium asperifolium</i> Wall.		VU	B1ab(i,ii,iii)		
<i>Gardenia crameri</i> Tirv.	S: Galis	VU	B1ab(i,ii,iii)		
<i>Gardenia fosbergii</i> Tirv.		VU	B1ab(i,ii,iii)		
<i>Geophila repens</i> var <i>asiatica</i> (Cham. & Schlecht.) Fosberg	S: Agu Karni	VU	B1ab(i,ii,iii)		
<i>Guettarda speciosa</i> L.	S: Nil Pichcha; T:Panir	VU	B1ab(i,ii,iii)		
<i>Haldina cordifolia</i> (Roxb.) Ridsd.	S: Kolon; T:manchal Kadampa, Raja Murunkai	LC			
<i>Hedyotis cinereoviridis</i> Thw.		CR(PE)			
<i>Hedyotis coprosmoides</i> Trimen		VU	B1ab(i,ii,iii)		
<i>Hedyotis cyanantha</i> Kurz		NT			
<i>Hedyotis cyanescens</i> Thw.		CR(PE)			
<i>Hedyotis dendroides</i> Alston		NT			
<i>Hedyotis evenia</i> Thw.		CR(PE)			
<i>Hedyotis flavescens</i> Thw.		NT			
<i>Hedyotis fruticosa</i> L.	S: Veraniya	LC			
<i>Hedyotis fumata</i> Alston		VU	B1ab(i,ii,iii)		
<i>Hedyotis gardneri</i> Thw.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Hedyotis gartmorensis</i> Ridsd.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Hedyotis inamoena</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Hedyotis lessertiana</i> Arn.		LC			
<i>Hedyotis macraei</i> Hook. f.		DD			
<i>Hedyotis marginata</i> (Thw. ex Trimen) Alston		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Hedyotis membranacea</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Hedyotis neesiana</i> Arn.		VU	B1ab(i,ii,iii)		
<b><i>Hedyotis neolessertiana</i></b> Ridsd.		EN	B2ab(i,ii,iii)		
<b><i>Hedyotis nodulosa</i></b> Arn.		VU	B1ab(i,ii,iii)		
<b><i>Hedyotis obscura</i></b> Thw.		VU	B1ab(i,ii,iii)		
<b><i>Hedyotis quinquinervia</i></b> Thw.		CR(PE)			
<b><i>Hedyotis rhinophylla</i></b> Thw. ex Trimen		EN	B2ab(i,ii,iii)		
<b><i>Hedyotis srilankensis</i></b> Deb & Dutta		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Hedyotis subverticillata</i></b> Alston		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Hedyotis thwaitesii</i></b> Hook.f.		VU	B1ab(i,ii,iii)		
<b><i>Hedyotis trichoneura</i></b> Alston		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Hedyotis tridentata</i></b> Ridsd.		EN	B1ab(i,ii,iii)		
<b><i>Hedyotis trimenii</i></b> var. <b><i>trimenii</i></b> Deb & Dutta		LC			
<i>Hydrophylax maritima</i> L. f.	S: Mudu-Geta-Kola	LC			
<i>Ixora calycina</i> Thw.		VU	B1ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Ixora coccinea</i> L.	S: Ratambala, Rat-Mal; T: Vedchi	LC			
<b><i>Ixora jucunda</i></b> Thw.	S: Goda-Rathambala, Gora-Ratambela, Wal-Rathmal	LC		VU <sup>i</sup>	A1c
<i>Ixora pavetta</i> Andr.	S: Maharatambala; T: Kanmuttankirai, Karankutti, Painkuray	LC			
<i>Ixora thwaitesii</i> Hook. f.		NT			
<b><i>Knoxia hirsuta</i></b> Arn.		VU	B1ab(i,ii,iii)		
<b><i>Knoxia platycarpa</i></b> Arn.		LC			
<b><i>Knoxia spicata</i></b> (Thw. ex Trimen) Ridsd.		NT			
<i>Knoxia sumatrensis</i> (Retz.) DC.		NT			
<b><i>Knoxia zeylanica</i></b> L.		NT	B1ab(i,ii,iii)		
<b><i>Lasianthus chrysocaulis</i></b> Ridsd.		VU	B1ab(i,ii,iii)		

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<i>Lasianthus foetulentus</i> Ridsd.		VU	B1ab(i,ii,iii)		
<i>Lasianthus gardneri</i> (Thw.) Hook.f.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	VU <sup>1</sup>	B1+2c
<i>Lasianthus moonii</i> Wight		LC			
<i>Lasianthus neolanceolatus</i> Ridsd.		VU	B1ab(i,ii,iii)		
<i>Lasianthus obliquus</i> (Thw.) Thw.		LC			
<i>Lasianthus oliganthus</i> (Thw.) Thw.		LC			
<i>Lasianthus protractus</i> (Thw.) Thw.		CR(PE)			
<i>Lasianthus rhizophyllus</i> (Thw.) Thw.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Lasianthus strigosus</i> Wight		LC			
<i>Lasianthus thwaitesii</i> Hook.f.		CR(PE)			
<i>Lasianthus varians</i> (Thw.) Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>1</sup>	B1+2c
<i>Leucocodon reticulatum</i> Gardner		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Metabolus decipiens</i> (Thw.) Ridsd.		LC			
<i>Mitragyna parvifolia</i> var <i>parvifolia</i> (Roxb.) Korth.	T: Nir-Kadampa, Chelampi	LC			
<i>Mitragyna tubulosa</i> (Am.) Havil.	S: Helamba	EN	B2ab(i,ii,iii)		
<i>Morinda citrifolia</i> L.	S: Ahu	LC			
<i>Morinda coreia</i> Buch.-Ham.	S: Ahu; T: Manchavanna	LC			
<i>Morinda umbellata</i> L.	S: Kiri-Wel, Maha-Kiri-Wel	LC			
<i>Mussaenda frondosa</i> L.	S: Mus-Wenna, Wal-But-Sarana, Mussenda	LC			
<i>Mussaenda samana</i> Jayaweera		LC			
<i>Nargedia macrocarpa</i> (Thw.) Boddome		LC			
<i>Nauclea orientalis</i> (L.) L.	S: Bakmi, Rata-Bakmi; T: Vammi, Atuvangi	LC			
<i>Neanotis monosperma</i> (Wight & Arn.) W.H. Lewis		LC			
<i>Neanotis nummularia</i> (Arn.) W.H. Lewis		LC			
<i>Neanotis nummulariformis</i> (Am.) W.H. Lewis		VU	B1ab(i,ii,iii)		
<i>Neanotis quadrilocularis</i> (Thw.) W.H. Lewis		CR(PE)			

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<i>Neanotis richardiana</i> (Am.) W.H. Lewis		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Neurocalyx calycinus</i> (R. Br. ex Benn.) Robinson		VU	B1ab(i,ii,iii)		
<b><i>Neurocalyx championii</i></b> Benth. ex Thw.		VU	B1ab(i,ii,iii)		
<b><i>Neurocalyx gardneri</i></b> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Neurocalyx zeylanicus</i></b> Hook.		VU	B1ab(i,ii,iii)		
<i>Oldenlandia biflora</i> L.		LC			
<i>Oldenlandia brachypoda</i> DC.		LC			
<i>Oldenlandia corymbosa</i> L.	S: Wal-Path-Padagam	LC			
<i>Oldenlandia diffusa</i> (Willd.) Roxb.		LC			
<i>Oldenlandia erecta</i> (Mani. & Sivarajan) Ridsd.		DD			
<i>Oldenlandia herbacea</i> (L.) Roxb.		LC			
<i>Oldenlandia ovatifolia</i> (Cav.) DC.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Oldenlandia pumila</i> (L. f.) DC.		DD			
<i>Oldenlandia stricta</i> L.		NT			
<i>Oldenlandia trinervia</i> Retz.		NT			
<i>Oldenlandia umbellata</i> L.	E: Chay Root; S: Saya; T: Chaya	LC			
<b><i>Ophiorrhiza glechomifolia</i></b> Thw.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Ophiorrhiza mungos</i> L.	S: Dathketiya	LC			
<b><i>Ophiorrhiza nemorosa</i></b> Thw.		EN	B2ab(i,ii,iii)		
<b><i>Ophiorrhiza pallida</i></b> Thw.		CR(PE)			
<b><i>Ophiorrhiza pectinata</i></b> Am.		LC			
<b><i>Ophiorrhiza radicans</i></b> Gardner ex Thw.	S: Kiri Makulu	VU	B1ab(i,ii,iii)		
<b><i>Ophiorrhiza rugosa</i></b> var. <b><i>angustifolia</i></b> (Thw.) Ridsd.		LC			
<i>Ophiorrhiza rugosa</i> var. <i>argentea</i> (Hook.f.) Deb & Mondal		CR(PE)			
<i>Ophiorrhiza rugosa</i> var. <i>decumbens</i> (Gardner & Thw.) Deb & Mondal		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Oxyceros rugulosus</i> (Thw.) Tirv.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		

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<i>Pavetta agrostiphylla</i> Bremek.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Pavetta badullensis</i> Ridsd.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Pavetta blanda</i> Bremek.	S: Pavatta; T: Pavaddai	LC			
<i>Pavetta gardneri</i> Bremek.		DD			
<i>Pavetta gleniei</i> Thw. ex Hook. f.	S: Gal Hambella, Ela Terana; T:vetpavaddai	NT			
<i>Pavetta glomerata</i> Bremek.		NT			
<i>Pavetta indica</i> L.	S: Pavatta; T:Pavaddai	LC			
<i>Pavetta involucrata</i> Thw.		NT			
<i>Pavetta macraei</i> Bremek.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Pavetta zeylanica</i> (Hook. f.) Gamble	S: Es-Rudha	NT			
<i>Pleiocraterium plantaginifolium</i> (Arn.) Bremek.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Prismatomeris albidiflora</i> Thw.		VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Prismatomeris tetrandra</i> (Roxb.) Schumann		VU	B1ab(i,ii,iii)		
<i>Pseudaidia speciosa</i> (Beddome) Tirv.		DD			
<i>Psilanthus travancorensis</i> (Wight & Arn.) Leroy	S: Gas-Pitchcha	VU	B1ab(i,ii,iii)		
<i>Psilanthus wightianus</i> (Wight & Arn.) Leroy	T: Kaddumallikai	VU	B1ab(i,ii,iii)		
<i>Psychotria dubia</i> (Wight) Alston		NT		VU <sup>i</sup>	A1c
<i>Psychotria gardneri</i> (Thw.) Hook. f.	S: Kalu-Kuratiya	NT		EN <sup>i</sup>	B1+2c
<i>Psychotria glandulifera</i> Thw. ex Hook.f.		VU	B1ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Psychotria longipetiolata</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Psychotria meeboldii</i> Deb & M.G. Gangop.		DD			
<i>Psychotria moonii</i> (Thw.) Hook.f.		CR(PE)			
<i>Psychotria nigra</i> (Gaertn.) Alston		LC			
<i>Psychotria plurivenia</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Psychotria sarmentosa</i> Blume	S: Wal-Gonika	NT			
<i>Psychotria sohmeri</i> Kiehn		VU	B1ab(i,ii,iii)		

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<i>Psychotria sordida</i> Thw.		VU	B1ab(i,ii,iii)	EN <sup>1</sup>	B1+2c
<i>Psychotria stenophylla</i> (Thw.) Hook.f.		VU	B1ab(i,ii,iii)	VU <sup>1</sup>	A1c
<i>Psychotria waasii</i> Sohmer		NT		VU <sup>1</sup>	A1c, B1+2c
<i>Psychotria zeylanica</i> Sohmer		LC			
<i>Psydrax dicoccos</i> Gaertn.	E: Ceylon Boxwood; S: Gal Karanda, Panakarawa, Panduru; T: Vatchikuran, Yerkoli	LC			
<i>Psydrax grandifolius</i> (Thw.) Ridsd.		CR(PE)			
<i>Psydrax montanus</i> (Thw.) Ridsd.		NT			
<i>Psydrax pergracilis</i> (Bourd.) Ridsd.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Rubia cordifolia</i> L.	S: Manda Madini-Wel, Yogama-Wel	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Saprosma foetens</i> (Wight) Schumann subsp. <i>ceylanicum</i> (Gardner) Gang.		LC			
<i>Saprosma glomeratum</i> var. <i>gardneri</i> (Thw.) Gang.		NT			
<i>Saprosma scabridum</i> (Thw.) Beddome		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Schizostigma hirsutum</i> Arn.		LC		LC	
<i>Scyphiphora hydrophyllacea</i> Gaertn.f.		VU	B1ab(i,ii,iii)		
<i>Scyphostachys coffaeoides</i> Thw.	E: Wild Coffee; S: Wal-kopi	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Scyphostachys pedunculatus</i> Thw.		CR(PE)			
<i>Spermacoce articularis</i> L.f.		LC			
<i>Spermacoce hispida</i> L.	S: Hin Geta Kola; T: Nattaichchuri, Yar	LC			
<i>Spermacoce prostrata</i> Aublet		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Spermacoce pusilla</i> Wall.		DD			
<i>Spermacoce ramanii</i> Sivaraajan & Nair		DD			
<i>Tamilnadia uliginosa</i> (Retz.) Tirv. & Sastre	S: Et-Kukuruman, Wadiga	VU	B1ab(i,ii,iii)		
<i>Tarenna asiatica</i> (L.) Kuntze ex Schumann	S: Tarana; T: Karanai	LC			
<i>Tarenna flava</i> Alston		LC			
<i>Timonius flavescens</i> (Jack) Baker	S: Peddimella, Ngana	LC			



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<i>Uncaria elliptica</i> R.Br. ex G.Don		LC			
<b><i>Urophyllum ceylanicum</i></b> (Wight) Thw.		LC			
<b><i>Urophyllum ellipticum</i></b> (Wight) Thw.		LC			
<b><i>Wendlandia bicuspidata</i></b> Wight & Arn.	S: Rawan Idala	LC			
<b>Family : Ruppiaceae</b>					
<i>Ruppia maritima</i> L.		LC		LC	
<b>Family : Rutaceae</b>					
<i>Acronychia pedunculata</i> (L.) Miq.	S: Ankenda	LC			
<i>Atalantia ceylanica</i> (Arn.) Oliver	S: Wal-Dehi, Yakinaran; S: Yak-Dehi; T: Pey kuruntu	LC			
<i>Atalantia monophylla</i> (Roxb.) DC.	S: Dodan Pana	LC			
<i>Atalantia racemosa</i> Wight ex Hook.		NT			
<i>Atalantia rotundifolia</i> (Thw.) Tanaka	S: Yaki-Naran	VU	B1ab(i,ii,iii)		
<i>Chloroxylon swietenia</i> DC.	E: Satin Wood; S: Buruta; T:Moodudad Marum, Muritai, Mutirai	VU	A2 cd		
<i>Clausena dentata</i> (Willd.) Roem.	S: Ganda-Pana, Et Kara, Bembiya, Weda-Pana	LC			
<i>Clausena indica</i> (Dalz.) Oliver	S: Migon Karapincha; T: Pannai, Purankainari	LC			
<i>Glycosmis angustifolia</i> Lindley in Wall. ex Wight & Arn.	S: Bol-Pana	LC			
<i>Glycosmis cyanocarpa</i> (Blume) Spreng		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Glycosmis mauritiana</i> (Lam.) Tanaka		LC			
<i>Glycosmis pentaphylla</i> (Retz.) A.DC.	S: Dodan-Pana; T: Kulapannai	LC			
<i>Limonia acidissima</i> L.	E: Elephant-Apple, Wood Apple; S: Divul; T: Mayaladikkuruntu, Vila, Vilatti	LC			
<b><i>Luvunga angustifolia</i></b> (Oliver) Tanaka		LC			
<i>Melicope lunu-ankenda</i> (Gaertn.) T. Hartley	S: Lunu-Ankenda	LC			
<b><i>Micromelum minutum</i></b> (Forst.f.) Wight & Arn. var. <i>ceylanicum</i>	S: Wal-Karapincha; T: Kakaipalai	LC			
<b><i>Murraya gleniei</i></b> Thw. ex Oliver		NT			
<i>Murraya koenigii</i> (L.) Spreng.	E: Curry Leaf; S: Karapinch; T: Karivempu	LC			

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<i>Murraya paniculata</i> (L.) Jack	E: Orange Jessamine; S: Etteriya	LC			
<i>Naringi crenulata</i> (Roxb.) Nicolson	S: Wal-Beli	VU	B1ab(i,ii,iii)		
<i>Pamburus missionis</i> (Wight) Swingle	S: Pamburu; T: Kurantu, Kuruntu, Perum Kuruntu	LC			
<i>Paramignya armata</i> (Thw.) Beddome ex Oliver		LC			
<i>Paramignya beddomei</i> Tanaka		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Paramignya monophylla</i> Wight	S: Wellangiriya	LC			
<i>Pleiospermium alatum</i> (Wight & Arn.) Swingle	S: Tumpat Kurundu, Tunpat Kurundu	LC			
<i>Toddalia asiatica</i> (L.) Lam.	S:Kudu Miris; T: Kandai	LC			
<i>Zanthoxylum caudatum</i> Alston		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Zanthoxylum rhetsa</i> (Roxb.) DC.	S: Katu-Keena	EN	B2ab(i,ii,iii)		
<i>Zanthoxylum tetraspermum</i> Wight & Arn.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Sabiaceae</b>					
<i>Meliosma pinnata</i> (Roxb.) Maxim	S: Nika Daula, Wal-Bilin; T: Kusavi	VU	B1ab(i,ii,iii)		
<i>Meliosma simplicifolia</i> (Roxb.) Walp.	S: El-Badda, El-Bedda	VU	B1ab(i,ii,iii)		
<b>Family : Salicaceae</b>					
<i>Casearia thwaitesii</i> Briq.		VU	B1ab(i,ii,iii)		
<i>Casearia tomentosa</i> Roxb.	S: Kiri Makulu	NT			
<i>Casearia zeylanica</i> (Gaertn.) Thw.	S: Wal-Waraka; T: Kakapalai, Kakapelar, Kakkaipalai, Tey Pala	LC			
<i>Dovyalis hebecarpa</i> (Gardner) Warb.	E: Ceylon Gooseberry; S: Ketambila	EN	B1ab(i,ii,iii)+ 2ab(i,ii,iii)		
<i>Flacourtia indica</i> (Burm.f.) Merr.	S: Uguressa, Dik-Patana, Katukurundu, Wal-Divul, Ukkuressa, Katukutundu; T:Katakali, Kurumurukki, Mulanninchil	LC			
<i>Homalium ceylanicum</i> (Gardner) Benth.	S: Liyang, Eta-Heraliya, Liyang, Walu	LC			
<i>Homalium dewitii</i> Kosterm.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Scolopia acuminata</i> Clos	S: Katu-Kenda, Katu- Kurundu	LC			
<i>Scolopia crassipes</i> Clos		LC			
<i>Scolopia pusilla</i> (Gaertn.) Willd.	S: Damhi, Katte Kurundu, Katu-Kenda, Katu-Keeree-	LC			

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<b>Family : Salvadoraceae</b>					
<i>Azima tetraacantha</i> Lam.	S: Katuniyanda; T: Ichanku, Iyanku	LC			
<i>Salvadora persica</i> L.	S: Maliththan, Peelu; T: Uvay, Viyay	NT			
<b>Family : Santalaceae</b>					
<i>Ginjalloa spathulifolia</i> (Thw.) Oliver		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Korthalsella japonica</i> (Thunb.) Engl.		CR	B2ab(i,ii,iii)		
<i>Notothixos floccosus</i> (Thw.) Oliver		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Osyris wightian</i> Wall ex Wight		NT			
<i>Scleropyrum wallichianum</i> (Wight & Arn.) Arn.		EN	B2ab(i,ii,iii)		
<i>Viscum articulatum</i> Burm.f.		LC			
<i>Viscum capitellatum</i> Smith		NT			
<i>Viscum heyneanum</i> DC.		LC			
<i>Viscum monoicum</i> Roxb. ex DC.		VU	B1ab(i,ii,iii)		
<i>Viscum orientale</i> Willd.		LC			
<i>Viscum ramosissimum</i> Roxb. ex DC.		CR	B1ab(i,ii,iii)		
<b>Family : Sapindaceae</b>					
<i>Allophylus cobbe</i> (L.) Rausch.	S: Kobbe, Bukobbe, Kobo, Moodu- Kobe, Wal-Kobbe	LC			
<i>Allophylus zeylanicus</i> L.	S: Wal-Kobbe	LC			
<i>Cardiospermum canescens</i> Wall.	S: Loco Penela	VU	B1ab(i,ii,iii)		
<i>Cardiospermum halicacabum</i> L.	S: Wel-Penela, Penela-Wel	LC			
<i>Dimocarpus gardneri</i> (Thw.) Leenh.	T: Nurai	VU	B1ab(i,ii,iii)		
<i>Dimocarpus longan</i> Lour.	S: Penni-More, Mora, Mora - Mora, Rasa-Mora	LC			
<i>Dodonaea viscosa</i> Jacq.	S: Eta-Werella; T: Virali	LC			
<i>Filicium decipiens</i> (Wight & Arn.) Thw.	S: Pehimbiya; T: Chittirai Vempu	LC			
<i>Glenniea unijuga</i> (Thw.) Radlk.	S: Wal-Mora; T: Kuma	LC			
<i>Harpullia arborea</i> (Blanco) Radlk.	S: Na-Imbul, Pundalu	VU	B1ab(i,ii,iii)		

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<i>Lepisanthes erecta</i> (Thw.) Leenh.		VU	B1ab(i,ii,iii)		
<i>Lepisanthes senegalensis</i> (Juss.ex Poir.) Leenh.	S: Gal-Kuma; T: Kal-Kuma	LC			
<b><i>Lepisanthes simplocifolia</i></b> (Thw.) Leenh.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Lepisanthes tetraphylla</i> (Vahl) Radlk.		LC			
<i>Pometia pinnata</i> J.R. & G. Forst.	S: Gal-Mora, Na - Imbul, Bulu-Mora	LC			
<i>Sapindus emarginata</i> Vahl	E: Soap Nut Tree; S: Kaha-Penela, Matambala, Embilla, Gas-Penela, Penela	LC			
<i>Sapindus trifoliata</i> L.	S: Kaha Penela, Kon, Kone; T: Puva, Kula	NT			
<i>Schleichera oleosa</i> (Lour.) Oken	E: Ceylon Oak; S : Kon; T: Kula, Puvu	LC			
<b>Family : Sapotaceae</b>					
<i>Chrysophyllum roxburghii</i> G.Don.	S: Rata Lawulu, Lawulu; T: Kat Illupai	NT			
<b><i>Isonandra compta</i></b> (Thw. ex Clarke) Dubard		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Isonandra lanceolata</i> Wight	S: Welivarana, Kirihembiliya, Molpedda	VU	B1ab(i,ii,iii)		
<b><i>Isonandra montana</i></b> (Thw.) Gamble		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Isonandra zeylanica</i></b> Jeuken		VU	B1ab(i,ii,iii)		
<b><i>Madhuca clavata</i></b> Jayasuriya	E: Clavate Mi; S:Ritigala Mi, Wanami	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Madhuca fulva</i></b> (Thw.) Macbride	S: Wana-Mi, Kiripede	VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Madhuca indica</i> Gmelin	E: Indian Butter Tree; S: Urulu Mi; T: Kaattu Illuppai Mohwa, Mahwa	DD			
<i>Madhuca longifolia</i> (L.) Macbride	E: Mousey Mi; S: Mi, Mi, Gam Mi, Gula Pushpa; T: Illupai ;	NT			
<b><i>Madhuca microphylla</i></b> (Hook.) Alston	S: Wana-Mi	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<b><i>Madhuca moonii</i></b> ( Thw.) H.J. Lam.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Madhuca neriifolia</i> ( Thw.) H.J. Lam.	S: Gan-Mi	VU	B2ab(i,ii,iii)	EN <sup>i</sup>	B1+2c
<i>Manilkara hexandra</i> ( Roxb.) Dubard	S: Palu; T: Palai	VU	B2ab(i,ii,iii)		
<i>Mimusops andamanensis</i> King & Gramble		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Mimusops elengi</i> L.	S: Munamal, Sinha- Kesara; T:Makil, Mukalai	NT			

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<i>Palaquium canaliculatum</i> (Thw.) Engl.	S: Elakirihembiliya	VU	B1ab(i,ii,iii) +2ab(i,ii,iii)	EN <sup>i</sup>	B1+2cd
<i>Palaquium grande</i> (Thw.) Engl.	S: Kirihambiliya, Kiripedda, Rathatiya, Kirihariya, Mihiriya, Molpedda	VU	B1ab(i,ii,iii) +2ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Palaquium hinmolpedda</i> van Royen	S: Hinmolpedda, Miriya, Kiri-Meeriya	VU	B1ab(i,ii,iii)		
<i>Palaquium laevifolium</i> (Thw.) Engl.	S: Wana-Mi, Molpedda	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	CR	B1+2cd
<i>Palaquium pauciflorum</i> (Thw.) Engl.	S: Kirihambiliya	EN	B2ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Palaquium petiolare</i> (Thw.) Engler	S: Golabodu, Kiri-Hambiliya, Kiri-Nuga	VU	B1ab(i,ii,iii)	Lci	
<i>Palaquium rubuginosum</i> (Thw.) Engl.	S: Kiriwavula, Tawenna, Kiri-Pedda	VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c, B1+2c
<i>Palaquium thwaitesii</i> Trimen	S: Rathatiya	VU	B1ab(i,ii,iii)	VU <sup>i</sup>	A1c
<i>Palaquium zeylanicum</i> Verdc.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)	VU <sup>i</sup>	D2
<i>Xantolis tomentosa</i> ( Roxb.) Raf.	T: Mulmakil	EN	B2ab(i,ii,iii)		
<b>Family : Schizandraceae</b>					
<i>Kadsura heteroclita</i> (Roxb.) Craib		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Scrophulariaceae</b>					
<i>Glossostigma diandra</i> (L.) Kuntze		DD			
<i>Verbascum chinense</i> (L.) Satapau		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b>Family : Simaroubaceae</b>					
<i>Ailanthus triphysa</i> (Dennst.) Alston	E: White Siris; S: Wal-Bilin; T:Peru	CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Brucea javanica</i> (L.) Merr.	E: Macassar kernel; S: Thiththa Kohomba	LC			
<i>Quassia indica</i> (Gaertn.) Noot.	S: Samadara	VU	B1ab(i,ii,iii)		
<b>Family : Smilacaceae</b>					
<i>Smilax aspera</i> L.		VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Smilax perfoliata</i> Lour.	S: Maha-Kabarassa, Kabarassa	LC			
<i>Smilax zeylanica</i> L.	S: Heen-Kabaressa, Kabarassa	LC			
<b>Family : Solanaceae</b>					
<i>Lycianthes bigeminta</i> (Nees) Bitter		VU	B1ab(i,ii,iii)		

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<i>Physalis micrantha</i> Link	S: Mottu, Nalal Batu, Lin -Mottu, Heen-Mottu	DD			
<i>Solanum erianthum</i> D.Don	S: Hekarilla	DD			
<i>Solanum giganteum</i> Jacq.		DD			
<i>Solanum lasiocarpum</i> Dunal	S: Mala-Batu	DD			
<i>Solanum mauritianum</i> Scop.	S: Hakarilla	DD			
<i>Solanum pubescens</i> Willd.		VU	B1ab(i,ii,iii)		
<i>Solanum torvum</i> Sw.	S: Tibbatu, Gona-Batu	LC			
<i>Solanum trilobatum</i> L.	S: Wel-Tibbatu; T: Tuttuvalai	LC			
<i>Solanum violaceum</i> Ortega		LC			
<i>Solanum virginianum</i> L.	S: Kara- Batu, Katuwel-Batu; T: Kandan-Kattari	LC			
<b>Family : Sphenocleaceae</b>					
<i>Sphenoclea zeylanica</i> Gaertn.		LC			
<b>Family : Staphyleaceae</b>					
<i>Turpinia malabarica</i> Gamble	S: Kankumbala Eta-Hirilla, Garandi-Kidaran	LC			
<b>Family : Stemonaceae</b>					
<i>Stemona curtisii</i> Hook. f.		CR(PE)			
<b>Family : Stemonuraceae</b>					
<i>Gomphandra coriacea</i> Wight		VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Gomphandra tetranda</i> (Wall.) Sleumer		NT			
<i>Stemonurus apicalis</i> (Thw.) Miers	S: Urul-Honda, Uru-Kanu	NT			
<b>Family : Stylidiaceae</b>					
<i>Stylidium uliginosum</i> Sw. ex Willd.		CR(PE)			
<b>Family : Surianaceae</b>					
<i>Suriana maritima</i> L.		CR(PE)			
<b>Family : Symplocaceae</b>					
<i>Symplocos bractealis</i> Thw.	S: Bombu	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	VU'	B1+2c
<i>Symplocos cochinchinensis</i> (Lour.) S.Moore	S: Wal-Bombu, Bobu, Bombu	LC			

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<i>Symplocos cordifolia</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	VU'	B1+2c
<i>Symplocos coronata</i> Thw.	S: Galparre, Guduhal	EN	B2ab(i,ii,iii)		
<i>Symplocos cuneata</i> Thw.		EN	B2ab(i,ii,iii)		
<i>Symplocos diversifolia</i> Brand Thw.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Symplocos elegans</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Symplocos elegans</i> var. <i>angustata</i>		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Symplocos kurgensis</i> Clarke		CR	B2ab(i,ii,iii)		
<i>Symplocos macrophylla</i> Wall. ex DC.		EN	B2ab(i,ii,iii)		
<i>Symplocos obtusa</i> Wall. ex G.Don		VU	B1ab(i,ii,iii)		
<i>Symplocos obtusa</i> var. <i>obtusata</i> Wall.		EN	B2ab(i,ii,iii)		
<i>Symplocos obtusa</i> var. <i>cucullata</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Symplocos obtusa</i> var. <i>pedicellata</i> (Clarke) Noot.		VU	B1ab(i,ii,iii)		
<i>Symplocos pendula</i> Wight		EN	B2ab(i,ii,iii)		
<i>Symplocos pulchra</i> Wight		EN	B2ab(i,ii,iii)		
<b>Family : Tamaricaceae</b>					
<i>Tamarix ericoides</i> Rottler & Willd.		DD			
<i>Tamarix indica</i> Willd.		LC			
<b>Family : Tetramelaceae</b>					
<i>Tetrameles nudiflora</i> R.Br.	S: Muguna, Niguna	LC		LR/ LC'	
<b>Family : Theaceae</b>					
<i>Camellia kissi</i> Wall.		DD			
<i>Gordonia ceylanica</i> Wight	S: Rathatiya, Mihiriya	EN	B2ab(i,ii,iii)		
<i>Gordonia dassanayakei</i> Wadhwa et Weerasooriya		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Gordonia elliptica</i> Gardner		EN	B1ab(i,ii,iii)+ 2ab(i,ii,iii)		
<i>Gordonia speciosa</i> (Gardner) Choisy	S: Ashoka	EN	B1ab(i,ii,iii)+ 2ab(i,ii,iii)		
<b>Family : Thymelaeaceae</b>					
<i>Gnidia glauca</i> (Fresen.) Gilg	S: Naha	NT			

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Gyrinops walla</i> Gaertn.	S: Wal-Aha, Walla, Walla-Patta, Patta-Walla	VU	A3bd		
<i>Phaleria capitata</i> Jack		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Wikstroemia canescens</i> Meissner		LC			
<b>Family : Triuridaceae</b>					
<i>Hyalisma janthina</i> Champ.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sciaphila secundiflora</i> Thw. ex Benth.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Sciaphila tenella</i> Blume		DD			
<b>Family : Typhaceae</b>					
<i>Typha angustifolia</i> L.	E: Bull-Rush, Cat Tail; S: Hambu-Pan	LC		LC	
<b>Family : Ulmaceae</b>					
<i>Holoptelea integrifolia</i> (Roxb.) Planch.	E: Indian Elm; S: Goda Kirilla; T: Ayil, Kauchia, Velayilii	NT			
<b>Family : Urticaceae</b>					
<i>Boehmeria glomerulifera</i> Miq.	S: Maha-Diya-Dul	VU	B1ab(i,ii,iii)		
<i>Boehmeria macrophylla</i> Hornem.		VU	B1ab(i,ii,iii)		
<i>Boehmeria rugosissima</i> (Blume) Wedd.		CR(PE)			
<i>Chamabainia cuspidata</i> Wight		CR(PE)			
<i>Debregeasia longifolia</i> (Burm.f.) Wedd.	E: Wild Rhea; S: Gas-Dul	LC			
<i>Debregeasia wallichiana</i> (Wedd.) Wedd.	S: Muda-Kenda	NT			
<i>Dendrocide sinuata</i> (Blume) Chew		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Elatostema acuminatum</i> (Poir.) Brongn.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Elatostema lineolatum</i> Wight		VU	B1ab(i,ii,iii)		
<i>Elatostema surculosum</i> Wight		CR(PE)			
<b><i>Elatostema walkerae</i></b> Hook.f.		CR(PE)			
<i>Girardinia diversifolia</i> (Link) Friis	E: Nilgiri Nettle; S: Gas-Kahambilia	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Laportea bulbifera</i> (Sieb. & Zucc.) Wedd.		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Laportea interrupta</i> (L.) Chew	S:Wal-Kahambilia	LC			



Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Lecanthus peduncularis</i> (Wall. ex Royle) Wedd.		CR(PE)			
<i>Oreocnide integrifolia</i> (Gaudich.) Miq.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Pellionia heyneana</i> Wedd.		CR(PE)			
<i>Pilea angulata</i> (Blume) Blume		VU	B1ab(i,ii,iii)		
<i>Pilea melastomoides</i> (Poir.) Wedd.		NT			
<i>Pilea wightii</i> Wedd.		VU	B1ab(i,ii,iii)		
<i>Pouzolzia auriculata</i> Wight		VU	B1ab(i,ii,iii)		
<i>Pouzolzia bennettiana</i> Wight		VU	B1ab(i,ii,iii)		
<i>Pouzolzia cymosa</i> Wight		DD			
<i>Pouzolzia triandra</i> (Blume) Blume		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<b><i>Pouzolzia walkeriana</i></b> Wight		LC			
<i>Pouzolzia zeylanica</i> (L.) Benn.		LC			
<i>Procris crenata</i> C.Robinson		LC			
<b>Family: Vahliaceae</b>					
<i>Vahlia dichotoma</i> (Murr.) Kuntze		EN	B1ab(i,ii,iii)		
<b>Family : Verbanaceae</b>					
<i>Chascanum hyderabadense</i> (Walp.) Moldenke		CR(PE)			
<i>Phyla nodiflora</i> (L.) Greene		LC			
<b>Family : Violaceae</b>					
<i>Hybanthus enneaspermus</i> (L.) F.Muell.	T: Oritad-Tamarai	LC			
<b><i>Hybanthus ramosissimus</i></b> (Thw.) Melchior		CR	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Rinorea bengalensis</i> (Wall.) Kuntze		EX			
<b><i>Rinorea decora</i></b> (Trimen) Melchior		EX			
<i>Rinorea virgata</i> (Thw.) Kuntze		VU	B1ab(i,ii,iii)		
<i>Viola betonicifolia</i> Sm.	E: Violet	VU	B1ab(i,ii,iii)		
<i>Viola hamiltoniana</i> D.Don	E: Violet	CR(PE)			
<i>Viola pilosa</i> Blume	E: Violet	LC			

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<b>Family : Vitaceae</b>					
<i>Ampelocissus indica</i> (L.) Planch	S: Towel, Rata-Bulat-Wel; T: Sambaravali	NT			
<i>Ampelocissus pheoenicantha</i> Alston		NT			
<i>Cayratia pedata</i> (Lam.) Juss. ex Gagnep.	S: Geranda-Dul-Wel, Media-Wel; T:Kattuppirandaa, Naralai	LC			
<b><i>Cayratia reticulata</i></b> (Lawson) Mabb.		LC			
<i>Cayratia trifolia</i> (L.) Domin	S: Wal-Rat-Diya-Labu	LC			
<i>Cissus adnata</i> Roxb.		EN	B2ab(i,ii,iii)		
<b><i>Cissus gardneri</i></b> Thw.		LC			
<i>Cissus glyptocarpa</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Cissus heyneana</i> Steud.	S: Wal-Muddarappalam	LC			
<i>Cissus latifolia</i> Lam.	S: Wal-Diya-Labu	LC			
<b><i>Cissus lonchiphylla</i></b> Thw.		NT			
<i>Cissus quadrangularis</i> L.	S: Hirassa, Sirassa; T: Arugni, Indirvalli, Kiritti, Pirandai, Puraindai, Uchiradam, Uttansanjivi, Vachiravalli	LC			
<i>Cissus trilobata</i> Lam.		LC			
<i>Cissus vitiginea</i> L.	S: Wal-Nivithi; T: Kaddumuntiri	LC			
<i>Cyphostemma setosum</i> (Roxb.) Alston	T: Anaitta Dichchai	NT			
<i>Leea indica</i> (Burm.f.) Merr.	S: Burulla, Gurulla; T: Nyckki, Otta-Nali	LC			
<i>Tetrastigma nilagiricum</i> (Miq) Shetty		LC			
<b>Family : Xanthorrhoeaceae</b>					
<i>Dianella ensifolia</i> (L.) DC	S: Monara-Pretan	LC			
<b>Family : Xyridaceae</b>					
<i>Xyris capensis</i> Thunb.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	LC	
<i>Xyris complanata</i> R.Br.		VU	B1ab(i,ii,iii)	LC	
<i>Xyris indica</i> L.		NT		LC	

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
<i>Xyris pauciflora</i> Willd.		LC		LC	
<b>Family : Zingiberaceae</b>					
<i>Alpinia abundiflora</i> Burt & Smith		LC			
<i>Alpinia fax</i> Burt & Smith		VU	B1ab(i,ii,iii)		
<i>Alpinia rufescens</i> (Thw.) Schum.		CR(PE)			
<i>Amomum acuminatum</i> Thw.		CR(PE)			
<i>Amomum benthamianum</i> Trimen		CR(PE)			
<i>Amomum echinocarpum</i> Alston	S: Bu-Kiriya, Niya	VU	B1ab(i,ii,iii)		
<i>Amomum fulviceps</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Amomum graminifolium</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Amomum hypoleucum</i> Thw.		CR(PE)			
<i>Amomum masticatorium</i> Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Amomum nemorale</i> (Thw.) Trimen		CR(PE)			
<i>Amomum pterocarpum</i> Thw.		EN	B1ab(i,ii,iii)+ 2ab(i,ii,iii)		
<i>Amomum trichostachyum</i> Alston		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Curcuma albiflora</i> Thw.	S: Haran-Kaha	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Curcuma aromatica</i> Salisb.	S: Dada-Kaha, Wal-Kaha	DD			
<i>Curcuma oligantha</i> Trimen		VU	B1ab(i,ii,iii)		
<i>Cyphostigma pulchellum</i> (Thw.) Benth.		NT			
<i>Elettaria cardamomum</i> (L.) Maton	E: Cardamomum; S: Ensal , Rata-Ensal, Cardamungu; T: Alaka, Ellakai, Cardumunga	VU	B1ab(i,ii,iii)		
<i>Globba marantina</i> L.	S: Hinguru-Piyali, Naharai; T: Kechulu Kalanga	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
<i>Zingiber cylindricum</i> Thw.		VU	B1ab(i,ii,iii)		
<i>Zingiber wightianum</i> Thw.		NT			
<b>Family : Zygophyllaceae</b>					
<i>Tribulus terrestris</i> L.	S: Sembu-Nerinchi, Gokatu; T:Chiru Nerinchi	LC			

## Analysis of Seed Plants of Sri Lanka

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Seed-bearing plants or seed plants are perhaps the most obvious group of plants on earth. They include gymnosperms and angiosperms.

In gymnosperms the seeds are not enclosed in a fruit. Gymnosperms can be further classified into gnetophytes, cycads, ginkgo, and conifers. In Sri Lanka there are no native conifers, gnetophytes or ginkgo. There are only two gymnosperm species in Sri Lanka belonging to genus *Cycas* in the family Cycadaceae. They are *Cycas nathorstii* (madu) and *Cycas zeylanica* (Lindstrom & Hill, 2007). Of these two species, *Cycas zeylanica* (maha madu) is a highly threatened species. The habitat of this species was damaged by tsunami in 2005 and it is believed that the population of this species was seriously affected (Lindstrom & Hill, 2007).

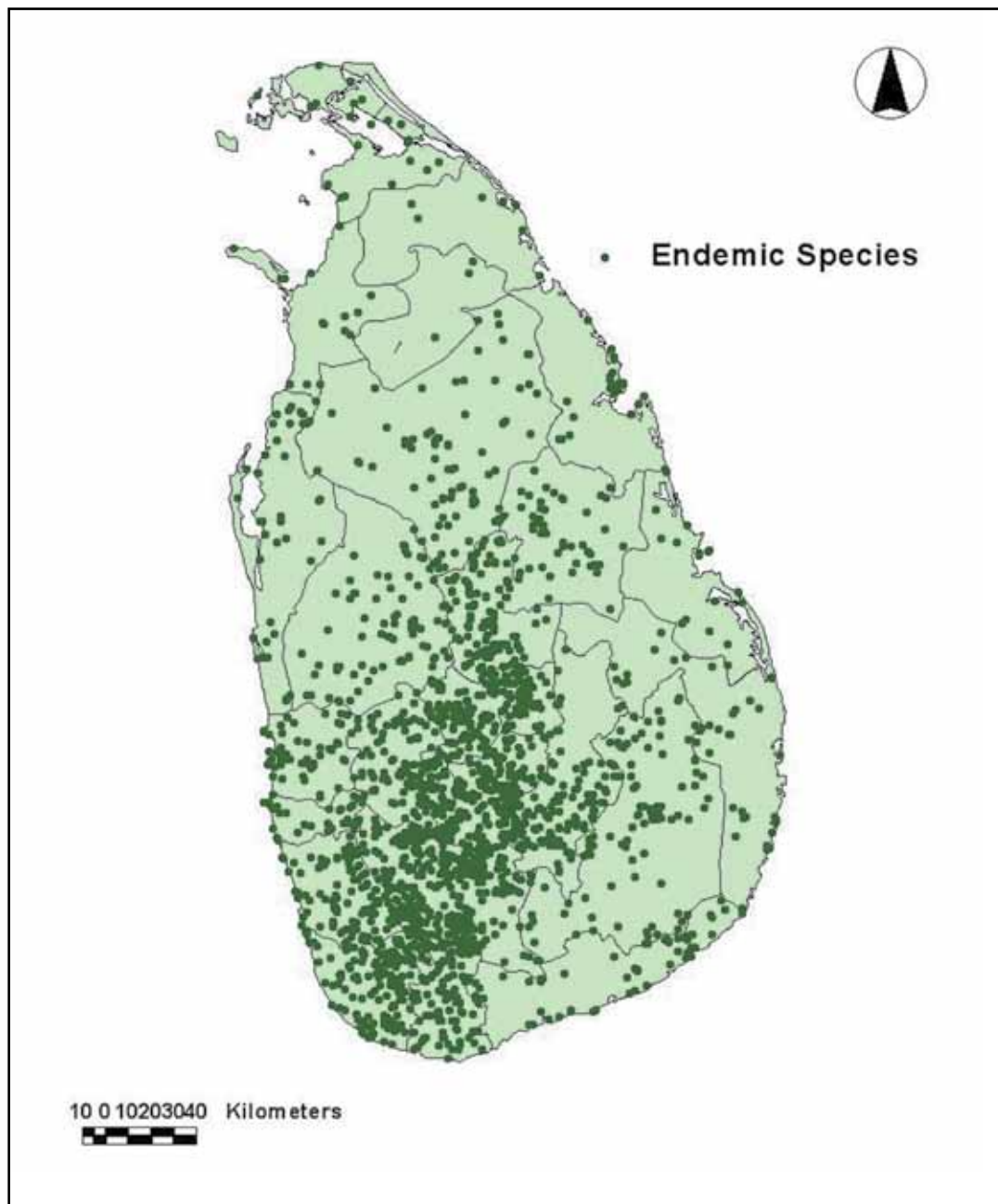
Angiosperms are flowering plants that produce seeds enclosed in a fruit. They are the most diverse group of plants with an estimated number of 200,000 to 400,000 species (Thorne, 2002). These species are classified into 415 families (APG, 2009)

Sri Lanka's angiosperm flora has been explored, studied and documented by many botanists since the colonial times (Jayasuriya, 2007). Trimen's Handbook to the Flora of Ceylon (Trimen, 1893-1900), was considered as one of the most comprehensive floras of that time. Based on Trimen's Flora, Abeywickrama (1945) reported 1,065 genera and 2,855 species in 171 families. Out of those 853 species were considered to be endemic to Sri Lanka.

The revision of the Trimen's Flora (Dassanayake *et al.*, 1980-2000) described 3,771 species in 1,363 genera and that included many naturalized species. The total number of endemic species (including varieties and subspecies) was about 1,000 according to that revision.

Compared to the other countries in South Asia, angiosperm diversity in Sri Lanka is remarkably higher due to multitudes of factors. Origin, affinities and biogeography of our flowering plants have been discussed by several authors in the past (Trimen, 1885; Abeywickrama, 1945; Ashton and Gunatilleke, 1987).

One of the striking features of our angiosperm flora is the high percentage of endemic species. Analyses done during the preparation of this Red List revealed that there are 894 endemic angiosperm species in Sri Lanka. These species are distributed mainly in the central and south west region of the island (The map preceding page). However, there may be more endemic species in the north east and eastern areas of the country which were not botanized as extensively as the south western regions.



### **Distribution of Endemic Angiosperm species in Sri Lanka**

There are no endemic families in Sri Lanka. But there are about 14 endemic genera.

Taxonomy of angiosperms was revolutionized recently by the application of molecular techniques in plant systematics (Yakandawala, 2006). Angiosperm Phylogeny Group, an informal international group of systematic botanists, published angiosperm classifications in 1998 (APG I), 2003 (APG II) and 2009 (APG III) to address deficiencies in earlier angiosperm classification systems (APG III, 2009). This list uses the classification proposed in APG III and the changes made to the family names widely used in the past are given in Table 1.

Table 1: Changes of families and genera according to Angiosperm Phylogeny Group classification for the flowering plants: APG III (2009)

Previous Family (Genera)	Family according to APG III in the Angiosperm list
Agavaceae	Asparagaceae
Alliaceae	Amaryllidaceae
Alangiaceae (Alangium)	Cornaceae
Anthericaceae	Asparagaceae
Apiaceae ( <i>Hydrocotyle</i> )	Araliaceae
Apostasiaceae	Orchidaceae
Asclepiadaceae	Apocynaceae
Avicenniaceae	Acanthaceae
Bombacaceae	Malvaceae
Callitrichaceae	Plantaginaceae
Capparaceae ( <i>Cleome</i> )	Cleomaceae
Caprifoliaceae ( <i>Viburnum</i> )	Adoxaceae
Celastraceae ( <i>Bhesa</i> )	Centroplacaceae
Chenopodiaceae	Amaranthaceae
Clusiaceae ( <i>Calophyllum, Mesua</i> )	Calophyllaceae
Cochlospermaceae	Bixaceae
Convallariaceae	Asparagaceae
Cuscutaceae	Convolvulaceae
Datisceae ( <i>Tetrameles</i> )	Tetramelaceae
Dipsacaceae	Caprifoliaceae
Dracaenaceae	Asparagaceae
Euphorbiaceae ( <i>Putranjiva, Drypetes</i> )	Putranjivaceae
Euphorbiaceae ( <i>Mischodon</i> )	Picrodendraceae
Euphorbiaceae ( <i>Actephila, Antidesma, Aporosa, Bischofia, Breynia, Bridelia, Cleistanthus, Fluggea, Glochidion, Margaritaria, Meineckia, Phyllanthus, Sauropus</i> )	Phyllanthaceae
Flacourtiaceae ( <i>Hydnocarpus, Trichadenia</i> )	Achariaceae
Flacourtiaceae ( <i>Casearia, Dovyalis, Flacourtia, Homalium, Scolopia</i> )	Salicaceae
Hippocrateaceae	Celastraceae
Hyacinthaceae	Asparagaceae
Hydrophyllaceae	Hydroleaceae
Icacinaceae ( <i>Stemonurus, Gomphandra</i> )	Stemonuraceae
Lamiaceae ( <i>Priva, Stachytarpheta</i> )	Verbenaceae
Leeaceae	Vitaceae
Lemnaceae	Araceae
Limnocharitaceae	Alismataceae
Lobeliaceae	Campanulaceae
Loganiaceae ( <i>Fagraea</i> )	Gentianaceae
Melastomataceae ( <i>Axinandra</i> )	Crypteroniaceae
Memecylaceae	Melastomataceae
Molluginaceae ( <i>Gisekia</i> )	Gisekiaceae
Myrsinaceae	Primulaceae
Najadaceae	Hydrocharitaceae
Nyctanthaceae	Oleaceae
Periplocaceae	Apocynaceae
Phormiaceae	Xanthorrhoeaceae

Portulacaceae	Cactaceae
Potamogetonaceae ( <i>Ruppia</i> )	Ruppiaceae
Rhizophoraceae ( <i>Anisophyllea</i> )	Anisophylleaceae
Scrophulariaceae ( <i>Adenosma, Bacopa, Dopatrium, Limnophila, Microcarpaea, Scoparia, Stemodia</i> )	Plantaginaceae
Scrophulariaceae ( <i>Artanema, Lindernia, Torenia</i> )	Linderniaceae
Scrophulariaceae ( <i>Calceolaria</i> )	Calceolariaceae
Scrophulariaceae ( <i>Centranthera, Pedicularis, Sopubia, Striga</i> )	Orobanchaceae
Scrophulariaceae ( <i>Peplidium</i> )	Phrymaceae
Sonneratiaceae	Lythraceae
Sterculiaceae	Malvaceae
Symphoremaceae	Lamiaceae
Taccaceae	Dioscoreaceae
Theaceae ( <i>Adinandra, Eurya, Ternstroemia</i> )	Pentaphylacaceae
Tiliaceae	Malvaceae
Trapaceae	Lythraceae
Trichopodaceae	Dioscoreaceae
Turneraceae ( <i>Turnera</i> )	Passifloraceae
Ulmaceae ( <i>Aphananthe, Celtis, Gironniera, Trema</i> )	Cannabaceae
Valerianaceae ( <i>Valeriana</i> )	Caprifoliaceae
Verbenaceae ( <i>Aegiphila, Clerodendrum, Glossocarya, Gmelina, Premna, Vitex</i> )	Lamiaceae
Viscaceae	Santalaceae
Zingiberaceae ( <i>Costus</i> )	Costaceae

Senaratne (2001) listed 4,143 flowering plant species in 1,522 genera belonging to 214 families. According to her 25% of these are exotics and out of the exotics 32% are naturalized.

During the preparation of this Red List the distribution data of each species were carefully analyzed by an expert panel and only those species which were undoubtedly native were used for evaluation. Thus, the total number of angiosperm species evaluated was 3,154. These species are in 186 families. Of these the Poaceae (grass family) has the largest number of species (262 species). The ten largest angiosperm families in Sri Lanka are given in Table 2. Nearly 45% of all angiosperm species in the country are in those 10 families.

Table 2. The 10 largest angiosperm families in Sri Lanka.

Family	Number of Species
<b>Poaceae</b>	262
<b>Fabaceae</b>	221
<b>Orchidaceae</b>	184
<b>Rubiaceae</b>	179
<b>Cyperaceae</b>	170
<b>Acanthaceae</b>	105
<b>Asteraceae</b>	86
<b>Malvaceae</b>	72
<b>Melastomataceae</b>	71
<b>Lamiaceae</b>	70

Out of 3,154 species evaluated 1,386 are threatened (critically endangered, endangered or vulnerable). This is about 44% of the total angiosperm flora in Sri Lanka. Five species are believed to be extinct (Table 17). These extinct species are *Strobilanthes caudata* (Acanthaceae), *Blumea angustifolia* (Asteraceae), *Crudia zeylanica* (Fabaceae), *Rinorea bengalensis* and *Rinorea decora* (Violaceae). It is alarming to note that 177 species are in the IUCN Red List category of CR(PE) meaning that those species are possibly extinct.

*Alphonsea hortensis* (Annonaceae) and *Doona ovalifolia* (Dipterocarpaceae) are believed to be found only in cultivation at Botanic Gardens (extinct in the wild).

Out of the 186 families evaluated, 81 families have 50% or more threatened species and in 24 families all species are threatened. These 24 families are each represented by less than 5 species and more than half of these families are represented by a single species. Only 45 families have no threatened species.

The distribution of the threatened species shows that the highest number of threatened species are found in the wet zone districts such as Kandy, Ratnapura, Nuwara Eliya, Badulla, Galle and Kalutara. These districts also house the largest diversity of angiosperm species (Table 3). Data show that in Ratnapura, Kandy, Kilinochchi, Galle, Nuwara Eliya Kalutara, Kegalle, and Matara districts over 60% of the endemic species are threatened.

Table 3. Distribution of threatened plants in different Districts in Sri Lanka.

District	Total species	Number of threatened species	Number of endemic species	Threatened endemic species
Ampara	477	94	39	17
Anuradhapura	956	236	100	47
Badulla	1129	421	246	145
Batticaloa	474	85	24	12
Colombo	652	174	111	53
Galle	1050	411	385	252
Gampaha	418	81	48	24
Hambantota	885	178	65	24
Jaffna	546	97	21	7
Kalutara	902	361	338	213
Kandy	1952	868	567	388
Kegalle	699	281	275	167
Kilinochchi	43	11	3	2
Kurunegala	825	215	128	55
Mannar	365	77	13	5
Matale	1125	344	212	111
Matara	667	261	276	165
Monaragala	766	217	108	48
Mullaitivu	86	22	7	3
Nuwara Eliya	1261	596	400	260
Polonnaruwa	645	127	52	21
Puttalam	694	117	47	13
Ratnapura	1539	739	570	397
Trincomalee	594	101	29	8
Vavuniya	218	41	9	5



Threats to angiosperms may range from direct causes such as habitat loss to indirect factors such as unavailability of pollinators or dispersal agents. Whatever the causal factors there may be, the proportion of threatened plants is exceedingly high. Therefore, the findings of the Red List need to be paid serious attention, without delay, by all concerned.

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## Potential Applications of the National Red List and the Way Forward

The National Red List provides the conservation status of the assessed species in a given country at that particular time. It is also a tool that guides conservation planning in a country as it;

- provides baseline information necessary for the preparation of species profiles of threatened species, a basis for prioritising conservation efforts and information necessary for the preparation and implementation of recovery plans;
- indicates information gaps regarding specific taxa and geographic areas;
- Provides a scientific basis for the development of a country's research agenda on biodiversity;
- allows for objective prioritisation of funding for conservation-oriented research;
- provides a basis to analyse biodiversity hotspots that will help identify priority areas for conservation of species and ecosystems;
- provides a scientific basis for the formulation and revision of legislation related to biodiversity conservation;
- provides a scientific framework for new policies and regulations related to biodiversity conservation;
- provides information for the creation of awareness and conservation education among different stakeholders;
- provides a sound decision-making platform for regional and local administrative bodies (i.e., at provincial and town level planning ) for formulation of local development plans; and
- provides a framework for monitoring spatial and temporal changes in biodiversity

Therefore, identifying species at risk is only the first step in species conservation. This should be followed with a programme of activities aimed at recovering species at risk. The aim of this chapter is to propose a set of actions that are needed along with detailed action plans in order to achieve effective biodiversity conservation in Sri Lanka. Further, these actions are aimed at ensuring the future sustenance of the Redlisting process, and facilitate its use towards the conservation of threatened species in Sri Lanka.

### 1. Ensuring sustainability of the Redlisting process

All species are subjected to dynamic changes driven by both extrinsic and intrinsic factors. Therefore, the conservation status of a species changes with time. Thus, it is essential that the assessment of the conservation status of species is a continuing process. The Redlisting of Sri Lankan biodiversity has been carried out at least five times over the past two decades. The responsibility of the Redlisting process should lie with a government institute to ensure transparency and reliability of the final outcome. Therefore, a Species Conservation Unit (SCU) dedicated for constant monitoring and regular updating of the conservation status of species and coordinate all activities related to conservation of threatened species, has been established at the Biodiversity Secretariat (BDS) of the Ministry of Environment. The SCU should be strengthened through relevant training and other logistic support to continue their functions efficiently in order to ensure sustainability of the Redlisting programme of Sri Lanka.

Further, evaluation of the conservation status of species is based on an objective process that requires great deal of information on species. In order to facilitate collection and analysis of such data, a National Species Database (NSD) has been established in the BDS. The database needs to be expanded in order to accommodate as many taxonomic groups as possible. Further, the information on species has to be updated regularly as new information becomes available. Thus, the NSD should be maintained and updated on a regular basis by the SCU, with inputs from individual researchers and other institutions. In order to ensure wider use of NSD, it should be made available to researchers and students through the Internet. However, this should be made possible only after ensuring data safety and integrity as well as a detailed set of guidelines for users. Researchers should be encouraged to use the database for non-commercial purposes, analyse it to identify trends and also update the NSD with their own research findings. Such a process could be facilitated through a formal agreement between the Ministry of Environment and the individual researcher and/or research institute. A MOU should be developed to facilitate such information exchange. Further, the NSD should be integrated with other relevant databases (*i.e.* the national wetland database) after formulation of necessary guidelines for data sharing. Also, an incentive/ a rewarding mechanism should be established to encourage individual researchers to deposit publications (research papers, articles, books, monographs, thesis etc.) in the SCU library. As a part of this exercise, a virtual library containing all published information on Sri Lankan biodiversity should be established in the BDS. As a part of their terms of reference, the SCU should prepare quarterly catalogues on new research outputs related to biodiversity, and forward it to researchers. Further, the national Redlist should be updated at least every two years based on new data that becomes available on species.

<b>Area of focus</b>	<b>Responsible Institution/s</b>	<b>Technical support</b>	<b>Time Frame</b>
Expansion of the database to include taxa that are not currently available	BDS (SCU)	NASCAG, Expert groups	Ongoing process
Collection of new information on taxa that are already listed in the database	BDS (SCU)	INASCAG, Expert groups	Ongoing process
Evaluation or reevaluation of species based on new information	BDS (SCU)	NASCAG, Expert groups	Ongoing process
Updating and publication of the National Redlist	BDS (SCU)	NASCAG, Expert groups	January 2015
Propose revisions to the IUCN global Redlist	BDS (SCU)	IUCN, Expert groups	Ongoing process
Ensure data safety and integrity	BDS (SCU)	NASCAG, Expert groups, NEC-Bd	Ongoing process
Prepare guidelines to use the database	BDS (SCU)	NASCAG, NEC-Bd	June 2013
Host the database in the Worldwide Web	BDS (SCU)	NASCAG	December 2013
Establish a network of researchers that can contribute to the Redlist	BDS (SCU)	NASCAG, NEC-Bd	December 2013
Publish a quarterly catalogue on research outputs related to Biodiversity of Sri Lanka	SCU	NASCAG	Ongoing process

Establish a virtual library on Sri Lankan Biodiversity at the Biodiversity Secretariat	BDS (SCU)	NASCAG	Ongoing process
Formulate guidelines for sharing and integrating the NSD with other relevant databases	BDS (SCU)	NASCAG, NEC-Bd	June 2013
Integrate NSD with other relevant databases	BDS (SCU)	NASCAG	December 2013

**BDS** - Biodiversity Secretariat, **NASCAG** - National Species Conservation Advisory Group, **NEC-Bd** - National Experts Committee on Biodiversity

## 2. Linking the Red list with ongoing cross-sectoral initiatives

Although four National Red lists were published during the last two decades, these lists have not been adequately integrated to National Policy nor have they been included into other ongoing national conservation actions. Because of this, previous Red Lists have failed to make a significant impact on overall conservation of species in Sri Lanka. This may be because there was a lack of awareness among relevant line agencies about the different purposes, significance and relevance of the National Red List and the need to integrate it into their planning processes. It could also be a result of lack of ownership of the Red List as being a truly national tool for conservation. Therefore, as a follow up action it is essential that awareness is created among relevant line agencies in order to develop a framework in each of the line agencies so that they integrate the results of the Red List into their ongoing activities. Some of the key conservation-related activities that should be considered and the corresponding line agencies are listed below. It is proposed that a two day residential workshop be held with the participation of at least one high-ranking representative from each of these line agencies with the specific aim of drafting a document including the activities to be undertaken by each of the line agencies to implement various facets of the Red List and to develop mechanisms through which these outcomes are achieved. This activity should to be completed by July 2013.

Area of focus	Responsible Institution/s
Protected area gap analysis	MOE, DWC, and FD
Habitat mapping and biodiversity baseline surveys in selected protected areas of DWC	DWC
National Species Conservation Strategy	MOE
Protected area management plan preparation	DWC, FD, CEA
Revision of fauna and flora protection ordinance	DWC
Revision of other conservation-related legislation	DWC, FD, CCD, DF., DC, CEA, ID etc.
Regulation of species subjected to export trade	DWC, FD, DC, DF
Conservation of crop wild relatives	DA
Funding and conducting biodiversity related research	NSF, Universities, Research Institutes Non Governmental Organizations
Conservation of medicinal species	Ministry of indigenous medicine
<i>Ex situ</i> conservation of species with special emphasis of establishing a captive breeding programme for threatened species	DBG, DZG, etc.,
National policy and planning	Department of physical planning

**MOE:** Ministry of Environment, **DWC:** Department of Wildlife Conservation, **FD:** Forest Department, **CEA:** Central Environmental Authority, **CCD:** Coast Conservation Department, **DC:** Department of Customs, **DF:** Department of Fisheries, **ID:** Irrigation Department, **DA:** Department of Agriculture, **NSF:** National Science Foundation, **DBG:** Department of Botanical Gardens, **DZG:** Department of Zoological Gardens

### 3. Update local level biodiversity profiles

The NSD contains a wealth of information that has been used to prepare the regional biodiversity profiles to assist decision-making at a regional level. These profiles need to be updated with the new information that has become available during the preparation of current Red List. Further, awareness about the Red List and its implications to local developmental planning should also be created among local government bodies. A series of district level workshops should be held with the participation of representatives from local government bodies with the aim of formulating a set of local level actions to implement various facets of the Red List results. The Biodiversity Secretariat (BDS) of the Ministry of Environment (MOE) should organise these workshops, between the period of June to December 2013.

### 4. Implement programmes to recover populations of threatened species

The primary aim of assessing the conservation status of species to identify conservation actions needed to protect these species so that natural populations can recover to a point where they can be down-listed or de-listed after a period of time. However, a simple comparison of the Red Lists published to date indicates that the status of most threatened species has remained unchanged or has worsened with time and this is therefore a very serious issue. This may be because necessary conservation measures have not been taken despite Red List data. Therefore, it is proposed that the proposed species conservation strategy be completed as an essential and immediate follow-up action of the Red List. As a part of the species conservation strategy, a set of single or multi species recovery plans should be identified and developed, and a mechanism should be devised to implement these plans, in order that as many of the species that are listed are recovered. Thus far a single recovery programme for *Puntius bandula* (Bandula pethiya) has been carried out with financial support from BDS under the overall supervision of NASCAG. The lessons learned from this project should be documented and incorporated in conducting future recovery programmes.

Area of focus (links)	Responsible Institution/s	Technical support	Time Frame
Complete the species conservation strategy	BDS (SCU)	NASCAG, NEC-Bd, Expert groups	June 2013
Identify a set of single and multi species recovery plans	BDS (SCU)	NASCAG, NEC-Bd, Expert groups	June 2013
Prepare recovery plans	Teams identified by the BDS	NASCAG	December 2013
Seek funds for the implementation of recovery plans	BDS, NSF, Other funding agencies	NASCAG	June 2014
Implement recovery plans	Relevant line agencies	Teams that prepared the recovery plans	June 2014

**BDS** - Biodiversity Secretariat, **NASCAG** - National Species Conservation Advisory Group, **NEC-Bd** - National Experts Committee on Biodiversity

## 5. Initiatives to conserve point endemics occurring outside PA's

According to the NSD, a number of endemic species in Sri Lanka have highly restricted distribution patterns, where they are known to exist only in one or a few locations. The NSD also reveals that many such point endemics exist outside the protected area network. Therefore, these species are at a high risk of extinction if appropriate conservation measures are not taken. In many of these cases simply integrating these locations into the existing protected area network may not be possible. Therefore, it will be desirable to develop other conservation models such as community-based conservation actions where local communities and civil society can play a major role in conserving these species. The NSD provides a platform to identify such point endemics. Therefore, it is proposed that such point endemics that needs immediate conservation action should be identified and management plans prepared for their conservation.

Area of focus (links)	Responsible Institution/s	Technical support	Time Frame
Identify point endemics that occur outside the PA network	BDS	NASCAG	June 2013
Prepare management plans to conserve these point endemics	DWC, FD, CEA	NASCAG,	December 2013
Implementation of these management plans	DWC, FD, CEA, NGO's	NASCAG	January 2014

**BDS** - Biodiversity Secretariat, **NASCAG** - National Species Conservation Advisory Group, **DWC** - Department of Wildlife Conservation, **FD** - Forest Department, **CEA** - Central Environment Agency, **NGO** - Non Governmental Agencies

## 6. Develop a research agenda for threatened species and initiate island-wide surveys on biodiversity

One of the major constraints during the Redlisting process was lack of data, except for their distribution, on most of the evaluated taxa. Even baseline data, particularly for invertebrates, is not available for several key ecosystems in Sri Lanka. The BDS over the past few years has provided seed grants to researchers to conduct investigations on threatened species as well as critical ecosystems that have lead to a wealth of new information. However, BDS does not have the capacity to sustain such research at a large scale due to limited amount of funds available at its disposal. Therefore, a sustainable funding mechanism to support such research initiatives should be established in collaboration with funding agencies such as National Science Foundation and National Research Council. Therefore, it is essential that a research agenda is developed to fill these gaps. Further, national expertise on many invertebrate and lower plant taxa is inadequate due to lack of trained personnel. Therefore, investment in capacity building in areas where expertise is lacking or weak is also a timely need. BDA have held a series of workshops on such lower taxa as well as produced communication tools to popularize study of such taxa. These activities needs to be continued and expanded to other areas of Sri Lanka with the aim of establishing regional groups using the university network as hubs. Another constraint faced during redlisting is the inability to assess temporal changes for most species as data has not been gathered using standard procedures. The following set of activities is proposed to overcome these limitations.

Area of focus	Responsible Institution/s	Technical support	Time Frame
Develop a research agenda for biodiversity related work	BDS, NSF, DWC, FD	NASCAG	June 2013
Award research contracts to implement the research agenda	NSF, DWC, FD	NASCAG	December 2013
Develop guidelines for a standard, methodological approach for conducting biodiversity-related research	NSF, BDS	NASCAG	June 2013
Conduct a series of workshops to create awareness about research gaps as well as use of standard methods for data collection	NSF, BDS	NASCAG	August 2013
Conduct a series of workshops to develop capacity for research on lower taxa	BDS and NSF	NASCAG	December 2013
Initiate baseline biodiversity surveys in selected sites	NSF, DWC, FD	NASCAG	January 2014

**BDS** - Biodiversity Secretariat, **NASCAG** - National Species Conservation Advisory Group, **DWC** - Department of Wildlife Conservation, **FD** - Forest Department, **CEA** - Central Environment Agency, **NGO** - Non Governmental Agencies

## 7. Assess status of infra-species variations for useful species

Even though the species is considered as the unit of conservation, there are number of taxa that show much infra species variation. In such cases, it may be prudent to plan conservation action at an infra species level in order to ensure conservation of genetic diversity. Therefore, an attempt should be made to document the diversity below the species level, especially for agro-biodiversity, given that that several indigenous crops and livestock varieties and their wild relatives have lost their genetic variability in the recent past.

Area of focus	Responsible Institution/s	Technical support	Time Frame
Prepare checklists of crop varieties and their wild relatives that should be conserved	Department of Agriculture	Crop Wild Relatives Project	June 2013
Prepare checklists of livestock varieties and their wild relatives that should be conserved	Department of Livestock	Indigenous Livestock Project	June 2013
Identify indigenous species that show appreciable infra species variability	BDS	Individual experts on such taxa	December 2013
Identify a set of actions needed to conserve such infra species variation	BDS	Individual experts on such taxa	December 2013

**BDS** - Biodiversity Secretariat

These actions are necessary to ensure long term conservation of Sri Lanka's biodiversity. The SCU based at the biodiversity secretariat will act as the coordinating body to initiate these actions. However, as can be seen, successful completion of these tasks will require great deal of inter-agency cooperation without which conservation of the biodiversity of Sri Lanka will indubitably fail.

The future of the species diversity of Sri Lanka lies in gathering solid scientific baseline data, analysing these data using the best possible methods, identifying gaps and priorities based on these scientific foundations and developing conservation action plans from the information gathered. It is essential that these efforts are buttressed by conservation education that creates awareness not only about the threats facing species and their current status, but also about the role each stakeholder can play in the conservation of Sri Lanka's flora and fauna. It is only when such a holistic and scientifically-based effort is made that engages and involves all stakeholders that conservation will move from being rhetoric to effective action. In such an effort, Redlisting is pivotal as a scientific tool that facilitates conservation.



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## Provisional Checklist of Sea Urchins (Echinodermata: Echinoidea) of Sri Lanka

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### Introduction

One of the most important groups of phylum Echinodermata is commonly known as Sea urchins which belong to the class Echinoidea. They are exclusively marine and occupy habitats from the intertidal zones to depths of more than 5000m and also from the equator to southern and northern poles. All extant Sea urchins are divided into two major groups, the regular echinoides (globose test and pentamerous symmetry commonly known as sea urchins) and irregular echinoides (heart urchins and sand dollars).

The echinoderms of the Indian Ocean are known since ancient times. This is mainly due to various expeditions such as Challenger expedition (1873-1874), Deutchen Tiefsee expedition (1902-1903), Percy Sladen Trust expedition (1904), John Murray expedition (1933-1934), Swedish Deep Sea expedition (1947-1948) and the Danish Deep Sea expedition (1961-1965). But some of the literature available relates to the "Indian Ocean" or in connection with the Gulf of Mannar making it difficult to work out the exact Sri Lankan echinoderm diversity.

The echinoderm fauna of island of Sri Lanka was first recorded by Bell (1887) and several other studies conducted during the early part of the 20th century, notably by Herdman *et al.*, (1904), Clark (1915) and the monographs compiled by Mortensen (1928, 1935, 1940, 1943). Herdman (1904) in his report to then Government of Ceylon on the pearl oyster fisheries, has recorded 109 echinoids including 30 species of Holothuroidea, 13 species of Crinoidea, 28 species of Echinoidea, 24 species of Asteroidea and 14 species of Ophiuroidea. Clark (1915) has also recorded 14 regular sea urchins.

Since then little work has been done on sea urchins for several decades. In recent years, work done by Malik Fernando, Prassana Weerakkody, S. Jayakody and R.M.G.N. Thilakarathne has resulted in addition of few new species to the list of sea urchins in Sri Lanka as well as re-establishing presence of some species listed in the checklist of Clark and Rowe (1971). Currently, 28 species of sea urchins are recognized from the coast of Sri Lanka. Identification now relies on Echinoid Directory, an online key adopted by British Natural History Museum, UK and a monograph by Clark and Rowe (1971).

Out of the 28 recognised species in Sri Lanka, only a single species, *Heterocentrotus mamillatus* (Slate Pencil urchin) is listed as protected in the Flora and Fauna Protection Ordinance (2007). The species is commercially exploited and are exported for ornamental trade. The lack of population data and also scanty information available for regulatory bodies to identify them has allowed the unregulated exploitation of sea urchins.

As in the case of other marine species, a vast amount of work is pending with regard to Sea Urchins. Therefore, to encourage future research into echinoides the following recommendations are made:

1. Establishment of a national echinoide collection and relevant literature
2. Studies to determine the role played by echinoides in the coastal ecosystems
3. Training young researchers and institutions on species collection and identification
4. Strengthening the capacity of relevant institutions working on marine research
5. Development of a species identification guide to popularize the study of sea urchins as well as for the use of regulatory bodies
6. Development and implementation of detailed studies that would furnish information necessary to conduct conservation status assessment of the sea urchins in the future

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## In addition following documents were also used

Recent records by Malik Fernando \*, Prasanna Weerakkody\*\* and Gayani Thilakaratne and Sevvandi Jayakody \*\*\*, MA Gayashan and Sevvandi Jayakody\*\*\*\*

NR = new record

\$ = exported ornamental species

P = protected

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Summarized from A.M. Clark & F.W.E. Rowe (1971) Monograph of shallow-water Indo-west Pacific Echinoderms with recent additions to this list and observations.

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\*\* Recent records by Malik Fernando \* Recent records by Prasanna Weerakkody (Ophiuroidea) , \*\*\*Recent records by S. Jayakody & RMGN Thilakaratne. NR = new record; \$ = exported ornamental species; P = protected

## Provisional checklist of regular and irregular echinoids of Sri Lankan shallow coastal areas

The checklist given below has been compiled using the documented literature of listed publications. Where appropriate information on current density calculations have also been given with the location.

### Class Echinoidea

#### Family Cidaridae

*Eucidaris metularia*  
*Phyllacanthus imperialis*  
*Prionocidaris baculosa* ?\*\*5  
*Prionocidaris bispinosa*

#### Family Echinothuriidae

*Asthenosoma varium*  
*Asthenosoma intermedium* ?\*\*NR\$6

#### Family Diadematidae

*Astropyga radiata* \*\*\$  
*Diadema savignyi* \*\*  
*Diadema setosum* \*\*  
*Echinothrix diadema* \*\*  
*Echinothrix calamaris*\*\*\*

#### Family Stomopneustidae

*Stomopneustes variolaris* \*\*\$

#### Family Temnopleuridae

*Microcyphus ceylanicus* \*\*  
*Salmaciella dussumieri*\*\*\*  
*Salmacis bicolor* \*\*\$  
*Salmacis virgulata* \*\*\$\*\*\*\*  
*Salmacis belli* \*\*\*  
*Salmacis toreumaticus*  
*Temnotrema siamense*

#### Family Toxopneustidae

*Gymnechinus robillardi*  
*Pseudoboletia indiana*  
*Pseudoboletia maculata* \*\*\$  
*Toxopneustes pileolus* \*\*\$\*\*\*\*  
*Tripneustes gratilla* \*\*

#### Family Echinometridae

*Colobocentrotus atratus*  
*Echinometra mathaei* \*\*\$ (both brown and ash colour morphs)  
*Echinostrephus molaris* \*\*  
*Heterocentrotus mammillatus* \*\*P

#### Family Echinoneidae

*Echinoneus cyclostomus* \*\*  
*Echinoneus abnormalis* \*\*NR

#### Family Clypeasteridae

*Clypeaster fervens*  
*Clypeaster humilis* \*\*  
*Clypeaster rarispinus* \*\*  
*Clypeaster reticulatus* \*\*

#### Family Fibulariidae

*Fibularia cribellum* (?)  
*Fibularia oblonga* (?)  
*Fibularia volva* (?)

#### Family Laganidae

*Laganum depressum* \*\*  
*Peronella lesueuri*  
*Peronella macroproctes* \*\*  
*Peronella oblonga*

#### Family Scutellidae

*Echinodiscus auritus* \*\*  
*Echinodiscus bisperforatus* \*\*

#### Family Echinolampadidae

*Echinolampas alexandri*  
*Echinolampas ovata* \*\*

#### Family Spatangidae

*Maretia planulata*  
*Pseudomaretia alta*

#### Family Loveniidae

*Lovenia elongata* \*\*

#### Family Schizasteridae

*Paraster gibberulus* \*\*  
*Prymnaster ? investigatoris* \*\*NR

#### Family Brissidae

*Brissus latecarinatus* \*\*  
*Metalia latissima*  
*Metalia sternalis* \*\*  
*Metalia dicrana* \*\*NR  
*Rhynobrissus pyramidalis*

**Provisional Checklist of Crinoidea, Ophiuroidea & Holothuroidea**  
Malik Fernando

**NR= New Record**

**Class: Crinoidea**

**Family Comasteridae**

1. *Capillaster macrobrachius*<sup>NR</sup>
2. *Capillaster multiradiatus*
3. *Capillaster sentosus*
4. *Comanthina schlegeli*
5. *Comanthus parvicirrus*
6. *Comanthus samoanus*
7. *Comatella maculata*
8. *Comatella stelligera*
9. *Comatula pectinata* (?)

**Family Zygometridae**

10. *Zygometra andromeda*(?)

**Family Himerometridae**

11. *Amphimetra ensifera*
12. *Amphimetra tessellata*<sup>NR</sup>
13. *Heterometra amboninae*
14. *Heterometra bengalensis*
15. *Heterometra reynaudi*
16. *Himerometra persica*<sup>NR</sup>
17. *Himerometra robustipinna*

**Family Mariametridae**

18. *Dichrometra* sp. <sup>NR</sup>
19. *Lamprometra palmata*
20. *Oxymetra finschi*
21. *Stephanometra echinus* (?)
22. *Stephanometra indica* (?)
23. *Stephanometra spicata*
24. *Stephanometra tenuipinna*

**Family Colobometridae**

25. *Cenometra herdmanni*
26. *Decametra modica*
27. *Decametra taprobanes*
28. *Oligometra serripinna*

**Family Tropiometridae**

29. *Tropiometra carinata*

**Family Antedonidae**

30. *Mastigometra micropoda*

**Class: Ophiuroidea**

**Family Ophiomixidae**

1. *Ophiomyxa australis*
2. *Ophiomyxa compacta*<sup>NR</sup>

**Family Gorgonocephalidae**

3. *Astroboa clavata*

**Family Ophiacanthidae**

4. *Ophiacantha indica*

**Family Amphiuridae**

5. *Amphioplus depressus*
6. *Amphiura luetkeni*

**Family Ophiactidae**

7. *Ophiactis savignyi*

**Family Ophiotrichidae**

8. *Gymnolophus obscura*
9. *Macrophiothrix aspidota*
10. *Macrophiothrix hirsuta*(?)
11. *Macrophiothrix longipeda*
12. *Macrophiothrix variabilis*
13. *Ophiocnemis marmorata*
14. *Ophiogymna elegans*
15. *Ophiomaza cacaotica*
16. *Ophiopteron elegans*
17. *Ophiotrix exigua*
18. *Ophiotrix foveolata*
19. *Ophiotrix trilineata*
20. *Ophiotrix proteus*
21. *Ophiotrix purpurea*
22. *Ophiotrix nereidina*

**Family Ophiocomidae**

23. *Ophiarthrum elegans*
24. *Ophiocoma brevipes*
25. *Ophiocoma dentata*<sup>NR</sup>
26. *Ophiocoma erinaceus*
27. *Ophiocoma pica*
28. *Ophiocoma scolopendrina*
29. *Ophiocomella sexradia*
30. *Ophiomastix annulosa*

**Family Ophionereidae**

31. *Ophionereis dubia*
32. *Ophionereis porrecta*

**Family Ophiodermatidae**

33. *Cryptopelta grannulifera*
34. *Ophiarachna incrassata*
35. *Ophiarachnella gorgonia*
36. *Ophiarachnella macrantha*<sup>NR</sup>
37. *Ophiarachnella septemspinosa*
38. *Ophiarachnella sphenisci*
39. *Ophiochaeta hoeschmai*<sup>NR</sup>
40. *Ophiopeza fallax*
41. *Ophiopeza spinosa*<sup>NR</sup>

**Family Ophiuridae**

42. *Ophiolepis cincta*
43. *Ophiolepis rugosa*
44. *Ophiolepis superba*
45. *Ophioplocus imbricatus*
46. *Ophiura kinbergi*

**Class : Holothuroidea****Family Holothuriidae**

1. *Actinopyga echinites*
2. *Actinopyga lecanora*
3. *Actinopyga maunliana*
4. *Actinopyga miliaris*
5. *Actinopyga serratidens*
6. *Bohadschia argus*
7. *Bohadschia marmorata*
8. *Bohadschia tenuissima*
9. *Bohadschia vitiensis*
10. *Colochirus robustus*
11. *Holothuria (Halodeima) atra*
12. *Holothuria (Halodeima) edulis*
13. *Holothuria (Lessonothuria) glandifera*
14. *Holothuria (Mertensiothuria) fuscocinerea*
15. *Holothuria fuscogilva*
16. *Holothuria (Mertensiothuria) leucospilota*
17. *Holothuria pardalis*
18. *Holothuria (Mertensiothuna) pervicax*
19. *Holothuria (Mertensiothuria) scabra*
20. *Holothuria (Microthele) nobilis*
21. *Holothuria (Platyperona) difficilis*
22. *Holothuria (Selenkothuria) erinaceus*
23. *Holothuria (Selenkothuria) moebii*
24. *Holothuria (Semperothuria) cinerascens*
25. *Holothuria (Semperothuria) imitans*
26. *Holothuria (Theelothuria) kurti*
27. *Holothuria (Theelothuria) spinifera*
28. *Holothuria (Thymiosycia) hilla*
29. *Holothuria (Thymiosycia) impatiens*

**Family Stichopodidae**

30. *Stichopus chironotus*

31. *Stichopus naso*
32. *Stichopus variegatus*
33. *Thelenota ananas*
34. *Thelenota anax*

**Family Psolidae**

35. *Psolus complanatus*

**Family Cucumariidae**

36. *Havelockia herdmani*
37. *Havelockia versicolor*
38. *Hemithyone semperi*
39. *Pentacta armatus*
40. *Pentacta quadrangularis*
41. *Pseudocolochirus tricolor*
42. *Pseudocolochirus violaceus*
43. *Staurothyone rosacea*
44. *Stolus buccalis*
45. *Stolus conjugens*
46. *Thyone papuensis*
47. *Trachythyone imbricata*
48. *Trachythyone typica*

**Family Phyllophoridae**

49. *Actinocucumis typicus*
50. *Ohshimella ehrenbergi*
51. *Phyllophorus (Phyllophorella) parvipedes*
52. *Phyllophorus (Phyllothuria) cebuensis*
53. *Phyllophorus (Urodemella) brocki*

**Family Caudinidae**

54. *Acaudina molpadiodes*

**Family Synaptidae**

55. *Opheodesoma grisea*
56. *Synapta maculata*
57. *Synaptula recta*
58. *Synaptula striata*

**Family Chirotidae**

59. *Polycheira rufescens*

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## Provisional checklist of soft corals recorded in Sri Lanka

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### Species

#### Family: Alcyoniidae

*Sinularia brassica* May, 1898  
*Sinularia dura* (Pratt, 1903)  
*Sinularia erecta* Tixier-Durivault, 1945  
*Sinularia firma* Tixier-Durivault, 1970  
*Sinularia grandilobata* Verseveldt, 19  
*Sinularia granosa* Tixier-Durivault, 1970  
*Sinularia leptocladus*(Ehrenberg, 1834 )  
*Sinularia lochmos* kolonko, 1926  
*Sinularia macropodia* Hickson & Hites, 1900  
*Sinularia microspiculata* Tixier-Durivault, 1970  
*Sinularia minima* Verseveldt, 1971  
*Sinularia polydactyla* Ehrenberg, 1834  
*Sinularia imbrilobata* Verseveldt, 1974  
*Cladiella humsi* Verseveldt, 1974  
*Cladiella* spp.  
*Cladiella subtilis* Tixier-Durivault, 1970  
*Lobophytum altum* Tixier-Durivault, 1956  
*Lobophytum compactum* Tixier-Durivault, 1956  
*Lobophytum crassum* Von Marenzeller, 1886

*Lobophytum crebriplacatum* Von Marenzeller, 1886  
*Lobophytum critigalli* Von Marenzeller, 1886  
*Lobophytum delectum* Tixier-Durivault, 1966  
*Lobophytum michaelae* Tixier-Durivault, 1966  
*Lobophytum ransoni* Tixier-Durivault, 1959  
*Lobophytum packeli* Tixier-Durivault, 1956  
*Sarcophyton acutangulam* Tixier-Durivault, 1966  
*Sarcophyton crassoc* Moser, 1919  
*Sarcophyton crassum* Tixier-Durivault, 1946  
*Sarcophyton ehrenbergi* Von Marenzeller, 1886  
*Sarcophyton latum*(Dana, 1846)  
*Sarcophyton trocheliophorum* Von Marenzeller, 1886

#### Family: Nephtheidae

*Dendronephthya gigantia*(Verrill, 1864)  
*Sterionephthya costatocyania* Burchardt, 1898  
*Tortus pacilloporaformis*

#### Family: Xeriidae

*Xenia* spp.

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## Provisional Checklist of Corals in Sri Lanka

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### Historical background

The descriptions of hard corals from Sri Lanka dates back to the 19<sup>th</sup> century (Dana, 1846; Edwards & Haime. 1860; Ridley. 1883; Ortmann 1889; Rehberg. 1892; Brook, 1892). Bourne (1905) described corals collected by Herdmann from Pearl Banks in the Gulf of Mannar. Thereafter, Pillai (1972) recorded 90 species of hard corals belonging to 39 genera. The physiographic zonation and ecological aspects of reefs at Hikkaduwa and Negombo was described by Mergner and Scheer (1974) and Arudpragasam (1984) respectively. Based on previous records and collections from Hikkaduwa, Scheer (1984) recorded 40 species of hermatypic (zooxanthellate) corals. De Silva and Rajasuriya (1985, 1986 and 1987) and Rajasuriya & De Silva (1988) identified 64 species of hermatypic corals in 15 genera that had not been previously recorded for Sri Lanka and from specimens collected during surveys carried out by the National Aquatic Resources Research and Development Agency. Thereafter Rajasuriya (1987, 1994, 2007a and 2007b) has listed 15 new species from Sri Lanka. Veron (2000) described three species of hermatypic corals occurring in the southern coast of Sri Lanka of which two are new to science. The current checklist of hard coral species for Sri Lanka contains 208 species in 71 genera divided among 19 families.

### Taxonomy

The taxonomic status of some hard coral species recorded for Sri Lanka has changed since the checklist of hard corals for Sri Lanka was published by Rajasuriya & De Silva (1988). Three genera; *Euphyllia*, *Catalaphyllia* and *Plerogyra* previously included in the family Caryophyllidae has been placed in a new Family, Euphyllidae by Veron (2000). *Fungiacyathus stephana* that was previously included in the family Fungiidae is now listed under the family Fungiacyathidae. In a revision of the 'Staghorn Corals of the World', Wallace (1999) renamed *Acropora formosa* as *Acropora muricata* citing the original description of the species. However, Veron (2000) in 'Corals of the World' has retained *Acropora formosa* as the valid name for this species. However, this species is listed as *Acropora muricata* in the present checklist of stony corals for Sri Lanka.

### Distribution of Corals and reef habitats in Sri Lanka

Most Hard Corals exhibit a wide distribution within the Asian region. However, Veron (2000) has described two new species of hard coral from Sri Lanka; *Podabacea lankaensis* (Family: Fungiidae) and *Echinopora robusta* (Family: Faviidae) that have not been reported from elsewhere to date. However, further investigations in the region are necessary to confirm whether these two species are endemic to Sri Lanka. Reef surveys carried out by the National Aquatic Resources Research and Development Agency indicate that the rarest species recorded to date is *Blastomussa merleti* which was collected at Unawatuna in late 1980s. This species has not been reported from any other location in Sri Lanka.



Extensive coral growth is limited to a depth of about 12 meters in Sri Lanka due to the turbidity that exist in coastal waters. The Gulf of Mannar has the most extensive shallow coral reefs in Sri Lanka (Swan 1983; Rajasuriya & De Silva, 1988). Fringing coral reefs are common in the northern, eastern and southern coastal waters. A few offshore patch reefs are found in the western coast between Chilaw and Colombo that are located ca. 10 to 20 kilometers from the shore line and at an average depth of 20 meters. Sandstone and rock reef habitats are widespread on the continental shelf. Generally, the hard coral cover is low on these substrates compared to extensive coral habitats (Rajasuriya & De Silva, 1988; Rajasuriya, Ohman & Johnstone, 1998; Rajasuriya, Ohman & Svensson, 1998). However, in some areas the diversity of hard corals is higher on sandstone reef habitats than on extensive coral habitats. Extensive hard coral reefs tend to be dominated by a few species belonging to branching and tabulate *Acropora* species, *Echinopora lamellosa* or foliose *Montipora* species and massive corals of the families, Faviidae and Poritidae.

### Threats

The major widespread threat to corals is from climate change. In 1998 large extents of shallow water corals became bleached and many reefs were damaged extensively. Their recovery is variable and even within a single reef area such as the Bar Reef individual patch reefs has shown different levels of recovery (Rajasuriya 2005, 2008). Coral bleaching with some regularity has been observed recently, especially on reefs in the east and north. In 2010 there was severe bleaching of the coral reefs in the Pigeon Island National Park and Dutch Bay in Trincomalee. These reefs are heavily degraded and have not shown good signs of recovery. However such bleaching events appear to be localized as some fringing reefs at Kutchchaveli located north of Trincomalee was not bleached during the same period. Crown of Thorns starfish populations dwindled after the 1998 large scale coral bleaching, but an increase in their numbers has been observed recently in Trincomalee.

The 2004 Tsunami caused serious damage to some coral reefs mainly in the eastern and southern region. This physical damage still remains and combined with other forms of impacts including coral bleaching and human induced damage continue to degrade the quality of coral reefs. The use of destructive fishing methods including blast fishing is still widespread, especially in the eastern and northwestern coastal waters. Over harvesting of species such as herbivorous reef fish, the Humphead wrasse (*Cheilinus undulatus*) that feed on juvenile Crown of Thorns starfish and many other species that are important for the maintenance of the ecological balance of coral reefs continue to take place. Pollution from coastal development and industries has affected all near shore reefs in Colombo and reefs in the vicinity of major cities in the southern coast. Unplanned development of tourist facilities along the coast has caused beach pollution and contributed to the damage of near shore reefs due to expansion of tourism related activities beyond the carrying capacity of an area and through direct impacts such as trampling of corals by visitors. Most of the damage is caused by Sri Lankan visitors who disregard the advice given to them by local authorities.

## Conservation

All species of hard corals are protected in Sri Lanka through the Fauna and Flora Protection Act by the Department of Wildlife Conservation. Corals and reef habitats are also protected under the Coast Conservation Act, but are limited to the coastal zone, which is a two kilometer wide strip of coastal water around the country. Four marine protected areas have been established to date under the Department of Wildlife Conservation, namely Hikkaduwa Marine National Park, Pigeon Island Marine National Park, Bar Reef Marine Sanctuary and Rumassala Marine Sanctuary. Due to inadequate implementation of wildlife and fisheries regulations there is little protection given to reef habitats, even within the marine protected areas.

The creation of special management areas under the Coastal Zone Management Plan has led to the development of management plans for the Hikkaduwa Marine National Park and the Bar Reef Marine Sanctuary. However, most of the recommendations for the protection of coral reefs in these two areas have not been implemented.

## Recommendations

Individual species of hard corals can best be protected by protecting entire reef habitats. Species based conservation will only be successful in localities where a rare species is found. Corals release gametes into the water and coral larvae travel widely in ocean currents and settle on suitable substrates. Therefore, protection of entire reef habitats is the only method to ensure the protection of corals in Sri Lanka.

Although there are several management plans for coral reef areas and despite the fact that corals have been given legal protection under the Fauna and Flora Protection Act, both coral reefs and corals receive little protection in the natural environment.

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## Checklist of corals recorded for Sri Lanka

### Species

#### Family: Acroporidae

*Acropora aculeus* (Dana, 1846)  
*Acropora anthocercis* (Brook, 1893)  
*Acropora ceylonica* (Ortmann, 1889)  
*Acropora clathrata* (Brook, 1891)  
*Acropora cytherea* (Dana, 1846)  
*Acropora danai* (Edwards & Haime, 1860)  
*Acropora divaricata* (Dana, 1846)  
*Acropora elegantula* (Ortmann, 1889)  
*Acropora hemprichii* (Ehrenberg, 1834)  
*Acropora humilis* (Dana, 1846)  
*Acropora hyacinthus* (Dana, 1846)  
*Acropora lamarcki* Veron, 2000  
*Acropora lianae* Nemenzo, 1967  
*Acropora millepora* (Ehrenberg, 1834)  
*Acropora microphthalma* (Verrill, 1869)  
*Acropora multiformis* (Ortmann, 1889)  
*Acropora muricata* (Dana, 1846)  
*Acropora natalensis* Riegl, 1995  
*Acropora nasuta* (Dana, 1846)  
*Acropora nobilis* (Dana, 1846)  
*Acropora orbicularis* Brook, 1892  
*Acropora pinguis* Wells, 1950  
*Acropora robusta* (Dana, 1846)  
*Acropora rudis* (Rehberg, 1892)  
*Acropora russelli* Wallace, 1994  
*Acropora samoensis* (Brook, 1891)  
*Acropora scherzeriana* (Bruggemann, 1877)  
*Acropora secale* (Studer, 1878)  
*Acropora selago* (Studer, 1878)  
*Acropora seriata* (Ehrenberg, 1834)  
*Acropora solitaryensis* Veron & Wallace, 1984  
*Acropora tenuis* (Dana, 1846)  
*Acropora valenciennesi* (Milne, Edwards & Haime, 1860)  
*Acropora verweyi* Veron & Wallace, 1984  
*Acropora yongei* Veron & Wallace, 1984  
*Montipora aequituberculata* Bernard, 1897  
*Montipora danae* (Milne, Edwards & Haime, 1851)  
*Montipora digitata* (Dana, 1846)  
*Montipora exserta* (Quelch, 1886)  
*Montipora effusa* Dana, 1846  
*Montipora foliosa* (Pallas, 1766)  
*Montipora friabilis* Bernard, 1897

*Montipora millepora* Crossland, 1952  
*Montipora monasteriata* (Forsk., 1775)  
*Montipora undata* Bernard, 1897  
*Montipora verrucosa* (Lamarck, 1816)  
*Astreopora gracilis* Bernard, 1896  
*Anacropora forbesi* Ridley, 1884  
**Family: Astrocoeniidae**  
*Stylocoeniella guentheri* Basset-Smith, 1890  
**Family: Agariciidae**  
*Gardineroseris planulata* (Dana, 1846)  
*Pavona clavus* (Dana, 1846)  
*Pavona decussata* (Dana, 1846)  
*Pavona divaricata* (Lamarck, 1816)  
*Pavona duerdeni* Vaughan, 1907  
*Pavona explanulata* (Lamarck, 1816)  
*Pavona minuta* Wells, 1954  
*Pavona varians* Verrill, 1864  
*Pavona venosa* (Ehrenberg, 1834)  
*Pavona maldivensis* (Gardiner, 1905)  
*Leptoseris explanata* Yabe & Sugiyama, 1941  
*Leptoseris gardineri* Horst, 1921  
*Leptoseris hawaiiensis* Vaughan, 1907  
*Leptoseris papyracea* (Dana, 1846)  
*Leptoseris mycetoseroides* Wells, 1954  
*Leptoseris scabra* Vaughan, 1907  
*Pachyseris rugosa* (Lamarck, 1801)  
*Pachyseris speciosa* (Dana, 1846)  
**Family: Caryophyllidae**  
*Deltocyathus rotulus* (Alcock, 1898)  
*Paracyathus stokesi* (Milne Edwards and Haime, 1848)  
*Paracyathus striatus* (Philippi, 1842)  
*Heterocyathus aequicostatus* Milne Edwards & Haime, 1848  
*Tropidocyathus herdmani* (Bourne, 1905)  
**Family: Dendrophylliidae**  
*Balanophyllia imperialis* (Kent, 1871)  
*Balanophyllia affinis* (Semper, 1872)  
*Balanophyllia parallela* (Semper, 1872)  
*Balanophyllia taprobanae* (Bourne, 1905)  
*Balanophyllia cumingii* (Milne, Edwards & Haime, 1848)  
*Psammoseris sulcata* (Verrill, 1866)  
*Heteropsammia cochlea* (Spengler, 1781)  
*Tubastrea aurea* (Quoy & Gaimard, 1833)

*Tubastrea micrantha* Ehrenberg, 1834  
*Dendrophyllia gracilis* (Milne, Edwards & Haime, 1848)  
*Dendrophyllia minuscula* (Bourne, 1905)  
*Dendrophyllia robusta* (Bourne, 1905)  
*Turbinaria peltata* (Esper, 1794)  
*Turbinaria mesenterina* Lamarck, 1816  
*Turbinaria quincuncialis* (Ortmann, 1889)  
**Family: Euphyllidae**  
*Euphyllia glabrescens* (Chamisso & Eysenhardt, 1821)  
*Euphyllia divisa* Veron & Pichon, 1980  
*Euphyllia ancora* Veron & Pichon, 1980  
*Catalaphyllia jardinei* (Saville - Kent, 1893)  
*Plerogyra sinuosa* (Dana, 1846)  
**Family: Faviidae**  
*Favia danae* Verrill, 1872  
*Favia fava* (Forsk., 1775)  
*Favia matthaii* Vaughan, 1918  
*Favia maxima* Veron & Pichon, 1977  
*Favia pallida* (Dana, 1846)  
*Favia speciosa* Dana, 1846  
*Favia veroni* Moll & Borel Best, 1984  
*Favia rotundata* (Veron & Pichon, 1977)  
*Favites abdita* (Ellis & Solander, 1786)  
*Favites chinensis* (Verrill, 1866)  
*Favites pentagona* (Esper, 1794)  
*Favites halicora* (Ehrenberg, 1834)  
*Favites melicerum* (Ehrenberg, 1834)  
*Favites spinosa* (Klunzinger, 1879)  
*Favites flexuosa* (Dana, 1846)  
*Montastrea valenciennesi* (Milne, Edwards & Haime, 1848)  
*Montastrea curta* (Dana, 1846)  
*Diploastrea heliopora* (Lamarck, 1816)  
*Plesiastrea versipora* (Lamarck, 1816)  
*Goniastrea edwardsi* Chevalier, 1971  
*Goniastrea pectinata* (Ehrenberg, 1834)  
*Goniastrea retiformis* (Lamarck, 1816)  
*Goniastrea aspera* Verrill, 1865  
*Platygyra carnosus* Veron, 2000  
*Platygyra lamellina* (Ehrenberg, 1834)  
*Platygyra sinensis* (Milne, Edwards & Haime, 1849)  
*Platygyra daedalea* (Ellis & Solander, 1786)  
*Platygyra pini* Chevalier, 1975  
*Leptoria phrygia* (Ellis & Solander, 1786)  
*Leptastrea purpurea* (Dana, 1846)  
*Leptastrea transversa* Klunzinger, 1879

*Cyphastrea chalcidicum* (Forsk., 1775)  
*Cyphastrea serailia* (Forsk., 1775)  
*Echinopora lamellosa* (Esper, 1795)  
*Echinopora robusta* Veron, 2000  
*Oulophyllia crista* (Lamarck, 1816)  
**Family: Flabellidae**  
*Flabellum stokesi* Milne, Edwards & Haime, 1848  
*Placotrochus laevis* Milne, Edwards & Haime, 1848  
**Family: Fungiidae**  
*Cycloseris costulata* (Ortmann, 1889)  
*Cycloseris cyclolites* (Lamarck, 1801)  
*Cycloseris hexagonalis* (Milne Edwards & Haime, 1848)  
*Cycloseris patelliformis* (Boschma, 1923)  
*Diaseris distorta* (Michelin, 1843)  
*Diaseris fragilis* Alcock, 1893  
*Ctenactis echinata* (Pallas, 1766)  
*Fungia danai* Milne Edwards & Haime, 1851  
*Fungia fungites* (Linnaeus, 1758)  
*Fungia repanda* Dana, 1846  
*Fungia moluccensis* Horst, 1919  
*Fungia paumotensis* Stutchbury, 1833  
*Fungia scutaria* Lamarck, 1801  
*Herpolitha limax* (Houttuyn, 1772)  
*Podabacia crustacea* (Pallas, 1766)  
*Podabacia lankaensis* Veron, 2000  
*Polyphyllia talpina* (Lamarck, 1801)  
*Sandalolitha robusta* Quelch, 1886  
*Zoopilus echinatus* Dana, 1846  
**Family: Fungiacyathidae**  
*Fungiacyathus stephanus* (Alcock, 1893)  
**Family: Merulinidae**  
*Hydnophora exesa* (Pallas, 1766)  
*Hydnophora microconos* (Lamarck, 1816)  
*Merulina ampliata* (Ellis and Solander, 1786)  
*Merulina* species  
**Family: Mussidae**  
*Acanthastrea echinata* (Dana, 1846)  
*Acanthastrea* species  
*Australomussa rowleyensis* Veron, 1985  
*Blastomussa merleti* Wells, 1961  
*Cynarina lacrymalis* (Milne Edwards and Haime, 1848)  
*Lobophyllia corymbosa* (Forsk., 1775)  
*Lobophyllia hemprichii* (Ehrenberg, 1834)  
*Micromussa diminuta* Veron, 2000  
*Micromussa minuta* (Moll and Borel-Best, 1984)

*Symphyllia agaricia* Milne, Edwards and Haime, 1849

*Symphyllia radians* Milne Edwards and Haime, 1849

*Symphyllia recta* (Dana, 1846)

*Symphyllia valenciennesi* Milne Edwards & Haime, 1849

**Family: Milleporidae**

*Millepora exesa* (Forsk., 1775)

*Millepora platyphyllia* (Hemprich and Ehrenberg, 1834)

*Millepora tenella* (Ortmann, 1892)

**Family: Oculinidae**

*Galaxea astreata* (Lamarck, 1816)

*Galaxea fascicularis* (Linnaeus, 1767)

**Family: Pectiniidae**

*Pectinia* species

*Mycedium elephantosus* (Pallas, 1766)

*Echinophyllia aspera* Ellis & Solander, 1788

*Echinophyllia echinata* Saville - Kent, 1871

**Family: Pocilloporidae**

*Pocillopora damicornis* (Linnaeus, 1758)

*Pocillopora elegans* Dana, 1846

*Pocillopora eydouxii* Milne Edwards and Haime, 1860

*Pocillopora cf. informis* Dana

*Pocillopora molokensis* Vaughan, 1907

*Pocillopora verrucosa* (Ellis and Solander, 1786)

*Stylophora pistillata* Esper, 1797

**Family: Poritidae**

*Porites annae* Crossland, 1952

*Porites cribripora* Dana, 1846

*Porites desilveri* Veron 2000

*Porites echinulata* Klunzinger, 1879

*Porites fragosa* Dana, 1846

*Porites gaimardi* Milne Edwards and Haime

*Porites lutea* Milne Edwards & Haime, 1851

*Porites lobata* Dana, 1846

*Porites rus* (Forsk., 1775)

*Porites solida* (Forsk., 1775)

*Porites* sp 1 as recorded by Mergner & Scheer, 1974

*Porites* sp 2 as recorded by Mergner & Scheer, 1974

*Poritipora paliformis* Veron 2000

*Stylaraea punctata* (Linnaeus, 1758)

*Goniopora bernardi* Faustino, 1927

*Goniopora fruticosa* Saville-Kent, 1893

*Goniopora stokesi* Edwards & Haime, 1851

*Alveopora viridis* Quoy & Gaimard, 1833

*Alveopora verrilliana* Dana, 1872

*Alveopora fenestrata* (Lamarck, 1816)

**Family: Siderastreidae**

*Coscinaraea columna* (Dana, 1846)

*Pseudosiderastrea tayamai* Yabe & Sugiyama, 1935

*Psammacora contigua* (Esper, 1797)

*Psammacora digitata* Milne Edwards & Haime, 1851

**Family: Stylasteridae**

*Distichopora violacea* (Pallas, 1766)

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## Provisional Checklist of Marine Aquatic Shelled Molluscs Of Sri Lanka

Excluding Freshwater Gastropods  
Malik Fernando

Part 1: Provisional Checklist of Species of Gastropods in Sri Lanka

Part 2: Provisional Checklist of Species of Bivalves in Sri Lanka

The Phylum MOLLUSCA Cuvier, 1795 contains numerous classes that include animals of numerous forms, both terrestrial and aquatic. This checklist deals only with aquatic forms, carrying external shells consisting of one or two pieces, in the classes Gastropoda and Bivalvia inhabiting marine and brackish waters (see box 01).

<p>Box 01</p> <p>Phylum Mollusca Cuvier, 1793</p> <p>Class: Aplacophora von Hering, 1876 – Spiny, shell-less molluscs</p> <p>Class: Polyplacophora Blainville, 1816 – chitons; with 8-shell plates</p> <p>Class: Monoplacophora Odhner, 1940 – cap-shell molluscs; deep sea</p> <p>Class: Gastropoda Cuvier, 1795 – snails; includes shell-less slugs</p> <p>Class: Bivalvia Linnaeus, 1758 – bivalves; clams, mussels, oysters</p> <p>Class: Scaphopoda Keferstein in Bronn, 1862 – tusk shells</p> <p>Class: Cephalopoda Cuvier, 1797 – octopuses, squids, cuttlefishes and nautilus</p> <p style="text-align: right;"><i>After de Bruyne, 2003</i></p>
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Box 02		
CLASS	GAS-TROPO-DA	BIVAL-VIA
ORDER	6	10
SUPERFAM-ILY	30	28
FAMILY	60	42
GENERA	173	113
SPECIES	469	287

Terrestrial forms are found only among the Gastropoda (some species in Orders Architaenioglossa & Pulmonata) and consist of terrestrial and arboreal species; these are excluded from this checklist. The great majority of species in this class are wholly marine; a minority occurs in brackish water, some ranging into water that may be fresh in tidal rivers. Others are entirely freshwater inhabitants (some species in Orders Neritopsina, Sorbeoconcha & Pulmonata) and are excluded from this checklist. The Order Opisthobranchia contains mostly species with no shells or greatly reduced shells that are internal; however, a few families of species with external shells are included here.

The Bivalvia are wholly aquatic and essentially marine with very few freshwater species. As all three undoubted species of freshwater bivalves (Family Unionidae) have been collected and photographed they have been included in the checklist. One record reported by Hadl (1974) from a single specimen is excluded; it was probably a misidentification referring to a brackish water species (Family Corbiculidae) that is included here.

The species in this list have been arranged in natural orders according to de Bruyne (2003) pages 309 to 316. The list is simplified to some extent, the species being listed under Class, Sub-class, Order, Superfamily and Family; the divisions Superorder, Suborder and Subfamily are not employed except in three instances where the subfamily category has been used.



Subgenera have generally not been used except where it was considered useful and such a division was found in the literature. Lack of uniformity in this regard is a shortcoming that needs to be addressed in future versions. This is not going to be an easy task. Box 02 summarises the taxa listed.

The principal difficulty in compiling this checklist was the non-availability of sufficient primary literature of a monographic nature with extensive synonymies to enable harmonisation between the lists of different authors and the lack of access to named collections for confirmation of identities by comparison. Reliance on a variety of literature, mostly not recent, has led to nomenclature that may not be uniform. The same species may therefore be represented under more than one name.

The checklist was compiled primarily based on the personal collections of the compiler, mostly collected by diving. Many specimens were obtained cast ashore on beaches or snagged on fishing nets, presumably in Sri Lankan waters. Some were purchased from itinerant vendors or from shell shops. The provenance of some of these items not collected personally may be in doubt. All these specimens have been identified personally using a variety of literature and two web-based databases; the complete Bibliography is attached to this checklist. All the specimens have been photographed and these will be available on a DVD in due course. All the named specimens are preserved and are available for reference.

The checklist contains incompletely identified species, not all specimens having been identified down to specific rank; in some even the genus is unknown. There are a number of collected specimens still awaiting identification – and many, no doubt, still awaiting collection – so the checklist will keep growing. All species have been photographed and most include descriptions as identification often requires examination of shell features not obvious in a photograph. In addition to the personal collection, reference has been made to published lists by Parakrama Kirtisinghe<sup>1</sup> (1978), Darshani de Silva<sup>2</sup> (2006) and D. H. Fernando<sup>3</sup> (1977). Misidentifications and identified synonyms in these publications have been excluded and the remainder included. It has not been possible to examine the Kirtisinghe collection; the other two publications are not backed by specimens.

Future work towards a complete checklist includes physical verification of the Kirtisinghe collection and inclusion of specimens in the Rodney Jonklaas and Kalika Perera collections in the Colombo National Museum and the Cedric Martenstyn collection. All three are known to be named. But, however many specimens are examined unless there is access to recent literature including monographs and facilities of comparing specimens with those in major collections, doubts will remain.

- 1 Kirtisinghe, Parakrama. 1978. *Sea shells of Sri Lanka*. Tuttle, Tokyo.
- 2 de Silva, Darshani. *Current Status of Taxonomy and Ecology of Marine Molluscs in Sri Lanka*. In: Bambaradeniya, Channa (Ed), *The Fauna of Sri Lanka* (2006), IUCN, 274-287.
- 3 Fernando, D. H. *Lamellibranchiate Fauna of the Estuarine and Coastal Areas in Sri Lanka*. Bull. Fish. Res. Stn., Sri Lanka, Vol. 27, 1977, 20-54.

## Part 1: Provisional Checklist of Species of Gastropods in Sri Lanka

### Family: Patellidae

*Cellana eucosmia*  
*Cellana luchuana*  
*Cellana rota* (Gmelin, 1791) \*  
*Patella flexuosa* Quoy and Gaimard, 1834 \*

### Family: Acmaeidae

*Acmaea saccharina* (Linnaeus, 1758) \*  
*Patelloida striata* Quoy and Gaimard, 1834 \*

### Family: Haliotidae

*Haliotis varia* Linnaeus, 1758 \*  
*Haliotis cf. pustulata*  
*Notohaliotis sieboldi*  
*Sunhaliotis planata*

### Family: Fissurellidae

*Clypidina notata* (Linnaeus, 1758) \*  
*Diodora lima*  
*Diodora mus* (Reeve, 1850) \*  
*Diodora* sp. \*  
*Emarginula fissurata* Holten, 1802 \*  
*Macroschisma* sp.  
*Scutus unguis* (Linnaeus, 1758) \*

### Family: Trochidae

*Calliostoma* sp. \*  
*Clanculus cf. atropurpureus* (Gould, 1849) \*  
*Euchelus asper*  
*Euchelus cf. atratus* (Gmelin) \*  
*Euchelus quadricarinatus* (Holten, 1802) \*  
*Euchelus* sp.1 \*  
*Monilea callifera*  
*Tectus pyramis* Born, 1778 \*  
*Trochus callicoccus* Reeve \*  
*Trochus gibberulus*  
*Trochus maculatus*  
*Trochus radiatus* Gmelin \*  
*Trochus sacellum*  
*Trochus tentorium* Gmelin \*  
*Trochus* sp.1 \*  
*Umbonium vestiarum* Linnaeus, 1758 \*

### Family: Turbinidae

*Angaria delphinus* Linnaeus, 1758\*  
*Astraliium costatum*  
*Astraliium heimburgi* (Dunker)\*  
*Astraliium rhodostoma*  
*Astraliium semicostata* (Kiener, 1850) \*  
*Astraliium* sp. 1 \*  
*Liotinaria cidaris*

*Turbo intercostalis* Menke, 1843\*  
*Turbo marmoratus*  
*Turbo petholatus* Linnaeus, 1758\*  
*Turbo stenogyrus*

### Family: Neritidae

*Clithon oualaniensis* Lesson, 1831  
*Naticarius rufilabris*  
*Nerita albicilla* Linnaeus, 1758  
*Nerita articulata* Gould, 1847  
*Nerita chamaeleon* Linnaeus, 1758  
*Nerita costata* Gmelin, 1791  
*Nerita insculpta*  
*Nerita plicata* Linnaeus, 1758  
*Nerita polita* Linnaeus, 1758  
*Neritopsis radula*  
*Nerita (Theliostyla) textilis* Gmelin, 1791  
*Ritena maura*  
*Neritina (Dostia) siquijorensis* (Recluz, 1843)

### Family: Cerithiidae

*Cerithium citrinum* Sowerby, 1855 \*  
*Cerithium echinatum*  
*Cerithium obeliscus* Bruguiere \*  
*Cerithium sowerbyi*  
*Clypeomorus batillariaeformis* (Habe and Kosuge, 1966) \*  
*Clypeomorus chemnitzianus*  
*Clypeomorus* sp. 1 \*  
*Clypeomorus* sp. 2 \*  
*Clypeomorus* sp. 3 \*  
*Clypeomorus* sp. 4 \*  
*Ochetoclava* sp.  
*Rhinoclavis aspera*  
*Rhinoclavis sinensis*

### Family: Modulidae

*Modulus tectum* Gmelin, 1791

### Family: Planaxidae

*Planaxis niger* Quoy & Gaimard, 1834 \*  
*Planaxis sulcatus* (Born, 1778)\*

### Family: Potamididae

*Cerithidea cingulata* (Gmelin, 1791) \*  
*Cerithidea quadrata*  
*Cerithidea* sp. 1 \*  
*Telescopium telescopium* (Linnaeus, 1758)\*  
*Terebralia palustris* (Linnaeus, 1767) \*

**Family: Siliquariidae**

*Tenagodus anguina* (Linnaeus, 1758) \*  
*Tenagodus cumingii* Mörch, 1861 \*

**Family: Turritellidae**

*Turritella columnaris* Kiener, 1840 \*  
*Turritella duplicata* (Linnaeus, 1758) \*  
*Turritella terebra*

**Family: Littorinidae**

*Echinolittorina millegrana* (Philippi, 1848) \*  
*Littoraria intermedia* (Philippi) \*  
*Littoraria scabra* (Linnaeus, 1758) \*  
*Littoraria undulata* (Gray, 1839) \*  
*Nodilittorina quadricincta* (von Mühlfeldt, 1824) \*  
*Nodilittorina trochoides* (Gray, 1839) \*

**Family: Rostellariidae**

*Rostellariella delicatula*  
*Tibia insulaechorab* Roding, 1798

**Family: Seraphidae**

*Terebellum terebellum* (Linnaeus, 1758)

**Family: Strombidae**

*Gibberulus gibberulus*  
*Lambis chiragra* Linnaeus, 1758 \*  
*Lambis crocata* Link, 1807 \*  
*Lambis lambis* (Linnaeus, 1758) \*  
*Lambis scorpius* (Linnaeus, 1758) \*  
*Lambis truncata* Humphrey, 1786 \*  
*Strombus aurisdianae* Linnaeus, 1758 \*  
*Strombus canarium* Linnaeus, 1758 \*  
*Strombus decorus* (Roding, 1798) \*  
*Strombus dentatus*  
*Strombus klineorum* Abbott \*  
*Strombus listeri* T. Gray, 1852 \*  
*Strombus luhuanus*  
*Strombus marginatus* Linnaeus, 1758 \*  
*Strombus mutabilis* Swainson, 1821 \*  
*Strombus plicatus siboldi* Sowerby, 1842 \*  
*Strombus vittatus* Linnaeus, 1758 \*  
*Strombus sp. 1* \*

**Family: Hipponicidae**

*Hipponix conicus* (Schumacher, 1817) \*  
*Hipponix pilosus*

**Family: Calyptraeidae**

*Cheilea tectumsinense*  
*Crucibulum extintorum* Lamarck, 1822 \*  
*Crucibulum violaceum*  
*Crucibulum sp. 1* \*  
*Syphopateella walshi* (Hermannsen in Reeve, 1859) \*

**Family: Xenophoridae**

*Xenophora helvacea*  
*Xenophora cf. exuta* \*?  
*Xenophora pallidula* Reeve, 1843 \*  
*Xenophora tenuis*

**Family: Vermetidae**

*Serpulorbis cf. siphon* Lamarck, 1818 \*  
*Vermetus sp.1* \*  
*Vermetus sp.2* \*

**Family: Cypraeidae**

*Cypraea errones*  
*Cypraea scurra*  
*Cypraea (Bistolida) hirundo* Linnaeus, 1758 \*  
*Cypraea (Blasicura) interrupta* Gray, 1824 \*  
*Cypraea (Cribraria) cribraria* Linnaeus, 1758 \*  
*Cypraea (Cypraea) tigris* Linnaeus \*  
*Cypraea (Erosaria) erosa* Linnaeus, 1758 \*  
*Cypraea (Erosaria) helvola* Linnaeus, 1758 \*  
*Cypraea (Erosaria) ocellata* Linnaeus \*  
*Cypraea (Erronea) caurica* Linnaeus  
*Cypraea (Erronea) caurica dracaena* \*  
*Cypraea (Erronea) felina listeri* (Gray, 1825) \*  
*Cypraea (Leporicypraea) mappa* Linnaeus, 1758 \*  
*Cypraea (Luria) isabella* Linnaeus, 1758 \*  
*Cypraea (Luria) pulchra* Gray, 1824 \*  
*Cypraea (Lyncina) argus* Linnaeus, 1758 \*  
*Cypraea (Lyncina) carneola* Linnaeus, 1758 \*  
*Cypraea (Lyncina) lynx* Linnaeus, 1758 \*  
*Cypraea (Lyncina) vitellus* Linnaeus, 1758 \*  
*Cypraea (Mauritia) arabica* Linnaeus, 1758 \*  
*Cypraea (Mauritia) histrio* Gmelin, 1791 \*  
*Cypraea (Mauritia) mauritiana* Linnaeus, 1758 \*  
*Cypraea (Monetaria) moneta* Linnaeus, 1758 \*  
*Cypraea (Nuclearia) nucleus* Linnaeus, 1758 \*  
*Cypraea (Ornamentaria) annulus* Linnaeus, 1758  
*Cypraea (Palmadusta) asellus* Linnaeus, 1758 \*  
*Cypraea (Palmadusta) clandestina* Linnaeus, 1767 \*  
*Cypraea (Purpuradusta) gracilis* Gaskoin, 1849 \*  
*Cypraea (Pustularia) cicercula* Linnaeus, 1758 \*  
*Cypraea (Ravitrona) caputserpentes* Linnaeus, 1758\*  
*Cypraea (Staphylaea) staphylaea* Linnaeus, 1758 \*  
*Cypraea (Talparia) talpa* Linnaeus, 1758 \*  
*Adusta onyx*  
*Derstolida stolidia*  
*Erosaria nebrates ceylonensis*  
*Erosaria poraria*  
*Mystaponda nivosa*  
*Ovatipsa coloba gregori*  
*Palmadusta punctata*  
*Peribolus depressus*  
*Pustularia globulus*  
*Ravitrona gangrenosa*  
*Talostolida teres*

**Family: Ovulidae**

*Calpurnus lacteus*  
*Calpurnus verrucosus* Linnaeus, 1758 \*  
*Ovula ovum* Linnaeus, 1758 \*  
*Volva brevirostris*  
*Volva volva*  
*Volva* sp. 1

**Family: Triviidae**

*Trivia edgari* Shaw \*

**Family: Naticidae**

*Mamilla kurodai*  
*Natica euzona*  
*Natica tigrina* (Roding, 1798) \*  
*Natica traillii* Reeve, 1855 \*  
*Natica vitellus* Linnaeus, 1758 \*  
*Natica (Naticarius) alapapilionis* (Röding, 1798) \*  
*Naticarius lineata*  
*Naticarius rufilabris* \*?  
*Polinices mamilla* (Linnaeus, 1758) \*  
*Polinices powisianus*  
*Polinices (Neverita) albumen* (Linnaeus, 1758) \*  
*Polinices (Neverita) didyma* (Roding, 1798) \*  
*Sinum javanicum* (Griffith & Pidgeon, 1834) \*  
*Sinum planulatus*

**Family: Bursidae**

*Bufonaria crumena* (Lamarck, 1816) \*  
*Bufonaria echinata* (Link, 1807) \*  
*Bufonaria nobilis*  
*Bursa bufonia* (Gmelin, 1791) \*  
*Bursa granularis* (Röding, 1798) \*  
*Bursa granularis* (Röding, 1798) [tuberculated form]\*  
*Bursa rana* (Linnaeus)  
*Bursa spinosa*  
*Tutufa bubo* Linnaeus, 1758 \*  
*Tutufa bufo* (Röding, 1798) \*  
*Tutufa rubeta* (Linnaeus, 1758) \*

**Family: Cassidae**

*Cassis cornuta* Linnaeus, 1758 \*  
*Casmaria erinacea*  
*Casmaria ponderosa*  
*Cypraecassis rufa* (Linnaeus, 1758) \*  
*Phalium areola*  
*Phalium canaliculatum*  
*Phalium fimbria* (Gmelin, 1791) \*  
*Phalium glaucum* Linnaeus, 1758 \*

**Family: Ranellidae**

*Apollon gyrinum* (Linnaeus, 1758) \*  
*Charonia tritonis* Linnaeus, 1758 \*  
*Cymatium cingulatum*

*Cymatium kleineri*  
*Cymatium lotorium*  
*Cymatium muricinum*  
*Cymatium perryi* Emmerson & Old, 1963 \*  
*Cymatium rubeculum*  
*Cymatium spengleri*  
*Cymatium (Cymatriton) nicobaricum* Roding, 1798 \*  
*Cymatium (Gelagna) clandestina*  
*Cymatium (Ranularia) pyrum*  
*Cymatium (Ranularia) retusum* Lamarck, 1822 \*  
*Cymatium (Septa) aquatile* Reeve, 1844 \*  
*Cymatium (Septa) pileare* Linnaeus, 1758 \*  
*Distorsio anus* Linnaeus, 1758 \*  
*Distorsio reticulata* Roding, 1798 \*

**Family: Tonnidae**

*Malea pomum*  
*Tonna canaliculata* (Linnaeus, 1758) \*  
*Tonna dolium* (Linnaeus, 1758) \*  
*Tonna galea* Linnaeus, 1758  
*Tonna perdix*  
*Tonna sulcosa*  
*Tonna tessalata*

**Family: Ficidae**

*Ficus ficus*  
*Ficus subintermedius* (d'Orbigny, 1852) \*  
*Ficus variegatus* Röding, 1798 \*

**Family: Epitoniidae**

*Epitonium (Gyroscala) perplexum* Deshayes \*

**Family: Janthinidae**

*Janthina globosa* Swainson, 1822 \*  
*Janthina janthina* Linnaeus, 1758 \*

**Family: Eulimidae**

*Eulima* sp. 1 \*  
*Thyca crystallina* (Gould, 1846) \*

**Family: Coralliophilidae**

*Coralliophila neritoidea* Lamarck, 1816 \*  
*Coralliophila pyriformis* Kira \*  
*Magilus* sp.  
*Rapa bulbiformis*

**Family: Muricidae**

*Chicoreus brunneus* Link, 1807 \*  
*Chicoreus palmarosae* Lamarck, 1822 \*  
*Chicoreus ramosus* (Linnaeus, 1758) \*  
*Chicoreus saulii* Soweby, 1841 \*  
*Chicoreus torrefactus* (Sowerby, 1841) \*  
*Chicoreus virgineus* Röding \*

*Haustellum haustellum* (Linnaeus, 1758) \*  
*Haustellum kiiensis* (Kuroda in Kira, 1959) \*  
*Murex pecten* Lightfoot, 1786 \*  
*Murex racemosa*  
*Murex ternispina* Lamarck, 1822 \*  
*Murex tribulus* Linnaeus, 1758 \*

#### Subfamily: Rapaninae

*Cymia lacera* (Born, 1778) \*  
*Drupa morum*  
*Drupa ricina* Linnaeus, 1758 \*  
*Drupella fusconigra*  
*Drupella ochrostoma* var. *spectrum* (Blainville) / (Reeve) \*  
*Drupella rugosa* (Born, 1778) \*  
*Mancinella mancinella* (Linnaeus, 1758) \*  
*Morula granulata* (Duclos, 1832) \*  
*Morula serrialis* (Laborde?) \*  
*Morula (Cronia) margariticola* Broderip, 1832 \*  
*Morula* sp. 1 \*  
*Morula* sp. 2 \*  
*Purpurea persica* (Linnaeus, 1758) \*  
*Rapana rapiformis* (Born, 1778) \*  
*Thais tissoti* Petit, 1852 \*  
*Thais (Mancinella) bufo* (Lamarck, 1822) \*  
*Thais mutabilis* \*

#### Family: Buccinidae

*Babylonia spirata* Linnaeus, 1758 \*  
*Babylonia zeylanica* Bruguiere, 1789 \*  
*Cantharus (Pollia) fumosus* Dillwyn, 1817 \*  
*Cantharus tranquebaricus*  
*Cantharus (Pollia) undosus* Linnaeus, 1758 \*  
*Cantharus* sp. 1 \*  
*Engina melanozona* Tomlin \*  
*Engina pulchra*  
*Engina zonata*  
*Engina* sp. 1 \*  
*Engina* sp. 2 \*  
*Phos senticosus* (Linnaeus, 1758)  
*Phos textum* \*

#### Family: Columbelloidea

*Pyrene flava* Bruguiere, 1789 \*  
*Pyrene flavida*  
*Pyrene terpsichore* Lamarck\*  
*Pyrene testudinaria* (Link, 1807) \*  
*Pyrene turturina*  
*Pyrene versicolor* (Sowerby, 1832) \*

#### Family: Fascioliidae

*Fusinus longicaudatus* (Lamarck, 1822) \*  
*Fusinus nicobaricus* Röding, 1798 \*  
*Hemipolygona amaliae* (Kuster & Kobelt, 1874) \*  
*Latirus gibbulus* (Gmelin, 1791) \*

*Latirus polygonus* Gmelin, 1791 \*  
*Latirolagena smaragdula*  
*Peristernia nassatula*  
*Pleuroploca filamentosa* Röding, 1798 \*  
*Pleuroploca persica* (Reeve, 1847) \*  
*Pleuroploca trapezium* Linnaeus, 1758 \*  
*Turritatirus craticulatus* (Linnaeus, 1758) \*  
*Turritatirus turritus* (Gmelin, 1791) \*

#### Family: Melongenidae

*Pugilina cochlidium* Linnaeus, 1758 \*

#### Family: Nassariidae

*Alectrion suturalis*  
*Bullia vittata* Linnaeus \*  
*Bullia* sp. 1 \*  
*Nassa francolinus*  
*Nassarius albescens* (Dunker, 1846) \*  
*Nassarius bicolor* Dunker \*  
*Nassarius gaudiosus* (Hinds, 1844) \*  
*Nassarius hepaticus* (Montagu) \*  
*Nassarius* cf. *livescens* Philippi \*  
*Nassarius pallidulus* (Adams) \*  
*Nassarius pullus* (Linnaeus, 1758) \*  
*Nassarius* sp. 1 \*  
*Nassarius (Zeuxis) dorsatus* (Röding, 1798) \*  
*Zeuxis olivaceus*  
*Zeuxis (Telasco) reeveanus* f. *velatus* (Gould) \*  
*Zeuxis* sp. 1 \*  
*Zeuxis* sp. 2 \*

#### Family: Harpidae

*Harpa armouretta*  
*Harpa davidis* Röding, 1798 \*  
*Harpa harpa* (Linnaeus, 1758) \*  
*Harpa major* Röding, 1798 \*

#### Family: Marginellidae

*Marginella angustata*  
*Marginella strigata*  
*Marginella* sp. 1  
*Volvarina angustata* Sowerby, 1846 \*

#### Family: Mitridae

*Chrysame anbigua*  
*Chrysame chrysalis*  
*Chrysame eremitarum*  
*Chrysame ferruginea*  
*Mitra (Strigatella) litterata* Lamarck, 1811 \*  
*Mitra mitra*  
*Mitra (Mitra) papalis* Linnaeus, 1758 \*  
*Mitra* cf. *pellisserpentis* Reeve, 1844 \*  
*Mitra* sp. \*  
*Mitropifex crebrillirata*

*Tiara floccata*  
*Tiara isabella*  
*Tiara morchi*

**Family: Olividae**

*Agaronia cinnamomea*  
*Agaronia nebulosa* (Lamarck, 1811) \*  
*Agaronia* (?) sp. 1 \*  
*Ancilla* (?) sp. 1 \*  
*Oliva annulata* Gmelin, 1791 \*  
*Oliva bulbosa* Röding, 1798 \*  
*Oliva erythrostoma*  
*Oliva miniacea*  
*Oliva oliva* Linnaeus, 1758 \*  
*Oliva ornata*  
*Oliva paxillus* Reeve, 1850 \*  
*Oliva reticulata* Röding, 1798 \*  
*Oliva sericea*  
*Oliva sidelia* Duclos, 1835 \*  
*Oliva textilina* Lamarck, 1811 \*  
*Oliva tremulina* Lamarck, 1811 \*  
*Oliva vidua* Röding, 1798 \*  
*Olivancillaria gibbosa* Born \*  
*Olivancillaria hiatula*  
*Olivancillaria steeriae*

**Family: Turbinellidae**

*Turbinella pyrum* (Linnaeus, 1758) \*  
*Turbinella pyrum* f. *napus* Lamarck, 1822 \*

**Family: Volutidae**

*Melo melo* Lightfoot, 1786 \*  
*Voluta (Harpulina) arausiaca* Lightfoot, 1876 \*  
*Voluta (Harpulina) lapponica* (Linnaeus, 1767) \*  
*Voluta (Lyria) cloveriana* Weaver, 1963 \*  
*Voluta magnifica*

**Family: Cancellariidae**

*Cancellaria scalarina*  
*Trigonostoma trigonostoma*

**Family: Conidae**

*Conus* (?) sp. 1 \*  
*Conus* (?) sp. 2 \*  
*Conus (Asprella?)* sp. 3 \*  
*Conus (Chelyconus) achatinus* Gmelin, 1791  
*Conus (Chelyconus) catus* Hwass, 1792  
*Conus (Conusprella) sowerbyi*  
*Conus (Cleobula) betulinus* Linnaeus, 1758 \*  
*Conus (Cleobula) figulinus* Linnaeus, 1758 \*  
*Conus (Cleobula) figulinus loroisii* Kiener \*  
*Conus (Cleobula) suratensis* Hwass, 1792 \*  
*Conus (Conus) nicobaricus* Hwass, 1792 \*  
*Conus (Cylinder) abbas* Hwass, 1792 \*

*Conus (Cylinder) natalis* Sowerby  
*Conus (Cylinder) textile* Linnaeus, 1758 \*  
*Conus (Darioconus) episcopus* Hwass, 1793  
*Conus (Darioconus) omaria* Hwass, 1792 \*  
*Conus (Darioconus) pennaceus* Born, 1758  
*Conus (Dauciconus) augur* Lightfoot, 1786 \*  
*Conus (Dauciconus) litoglyphus* Hwass, 1792 \*  
*Conus (Dauciconus) vitulinus* Hwass, 1792 \*  
*Conus (Gastroidium) geographus* Linnaeus, 1758 \*  
*Conus (Gastroidium) obscurus* Sowerby, 1833  
*Conus (Hermes) nussatella* Linnaeus, 1758 \*  
*Conus (Hermes) terebra* Born, 1780 \*  
*Conus (Leptoconus) amadis* Gmelin 1791 \*  
*Conus (Leptoconus) generalis* Linnaeus, 1767 \*  
*Conus (Leptoconus) monile* Hwass, 1792  
*Conus (Lithoconus) eburneus* Hwass, 1792  
*Conus (Lithoconus) leopardus* Röding, 1798 \*  
*Conus (Lithoconus) litteratus* Linnaeus, 1758 \*  
*Conus (Lithoconus) tessulatus* Born, 1778 \*  
*Conus (Pionoconus) pertusus* Hwass, 1792  
*Conus (Puncticulis) arenatus* Hwass, 1792 \*  
*Conus (Puncticulis) pulicarius* Hwass, 1792  
*Conus (Puncticulis) zeylanicus* Gmelin, 1791 \*  
*Conus (Regiconus) aulicus* Linnaeus, 1758 \*  
*Conus (Rhizoconus) capitaneus* Linnaeus, 1758 \*  
*Conus (Rhizoconus) miles* Linnaeus, 1758 \*  
*Conus (Rhizoconus) mustelinus* Hwass, 1792  
*Conus (Rhizoconus) rattus* Hwass, 1792 \*  
*Conus (Rhizoconus) vexillum* Gmelin, 1791  
*Conus (Rhombus) zonatus* Hwass, 1782  
*Conus (Stephanoconus) varius* Linnaeus, 1758  
*Conus (Strioconus) striatus* Linnaeus, 1758 \*  
*Conus (Textilia) nimbus* Hwass, 1792 \*  
*Conus (Virgiconus) flavidus* Lamarck, 1810  
*Conus (Virgiconus) virgo* Linnaeus, 1758 \*  
*Conus (Virroconus) ceylanensis* Bruguiere, 1792 \*  
*Conus (Virroconus) coronatus* Gmelin 1791 \*  
*Conus (Virroconus) chaldaeus* Röding, 1798  
*Conus (Virroconus) distans* Hwass, 1792  
*Conus (Virroconus) ebraeus* Linnaeus, 1758 \*  
*Conus (Virroconus) lividus* Hwass, 1792 \*  
*Conus (Virroconus) musicus* Hwass, 1792 \*  
*Conus (Virroconus) piperatus* Dilwyn, 1817

**Family: Terebridae**

*Abretiella cerithina*  
*Cinguloterebra serotina*  
*Impages hectica* Linnaeus, 1758 \*  
*Myurella pretiosa*  
*Terebra commaculata*  
*Terebra crenulata* Linnaeus, 1758 \*  
*Terebra dimidiata* Linnaeus, 1758 \*  
*Terebra (Duplicaria) duplicata* Linnaeus \*  
*Terebra guttata* Röding, 1798 \*  
*Terebra maculata* Linnaeus, 1758 \*  
*Terebra stylata* Hinds, 1844 \*

*Terebra subulata* Linnaeus, 1767 \*  
*Terebra* sp. 1  
*Triplostephanus lima*

**Family: Turridae**

*Brachytoma crenularis*  
*Lophiotoma acuta* Perry, 1811 \*  
*Lophiotoma indica* Röding, 1798 \*  
*Turris undosa*  
*Turricula javana* (Linnaeus, 1767) \*  
*Unedogemmula unedo*  
*Xenoturris cingulifera* (Lamarck, 1822) \*

**Family: Architectonicidae**

*Architectonica laevigatum* Lamarck, 1861 \*  
*Architectonica perspectiva* (Linnaeus, 1758) \*  
*Haliacus variagatus*  
*Philippia hybrida*

**Family: Amathinidae**

*Amathina tricarinata* (Linnaeus, 1758) \*

**Family: Pyramidellidae**

*Otopleura auriscati* Holten, 1802 \*

**Family: Acteonidae**

*Maxacteon fabreanus* (Crosse, 1874) \*  
*Solidula solidula* Linnaeus, 1758 \*

**Family: Hydatinidae**

*Hydatina physis* Linnaeus, 1758 \*  
*Hydatina velum*

**Family: Bullidae**

*Bulla ampulla* Linnaeus, 1758 \*

**Family: Haminoeidae**

*Haminoea crocata* Pease, 1860 \*  
*Haminoea cymbalum* \*

**Family: Siphonariidae**

*Siphonaria* cf. *acmaeoides* Pilsbury \*  
*Siphonaria alternata* Say, 1826 \*  
*Siphonaria atra*  
*Siphonaria javanica* (Lamarck, 1819) \*

**Family: Ellobiidae**

*Cassidula nucleus* (Gmelin, 1791) \*  
*Ellobium gangeticum* (Pfeiffer, 1855) \*  
*Melampus fasciatus* (Deshayes, 1830) \*  
*Melampus* sp. 1 \*  
*Pythia plicata* (Ferrusac) Gray, 1825 \*

## Part 2: Provisional Checklist of Species of Bivalves in Sri Lanka

### Family: Arcidae

*Anadara antiquata* (Linnaeus)  
*Anadara complanata* (Chemnitz)  
*Anadara clathrata* (Reeve)  
*Anadara granosa* (Linnaeus, 1758)\*  
*Anadara lateralis* (Reeve)\*  
*Anadara maculosa* (Reeve)  
*Anadara nodifera* (Martens, 1860)\*  
*Anadara pilula* Reeve  
*Anadara satowi* Dunker\*  
*Anadara* sp. 'Wellawatte'\*  
*Anadara* cf. *troscheli* \*  
*Arca arabica* Philippi  
*Arca bistrigata* Dunker  
*Arca lienosa*  
*Arca navicularis* Bruguiere, 1789\*  
*Arca* sp. 1\*  
*Arca* sp. 2\*  
*Arca* sp. 3\*  
*Arca* sp. 4\*  
*Arca* sp. 5\*  
*Arca* sp. 6\*  
*Arca ventricosa* Lamarck, 1819\*  
*Arca (Trisodos) tortuosa* (Linnaeus, 1758)\*  
*Barbatia foliata* (Forsskal, 1775)\*  
*Barbatia fusca* (Bruguiere, 1789)\*  
*Barbatia* sp. 1\*  
*Barbatia* sp. 2\*  
*Barbatia* sp. 3\*  
*Barbatia* sp. 4\*  
*Barbatia virescens* (Reeve)\*  
*Barbatia virescens obtusoides* (Nyst)\*  
*Scapharca inaequivalvis* (Bruguière, 1789)\*

### Family: Cucullaeidae

*Cucullaea labiata* (Lightfoot, 1786)

### Family: Glycymerididae

*Glycymeris oblingus* (Reeve)\*  
*Glycymeris rotunda* (Dunker)  
*Glycymeris* sp. 1\*

### Family: Mytilidae

*Brachiodontes* sp. 1\*  
*Brachiodontes* sp. 2\*  
*Brachiodontes* sp. 3\*  
*Lithophaga cinnamomea* (Lamarck)  
*Lithophaga* cf. *lima* (Lamy)\*  
*Lithophaga nigra* (d'Orbigny)  
*Lithophaga teres* (Philippi, 1846)\*  
*Modiolus auriculatus* (Krauss, 1848)\*  
*Modiolus philippinarum* Hanley, 1843\*

*Modiolus metcalfei* (Hanley)  
*Modiolus tulipa* (Lamarck)  
*Modiolus* cf. *micropterus* (Deshayes, 1836)\*  
*Modiolus* sp. 1\*  
*Musculus (Reynella) cupreus* (Gould)\*  
*Mytilus* sp. 1 \*  
*Perna perna* (Linnaeus, 1758) \*  
*Perna viridis* (Linnaeus, 1758)\*  
*Septifer bilocularis* Linnaeus, 1758\*  
*Septifer virgatus* (Wiegmann)\*  
*Septifer* (?) sp. 1 (Wellawatte 5.9.2010)\*

### Family: Isognomonidae

*Isognomon ephippium* (Linnaeus)  
*Isognomon isognomum* (Linnaeus, 1758)\*  
*Isognomon perna* Linnaeus, 1767\*

### Family: Malleidae

*Malleus albus* Lamarck, 1819\*  
*Malleus malleus* Linnaeus, 1758\*  
*Malleus* sp.\*  
*Vulsella vulsella* (Linnaeus, 1758)\*

### Family: Pteriidae

*Electroma (Pterelectroma) zebra* (Reeve, 1857)\*  
*Pinctada margaritifera* (Linnaeus, 1758)\*  
*Pinctada radiata* (Leach, 1814)\*  
*Pteria breviaiata* (Dunker, 1872)\*  
*Pteria inquinata* (Reeve)\*  
*Pteria penguin* (Roding, 1758)\*  
"Pteria" sp.\*

### Family: Pinnidae

*Atrina pectinata* (Linnaeus)  
*Atrina vexillum* (Born, 1778)\*  
*Pinna bicolor* Gmelin\*  
*Pinna muricata* Linnaeus  
*Streptopinna saccata* (Linnaeus)

### Family: Limidae

*Ctenoides ales* (Finley, 1927)\*  
*Ctenoides annulata* Lamarck\*  
*Lima vulgaris* (Link, 1807)\*  
*Limaria basilanica* (Adams & Reeve, 1950)\*  
*Limaria fragilis* (Gmelin, 1791)\*

### Family: Gryphaeidae

*Hyotissa hyotis* (Linnaeus, 1758)\*

### Family: Ostreidae

*Crassostrea belcheri* (Sowerby)\*



*Crassostrea* cf. *madrasensis* (Preston)?\*  
*Crassostrea* sp. 1\*  
*Crassostrea* cf. *gryphoides* (Scholtheim, 1813)\*  
*Dendostrea folium* (Linnaeus, 1758)\*  
*Lopha cristagalli* Linnaeus, 1578\*  
*Ostrea* sp. 1\*  
*Ostrea* sp. 2\*  
*Ostrea* sp. 3\*  
*Saccostrea cucullata* (Born, 1778)\*  
*Saccostrea mordax* (Gould, 1850)\*

**Family: Pectinidae**

*Amusium pleuronectes* (Linnaeus)  
*Chlamys irregularis* Sowerby  
*Chlamys senatorius* Gmelin, 1791\*  
*Chlamys (Excellichlamys) spectabilis* Reeve, 1853\*  
*Chlamys (Mimachlamys) nobilis* Reeve\*  
*Chlamys gloriosus* Reeve  
*Chlamys pelseneeri* Dautzenberg & Bavay  
*Chlamys pyxidata* (Born)  
*Chlamys tranquebarica* (Gmelin)  
*Chlamys* sp. 1\*  
*Decatopecten striatus* (Schumacher, 1817)\*  
*Pecten (Cryptopecten) pallium* Linnaeus, 1758\*  
*Pecten nodosus* Linnaeus  
*Pecten townsendi* Sowerby  
? *Pecten* sp. 1\*  
? *Plicatula* sp. 2\*

**Family: Spondylidae**

*Spondylus imperialis*\*  
*Spondylus layardi* Reeve  
*Spondylus nicobaricus* Schreibers  
*Spondylus versicolor* Schreibers, 1793\*  
*Spondylus* cf. *barbatus*\*  
*Spondylus* cf. *cruentus* Lishke\*  
*Spondylus* cf. *marisrubri* Röding\*  
*Spondylus* sp. 1\*  
*Spondylus* sp. 2\*  
*Spondylus* sp. 3\*  
*Spondylus* sp. 4\*  
*Spondylus* sp. 5\*

**Family: Anomiidae**

*Anomia achaeus* Gray

**Family: Placunidae**

*Placuna placenta* (Linnaeus)\*

**Family: Unionidae**

*Lamellidens lamellatus* (Lea, 1838)\*  
*Lamellidens testudinarius* (Spengler, 1793)\*  
*Parreysia corrugata* (Müller, 1774)\*

**Family: Chamidae**

*Chama dunkeri* Lischke\*  
*Chama fragum* Reeve\*  
*Chama lazarus* Linnaeus, 1758\*  
*Chama pulchella* Reeve, 1846\*  
*Chama reflexa* Reeve, 1846\*

**Family: Lucinidae**

*Codakia punctata* (Linnaeus)

**Family: Ungulinidae**

*Diplodonta rotundata* (Montagu, 1803)\*  
*Diplodonta semiasperatoides* Nomura

**Family: Carditidae**

*Cardita bicolor* Lamarck\*  
*Cardita crassicosta* (Lamarck, 1819)\*  
*Cardita variegata* Bruguiere, 1792\*  
*Cardita* sp.

**Family: Crassatellidae**

? *Eucrassatella* sp. 1\*

**Family: Cardiidae**

*Afrocardium latum* (Born)\*  
*Afrocardium setosum* (Redfern)\*  
*Fragum hemicardium* (Linnaeus, 1758)\*  
*Fulvia australis* I(Sowerby)  
*Fulvia asiatica* (Bruguière)  
*Laevicardium biradiatum* (Bruguiere, 1789)\*  
*Laevicardium* sp. 2\*  
*Laevicardium* sp. 3\*  
*Laevicardium* sp. 4\*  
*Nemocardium lyratum* (Soweby, 1841)\*  
*Trachycardium angulatum* (Lamarck, 1822)\*  
*Trachycardium elongatum* Bruguière, 1789\*  
*Trachycardium enode* (Sowerby), 1841\*  
*Trachycardium flavum* (Linnaeus, 1758)\*  
*Trachycardium* sp. 1\*  
*Vasticardium lacunosum* (Reeve)\*  
*Vasticardium rubicundum* (Reeve)  
*Vasticardium arenicola* (Reeve)  
*Vasticardium flavum* (Linnaeus)  
*Vasticardium assimile* (Reeve)  
*Vepricardium asiaticum* (Bruguière, 1792)\*  
Undetermined genus\*

**Sub-family Tridacninae**

*Tridacna maxima* (Röding)\*

**Family: Mactridae**

*Lutraria arcuata* Reeve\*  
*Mactra complanata* Deshayes

*Mactra cuneata* Chemnitz  
*Mactra mera* Reeve\*  
*Mactra ornata* Gray, 1836\*  
*Mactra lurida* (Philippi) \*  
*Mactra turgida* Gmelin  
*Mactra* sp. 1\*  
*Mactra* sp. 2\*  
*Mactra* sp. 3\*  
*Mactrinula laevis* (Chemnitz)  
*Oxyperas bernardi* (Pilsbury)\*  
*Oxyperas triangularis* (Lamarck)\*  
*Spisula* sp.

**Family: Pharidae**

*Ensis* sp. 1\*  
*Ensis* sp. 2  
*Ensiculus philippinus* (Dunker)  
*Siliqua radiata* Linnaeus, 1758\*

**Family: Solenidae**

*Solen brevis* Gray, in Hanley, 1842\*  
*Solen exiguus* Dunker  
*Solen lamarckii* Deshayes, 1839\*  
*Solen roseomaculatus* Pilsbury, 1901\*  
*Solen strictus* Gould

**Family: Donacidae**

*Donax cuneatus* Linnaeus. 1758\*  
*Donax deltoides* Lamarck, 1818\*  
*Donax faba* Gmelin, 1791 \*  
*Donax scortum* Linnaeus\*  
*Donax variabilis* Say. 1822\*

**Family: Psammobiidae**

*Asaphis dichotoma* (Anton)  
*Gari elongata* (Lamarck, 1818)\*  
*Gari maculosa* (Lamarck, 1818)\*  
*Gari* cf. *sibogai* Prashad\*  
*Gari* sp. 1\*  
*Scutarcophagia linguafelis* (Linnaeus)  
*Soletellina diphos* (Linnaeus, 1771)\*

**Family: Semelidae**

*Semele cordiformis* (Holten, 1803)\*  
*Semele jukesi* A. Adams, 1853\*  
*Semele radiata* Ruppel  
*Semele* sp. 1\*  
*Semele* (?) Sp. 2\*

**Family: Solecurtidae**

*Solecurtus exaratus* Philippi

**Family: Tellinidae**

*Gastrana polygona* (Hanley)

*Macoma bruguierei* Hanley\*  
*Tellina angulata* Gmelin  
*Tellina coarctata* Philippi  
*Tellina palatan* (Iredale, 1929)\*  
*Tellina remies* Linnaeus, 1758\*  
*Tellina timorensis* (Lamarck, 1818)\*  
*Tellina* cf. *virgata* Linnaeus, 1758\*  
*Tellinimacra* sp. 1\*

**Family: Trapeziidae**

*Trapezium rostrata* Lamarck\*  
*Trapezium* sp. 1\*

**Family: Corbiculidae**

*Geloina coaxans* (Gmelin, 1791)\*

**Superfamily: Veneroidea**

Family 33: Petricolidae

*Petricola* (?) sp. 1\*

**Family: Veneridae**

*Antigona lamellaris* Schumacher  
*Anodontia edentula* (Lin.)  
*Anodontia ovum* (Reeve)  
*Anomalocardia donacina* (Lamarck)  
*Anomalocardia producta* Kuroda & Habe  
*Callanaitis disjecta* Perry  
*Callista erycina* Linnaeus\*  
*Callista chinensis* (Holten)  
*Circe scripta* Linnaeus\*  
*Dosinia biscocta* (Reeve)\*  
*Dosinia cretacea* (Reeve)  
*Dosinia histrio* (Gmelin, 1791)\*  
*Dosinia juvenilis* Chemnitz  
*Dosinia puella* Angas  
*Dosinia trigona* (Reeve)  
*Dosinia variegata* (Gray)  
*Ctene divergens* (Philippi)  
*Gafrarium dispar* (Dillwyn)\*  
*Gafrarium divaricatum* (Gmelin, 1791)\*  
*Gafrarium tumidum* Röding, 1798\*  
*Lioconcha castrensis* Linnaeus, 1758\*  
*Lioconcha dautzenbergi* Prashad  
*Lioconcha fastigiata* Sowerby, 1851\*  
*Marcia hiantina* (Lamarck, 1818)\*  
*Marcia opima* (Gmelin, 1791)\*  
*Meretrix casta* Gmelin\*  
*Meretrix meretrix* (Linnaeus, 1758)\*  
*Meretrix* sp. 'Rekawa' ?casta\*  
*Mesodesma glabratum* (Lamarck)  
*Paphia alapapilionis* Röding, 1798\*  
*Paphia amabilis* Philippi  
*Paphia exarata* (Philippi)\*  
*Paphia gallus* f. *lentiginosa* (Reeve, 1864)\*  
*Paphia textilis* (Gmelin, 1791)\*

*Paphia* sp. 1\*  
*Paphia* sp. 2\*  
*Paphia* sp. 3\*  
*Paphia* sp. 4\*  
*Paphia* sp. 5\*  
*Paphia* sp. 6\*  
*Periglypta reticulata* (Linnaeus, 1758)\*  
*Pitar ceylonensis* (Sowerby)  
*Pitar sulfureum* (Pilsbury)  
*Pitar striata* (Gray)  
*Sunetta effossa* (Reeve, 1843)\*  
*Sunetta meröe* (Schumacher)  
*Sunetta scripta* (Linnaeus)\*  
*Sunetta truncata* (Deshayes, 1853)\*  
*Sunetta* sp. 1\*  
*Sunetta* sp. 2\*  
*Sunettina* cf. *solanderii* (Gray, 1825)\*  
*Tapes deshayesi* (Hanley)  
*Tapes literatus* (Linnaeus, 1758)  
*Tapes radiata* (Chemnitz)\*  
*Tapes* sp. 1\*  
*Timoclea arakana* (Nevill, 1871) \*  
*Timoclea marica* Linnaeus\*  
*Venus toreuma* Gould, 1851\*  
*Undetermined Gen.* 1\*

**Family: Corbulidae**

*Corbula sulcata* Lamarck, 1801\*

*Corbula* sp. 1\*

**Family: Gastrochaenidae**

*Gastrochaena* sp. 1 \*  
*Gastrochaena* sp. 2 \*  
*Gastrochaena* sp. 3 \*

**Family: Hiatellidae**

*Hiatella arctica* (Linnaeus, 1767)\*

**Family: Pholadidae**

*Martesia striata* (Linnaeus, 1758)\*  
*Pholas orientalis* (Gmelin, 1791)\*  
Undetermined genus sp. 1\*

**Family: Teredinidae**

"Teredo" sp. 1 +

**Family: Clavagellidae**

*Brechites penis* (Linnaeus, 1758)\*

**Family: Periplomatidae**

*Periploma* (?) sp. 1\*

**Family: Cuspidariidae**

*Cuspidaria* sp. 1\*

## **Provisional Check List of the Marine Crustaceans (Arthropoda; Crustacea) in Sri Lanka**

Prasanna Weerakkody

### **Introduction**

Sri Lanka is surrounded by the Indian Ocean. The shallow seas in the continental shelf region gently slope from sub-littoral zone to depths of around 30-50m, where it will begin to drop at a steep incline to depths of 600m to over 1000m. The width of the shelf from the shore line can vary from 5-15 km and connects with the Indian continental shelf in the Palk bay area. Beyond the Territorial seas, the Exclusive Economic Zone of the country claims a sea area of 200 nautical miles in extent except at the boundary it shares with India. The extent of the Territorial sea and the Exclusive Economic Zone of Sri Lanka stands at 21,500 Km<sup>2</sup> and 517,000 Km<sup>2</sup> respectively, the latter amounting to nearly 8 times the total land area of the country.

Sri Lankan marine environment contain a diverse array of habitats that range from coastal shallows to deep oceanic and pelagic regions, on soft and hard bottoms as well. These habitats house a diverse assemblage of marine crustacean fauna. The marine crustaceans are a highly diverse group of invertebrates classified under the Phylum Arthropoda, and consists primarily of Marine and Aquatic forms. Indian shores contain about 3500 species of crustaceans and checklist published for the State of Tamil-nadu contains about 419 species.

This paper aims to cover the marine crustacean fauna of the shallow seas and the oceanic epi-pelagic zones and does not cover the deep sea fauna of the region. The list is compiled by collecting available records specified for Sri Lanka. The regional records were not considered during the compilation of this list. However, some species recorded in the Indian shores of the Palk Strait and Mannar basin were selectively included based on personal observations made by the author while diving in reef habitats or inspecting of incidental and fishing by-catch. Since the boundary of the estuarine species is not clearly defined, transitional zone fauna are also included in this list. The provisional checklist of marine crustaceans of Sri Lanka presented in this paper includes 742 species. Based on the probabilities of occurrence it is estimated that the total Sri Lankan Crustacean fauna would comprise of approximately 1500 species.

### **Taxonomy**

Probably the most extensive collection of records on marine invertebrates of Sri Lanka is given in "Report to the Government of Ceylon on the Pearl Oyster Fisheries of the Gulf of Mannar" by W. A. Herdman (1903-06). This list however needs to be revised and verified based on the current information available on crustacean taxonomy and distribution that has resulted due to significant amount of work that has been carried out by regional scientists and Indian Ocean Explorations. Further, the commercially important crustacean species have been well studied across the region and information regarding this species can be found in the FAO species catalogues for the region. This paper is a preliminary effort at updating the list of Crustacea in Sri Lanka based on available information and should not be considered as a complete list as it may contain inadequacies.

## Distribution

Many Marine species including the Crustacea reproduce through release of eggs and larvae into the water column. The duration of time the larvae spend drifting in the ocean as plankton, existing pattern of currents and the ability to find a suitable substrate for settlement will dictate the rate of dispersal of the species. Under favourable conditions sedentary species may cross deep oceans to settle on distant shores regularly. In addition to the demersal species, the Crustacea contain a large group of taxa that inhabit the Pelagic or open seas as part of the Plankton or Nekton throughout their lives and may inhabit and traverse large expanses of Oceanic waters and shores. Therefore, many marine species display wide distribution patterns occupying similar habitats across the region. Further, dispersal strategies of most marine species and the lack of hard ecological barriers prevent the establishment of endemic species in the marine environment.

The Palk Strait and the Gulf of Mannar represent a shallow and narrow stretch of sea between the shores of Southern India and Sri Lanka. The general homogeneity of habitats across the shores of the two countries and their close proximity would make it highly probable that both shores would harbour a similar species assemblage.

## Threats

Crustacea include species of commercial interest both as local food species and exploited for the export trade both as food and Ornamental species. While harvesting of Shrimps, Prawns and Crabs for local consumption is high, the most severe exploitation of Crustaceans occur due to the export industry. The spiny lobster fisheries take place around the shores of Sri Lanka and have a significant impact on the wild populations. The population densities on exploited reefs have depleted significantly and on occasion they have reached near-extinction levels on certain reefs. Though regulations are in place for some species the populations are on the decline due to inadequate enforcement. The collection of high value ornamental species is causing significant reduction of reef Shrimps, Crabs, Hermit crabs Mantis shrimps and Lobster species. The excessive collection of reef shrimp species that play an important role on the reef as cleaners of other species can result in a reduction of health of reef fauna and abandonment of sections of the reef by other animal species affecting the balance of the eco-system. However, habitat loss, including the degradation of coral reef environments, probably pose a greater threat to Marine Crustacean Diversity than that of direct extraction.

## Conservation

Several species of Marine crustaceans are currently listed as Protected under the Fauna and Flora Protection Ordinance. These include the Painted/Harlequin/Orchid Shrimp (*Hymenocera elegans*), Scarlet/Reef Lobsters in the genus *Enoplometopus* (*E. ocedentalis*, *E. debellius* and *E. holthuisi*) and the Hairy-red/ White-spotted Orange Hermit-Crab (*Dardanus megistos*). However, providing legal protection to many species has not had a significant impact as on site enforcement is ineffective. Therefore, the unregulated harvest/extraction of many species of crustaceans tends to have significant impacts on their populations.

Most species of crustaceans still survive in the reefs located in the Northern and Eastern coast that were spared of human impacts for 3 decades due to the war. However, these reefs are also being subject to the same fate at present with the opening up of these areas after the end of the war. Therefore, study and conservation of these reefs and their diversity is of prime importance to ensure survival of these species and the crustacean bio-diversity of Sri Lanka.

### **Conclusions and recommendations**

The Current level of knowledge on marine Crustacea is far from complete with significant gaps in the knowledge on many groups of taxa as well as the status of their populations. It is important to carry out detailed studies on the Sri Lankan Marine Crustacean fauna as early as possible as the populations are under threat both from excessive extraction as well as major habitat loss.

Only a few studies have focussed on marine Crustacea of Sri Lanka. Further, most of the work carried out by local scientists to date focused mainly on commercially important food species. During the last 3 decades the diving scientists contributed significantly for the furthering of knowledge on marine natural habitats including marine crustacea. The extensive extraction of crustaceans as an export resource both as food and for the ornamental marine aquarium trade have also indirectly added to the knowledge of species in our waters. As in the case of most marine invertebrate fauna, a significant amount of work needs to be carried out to gain a better understanding of the true diversity of marine Crustaceans of Sri Lanka as well as their biology and conservation status.

An effort has to be taken to effectively enforce the existing fishing regulations with a better mechanism for monitoring the efficiency of enforcement. Further, steps must be taken to phase out tightly regulate all wild collection of Marine ornamental species. The financial benefits achieved through exploitation of ornamental species for export can be nullified by the benefits that can be accrued from tourism and the ecosystem services that can be obtained by retaining healthy reefs. The greatest need however, is to conserve the critical marine habitats to ensure long term survival of our rich marine biodiversity.

## Provisional Check List of the Marine Crustaceans

Scientific Name	Common Name
<b>Order: Pedunculata (Stalked barnacles)</b>	
<b>Family: Artemiidae</b>	
<i>Artrmia parthegenetica</i> <sup>22</sup>	
<b>Family: Lepadidae</b>	
<i>Lepas anserifera</i> <sup>1</sup>	Goose Barnacle
<i>Lepas anatifera</i> <sup>1</sup>	Goose Barnacle
<i>Lepas tenuivulvata</i> <sup>1</sup>	Goose Barnacle
<i>Dichelaspis equina</i> <sup>1</sup>	
<i>Dichelaspis pellucida</i> <sup>1</sup>	
<i>Paecilasma kempferi</i> <sup>1</sup>	
<i>Sculpellum grurelli</i> <sup>1</sup>	
<i>Sculpellum alcockianum</i> <sup>1</sup>	
<i>Sculpellum squamiferum</i> <sup>1</sup>	
<i>Sculpellum truncatum</i> <sup>1</sup>	
<i>Sculpellum tenue</i> <sup>1</sup>	
<i>Sculpellum subflavum</i> <sup>1</sup>	
<i>Conchoderma sp.</i> <sup>41</sup>	Whale Barnacle
<b>Order: Sessilia (Barnacles)</b>	
<b>Family: Chthamalidae</b>	
<i>Chthamalus challengerii</i> <sup>10</sup>	Star Barnacles
<i>Chthamalus stellatus</i> <sup>1</sup>	Poli's Stellate barnacle
<b>Family: Tetraclitidae</b>	
<i>Tetraclita squamosa</i> <sup>10</sup>	Acorn Barnacle
<i>Tetraclita serrata</i> <sup>1</sup>	Volcano Barnacle
<b>Family: Balanidae</b>	
<i>Balanus tintinabulum</i> <sup>1,10</sup>	Acorn Barnacle
<i>Balanus amphitrite</i> <sup>1,10</sup>	Acorn Barnacle
<i>Balanus amaryllis</i> <sup>1,10</sup>	Acorn Barnacle
<i>Balanus longirostrum</i> <sup>10</sup>	Acorn Barnacle
<i>Armatobalanus allium</i> <sup>1</sup>	
<i>Armatobalanus terebratus</i> <sup>1</sup>	
<i>Solidobalanus socialis</i> <sup>1</sup>	
<i>Solidobalanus ciliatus</i> <sup>1</sup>	
<i>Pyrgoma conjugum</i> <sup>1,10</sup>	Acorn Barnacle
<b>Family: Cornulidae</b>	
<i>Chelonibia testudinaria</i> <sup>42</sup>	
<i>Stephanolepas muricata</i> <sup>42</sup>	
<i>Chelolepas cheloniae</i> <sup>42</sup>	
<b>Family: Pygomatidae</b>	
<i>Creusia spinulosa</i> <sup>1</sup>	Coral Barnacle
<b>Family Archaeobalanidae</b>	
<i>Acasta cyathus</i> <sup>1</sup>	Sponge barnacle
<i>Acasta funicularum</i> <sup>1</sup>	

Scientific Name	Common Name
<b>Family: Asteropidae</b>	
<i>Asterope oculata</i> <sup>1</sup>	
<i>Asterope quadrata</i> <sup>1</sup>	
<i>Asterope arthuri</i> <sup>1</sup>	
<i>Cyclasterope similis</i> <sup>1</sup>	
<b>Family: Vypridinidae</b>	
<i>Cypridina faveolata</i> <sup>1</sup>	
<i>Pyrocypris chiechiai</i> <sup>1</sup>	
<i>Codonocera crenulata</i> <sup>1</sup>	
<b>Family: Sarsiellidae</b>	
<i>Sarsiella ornithoides</i> <sup>1</sup>	
<i>Sarsiella carinata</i> <sup>1</sup>	
<i>Sarsiella gracilis</i> <sup>1</sup>	
<i>Sarsiella similis</i> <sup>1</sup>	
<i>Sarsiella crispata</i> <sup>1</sup>	
<i>Sarsiella tumida</i> <sup>1</sup>	
<b>Family: Halocyprididae</b>	
<i>Conchoecia magna</i> <sup>1</sup>	
<i>Conchoecia clausii</i> <sup>1</sup>	
<i>Conchoecia acuminata</i> <sup>1</sup>	
<i>Halocypris concha</i> <sup>1</sup>	
<b>Family: Cypridae</b>	
<i>Macrocypris decora</i> <sup>1</sup>	
<i>Macrocypris orientalis</i> <sup>1</sup>	
<i>Macrocypris similis</i> <sup>1</sup>	
<i>Macrocypris maculata</i> <sup>1</sup>	
<i>Pontocypris robusta</i> <sup>1</sup>	
<i>Pontocypris elegans</i> <sup>1</sup>	
<i>Pontocypris rostrata</i> <sup>1</sup>	
<i>Pontocypris tumida</i> <sup>1</sup>	
<i>Eurythorocypris herdmani</i> <sup>1</sup>	
<i>Bairdia villosa</i> <sup>1</sup>	
<i>Bairdia attenata</i> <sup>1</sup>	
<i>Bairdia woodwardiana</i> <sup>1</sup>	
<i>Bairdia amygdaloides</i> <sup>1</sup>	
<i>Bairdia faveolata</i> <sup>1</sup>	
<i>Bairdia hirsuta</i> <sup>1</sup>	
<i>Bairdia inornata</i> <sup>1</sup>	
<i>Bairdia robusta</i> <sup>1</sup>	
<i>Anchistrocheles bradyi</i> <sup>1</sup>	
<i>Pseudocythere minuta</i> <sup>1</sup>	
<i>Paradoxostoma cingalense</i> <sup>1</sup>	
<i>Paradoxostoma attenuatum</i> <sup>1</sup>	

<i>Paradoxostoma stebbingi</i> <sup>1</sup>	
<i>Xestolebris margaritea</i> <sup>1</sup>	
<i>Xestolebris tumefacta</i> <sup>1</sup>	
<i>Xestolebris aurentia</i> <sup>1</sup>	
<i>Xestolebris variegata</i> <sup>1</sup>	
<i>Xestolebris squamigera</i> <sup>1</sup>	
<i>Xestolebris irrasa</i> <sup>1</sup>	
<i>Xestolebris tumida</i> <sup>1</sup>	
<i>Paracytheridea perplexa</i> <sup>1</sup>	
<i>Cytherura concinna</i> <sup>1</sup>	
<i>Loxoconcha anomala</i> <sup>1</sup>	
<i>Loxoconcha alata</i> <sup>1</sup>	
<i>Loxoconcha papillosa</i> <sup>1</sup>	
<i>Loxoconcha sculpta</i> <sup>1</sup>	
<i>Loxoconcha australis</i> <sup>1</sup>	
<i>Cythere bimammillata</i> <sup>1</sup>	
<i>Cythere darwini</i> <sup>1</sup>	
<i>Cythere inconspicua</i> <sup>1</sup>	
<i>Cythere ovalis</i> <sup>1</sup>	
<i>Cythere polytrema</i> <sup>1</sup>	
<i>Cythere rectangularis</i> <sup>1</sup>	
<i>Cythere ruperti</i> <sup>1</sup>	
<i>Cythere stimpsoni</i> <sup>1</sup>	
<i>Cythere subcuneata</i> <sup>1</sup>	
<i>Cythere knoxi</i> <sup>1</sup>	
<i>Cythere chalmersi</i> <sup>1</sup>	
<i>Cythere imthurni</i> <sup>1</sup>	
<i>Cythere thompsoni</i> <sup>1</sup>	
<i>Cythere donnani</i> <sup>1</sup>	
<i>Cythere willeyi</i> <sup>1</sup>	
<i>Cythere hornelli</i> <sup>1</sup>	
<i>Cythere halyi</i> <sup>1</sup>	
<i>Cythere kelaarti</i> <sup>1</sup>	
<i>Cythere willisi</i> <sup>1</sup>	
<i>Cythere coletti</i> <sup>1</sup>	
<i>Cythere holdsworthi</i> <sup>1</sup>	
<b>Family: Cytherellidae</b>	
<i>Cytherella ondatjei</i> <sup>1</sup>	
<i>Cytherella vraspillaii</i> <sup>1</sup>	
<b>Order: Leptostraca</b>	
<b>Family: Nebalidae</b>	
<i>Nebalia bipes</i> <sup>1</sup>	
<b>Order: Stomatopoda (mantis shrimps)</b>	
<b>Family :Lysiosquillidae</b>	
<i>Lysiosquilla maculata</i> <sup>30,31</sup>	Spearing / Zebra Mantis-Shrimp

<b>Family: Odontodactylidae</b>	
<i>Odontodactylus scyllarus</i> <sup>30,31</sup>	Peacock Mantis-Shrimp
<i>Odontodactylus brevirostris</i> <sup>1</sup>	Short-nose Mantis-Shrimp
<i>Odontodactylus japonicus</i>	
<b>Family: Gonodactylidae</b>	
<i>Gonodactylus chiragra</i> <sup>1</sup>	Smasher Shrimp
<i>Gonodactylus smithii</i> <sup>33</sup>	Purple-spot Smasher-Shrimp
<i>Gonodactylaceus glabrous</i> <sup>1</sup>	Smasher Shrimp
<i>Gonodactylopsis herdmani</i> <sup>1</sup>	Smasher Shrimp
<i>Hoplosquilla acanthurus</i> <sup>1</sup>	Smasher Shrimp
<b>Family: Squillidae</b>	
<i>Harpiosquilla indica</i> <sup>41</sup>	Spearer Mantis-Shrimp
<i>Harpiosquilla raphidea</i> <sup>1</sup>	Spearer Mantis-Shrimp
<i>Oratosquilla sp.</i> <sup>41</sup>	Mantis-Shrimp
<b>Family: Protosquillidae</b>	
<i>Pseudosquilla cillata</i> <sup>1</sup>	Rainbow Mantis Shrimp
<i>Haptosquilla trispinosa</i> <sup>1</sup>	
<i>Chlorisquilla spinosissima</i> <sup>1</sup>	
<b>Order: Mysida (Mysid shrimps)</b>	
<b>Family: Mysidae</b>	
<i>Siriella paulsoni</i> <sup>1</sup>	Mysid shrimp
<i>Haplostylus erythraeus</i> <sup>1</sup>	Mysid shrimp
<b>Order: Amphipoda (Amphipods)</b>	
<b>Family: Amaryllidae</b>	
<i>Vijaya tenuipes</i> <sup>11,12</sup>	Amphipod
<b>Family: Lysianassidae</b>	
<i>Socarnella bonide</i> <sup>12</sup>	Amphipod
<i>Lysianassa cinghalens</i> <sup>12</sup>	Amphipod
<i>Lysianassa coelochir</i> <sup>12</sup>	Amphipod
<i>Orehomebella nana</i> <sup>12</sup>	Amphipod
<i>Tryphosa eucullata</i> <sup>12</sup>	Amphipod
<i>Anonyx schmardae</i> <sup>12</sup>	Amphipod
<b>Family: Ampeliscidae</b>	
<i>Ampelisca tridens</i> <sup>12</sup>	Amphipod
<i>Ampelisca scabries</i> <sup>12</sup>	Amphipod
<i>Ampelisca brevicornis</i> <sup>12</sup>	Amphipod
<i>Ampelisca cyclops</i> <sup>12</sup>	Amphipod
<i>Ampelisca zamboangae</i> <sup>12</sup>	Amphipod
<b>Family: Haustoriidae</b>	
<i>Phtyischonopus herdmani</i> <sup>12</sup>	Amphipod
<i>Urothoe spinidigitus</i> <sup>12</sup>	Amphipod



<b>Family: Argissidae</b>	
<i>Argissa hamatipes</i> <sup>12</sup>	Amphipod
<b>Family: Phoxocephalidae</b>	
<i>Paraphoxus unicrostrata</i> <sup>12</sup>	Amphipod
<b>Family: Amphilochidae</b>	
<i>Cyproidea ornata</i> <sup>12</sup>	Amphipod
<b>Family: Leucothoidae</b>	
<i>Leucothoe spinicarpa</i> <sup>12</sup>	Amphipod
<i>Leucothoe funima</i> <sup>12</sup>	Amphipod
<b>Family: Anamyxidae</b>	
<i>Stenothoe gallensis</i> <sup>12</sup>	Amphipod
<i>Stenothoe monoculoides</i> <sup>12</sup>	Amphipod
<b>Family: Colomastigidae</b>	
<i>Colomastix pusilla</i> <sup>12</sup>	Amphipod
<b>Family: Liljborgidae</b>	
<i>Liljborgia pallida</i> <sup>12</sup>	Amphipod
<b>Family: Oedicerotidae</b>	
<i>Periculodes serra</i> <sup>12</sup>	Amphipod
<b>Family: Tironidae</b>	
<i>Tiron Thompsoni</i> <sup>12</sup>	Amphipod
<b>Family: Eusiridae</b>	
<i>Eusiroides diplinyx</i> <sup>12</sup>	Amphipod
<i>Eusiroides orchomenipes</i> <sup>12</sup>	
<b>Family: Atylidae</b>	
<i>Atylus grannulosa</i> <sup>12</sup>	Amphipod
<b>Family: Gammaridae</b>	
<i>Melita fresnelli</i> <sup>12</sup>	Amphipod
<i>Melita obtusata</i> <sup>12</sup>	Amphipod
<i>Maera othonidea</i> <sup>12</sup>	Amphipod
<i>Maera subcarinata</i> <sup>12</sup>	Amphipod
<i>Maera tenella</i> <sup>12</sup>	Amphipod
<i>Maera inaequipipes</i> <sup>12</sup>	Amphipod
<i>Ceradocus rubromaculatus</i> <sup>12</sup>	Amphipod
<i>Elasmopus spinimanus</i> <sup>12</sup>	Amphipod
<i>Elasmopus pectinicus</i> <sup>12</sup>	Amphipod
<i>Elasmopus dubius</i> <sup>12</sup>	Amphipod
<i>Parelmopus suluensis</i> <sup>12</sup>	Amphipod
<b>Family: Dexamanidae</b>	
<i>Dexamine serraticrus</i>	Amphipod
<i>Polycheria atoll</i> <sup>12</sup>	Amphipod
<b>Family: Melphidippidae</b>	
<i>Hornella incerta</i> <sup>12</sup>	Amphipod
<b>Family: Aoridae</b>	
<i>Lembos podoceroides</i> <sup>12</sup>	Amphipod
<i>Lembos chelatus</i> <sup>12</sup>	Amphipod
<b>Family: Photidae</b>	
<i>Eurytheus atlanticus</i> <sup>12</sup>	Amphipod
<i>Photis longicaudata</i> <sup>12</sup>	Amphipod

<i>Photis longimanus</i> <sup>12</sup>	Amphipod
<i>Photis nana</i> <sup>12</sup>	Amphipod
<i>Cheriphotis megacheles</i> <sup>12</sup>	Amphipod
<i>Chevaria avriculae</i> <sup>12</sup>	Amphipod
<b>Family: Ampithoidae</b>	
<i>Ampithoe ramondi</i> <sup>12</sup>	Amphipod
<b>Family: Corophidae</b>	
<i>Carapus abditus</i> <sup>12</sup>	Amphipod
<i>Erichthonius macrodactylus</i> <sup>12</sup>	Amphipod
<i>Erichthonius brasillensis</i> <sup>12</sup>	Amphipod
<i>Siphonocaetes orientalis</i> <sup>12</sup>	Amphipod
<i>Corophium triaenonyx</i> <sup>12</sup>	Amphipod
<b>Family: Podoceridae</b>	
<i>Podocerus laevis</i> <sup>12</sup>	Amphipod
<i>Podocerus zeylanicus</i> <sup>12</sup>	Amphipod
<i>Podocerus brasillensis</i> <sup>12</sup>	Amphipod
<b>Order: Isopoda (Isopods)</b>	
<b>Family: Cirolanidae</b>	
<i>Cirolana willeyi</i> <sup>11</sup>	Isopod
<b>Family: Taneidae</b>	
<i>Tanais gracilis</i> <sup>1</sup>	Isopod
<i>Heterotanaeis crassicornis</i> <sup>1</sup>	Isopod
<i>Leptocheilia mirabilis</i> <sup>1</sup>	Isopod
<i>Leptocheilia lifuensis</i> <sup>1</sup>	Isopod
<b>Family: Anthuridae</b>	
<i>Calathura sp.</i> <sup>1</sup>	Isopod
<b>Family: Gnathiidae</b>	
<i>Gnathia insolita</i> <sup>1</sup>	Isopod
<b>Family: Eurydicidae</b>	
<i>Cirolana sulcataudata</i> <sup>1</sup>	Isopod
<i>Cirolana parva</i> <sup>1</sup>	Isopod
<i>Conilopheus herdmani</i> <sup>1</sup>	Isopod
<i>Hansenolana sphaeromiformis</i> <sup>1</sup>	Isopod
<b>Family: Agarthonidae</b>	
<i>Agarthona normani</i> <sup>1</sup>	Isopod
<i>Lanochira gardineri</i> <sup>1</sup>	Isopod
<i>Lanochira zeylanica</i> <sup>1</sup>	Isopod
<b>Family: Aegidae</b>	
<i>Aega ommatophylax</i> <sup>1</sup>	Isopod
<i>Rocinela orientalis</i> <sup>1</sup>	Isopod
<b>Family: Cymothoidae</b>	
<i>Anilocra dimidiata</i> <sup>1</sup>	Isopod
<i>Rhiothra callipia</i> <sup>1</sup>	Isopod
<i>Irona nanaoides</i> <sup>1</sup>	Isopod
<i>Nerocila sigani</i> <sup>18</sup>	Isopod
<b>Family: Sphyromidae</b>	
<i>Sphyroma walkeri</i> <sup>1</sup>	Isopod

<i>Cilicæa latreillii</i> <sup>1</sup>	Isopod
<i>Cilicæa whiteleggei</i> <sup>1</sup>	Isopod
<i>Cilicæa beddardi</i> <sup>1</sup>	Isopod
<i>Cymodoce bicarinata</i> <sup>1</sup>	Isopod
<i>Cymodoce inornata</i> <sup>1</sup>	Isopod
<b>Family: Amesopodidae</b>	
<i>Amesopous richardsonae</i> <sup>1</sup>	Isopod
<b>Family: Idoteidae</b>	
<i>Idotea sp.</i> <sup>1</sup>	Isopod
<b>Family: Astacillidae</b>	
<i>Astacilla amblyurna</i> <sup>1</sup>	Isopod
<b>Family: Janiridae</b>	
<i>Janira nana</i> <sup>1</sup>	Isopod
<i>Jaeropsis curvicornis</i> <sup>1</sup>	Isopod
<b>Family: Stenetriidae</b>	
<i>Stenetrium chiltoni</i> <sup>1</sup>	Isopod
<b>Family: Munnidae</b>	
<i>Pleurocope dasyura</i> <sup>1</sup>	Isopod
<b>Family: Ligiidae</b>	
<i>Ligia exotica</i> <sup>1</sup>	Sea Slater /Sea roach
<b>Order: Euphausiacea (Krill)</b>	
<b>Family: Euphausiidae</b>	
<i>Euphausia sibogae</i> <sup>24</sup>	Krill
<i>Euphausia paragibba</i> <sup>11</sup>	Krill
<i>Euphausia mutica</i> <sup>1</sup>	Krill
<i>Euphausia latifrons</i> <sup>1</sup>	Krill
<i>Nematoscelis microps</i> <sup>1</sup>	Krill
<b>Order: Decapoda (Prawns, shrimps)</b>	
<b>Family: Penaeidae</b>	
<i>Atypopeneus stenodactylus</i> <sup>3</sup>	Periscope Shrimp
<i>Metapenaeops hilarula</i> <sup>3</sup>	Minstrel Shrimp
<i>Metapenaeops mogiensis</i> <sup>3</sup>	Velvet Shrimp
<i>Metapenaeops stridulans</i> <sup>3</sup>	Fiddler Shrimp
<i>Metapenaeops toloensis</i> <sup>3</sup>	Tolo Velvet Shrimp
<i>Metapenaeus affinis</i> <sup>3</sup>	Jinga Shrimp
<i>Metapenaeus dobsoni</i> <sup>3</sup>	Kadal Shrimp
<i>Metapenaeus elegans</i> <sup>3</sup>	Fine Shrimp
<i>Metapenaeus ensis</i> <sup>3</sup>	Greasyback Shrimp
<i>Metapenaeus lysianassa</i> <sup>3</sup>	Bird Shrimp
<i>Metapenaeus monoceros</i> <sup>3</sup>	Speckled Shrimp
<i>Metapenaeus moyebi</i> <sup>3</sup>	Moyebi Shrimp
<i>Parapenaeopsis acclivirostris</i> <sup>3</sup>	Hawknose Shrimp
<i>Parapenaeopsis cornuta</i> <sup>3</sup>	Coral Shrimp
<i>Parapenaeopsis coromandelica</i> <sup>3</sup>	Coromandel Shrimp
<i>Parapenaeopsis maxillipedo</i> <sup>3</sup>	Torpedo Shrimp

<i>Parapenaeopsis nana</i> <sup>3</sup>	Dwarf Shrimp
<i>Parapenaeopsis sculptilis</i> <sup>3</sup>	Rainbow Shrimp
<i>Parapenaeopsis stylifera</i> <sup>3</sup>	Kiddi Shrimp
<i>Parapenaeopsis tenella</i> <sup>3</sup>	Smoothshell Shrimp
<i>Parapenaeopsis uncta</i> <sup>3</sup>	Uncta Snrimp
<i>Parapenaeus longipes</i> <sup>3</sup>	Flamingo Shrimp
<i>Peneus indicus</i> <sup>3</sup>	Indian White Shrimp
<i>Peneus merguensis</i> <sup>3</sup>	Banana Prawn
<i>Penaeus canaliculatus</i> <sup>3</sup>	Witch Prawn
<i>Penaeus latisulcatus</i> <sup>3</sup>	Western King-prawn
<i>Penaeus monodon</i> <sup>3</sup>	Giant Tiger Prawn
<i>Penaeus semisulcatus</i> <sup>3</sup>	Green Tiger Prawn
<i>Penaeus japonicus</i> <sup>43</sup>	
<i>Trachypenaeus cavirostris</i> <sup>3</sup>	Cocktail Shrimp
<i>Trachypenaeus granulatus</i> <sup>3</sup>	Coarse Shrimp
<i>Trachypenaeus sedill</i> <sup>3</sup>	Malayan Rough Shrimp
<b>Family: Solenoceridae</b>	
<i>Solenocera choprai</i> <sup>4</sup>	Ridgeback Shrimp
<i>Solenocera crassicornis</i> <sup>4</sup>	Coastal Mud Shrimp
<i>Solenocera hexii</i> <sup>4</sup>	Deep Sea Mud Shrimp
<b>Family: Sergastidae</b>	
<i>Acetes indicus</i> <sup>4</sup>	Jawla paste Shrimp
<i>Acetes eurythaeus</i> <sup>4</sup>	Tsivakihini paste Shrimp
<i>Acetes japonicus</i> <sup>4</sup>	
<i>Acetes sibogei</i> <sup>4</sup>	
<i>Acetes johni</i> <sup>4</sup>	
<i>Leucifer typus</i> <sup>4</sup>	
<b>Family: Stenopodidae</b>	
<i>Stenopus hispidus</i> <sup>41</sup>	Banded Boxing Shrimp
<i>Stenopus cyanoscelis</i> <sup>41</sup>	Blue-legged Boxing shrimp
<i>Stenopus zanzibaricus</i> <sup>41</sup>	Zanzibar Boxing Shrimp
<i>Stenopus goyi</i> <sup>41</sup>	
<i>Stenopus sp.</i> <sup>41</sup>	Kalpitiya boxing shrimp
<b>Family: Palaemoninae</b>	
<i>Macrobrachium rosenbergii</i> <sup>3</sup>	Giant River Prawn
<i>Macrobrachium equidens</i> <sup>3</sup>	Rough River Prawn
<i>Macrobrachium rude</i> <sup>3</sup>	Hairy River Prawn
<i>Macrobrachium latimanus</i> <sup>4</sup>	

<i>Macrobrachium malcomsoni</i> <sup>4</sup>	Monsoon River Prawn
<i>Expalaemon stylifer</i> <sup>3</sup>	Rushna Shrimp
<i>Nematopalaemon tenuipes</i> <sup>4</sup>	Spider Prawn
<i>Brachycarpus biunguiculatus</i> <sup>18</sup>	
<i>Urocaridella antonbruunii</i> <sup>32</sup>	
<b>Family: Pontoininae</b>	
<i>Periclimenes imperator</i> <sup>32</sup>	Emperor Shrimp
<i>Periclimenes brevicarpalis</i> <sup>32</sup>	Peacock-tail Anemone Shrimp
<i>Periclimenes magnificus</i> <sup>32</sup>	Anemone shrimp
<i>Periclimenes holthuisi</i> <sup>32</sup>	Purple spotted cleaner Shrimp
<i>Periclimenes soror</i> <sup>32</sup>	Sea star Shrimp
<i>Periclimenes tenuipes</i> <sup>32</sup>	
<i>Periclimenes psamathe</i> <sup>32</sup>	
<i>Periclimenes incertus</i> <sup>18</sup>	
<i>Periclimenes spp.</i> <sup>41</sup>	
<i>Stegopontonia commensalis</i> <sup>32</sup>	White Striped Urchin Shrimp
<i>Vir phillippinus</i> <sup>32</sup>	
<i>Coralliocaris viridis</i> <sup>18</sup>	Coral shrimp
<i>Coralliocaris sp.</i> <sup>41</sup>	
<i>Jocuste lucina</i> <sup>18</sup>	
<i>Harpiliopsis beaupresii</i> <sup>18</sup>	
<i>Harpiliopsis depressa</i> <sup>18</sup>	
<i>Kamponia elegans</i> <sup>18</sup>	
<i>Kamponia grandis</i> <sup>18</sup>	
<i>Kamponia tenuipes</i> <sup>18</sup>	
<b>Family: Pandalidae</b>	
<i>Heterocarpus woodmasoni</i> <sup>3</sup>	Indian Nylon Shrimp
<b>Family: Atyidae</b>	
<i>Atyopsis moluccensis</i>	
<i>Caradina vitiensis</i> <sup>1</sup>	
<b>Family: Rhynchocinetidae</b>	
<i>Rhynchocinetus durbanensis</i> <sup>41</sup>	Camel / Hinge-beak shrimp
<i>Cinetorhynchus concolor</i> <sup>41</sup>	Uniform-hingebeak Shrimp
<i>hendersoni</i>	Henderson's Hingebeak Shrimp
<b>Family: Alphaedae</b>	
<i>Alpheus soror</i> <sup>23</sup>	
<i>Alpheus fasquel</i> <sup>23</sup>	Fasquel's snapping shrimp.
<i>Alpheus tricolor</i> <sup>23</sup>	Three-colored snapping shrimp.
<i>Alpheus bellulus</i> <sup>41</sup>	Tiger Pistol Shrimp
<i>Alpheus ideocheles</i> <sup>1</sup>	

<i>Alpheus malleodigitatus</i> <sup>1</sup>	
<i>Alpheus spongiarum</i> <sup>1</sup>	Bristle Snapping Shrimp
<i>Alpheus paralcione</i> <sup>1</sup>	
<i>Alpheus miersi</i> <sup>1</sup>	
<i>Alpheus pareuchirus</i> <sup>1</sup>	
<i>Alpheus bi-incisus</i> <sup>1</sup>	Flathead Snapping Shrimp
<i>Alpheus edwardsii</i> <sup>1</sup>	
<i>Alpheus malabaricus</i> <sup>1</sup>	
<i>Alpheus lottini</i> <sup>1</sup>	Cauliflower coral snapping shrimp
<i>Synalpheus laticeps</i> <sup>1</sup>	
<i>Synalpheus biunguiculatus</i> <sup>1</sup>	
<i>Synalpheus comatulorum</i> <sup>1</sup>	
<i>Synalpheus neomeris</i> <sup>1</sup>	
<i>Synalpheus carinatus</i> <sup>1</sup>	
<i>Athanas nitescens</i> <sup>1</sup>	
<i>Athanas orientalis</i> <sup>1</sup>	
<i>Potamalpheops galle</i> <sup>23</sup>	
<b>Family: Crangonidae</b>	
<i>Aegaeon cataphractus</i> <sup>1</sup>	
<b>Family: Hippolytidae</b>	
<i>Exhippolysmata ensirostris</i> <sup>3</sup>	Hunter Shrimp
<i>Lysmata amboinensis</i> <sup>41</sup>	Peppermint Cleaner Shrimp
<i>Lysmata debellius</i> <sup>41</sup>	Scarlet Cleaner Shrimp
<i>Lysmata vittata</i> <sup>41,1</sup>	Peppermint Cleaner Shrimp
<i>Saron marmorata</i> <sup>41,1</sup>	Marbled Shrimp
<i>Saron neglectus</i> <sup>41</sup>	Spotted Marbled Shrimp
<i>Saron spp.</i> <sup>41</sup>	Marbled Shrimp
<i>Thor amboinensis</i> <sup>41</sup>	Ambon Shrimp
<i>Heptacarpus futillirostris</i> <sup>1</sup>	
<i>Latreutes ceylonensis</i> <sup>1</sup>	
<b>Family: Gnathophyllidae</b>	
<i>Gnathophyllum americanum</i> <sup>41</sup>	Bumblebee Shrimp
<b>Family: Hymnoceridae</b>	
<i>Hymenocera elegans</i> <sup>41</sup>	Painted/ Orchid/ Harlequin Shrimp
<b>Family: Thalassinidea</b>	
<i>Thalassina anomala</i> <sup>8</sup>	Mud Lobster
<b>Family: Palinuridae</b>	
<i>Panulirus ornatus</i> <sup>3</sup>	Ornate Spiny Lobster
<i>Panulirus versicolor</i> <sup>3</sup>	Painted Spiny Lobster
<i>Panulirus longipes</i> <sup>3</sup>	Longlegged Spiny lobster

<i>Panulirus homarus</i> <sup>3</sup>	Scalloped Spiny lobster
<i>Panulirus penicillatus</i> <sup>3</sup>	Pronghorn Spiny Lobster
<i>Panulirus polyphagus</i> <sup>3</sup>	Mud Spiny Lobster
<i>Puerulus sewelli</i> <sup>3</sup>	Arabian Whip lobster
<b>Family: Scyllaridae</b>	
<i>Parribacus antarcticus</i> <sup>3</sup>	Sculptured Mitten Lobster
<i>Scyllarus batei</i> <sup>3</sup>	Soft locust Lobster
<i>Scyllarus martensii</i> <sup>3</sup>	Striated locust Lobster
<i>Thenus orientalis</i> <sup>3</sup>	Flathead Lobster
<b>Family: Nephropidae</b>	
<i>Enoplometopus occidentalis</i> <sup>41</sup>	Red Reef lobster
<i>Enoplometopus holthuisi</i> <sup>41</sup>	Holthuis's Reef Lobster
<i>Enoplometopus debellius</i> <sup>41</sup>	Debellius's reef Lobster
<b>Family: Galatheidae</b>	
<i>Uroptchas bacillimanus</i> <sup>9</sup>	Squat lobster
<i>Uroptchas indicus</i> <sup>9</sup>	Squat lobster
<i>Uroptchas nonophrys</i> <sup>9</sup>	Squat lobster
<i>Agononida proluxa</i> <sup>9</sup>	Squat lobster
<i>Allogalthea elegans</i> <sup>9</sup>	Squat lobster
<i>Galacantha bellis</i> <sup>9</sup>	Squat lobster
<i>Galathea australensis</i> <sup>9</sup>	Squat lobster
<i>Galathea corallicola</i> <sup>9</sup>	Squat lobster
<i>Munida japonica</i> <sup>9</sup>	Squat lobster
<i>Munida microps</i> <sup>9</sup>	Squat lobster
<i>Munidopsis antonii</i> <sup>9</sup>	Squat lobster
<i>Munidopsis bairdii</i> <sup>9</sup>	Squat lobster
<i>Munidopsis edwardsii</i> <sup>9</sup>	Squat lobster
<i>Munidopsis sinclari</i> <sup>9</sup>	Squat lobster
<i>Munidopsis spissata</i> <sup>9</sup>	Squat lobster
<i>Munidopsis wardeni</i> <sup>9</sup>	Squat lobster
<i>Raymunida elegantissima</i> <sup>9</sup>	Squat lobster
<b>Family: Porcellanidae</b>	
<i>Ancylocheles graveleii</i> <sup>7</sup>	Porcellaine crab
<i>Petrolisthes ornatus</i> <sup>7</sup>	Porcellaine crab
<i>Neopetrolisthes maculatus</i> <sup>41</sup>	Porcellaine crab
<b>Family: Hippidae</b>	
<i>Emerita asiatica</i> <sup>41</sup>	Mole Crab
<i>Emerita rathbunae</i> <sup>?41</sup>	Mole Crab
<b>Family: Cenobitidae</b>	
<i>Cenobita rugosa</i> <sup>41</sup>	Stridulating Land Hermit Crab
<i>Cenobita c.f. perlates</i> <sup>41</sup>	Strawberry Land hermit crab

<b>Family: Diogenidae</b>	
<i>Aniculus aniculus</i> (?) <sup>41</sup>	Red Hermit Crab
<i>Aniculus maximus</i> <sup>41</sup>	
<i>Dardanus magistos</i> <sup>41</sup>	Hairy red Hermit Crab
<i>Dardanus logopodes</i> <sup>41</sup>	Hare Hermit Crab
<i>Dardanus pedunculatus</i> <sup>41</sup>	
<i>Dardanus guttatus</i> <sup>41</sup>	Blue-knee Hermit Crab
<i>Dardanus gemmatus</i> <sup>41</sup>	Jewelled hermit crab
<i>Dardanus setifer</i> <sup>41</sup>	
<i>Dardanus deformis</i> <sup>5</sup>	Pale hermit Crab
<i>Dardanus aspar</i> <sup>5</sup>	
<i>Diogenes diogenes</i> <sup>5</sup>	
<i>Diogenes miles</i> <sup>5</sup>	
<i>Diogenes custos</i> <sup>5</sup>	
<i>Diogenes costatus</i> <sup>5</sup>	
<i>Trizopagurus kremfi</i> <sup>5</sup>	
<i>Calcinus herbsti</i> <sup>5</sup>	
<i>Calcinus gaimardi</i> <sup>41</sup>	Yellow antennae hermit Crab
<i>Calcinus laevimanus</i> <sup>41</sup>	Left-handed Hermit Crab
<i>Calcinus seurati</i> <sup>41</sup>	Seurat's hermit Crab
<i>Calcinus taeniatus</i> <sup>41</sup>	
<i>Calcinus virescens</i> <sup>41</sup>	Greenish Hermit Crab
<i>Calcinus latens</i> <sup>41</sup>	Hidden Hermit Crab
<i>Calcinus morgani</i> <sup>41</sup>	
<i>Paguristes incomitatus</i> <sup>41</sup>	
<i>clibanarius pedavensis</i> <sup>5</sup>	
<i>clibanarius bimaculatus</i> <sup>41</sup>	White finger Hermit Crab
<i>clibanarius longitarsus</i> <sup>5</sup>	Long-legged Hermit Crab
<i>clibanarius striolatus</i> <sup>5</sup>	Ribbed Hermit Crab
<i>clibanarius merguensis</i> <sup>5</sup>	
<i>clibanarius cruentatus</i> <sup>41</sup>	Spotted Black Hermit crab
<i>clibanarius aequabilis</i> <sup>7</sup>	
<b>Family: Paguridae</b>	
<i>Pagurus sp.</i> <sup>41</sup>	Hermit crab
<i>Paguritta spp.</i> <sup>41</sup>	Coral boring hermits <sup>7</sup>
<b>Family: Dromiidae</b>	
<i>Dromia dromia</i> <sup>6</sup>	
<i>Dromia Intermedia</i> <sup>1</sup>	

<i>Dromia dehanni</i> <sup>14</sup>	Sponge crab
<i>Dromiopsis australensis</i> <sup>1</sup>	
<i>Cryptodromia canaliculata</i> <sup>1</sup>	
<i>Cryptodromia bullifera</i> <sup>1</sup>	
<i>Cryptodromia demani</i> <sup>1</sup>	
<i>Cryptodromia hilgendorfi</i> <sup>1</sup>	
<i>Cryptodromia gilesi</i> <sup>1</sup>	
<i>Conchaecetus artificiosus</i> <sup>1</sup>	
<i>Conchaecetus andamanicus</i> <sup>1</sup>	
<b>Family: Raninnidae</b>	
<i>Rannina ranina</i> <sup>14</sup>	Spanner Crab
<i>Notosceles serratifrons</i> <sup>1</sup>	
<b>Family: Dorippidae</b>	
<i>Notopus dorsipes</i> <sup>1</sup>	=Dorippe dorsipes
<i>Dorippoides facchino</i> <sup>1</sup>	=Dorippe facchino
<b>Family: Calappidae</b>	
<i>Calappa calappa</i> <sup>41</sup>	Giant Box Crab
<i>Calappa lophos</i> <sup>2</sup>	Box Crab
<i>Calappa gallus</i> <sup>2</sup>	Lumpy Box Crab
<i>Calappa hepatica</i> <sup>2</sup>	Reef Box Crab
<i>Calappa capellonis</i> <sup>2</sup>	Box Crab
<i>Calappa japonica</i> <sup>41</sup>	Box Crab
<i>Calappa phillargius</i> <sup>2</sup>	Box Crab
<i>Mursia bicristimana</i> <sup>1</sup>	
<i>Cyloes marisrubri</i> <sup>1</sup>	
<b>Family: Matutidae</b>	
<i>Matuta planipes</i> <sup>41</sup>	moon Crab
<i>Matuta victor</i> <sup>2</sup>	moon Crab
<i>Ashtoret lunaris</i> <sup>41</sup>	moon Crab
<i>Ashtoret miersii</i> <sup>2</sup>	moon Crab
<i>Ashtoret picta</i> <sup>2</sup>	moon Crab
<b>Family: Leucosidae</b>	
<i>Leucosia pubescens</i> <sup>6</sup>	Pebble Crab
<i>Leucosia anatum</i> <sup>1</sup>	Pebble Crab
<i>Myra affinis</i> <sup>15</sup>	Pebble Crab
<i>Myra brevimanna</i> <sup>15</sup>	Pebble Crab
<i>Myra fugax</i> <sup>15</sup>	Pebble Crab
<i>Myrine kesslerii</i> <sup>15</sup>	Pebble Crab
<i>Cryptocnemus holdsworthi</i> <sup>1</sup>	
<i>Oreotlos havelocki</i> <sup>1</sup>	
<i>Nursia plicata</i> <sup>1</sup>	
<i>Nursia lar</i> <sup>1</sup>	
<i>Ebalia diadumenna</i> <sup>1</sup>	Nut Crab
<i>Ebalia maldiviensis</i> <sup>1</sup>	Nut Crab
<i>Euclosiana obtusifrons</i> <sup>1</sup>	
<i>Coleusia urania</i> <sup>1</sup>	
<i>Urnalena cumingi</i> <sup>1</sup>	

<i>Urnalena haematosticta</i> <sup>1</sup>	
<i>Hiplyra platycheir</i> <sup>1</sup>	
<i>Hiplyra adamsi</i> <sup>1</sup>	
<i>Hiplyra elegans</i> <sup>19</sup>	
<i>Philyra globus</i> <sup>1</sup>	
<i>Pseudophilyra tridentata</i> <sup>1</sup>	
<i>Pseudophilyra melita</i> <sup>1</sup>	
<i>Heterolithadia fallax</i> <sup>1</sup>	
<i>Arcania gracilis</i> <sup>1</sup>	
<i>Arcania erinaceus</i> <sup>1</sup>	
<i>Arcania tuberculata</i> <sup>1</sup>	
<i>Ixa pulcherrima</i> <sup>1</sup>	
<i>Ixa cylindrus</i> <sup>1</sup>	
<b>Family: Majidae</b>	
<i>Sunipea indicus</i> <sup>1</sup>	
<i>Menaethius monoceros</i> <sup>41</sup>	
<i>Schizophrys aspera</i> <sup>6</sup>	
<i>Paramithrax aculeatus</i> <sup>6</sup>	
<i>Hyastenus plannasius</i> <sup>6</sup>	
<i>Maja proteus</i> <sup>1</sup>	
<i>Micippa philyra</i> <sup>1</sup>	
<i>Micippa thalia</i> <sup>1</sup>	
<i>Micippa margaritifera</i> <sup>1</sup>	
<i>Micippa parca</i> <sup>1</sup>	
<i>Schizophrys aspera</i> <sup>1</sup>	
<i>Cyclax suborbicularis</i> <sup>1</sup>	
<i>Phalangipus arachnoides</i> <sup>1</sup>	
<i>Pseudomicippe nodosa</i> <sup>1</sup>	
<i>Rochinia sp.</i> <sup>14</sup>	Spider crab
<i>Hyas araneus</i> <sup>14</sup>	Spider crab
<b>Family: Inachidae</b>	
<i>Achaeus lacertosus</i> <sup>1</sup>	
<i>Achaeus dubia</i> <sup>1</sup>	
<i>Oncinopus aranea</i> <sup>1</sup>	
<i>Paratymolus hastatus</i> <sup>1</sup>	
<i>Camposcia retusa</i> <sup>1</sup>	Decorator crab
<b>Family: Epialtidae</b>	
<i>Xenocarcinus tuberculatus</i> <sup>1</sup>	
<i>Simocarcinus simplex</i> <sup>1</sup>	
<i>Menaethius monoceros</i> <sup>1</sup>	
<i>Acanthonyx scutellatus</i> <sup>1</sup>	
<i>Hyastenus pleione</i> <sup>1</sup>	
<i>Hyastenus hilgendorfi</i> <sup>1</sup>	
<i>Hyastenus convexus</i> <sup>1</sup>	
<i>Hyastenus brockii</i> <sup>1</sup>	
<i>Naxioides hirtas</i> <sup>1</sup>	
<i>Naxioides investigatoris</i> <sup>1</sup>	
<i>Doclea rissoni</i> <sup>1</sup>	

<i>Doclea alcocki</i> <sup>1</sup>	
<i>Tylocarcinus styx</i> <sup>1</sup>	
<b>Family: Hymenosomatidae</b>	
<i>Elamena cristatipes</i> <sup>6</sup>	
<i>Elamena sindens</i> <sup>13</sup>	
<i>Elamena truncata</i> <sup>1</sup>	
<i>Elamenopsis woodmasoni</i> <sup>13</sup>	
<i>Elamenopsis tuberculata</i> <sup>13</sup>	
<b>Family: Aethridae</b>	
<i>Aethera scruposa</i> <sup>2,16</sup>	Stone Crab
<i>Drachiella sculpta</i> <sup>1</sup>	
<b>Family: Parthinopidae</b>	
<i>Cryptopodia angulata</i> <sup>20</sup>	Bat Crab
<i>Lambrus carinatus</i> <sup>1</sup>	
<i>Rhinolambrus pelagicus</i> <sup>1,2</sup>	
<i>Aulacolambrus hoplodontus</i> <sup>1</sup>	
<i>Lambrus calappoides</i> <sup>1,2</sup>	
<i>Pseudolambrus beaumonti</i> <sup>1,2</sup>	
<i>Pseudolambrus harpax</i> <sup>1</sup>	
<i>Aulacolambrus curvispinis</i> <sup>1</sup>	
<i>Rhinolambrus contrarius</i> <sup>1,2</sup>	
<i>Rhinolambrus longispinis</i> <sup>1</sup>	
<i>Parthenope longimanus</i> <sup>2</sup>	
<i>Parthenope echinatus</i> <sup>2</sup>	
<i>Parthenope cybelis</i> <sup>2</sup>	
<i>Parthenope lamellifrons</i> <sup>2</sup>	
<i>Parthenope longimanus</i> <sup>2,1</sup>	
<i>Parthenope petalophorus</i> <sup>2</sup>	
<i>Doldorfia horrida</i> <sup>2</sup>	Rubble Crab
<i>Cryptopodia fornicata</i> <sup>1,2</sup>	Common Buckler Crab
<i>Cryptopodia pan</i> <sup>1</sup>	
<i>Furtipodia petrosa</i> <sup>1</sup>	
<b>Family: Scalopidiidae</b>	
<i>Scalopidia spinosipes</i> <sup>1</sup>	
<b>Family: Pilumnidae</b>	
<i>Zebrida adamsi</i> <sup>1</sup>	
<i>Harrovia albolineata</i> <sup>1</sup>	
<i>Pilumnus cursor</i> <sup>1</sup>	
<i>Pilumnus longicornis</i> <sup>1,2</sup>	
<i>Pilumnus minutus</i> <sup>2</sup>	
<i>Pilumnus vespertillio</i> <sup>1,2</sup>	
<i>Actumnus setifer</i> <sup>1</sup>	
<i>Actumnus asper</i> <sup>1</sup>	
<i>Actumnus calypso</i> <sup>1</sup>	
<i>Actumnus fissifrons</i> <sup>1</sup>	
<i>Mertonia lanka</i> <sup>1</sup>	

<b>Family: Atelecyclidae</b>	
<i>Trachycarcinus ovalis</i> <sup>2</sup>	Twin horn Helmut Crab
<b>Family: Corystidae</b>	
<i>Gomezia bicornis</i> <sup>1</sup>	Twin-Horn Helmut Crab
<b>Family: Thiidae</b>	
<i>Palapedia integra</i>	
<b>Family: Portunidae</b>	
<i>Catoptrus nitidus</i> <sup>1,2</sup>	
<i>Lissocarcinus laevis</i> <sup>1,2</sup>	
<i>Lissocarcinus orbicularis</i> <sup>1,2</sup>	
<i>Lissocarcinus polybioides</i> <sup>1,2</sup>	
<i>Portunus pelagicus</i> <sup>3</sup>	Blue swimming Crab/ Flower Crab
<i>Portunus sanguinolentus</i> <sup>3</sup>	Three-spot Swimming crab
<i>Portunus argentatis</i> <sup>2</sup>	
<i>Portunus gracillimanus</i> <sup>1,2</sup>	
<i>Portunus grannulatus</i> <sup>1</sup>	
<i>Portunus haani</i> <sup>1</sup>	
<i>Portunus longispinus</i> <sup>1</sup>	
<i>Portunus hastatoides</i> <sup>1</sup>	
<i>Portunus convexus</i> <sup>1</sup>	
<i>Portunus petreus</i> <sup>1</sup>	
<i>Portunus euglyphus</i> <sup>1</sup>	
<i>Portunus spinipes</i> <sup>1</sup>	
<i>Portunus longispinosus</i> <sup>1</sup>	
<i>Macropipus tuberculatus</i> <sup>1</sup>	
<i>Neptunus argentatus</i> <sup>1</sup>	
<i>Neptunus hastatoides</i> <sup>1</sup>	
<i>Neptunus tenuipes</i> (de Haan 1835) <sup>1</sup>	
<i>Cavoportunus dubius</i> <sup>1</sup>	
<i>Lupocyclus rotundatus</i> <sup>1,2</sup>	
<i>Lupocyclus philippinensis</i> <sup>1</sup>	
<i>Charybdis cruciata</i> <sup>41</sup>	Cross Crab
<i>Charybdis miles</i> <sup>41</sup>	Soldier Crab
<i>Charybdis ferriata</i> <sup>41</sup>	
<i>Charybdis annulatus</i> <sup>2,6</sup>	
<i>Charybdis helleri</i> <sup>2</sup>	
<i>Charybdis lucifera</i> <sup>2,6</sup>	
<i>Charybdis natator</i> <sup>1,2</sup>	
<i>Charybdis orientalis</i> <sup>1,2</sup>	
<i>Charybdis ornata</i> <sup>1</sup>	
<i>Thalamita chaptali</i> <sup>1,2</sup>	
<i>Thalamita crenata</i> <sup>1,2</sup>	Mangrove Swimming Crab
<i>Thalamita oculus</i> <sup>2</sup>	Swimming Crabs



<i>Thalamita picta</i> <sup>2</sup>	Swimming Crabs
<i>Thalamita prymna</i> <sup>1,2</sup>	Swimming Crabs
<i>Thalamita chaptali</i> <sup>1</sup>	Swimming Crabs
<i>Thalamita sexlobata</i> <sup>2</sup>	Swimming Crabs
<i>Thalamita sima</i> <sup>2</sup>	Swimming Crabs
<i>Thalamita poissoni</i> <sup>1</sup>	Swimming Crabs
<i>Thalamita admete</i> <sup>1</sup>	Swimming Crabs
<i>Thalamita exetastica</i> <sup>1</sup>	Swimming Crabs
<i>Thalamita integra</i> <sup>1</sup>	Swimming Crabs
<i>Thalamita investigatoris</i> <sup>1</sup>	Swimming Crabs
<i>Thalamita sexlobata</i> <sup>1</sup>	Swimming Crabs
<i>Thalamita woodmasoni</i> <sup>1</sup>	Swimming Crabs
<i>Thalamita ocullea</i> <sup>1</sup>	Swimming Crabs
<i>Podophthalmus sp.</i> <sup>41</sup>	
<i>Scylla cirrata</i> <sup>3</sup>	Giant Mud Crab
<i>Scylla olivacea</i>	Orange Mud Crab
<i>Scylla tranquebarica</i>	Purple Mud Crab
<i>Macropipus tuberculatus</i> <sup>1</sup>	
<b>Family: Goneplacidae</b>	
<i>Mertonia lankae</i> <sup>2</sup>	
<b>Family: Trapeziidae</b>	
<i>Trapezia wardi</i> <sup>41</sup>	
<i>Trapezia cymodoce</i> <sup>1,2</sup>	Cymodoce Guard Crab
<i>Trapezia digitalis</i> <sup>2</sup>	
<i>Trapezia ferruginea</i> <sup>1,2</sup>	
<i>Trapezia lutea</i> <sup>2</sup>	
<i>Trapezia rufopunctata</i> <sup>1,2</sup>	Crimson-spotted Guard Crab
<i>Trapezia septata</i> <sup>2</sup>	Honey-combed Guard Crab
<i>Trapezia tigrina</i> <sup>2</sup>	
<i>Trapezia maculata</i> <sup>1</sup>	
<i>Tetralia glaberrima</i> <sup>1,2</sup>	
<i>Tetralia rubridactyla</i> <sup>2</sup>	
<i>Quadrellia coronata</i> <sup>1,2</sup>	
<i>Quadrellia maculosa</i> <sup>2</sup>	
<i>Quadrellia reticulata</i> <sup>2</sup>	
<b>Family: Xanthiidae</b>	
<i>Actaea calculosa</i> <sup>1,2</sup>	
<i>Actaeaperonii</i> <sup>1</sup>	
<i>Actaea granulata</i> <sup>1</sup>	
<i>Actaea savignii</i> <sup>2,6</sup>	
<i>Actaea speciosa</i> <sup>25</sup>	
<i>Actaea rupelliae</i> <sup>1</sup>	
<i>Actaeodes tomentosum</i> <sup>2</sup>	
<i>Atergatis diladatus</i> <sup>2</sup>	
<i>Atergatis floridus</i> <sup>2</sup>	Flowery Crab

<i>Atergatis integerrimus</i> <sup>2</sup>	Bashful Crab
<i>Atergatis alcocki</i> <sup>2,1</sup>	Actaea alcocki
<i>Actumnus setifer</i> <sup>1,2</sup>	
<i>Actumnus squamosus</i> <sup>2</sup>	
<i>Carpilius maculatus</i> <sup>41</sup>	Spotted reef Crab
<i>Carpilius convexus</i> <sup>41</sup>	Red Egg Crab
<i>Cymo andreossi</i> <sup>1,2</sup>	
<i>Cymo melanodactylus</i> <sup>2</sup>	
<i>Calmania prima</i> <sup>1</sup>	
<i>Calvactaea tumida</i> <sup>2</sup>	
<i>Chlorodiella nigra</i> <sup>1</sup>	
<i>Chlorodiella laevissima</i> <sup>25</sup>	
<i>Chlorodopsis areolata</i> <sup>1</sup>	
<i>Chlorodopsis pilumnoides</i> <sup>1</sup>	
<i>Calamania prima</i> <sup>2</sup>	
<i>Demania buccalipes</i> <sup>2</sup>	
<i>Demania splendida</i> <sup>1</sup>	
<i>Epixanthus frontalis</i> <sup>2</sup>	
<i>Euxanthus exsculptus</i> <sup>2</sup>	
<i>Euxanthus herdmani</i> <sup>1</sup>	
<i>Etisus analglypticus</i> <sup>2</sup>	
<i>Etisus splendidus</i> <sup>41</sup>	Splendid Spooner
<i>Etisus laevimanus</i> <sup>25,41</sup>	Smooth Spooner
<i>Eriphia scabricula</i> <sup>2</sup>	Red-eyed Rock Crab
<i>Eriphia sebana</i> ? <sup>41</sup>	Red-eyed Rock Crab
<i>Eriphia smithi</i> ?? <sup>41</sup>	Red-eyed Rock Crab
<i>Eumedonus zebra</i> <sup>2</sup>	
<i>Forestia depressa</i> <sup>2</sup>	
<i>Gaillardius rupelliae</i> <sup>2</sup>	
<i>Gorgonariana sodalis</i> <sup>2</sup>	
<i>Harrovia albilineata</i> <sup>2</sup>	
<i>Harrovia elegans</i> <sup>2</sup>	
<i>Hypocolpus rugulosus</i> <sup>1</sup>	
<i>Halimede ochtodes</i> <sup>1</sup>	
<i>Lybia caestifera</i> <sup>2</sup>	
<i>Liomera bella</i> <sup>2</sup>	
<i>Liomera cinctimana</i> <sup>2</sup>	Colourful reef crab
<i>Liomera tristis</i> <sup>1</sup>	
<i>Liomera laevis</i> <sup>41</sup>	
<i>Liomera monticulosa</i> <sup>2</sup>	
<i>Liomera rugata</i> <sup>2</sup>	
<i>Liomera venosa</i> <sup>2</sup>	Ruby Reef Crab
<i>Lophozosymus incisus</i> <sup>1,2</sup>	
<i>Lophozosymus dodone</i> <sup>1</sup>	
<i>Lophozosymus pulchellus</i> <sup>1,2</sup>	

<i>Leptodius exaratus</i> <sup>1,2</sup>	
<i>Macromadaeus crassimanus</i> <sup>2</sup>	
<i>Macromadaeus distinguendus</i> <sup>1</sup>	
<i>Menippe rumphii</i> <sup>2</sup>	
<i>Neoxanthops lineatus</i> <sup>1,2</sup>	
<i>Nanopilumnus rouxi</i> <sup>2</sup>	
<i>Ozius rugulosus</i> <sup>2,6</sup>	
<i>Ozius tuberculosus</i> <sup>1</sup>	
<i>Palapedia nitida</i> <sup>1</sup>	
<i>Pseudoliomera speciosa</i> <sup>1,2</sup>	
<i>Pseudoliomera variolosa</i> <sup>1</sup>	
<i>Psaumis cavipes</i> <sup>2</sup>	
<i>Pseudoactaea corallina</i> <sup>2</sup>	
<i>Platypodia anaglypta</i> <sup>1,2</sup>	
<i>Platypodia ceylonica</i> <sup>41</sup>	
<i>Pilodius aereolatus</i> <sup>2</sup>	
<i>Pilodius pugil</i> <sup>1,2</sup>	
<i>Phymodius nitidens</i> <sup>2</sup>	
<i>Phymodius unguatus</i> <sup>2</sup>	
<i>Phymodius sculptus</i> <sup>25</sup>	
<i>Paraxanthias notatus</i> <sup>1,2</sup>	
<i>Serenius ceylonicus</i> <sup>1,2</sup>	
<i>Xantho scabrerrimus</i> <sup>6</sup>	
<i>Xanthias lamarcki</i> <sup>1,2</sup>	Lamarck's Crab
<i>Xanthias punctatus</i> <sup>2</sup>	
<i>Zebrida adamsi</i> <sup>2</sup>	
<i>Zosymus anaeus</i> <sup>25,41</sup>	Killer Crab
<i>Zosymodus cavipes</i> <sup>2</sup>	
<b>Family: Cryptochiridae</b>	
<i>Hepalocarcinus marsupialis</i> <sup>2</sup>	Coral gall crabs
<b>Family: Pinnotheridae</b>	
<i>Pinnotheres margaritiferae</i> <sup>1</sup>	Pea crab
<b>Family: Ocypodidae</b>	
<i>Ocypode saratan</i> <sup>41</sup>	Ghost Crab
<i>Ocypode ceratophthalma</i> <sup>1</sup>	Horn-eyed Ghost crab
<i>Ocypode cordimana</i> <sup>2</sup>	Smooth-handed Ghost Crab
<i>Ocypode platytasus</i> <sup>1,14</sup>	Stalk eyed ghost crab
<i>Uca annulipes</i> <sup>1,2</sup>	Fiddler Crab
<i>Uca vocans</i> <sup>2</sup>	Fiddler Crab
<i>Uca lactea</i> <sup>8</sup>	Fiddler Crab
<i>Uca dussumieri</i> <sup>8</sup>	Fiddler Crab
<i>Dotilla myctiroides</i> <sup>17</sup>	Soldier Crab
<i>Scopimera pilula</i> <sup>41</sup>	Sand-bubbler Crab

<b>Family: Palicidae</b>	
<i>Pseudopalicus serripes</i> <sup>1,2</sup>	
<b>Family: Gecarcinidae</b>	
<i>Cardiosoma carnifex</i> <sup>41</sup>	Brown land Crab
<b>Family: Grapsidae</b>	
<i>Grapsus tenuicrustatus</i> <sup>41</sup>	Common Sally light-foot Crab
<i>Grapsus albolineatus</i> <sup>2</sup>	Mottled Sally light-foot Crab
<i>Grapsus strigosus</i> <sup>14</sup>	Swift footed rock crab
<i>Varuna literata</i> <sup>41</sup>	Paddler Crab
<i>Geograpsus stormii</i> <sup>41</sup>	Red-brick Shore Crab
<i>Geograpsus crinipes</i> <sup>1</sup>	Brown Land Crab
<i>Percnon planissimum</i> <sup>1,2</sup>	Green-lined Flat Crab
<i>Percnon guinotae</i> <sup>41</sup>	Red-eyed Flat Crab
<i>Plagussia depressa</i> <sup>1</sup>	Rafting Crab
<i>Metopograpsus latifrons</i> <sup>2</sup>	Rock crab
<i>Metopograpsus messor</i> <sup>1,8,14</sup>	Rock crab
<i>Metopograpsus thukhar</i> <sup>21</sup>	
<i>Parasesarma plicatum</i> <sup>2</sup>	
<b>Family: Macrophthalmidae</b>	
<i>Macrophthalmus latreillei</i> <sup>2</sup>	Sentinel Crab
<i>Macrophthalmus depressus</i> <sup>8</sup>	
<i>Pseudoserarma edwardsii</i> <sup>1</sup>	
<i>Neosermatium malabaricum</i> <sup>8</sup>	
<i>Venitus latreillei</i> <sup>1</sup>	
<b>Family: Sesarmidae</b>	
<i>Perisesarma indiarum</i> <sup>8</sup>	Face-banded Sesarmine Crab
<i>Perisesarma bidens</i> <sup>2,8</sup>	Red Clawed Crab
<i>Perisesarma darwinensis</i> <sup>8</sup>	
<i>Perisesarma bengalensis</i>	
<i>Perisesarma guttatum</i> <sup>21</sup>	
<i>Episesarma versicolor</i> <sup>21</sup>	
<i>Neosermatium smithii</i> <sup>21</sup>	
<b>Family: ?</b>	
<i>Lahaina agassizi</i> <sup>1</sup>	
<i>Thysaenys pehlevi</i> <sup>1</sup>	
<i>Naxia spinosa</i> <sup>1</sup>	
<i>Thysaenys irami</i> <sup>1</sup>	
<i>Paramithrax longispinosus</i> <sup>1</sup>	
<i>Stenocionops cervicornis</i> <sup>1</sup>	
<i>Neopalicus jukesii</i> <sup>1</sup>	



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\*In addition to personal observations and records; species with specific records from Sri Lanka or Gulf of Mannar for mud/sand living species were included in the list from published sources. Where published data was available I have given precedence to the record it over my own records.

\*\*Records from Herdman need updating- this has been carried out in some sections. Not all taxa from Herdman have been added where more authoritative recent lists were available and due to insufficient time to verify all records.

## **Provisional Checklist of Marine fish of Sri Lanka**

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### **Introduction**

Consisting of more than 32,000 species, marine fish are the most diverse group of organisms among the chordates (Froese & Pauly, 2012). They are found in most bodies of water and found in nearly all aquatic environments, from high mountain streams to the abyssal and even hadal depths of the deepest oceans. Depending on the oceanic zone they occupy, fish can be divided into three main categories, pelagic, demersal and reef fishes. Pelagic fish live near the surface or in the water column of coastal, ocean and lake waters. Demersal fish, live on or near the bottom of the water body while reef fish are associated with coral reefs (Lal & Fortune, 2000). Marine pelagic fish can be divided into coastal (inshore) fish and oceanic (offshore) fish (McLintock, 2007). Coastal fish inhabit the relatively shallow and sunlit waters above the continental shelf, while oceanic fish (which may well also swim inshore) inhabit the vast and deep waters beyond the continental shelf (Walrond, 2007).

Fish are an important resource worldwide, especially as a source of protein. Commercial and subsistence fishery depend on wild stocks or more intensive culture of selected fish species under captive conditions. Marine fish are also caught by recreational fishers, kept as pets, raised by fish keepers, and exhibited in public aquaria. Therefore, depending on the use, fish can be divided mainly into major categories, food fish and recreational fish. Sri Lanka enjoys an eight time larger maritime zone than its land area. A variety of habitats such as sea grass beds, lagoons, estuaries, coral reefs and fertile coastal waters around the country. These diverse array of habitats support a rich marine fish fauna.

### **Taxonomy**

A complete systematic study of Sri Lankan marine fish is still lacking. However, the literature on Sri Lankan fishes dates back to the early 19th century (De Bruin, *et al.*, 1994). Most of the early records of Sri Lankan marine fish have appeared in 'Ceylon Journal of Science' and in various reports by marine biologists appointed by the Sri Lankan government (Munro, 1955; De Bruin, *et al.*, 1994). Among them Dr. P. E. P. Deraniyagala, the former Director of the national Museum in Colombo and Ian S. R. Munro (1955) has made remarkable contribution to further our knowledge on marine fish (De Bruin, *et al.*, 1994). Munro (1955) has listed 856 marine, brackish water and fresh water fish species for Sri Lanka. However, at present most of these early taxonomic works have been largely revisited and eclipsed by more modern taxonomic treatments. De Bruin, *et al.* (1994) lists about 800 marine and brackish water fishes in Sri Lankan waters. The FAO "Fishery and Aquaculture Country Profiles of Sri Lanka" (FAO, 2004) indicates that there are about 975 marine and brackish water fish (610 species of coastal fish, 60 species of sharks, 90 species of oceanic pelagic species of fish and 215 demersal species). In addition, Öhman, Rajasuriya, & Linden (1993) have listed over 300 species of reef and reef associated fish belonging to 62 families. Thus, the actual number of marine and brackish water fishes living in Sri Lankan Waters could be in excess of 1800 species (The Government of Sri Lanka, 2006; Weerakkody, 2012).

## Threats

In addition to the excess fishing pressure, marine fish are facing number of problems including environmental degradation, e.g., discharge of contaminated waters by domestic and foreign vessels, heated water from land based industries, pollutants and other nonbiodegradable materials (such as oil spills). Higher amounts of nutrients and toxic pollutants in the coastal waters also cause stress conditions and physiological changes that leads to reduced reproductive rates, shorter life spans, behavioural changes, rapid expansion or total disappearance of some species. In addition, climate change, ocean acidification and sea level rise could further aggravate these conditions.

Overfishing, fishing in proscribed areas and use of unauthorized gears and methods all have major impacts on the marine fish resource, which require immediate attention. Blast fishing, bottom set nets, moxy nets, trammel nets, trawl nets and push nets are banded in Sri Lanka. Though it is banned, moxy nets are frequently used as a fishing gear by ornamental fish catchers. The use of trawl nets, especially by Indian fishermen in Sri Lankan territorial waters has become a major threat not only to marine fish fauna, but also to the complete ecosystem in the North and North western parts of the country.

## Conservation

Sri Lanka has ratified and signed several international treaties in order to conserve and manage marine fish resources in a sustainable manner. Further, there are number of state level legislations available to conserve and effectively manage marine and coastal fish resources. Some of them directly control the management of marine fish resources while others can be used indirectly to regulate the exploitation of marine fish.

Sri Lanka has also established four Marine Protected areas, The Bar Reef Marine Sanctuary, Rumassala Marine Sanctuary, Pigeon Island National Park and Hikkaduwa National Park and two fisheries management areas, Great and Little Basses fisheries management area and Polhena fisheries management area. Although several MPAs exist in Sri Lanka, most are not managed, and resource extraction and habitat degradation continue unabated (Perera & De Vos, 2007). In 1998, the Export and Import of Live Fish Regulations were introduced. These regulations define which species of fish are prohibited from being exported or imported and denote that permits are required to export certain fish species and/or live fish eggs, roe or spawn.

Marine fish resources are over exploited in most part of the country and the fishing stress is unimaginable. However still there are rarely exploited resources in deep sea environments where the possibility for undescribed species is still very high. Further, the expansion of EEZ into the high seas may add new species to the marine fish list of Sri Lanka. Thus the actual number of marine fish species in Sri Lankan waters may be higher than the recorded number in this provisional check list.

All the species and family names were checked for the synonyms using the online resources (*World Register of Marine Species* and *Fish Base*). Thus the currently accepted name is listed with its synonym and its source for easy verification.

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# Provisional Check List of Marine and Brackish water fish in Sri Lankan waters.

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## Boney Fishes

### Family: Acanthuridae

- Acanthurus dussumieri* Valenciennes, 1835<sup>1</sup>  
*Acanthurus leucosternon* Bennett, 1832<sup>1, 5, 7</sup>  
*Acanthurus lineatus* (Linnaeus, 1758)<sup>1, 5, 7, 23</sup>  
*Acanthurus mata* (Cuvier, 1829)<sup>1, 5</sup>  
*Acanthurus nigricauda* Dunker and Mohr, 1926<sup>1, 5</sup>  
*Acanthurus nigrofuscus* (Forsskal, 1775)<sup>1</sup>  
*Acanthurus tennentii* Gunther, 1861<sup>1, 5</sup>  
*Acanthurus triostegus* (Linnaeus, 1758)<sup>1, 5, 7, 23</sup>  
*Acanthurus tristis* Tickell, 1888<sup>1, 5</sup>  
*Acanthurus xanthopterus* Valenciennes, 1835<sup>1, 5</sup>  
*Acanthurus pyroferus* Kittlitz, 1834<sup>5</sup>  
*Acanthurus bariene* Lesson, 1831<sup>2</sup>  
*Acanthurus nigricans* (Linnaeus, 1758)<sup>7</sup>  
*Ctenochaetus striatus* Quoy and Gaimard, 1824<sup>1, 5, 23</sup>  
*Ctenochaetus strigosus* (Bennett, 1828)<sup>1, 5</sup>  
*Ctenochaetus binotatus* Randall, 1955<sup>5</sup>  
*Naso annulatus* (Quoy and Gaimard, 1825)<sup>1</sup>  
*Naso brevirostris* (Valenciennes, 1835)<sup>1, 5, 7</sup>  
*Naso lituratus* (Bloch and Schneider, 1801)<sup>1, 5</sup>  
*Naso thynnoides* (Valenciennes, 1835)<sup>1</sup>  
*Naso tuberosus* Lacepede, 1802<sup>1</sup>  
*Naso unicornis* (Forsskal, 1775)<sup>1</sup>  
*Naso vlamingi* (Valenciennes, 1835)<sup>2</sup>  
*Paracanthurus hepatus* (Linnaeus, 1766)<sup>5</sup>  
*Zebrasoma scopas* (Cuvier, 1829)<sup>1, 5</sup>  
*Zebrasoma veliferum* (Bloch, 1795)<sup>1, 20, 21</sup>  
*Zebrasoma xanthurum* (Blyth, 1852)<sup>1</sup>  
*Zebrasoma desjardeinii* (Bennett, 1836)<sup>5, 20</sup>

### Family: Acropomidae

- Acropoma japonicum* Gunther, 1859<sup>18</sup>

### Family: Albulidae

- Albula glossodonta* (Forsskal, 1775)<sup>1</sup>  
*Albula neoguinaica* Valenciennes, 1846<sup>1</sup>

### Family: Alepocephalidae

- Alepocephalus blanfordii* Alcock, 1892<sup>1</sup>

### Family: Ambassidae

- Ambassis gymnocephalus* (Lacepede, 1802)<sup>1</sup>

### Family: Anguillidae

- Anguilla bengalensis bengalensis* (Gray, 1831)<sup>1</sup>  
*Anguilla bicolor bicolor* McClelland, 1844<sup>1</sup>

### Family: Antennariidae

- Antennarius indicus* Schultz, 1964<sup>5</sup>  
*Antennarius maculatus* (Desjardins, 1840)<sup>5</sup>  
*Antennarius pictus* (Shaw, 1794)<sup>19, 21</sup>  
*Antennarius striatus* (Shaw, 1794)<sup>19, 21</sup>  
*Antennatus tuberosus* (Cuvier, 1817)<sup>21</sup>  
*Antennarius hispidus* (Bloch & Schneider, 1801)<sup>19</sup>  
*Antennarius commerson* (Lacepede, 1798)<sup>19</sup>  
*Antennarius nummifer* (Cuvier, 1817)<sup>19</sup>  
*Histrio histrio* (Linnaeus, 1758)<sup>5, 19</sup>

### Family: Aploactinidae

- Cocotropus monacanthus* (Gilchrist, 1906)<sup>18, 21</sup>  
*Paraploactis taprobanensis* (Whitley, 1933)<sup>1, 21</sup>

### Family: Apogonidae

- Acropoma japonicum* Günther, 1859<sup>18, 20</sup>  
*Apogon spp.*<sup>2</sup>  
*Apogon aureus* (Lacepede, 1802)<sup>5</sup>  
*Apogon fraenatus* Valenciennes, 1832<sup>5</sup>  
*Apogon nigrofasciatus* (Lachner, 1953)<sup>5</sup>  
*Apogon cookii* Macleay, 1881<sup>22</sup>  
*Apogon taeniophorus* Regan, 1908<sup>22</sup>  
*Apogon cyanosoma* Bleeker, 1853<sup>22</sup>  
*Apogon apogonides* (Bleeker, 1856)<sup>22</sup>  
*Apogon kallopterus* Bleeker, 1856<sup>22</sup>  
*Archamia fucata* (Cantor, 1849)<sup>20, 22</sup>  
*Archaemia spp.*<sup>2</sup>  
*Cheilodipterus spp.*<sup>2</sup>  
*Cheilodipterus quinquelineatus* Cuvier, 1828<sup>5</sup>  
*Cheilodipterus macrodon* (Lacepede, 1802)<sup>22</sup>  
*Cheilodipterus artus* Smith, 1961<sup>22</sup>  
*Sphaeramia nematoptera* (Bleeker, 1856)<sup>5</sup>  
*Synagrops malayanus* Weber, 1913<sup>18</sup>

### Family: Ariidae

- Arius jella* Day, 1877<sup>1</sup>  
*Arius maculatus* (Thunberg, 1792)<sup>1, 20</sup>  
*Arius subrostratus* Valenciennes, 1840<sup>1</sup>  
*Arius sumatranus* Bennett, 1840<sup>1</sup>  
*Batrachocephalus mino* (Hamilton – Buchanan, 1822)<sup>1</sup>  
*Nemapteryx caelata* (Valenciennes, 1840)<sup>1, 20</sup>  
*Netuma bilineata* (Valenciennes, 1840)<sup>1, 20</sup>  
*Netuma thalassina* (Rüppell, 1837)<sup>1, 21</sup>  
*Osteogeneiosus militaris* (Linnaeus, 1758)<sup>1</sup>  
*Plicofollis dussumieri* (Valenciennes, 1840)<sup>1, 20</sup>  
*Plicofollis platystomus* (Day, 1877)<sup>1, 21</sup>  
*Sciades sona* (Hamilton, 1822)<sup>1, 20</sup>

**Family: Ariommatidae***Ariomma indica* (Day, 1871)<sup>18, 20, 21</sup>**Family: Atherinidae***Atherinomorus lacunosus* (Forster, 1801)<sup>1</sup>*Hypoatherina temminckii* (Bleeker, 1853)<sup>1</sup>**Family: Aulostomidae***Aulostomus chinensis* (Linnaeus, 1766)<sup>1</sup>**Family: Balistidae***Abalistes stellatus* (Lacepede, 1798)<sup>1, 5</sup>*Balistapus undulatus* (Park, 1797)<sup>1, 5</sup>*Balistooides conspicillum* (Bloch and Schneider, 1801)<sup>1, 5, 9</sup>*Balistooides viridescens* (Bloch, 1801)<sup>1, 5</sup>*Canthidermis maculata* (Bloch, 1786)<sup>1, 21</sup>*Melichthys indicus* Randall and Klausewitz, 1973<sup>1, 5</sup>*Melichthys vidua* (Richardson, 1845)<sup>20, 21, 22</sup>*Melichthys niger* (Bloch, 1786)<sup>22</sup>*Odonus niger* (Ruppell, 1840)<sup>1</sup>*Pseudobalistes fuscus* (Bloch and Schneider, 1801)<sup>1, 5, 9</sup>*Pseudobalistes flavimarginatus* (Ruppell, 1829)<sup>22</sup>*Rhinecanthus aculeatus* (Linnaeus, 1758)<sup>1, 5, 7</sup>*Rhinecanthus rectangulus* (Bloch & Schneider, 1801)<sup>5</sup>*Rhinecanthus verrucosus* (Linnaeus, 1758)<sup>22</sup>*Sufflamen chrysopterus* (Bloch and Schneider, 1801)<sup>1, 5</sup>*Sufflamen fraenatus* (Bloch and Schneider, 1801)<sup>1, 5</sup>*Sufflamen bursa* (Bloch & Schneider, 1801)<sup>5</sup>*Sufflamen albicaudatum* (Ruppell, 1829)<sup>21, 22</sup>**Family: Bathyclupeidae***Bathyclupea hoskynii* (Alcock)<sup>18</sup>**Family: Batrachoididae***Allenbatrachus grunniens* (Linnaeus, 1758)<sup>1, 21</sup>**Family: Belonidae***Ablennes hians* (Valenciennes, 1846)<sup>1</sup>*Strongylura leiura* (Bleeker, 1850)<sup>1</sup>*Strongylura strongylura* (van Hasselt, 1823)<sup>1</sup>*Tylosurus acus melanotus* (Bleeker, 1850)<sup>1</sup>*Tylosurus crocodilus crocodilus* (Peron and Le Seur, 1821)<sup>1</sup>**Family: Blenniidae***Alticus saliens* (Forster, 1788)<sup>19</sup>*Aspidontus taeniatus* Quoy & Gaimard, 1834<sup>21, 22</sup>*Aspidontus dussumieri* (Valenciennes, 1836)<sup>19, 21, 22</sup>*Blenniella periphthalmus* (Valenciennes, 1836)<sup>19, 21</sup>*Cirripectes stigmaticus* Strasburg & Schultz, 1953<sup>20, 22</sup>*Cirripectes auritus* Carlson, 1981<sup>22</sup>*Ecsenius bicolor* (Day, 1888)<sup>5</sup>*Ecsenius midas* Starck, 1969<sup>5</sup>*Ecsenius nalolo* Smith, 1959<sup>22</sup>*Ecsenius yaeyamaensis* (Aoyagi, 1954)<sup>21, 22</sup>*Ecsenius gravieri* (Pellegrin, 1906)<sup>21, 22</sup>*Ecsenius lineatus* Klausewitz, 1962<sup>21, 22</sup>*Ecsenius frontalis* (Valenciennes, 1836)<sup>19, 21</sup>*Entomacrodus striatus* (Valenciennes, 1836)<sup>19</sup>*Entomacrodus* spp.<sup>2</sup>*Escenius* spp.<sup>2</sup>*Exallias brevis* (Kner, 1868)<sup>19, 21</sup>*Helcogramma striata* Hansen, 1986<sup>22</sup>*Helcogramma* spp.<sup>22</sup>*Istiblenius edentulous* Forster & Schneider, 1801<sup>2</sup>*Istiblennius andersoni* (Day, 1870)<sup>19</sup>*Istiblennius lineatus* (Valenciennes, 1836)<sup>19</sup>*Istiblennius edentulous* (Forster & Schneider, 1801)<sup>19, 21</sup>*Istiblennius unicolor* (Ruppell, 1838)<sup>19</sup>*Meiacanthus smithi* Klausewitz, 1962<sup>5, 22</sup>*Petroscirtes variabilis* Cantor, 1849<sup>20, 22</sup>*Petroscirtes mitratus* Rüppell, 1830<sup>20, 21, 22</sup>*Petroscirtes breviceps* (Valenciennes, 1836)<sup>19, 20</sup>*Plagiotremus tapeinosoma* (Bleeker, 1857)<sup>22</sup>*Plagiotremus rhinorhynchus* (Bleeker, 1852)<sup>22</sup>*Plagiotremus phenax* Smith-Vaniz, 1976<sup>22</sup>*Salarias fasciatus* (Bloch, 1786)<sup>2</sup>*Salarias alboguttatus* Kner, 1867<sup>19</sup>**Family: Bothidae***Arnoglossus tapeinosoma* (Bleeker, 1866)<sup>1</sup>*Bothus pantherinus* (Ruppell, 1830)<sup>1</sup>*Bothus myriaster* (Temminck and Schlegel, 1846)<sup>1</sup>*Bothus mancus* (Broussonet, 1782)<sup>5</sup>*Chascanopsetta lugubris* Alcock, 1894<sup>1</sup>*Crossorhombus azureus* (Alcock, 1889)<sup>1</sup>*Crossorhombus valderostratus* (Alcock, 1890)<sup>1</sup>*Engyprosopon grandisquama* (Temminck & Schlegel, 1846)<sup>1, 21</sup>*Grammatobothus polyophthalmus* (Bleeker, 1866)<sup>1</sup>*Laeops kitaharai* (Smith & Pope)<sup>18</sup>*Parabothus polylepis* (Alcock, 1889)<sup>1</sup>**Family: Caesionidae***Caesio caeruleaurea* Lacepede, 1802<sup>1</sup>*Caesio cuning* (Bloch, 1791)<sup>1</sup>*Caesio lunaris* Cuvier, 1830<sup>1</sup>*Caesio teres* Seale, 1906<sup>1</sup>*Caesio varilineata* Carpenter, 1987<sup>1</sup>*Caesio xanthonota* Bleeker, 1853<sup>1</sup>*Dipterygonotus balteatus* (Valenciennes, 1830)<sup>1</sup>*Gymnocaesio gymnoptera* (Bleeker, 1856)<sup>1</sup>*Pterocaesio chrysozona* (Cuvier, 1830)<sup>1</sup>*Pterocaesio pisang* (Bleeker, 1853)<sup>1</sup>

*Pterocaesio tessellata* Carpenter, 1987<sup>1</sup>  
*Pterocaesio tile* (Cuvier, 1830)<sup>1</sup>

**Family: Callionymidae**

*Synchiropus stellatus* Smith, 1963<sup>5</sup>

**Family: Caproidae**

*Antigonia rubescens* (Gunther, 1860)<sup>1</sup>  
*Antigonia malayana* Weber, 1913<sup>18</sup>

**Family: Caracanthidae**

*Caracanthus zeylonicus* (Day, 1869)<sup>1</sup>

**Family: Carangidae**

*Alectis ciliaris* (Bloch, 1788)<sup>1</sup>  
*Alectis indicus* (Ruppell, 1830)<sup>1</sup>  
*Alepes djedaba* (Forsskal, 1775)<sup>1</sup>  
*Alepes melanoptera* (Swainson, 1839)<sup>1</sup>  
*Alepes vari* (Cuvier, 1833)<sup>1</sup>  
*Alepes kleinii* (Bloch, 1793)<sup>1,21</sup>  
*Atropus atropos* (Schneider, 1801)<sup>1</sup>  
*Atule mate* (Cuvier, 1833)<sup>1,21</sup>  
*Carangoides armatus* (Ruppell, 1830)<sup>1</sup>  
*Carangoides coeruleopinnatus* (Rüppell, 1830)<sup>1,21</sup>  
*Carangoides chrysophrys* (Cuvier, 1833)<sup>1</sup>  
*Carangoides ferdau* (Forsskal, 1775)<sup>1,20</sup>  
*Carangoides fulvoguttatus* (Forsskal, 1775)<sup>1,14</sup>  
*Carangoides gymnostethus* (Cuvier, 1833)<sup>1,14</sup>  
*Carangoides hedlandensis* (Whitley, 1933)<sup>1</sup>  
*Carangoides malabaricus* (Bloch and Schneider, 1801)<sup>1</sup>  
*Carangoides oblongus* (Cuvier, 1833)<sup>1</sup>  
*Carangoides plagiotænia* (Bleeker, 1851)<sup>1</sup>  
*Carangoides praeustus* (Bennett, 1830)<sup>1</sup>  
*Carangoides talamparoides* (Bleeker, 1852)<sup>1</sup>  
*Carangoides coeruleopinnatus* (Rüppell, 1830)<sup>1,21</sup>  
*Caranx heberi* (Bennett, 1830)<sup>1,14</sup>  
*Caranx ignobilis* (Forsskal, 1775)<sup>1,14</sup>  
*Caranx melampygus* Cuvier, 1833<sup>1,20</sup>  
*Caranx papuensis* (Alleyne and Macleay, 1877)<sup>1</sup>  
*Caranx sexfasciatus* (Quoy and Gaimard, 1824)<sup>1</sup>  
*Caranx tille* (Cuvier, 1833)<sup>1</sup>  
*Decapterus macarellus* (Cuvier, 1833)<sup>1</sup>  
*Decapterus macrosoma* (Bleeker, 1852)<sup>1</sup>  
*Decapterus russelli* (Ruppell, 1830)<sup>1</sup>  
*Elagatis bipinnulata* (Quoy and Gaimard, 1824)<sup>1</sup>  
*Gnathanodon speciosus* (Forsskal, 1775)<sup>1,5</sup>  
*Megalaspis cordyla* (Linnaeus, 1758)<sup>1</sup>  
*Naucrates ductor* (Linnaeus, 1758)<sup>1</sup>  
*Parastromateus niger* (Bloch, 1795)<sup>1</sup>  
*Scomberoides commersonianus* (Lacepede, 1802)<sup>1</sup>  
*Scomberoides lysan* (Forsskal, 1775)<sup>1</sup>  
*Scomberoides tala* (Cuvier, 1832)<sup>1</sup>  
*Scomberoides tol* (Cuvier, 1832)<sup>1</sup>  
*Selar crumenophthalmus* (Bloch, 1793)<sup>1</sup>

*Selaroides leptolepis* (Cuvier, 1833)<sup>1</sup>  
*Seriola rivoliana* (Valenciennes, 1833)<sup>1</sup>  
*Seriolina nigrofasciata* (Ruppell, 1829)<sup>1</sup>  
*Trachinotus baillonii* (Lacepede, 1801)<sup>1</sup>  
*Trachinotus blochii* (Lacepede, 1801)<sup>1</sup>  
*Trachinotus mookalee* (Cuvier, 1832)<sup>1</sup>  
*Trachinotus botla* (Shaw, 1803)<sup>1,21</sup>  
*Ulua mentalis* (Cuvier, 1833)<sup>1</sup>  
*Uraspis helvola* (Forster, 1801)<sup>1</sup>

**Family: Carapidae**

*Carapus mourlani* (Petit, 1934)<sup>1</sup>

**Family: Centriscidae**

*Aeoliscus strigatus* (Günther, 1861)<sup>22</sup>  
*Centriscus scutatus* Linnaeus, 1758<sup>1</sup>

**Family: Centropomidae**

*Lates calcarifer* (Bloch, 1796)<sup>1</sup>  
*Psammoperca waigiensis* (Cuvier, 1828)<sup>1</sup>

**Family: Cepolidae**

*Owstonia weberi* (Gilchrist, 1922)<sup>18,21</sup>

**Family: Chaetodontidae**

*Chaetodon vagabundus* Linnaeus, 1758<sup>2,5,7</sup>  
*Chaetodon decussatus* Cuvier, 1829<sup>2,5</sup>  
*Chaetodon citrinellus* Cuvier, 1831<sup>2</sup>  
*Chaetodon trifascialis* Quoy and Gaimard, 1825<sup>2,5</sup>  
*Chaetodon trifasciatus* Park, 1797<sup>2,5,7</sup>  
*Chaetodon meyeri* Bloch and Schneider, 1801<sup>2,5,9</sup>  
*Chaetodon lunula* (Lacepede, 1802)<sup>2,5,7</sup>  
*Chaetodon collare* Bloch, 1787<sup>2,5</sup>  
*Chaetodon auriga* Forsskal, 1775<sup>2,5,7</sup>  
*Chaetodon plebeius* Cuvier, 1831<sup>2,5,12</sup>  
*Chaetodon xanthocephalus* Bennett, 1832<sup>2,5,9</sup>  
*Chaetodon unimaculatus* Bloch, 1787<sup>2,5,9</sup>  
*Chaetodon kleinii* Bloch, 1790<sup>2,5</sup>  
*Chaetodon madagascariensis* Ahl, 1923<sup>3,5,9</sup>  
*Chaetodon gardneri* Norman, 1939<sup>3,5</sup>  
*Chaetodon semeion* (Bleeker, 1855)<sup>5,9</sup>  
*Chaetodon octofasciatus* Bloch, 1787<sup>5,9</sup>  
*Chaetodon ornatissimus* Cuvier, 1831<sup>5,9</sup>  
*Chaetodon ephippium* Cuvier, 1831<sup>5,9</sup>  
*Chaetodon bennetti* Cuvier, 1831<sup>5,9</sup>  
*Chaetodon triangulum* Cuvier, 1831<sup>5,9</sup>  
*Chaetodon citrinellus* Cuvier, 1831<sup>5,7</sup>  
*Chaetodon falcula* Bloch, 1795<sup>5,7,9</sup>  
*Chaetodon guttatissimus* Bennett, 1833<sup>5</sup>  
*Chaetodon interruptus* Ahl, 1923<sup>5</sup>  
*Chaetodon lineolatus* Cuvier, 1831<sup>5</sup>  
*Chaetodon oxycephalus* Bleeker, 1853<sup>22</sup>  
*Chaetodon melannotus* Bloch & Schneider, 1801<sup>5</sup>



*Chaetodon mertensii* Cuvier, 1831<sup>5</sup>  
*Chaetodon rafflesi* Anonymous [Bennett], 1830<sup>5,9</sup>  
*Forcipiger flavissimus* Jordan & Evermann, 1898<sup>3,5</sup>  
*Forcipiger longirostris* Broussonet, 1782<sup>3,5</sup>  
*Hemitaurichthys zoster* (Bennett, 1831)<sup>3,5</sup>  
*Heniochus singularis* Smith & Radcliffe, 1911<sup>3,5</sup>  
*Heniochus monoceros* Cuvier, 183<sup>3,5,9</sup>  
*Heniochus acuminatus* (Linnaeus, 1758)<sup>3,5,7</sup>  
*Heniochus pleurotaenia* (Cuvier, 1831)<sup>5,9</sup>  
*Heniochus diphreutes* Jordan, 1903<sup>22</sup>  
*Parachaetodon ocellatus* (Cuvier, 1831)<sup>22</sup>  
*Prognathodes guyotensis* (Yamamoto & Tameka, 1982)<sup>22</sup>

**Family: Chanidae**

*Chanos chanos* (Forsskal, 1775)<sup>1</sup>

**Family: Chauliodontidae**

*Chauliodus sloani* Bloch and Schneider, 1801<sup>1</sup>

**Family: Chaunacidae**

*Chaunax pictus* Lowe, 1846<sup>1</sup>

**Family: Chirocentridae**

*Chirocentrus dorab* (Forsskal, 1775)<sup>1</sup>  
*Chirocentrus nudus* (Swainson, 1839)<sup>1</sup>

**Family: Chlorophthalmidae**

*Chlorophthalmus agassizi* (Bonaparte, 1850)<sup>1</sup>  
*Chlorophthalmus bicornis* (Norman, 1939)<sup>1</sup>

**Family: Cirrhitidae**

*Cirrhitus pinnulatus* (Forster, 1801)<sup>2</sup>  
*Cirrhitichthys oxycephalus* (Bleeker, 1855)<sup>5</sup>  
*Cirrhitichthys bleekeri* Day, 1874<sup>5</sup>  
*Cirrhitichthys aprinus* (Cuvier, 1829)<sup>7</sup>  
*Oxycirrhites typus* Bleeker, 1857<sup>5</sup>  
*Paracirrhites forsteri* (Schneider, 1801)<sup>2,5</sup>  
*Paracirrhites arcatus* (Cuvier, 1829)<sup>5</sup>

**Family: Clinidae**

*Springeratus xanthosoma* (Bleeker, 1857)<sup>1,20</sup>

**Family: Clupeidae**

*Amblygaster clupeoides* Bleeker, 1849<sup>1,14</sup>  
*Amblygaster leiogaster* (Valenciennes, 1847)<sup>1</sup>  
*Amblygaster sirm* (Walaum, 1792)<sup>1,14</sup>  
*Anodontostoma chacunda* (Hamilton, 1822)<sup>1,20</sup>  
*Dayella malabarica* (Day, 1873)<sup>1</sup>  
*Dussumieria acuta* (Valenciennes, 1847)<sup>1,14</sup>  
*Dussumieria elopsoides* Bleeker, 1849<sup>1,21</sup>  
*Ehirava fluviatilis* Deraniyagala, 1929<sup>1</sup>  
*Escualosa thoracata* (Valenciennes, 1847)<sup>1,14</sup>  
*Herklotsichthys quadrimaculatus* (Ruppell, 1837)<sup>1</sup>  
*Hilsa kelee* (Cuvier, 1829)<sup>1</sup>

*Nematalosa galathea* Nelson and Rothman, 1973<sup>1</sup>  
*Nematalosa nasus* (Bloch, 1795)<sup>1,14</sup>  
*Sardinella albella* (Valenciennes, 1847)<sup>1,14</sup>  
*Sardinella fimbriata* (Valenciennes, 1847)<sup>1,21</sup>  
*Sardinella gibbosa* (Bleeker, 1849)<sup>1,14</sup>  
*Sardinella jussieu* (Lacepède, 1803)<sup>1,20</sup>  
*Sardinella longiceps* (Valenciennes, 1847)<sup>1</sup>  
*Spratelloides delicatulus* (Bennett, 1831)<sup>1</sup>  
*Spratelloides gracilis* (Temminck and Schlegel, 1846)<sup>1</sup>  
*Tenualosa ilisha* (Hamilton-Buchanan, 1822)<sup>1</sup>  
*Tenualosa toli* (Valenciennes, 1847)<sup>1</sup>

**Family: Congridae**

*Ariosoma anago* (Schlegel, 1849)<sup>1</sup>  
*Conger cinereus* (Ruppell, 1828)<sup>1</sup>  
*Uroconger lepturus* (Richardson, 1848)<sup>1</sup>

**Family: Coryphaenidae**

*Coryphaena hippurus* Linnaeus, 1758<sup>1</sup>

**Family: Cynoglossidae**

*Cynoglossus arel* (Schneider, 1801)<sup>1</sup>  
*Cynoglossus bilineatus* (Lacepede, 1802)<sup>1</sup>  
*Cynoglossus kopsii* (Bleeker, 1851)<sup>1,21</sup>  
*Cynoglossus lingua* Hamilton-Buchanan, 1822<sup>1</sup>  
*Cynoglossus puncticeps* (Richardson, 1846)<sup>1</sup>  
*Cynoglossus semifasciatus* Day, 1877<sup>1</sup>  
*Cynoglossus marleyi* Regan, 1921<sup>18</sup>  
*Paraplagusia bilineata* (Bloch, 1784)<sup>1</sup>  
*Symphurus septemstriatus* (Alcock, 1891)<sup>1</sup>  
*Symphurus trifasciatus* (Alcock, 1894)<sup>1</sup>

**Family: Dactylopteridae**

*Dactyloptena orientalis* (Cuvier, 1829)<sup>1,5</sup>

**Family: Diodontidae**

*Cyclichthys orbicularis* (Bloch, 1785)<sup>1,21</sup>  
*Diodon holocanthus* Linnaeus, 1758<sup>1</sup>  
*Diodon hystrix* (Linnaeus, 1758)<sup>1,5,7,23</sup>  
*Diodon liturosus* Shaw, 1804<sup>5</sup>

**Family: Drepanidae**

*Drepane punctata* (Linnaeus, 1758)<sup>1</sup>

**Family: Echeneidae**

*Echeneis naucrates* Linnaeus, 1758<sup>1,5</sup>  
*Remora australis* (Bennett, 1840)<sup>1</sup>  
*Remora remora* (Linnaeus, 1758)<sup>1</sup>  
*Remora albescens* (Temminck and Schlegel, 1843)<sup>1</sup>

**Family: Elopidae**

*Elops machnata* (Forsskal, 1775)<sup>1</sup>

**Family: Emmelichthyidae***Plagiogoneion rubiginosum* (Hutton, 1875)<sup>1,21</sup>**Family: Engraulididae**

*Coilia dussumieri* (Valenciennes, 1847)<sup>1</sup>  
*Coilia neglecta* (Whitehead, 1968)<sup>1</sup>  
*Encrasicholina devisi* (Whitly)<sup>1</sup>  
*Encrasicholina heteroloba* (Ruppell, 1873)<sup>1</sup>  
*Encrasicholina punctifer* Fowler, 1938<sup>1</sup>  
*Setipinna taty* (Valenciennes, 1848)<sup>1</sup>  
*Stolephorus commersonii* Lacepede, 1803<sup>1</sup>  
*Stolephorus indicus* (van Hasselt, 1823)<sup>1</sup>  
*Stolephorus insularis* Hardenberg, 1933<sup>1</sup>  
*Stolephorus waitei* Jordan and Seale, 1926<sup>1</sup>  
*Thryssa baelama* (Forsskal, 1775)<sup>1</sup>  
*Thryssa dussumieri* (Valenciennes, 1848)<sup>1</sup>  
*Thryssa encrasicholoides* (Bleeker, 1852)<sup>1</sup>  
*Thryssa gautamiensis* Babu Rao, 1971<sup>1</sup>  
*Thryssa hamiltonii* (Gray, 1835)<sup>1</sup>  
*Thryssa malabarica* (Bloch, 1795)<sup>1</sup>  
*Thryssa mystax* (Schneider, 1801)<sup>1</sup>  
*Thryssa polybranchialis* Wongratana, 1983<sup>1</sup>  
*Thryssa purava* (Hamilton-Buchanan, 1822)<sup>1</sup>  
*Thryssa setirostris* (Broussonet, 1782)<sup>1</sup>  
*Thryssa vitirostris* (Gilchrist & Thompson, 1908)<sup>1,21</sup>

**Family: Ehippidae**

*Ehippus orbis* (Bloch, 1787)<sup>1</sup>  
*Platax orbicularis* (Forsskal, 1775)<sup>1,5,7</sup>  
*Platax teira* (Forsskal, 1775)<sup>1,5</sup>  
*Platax pinnatus* (Linnaeus, 1758)<sup>5,9</sup>

**Family: Epigonidae**

*Epigonus robustus* (Barnard, 1927)<sup>18,21</sup>  
*Epigonus telescopus* (Risso, 1810)<sup>18</sup>

**Family: Exocoetidae**

*Cheilopogon atrisignis* (Jenkins, 1904)<sup>1</sup>  
*Cheilopogon cyanopterus* (Valenciennes, 1846)<sup>1</sup>  
*Cheilopogon furcatus* (Mitchill, 1815)<sup>1</sup>  
*Cheilopogon nigricans* (Bennett, 1846)<sup>1</sup>  
*Cheilopogon spilopterus* (Valenciennes, 1846)<sup>1</sup>  
*Cheilopogon suttoni* (Whitley and Colefax, 1938)<sup>1</sup>  
*Cheilopogon katoptron* (Bleeker, 1865)<sup>1,21</sup>  
*Cypselurus naresii* (Gunther, 1889)<sup>1</sup>  
*Cypselurus oligolepis* (Bleeker, 1866)<sup>1</sup>  
*Cypselurus opisthopus* (Bleeker, 1866)<sup>1</sup>  
*Cypselurus poecilopterus* (Valenciennes, 1846)<sup>1</sup>  
*Exocoetus monocirrhus* Richardson, 1846<sup>1</sup>  
*Exocoetus volitans* (Linnaeus, 1758)<sup>1</sup>  
*Hirundichthys coromandelensis* (Hornell, 1923)<sup>1</sup>  
*Hirundichthys oxycephalus* (Bleeker, 1857)<sup>1</sup>  
*Hirundichthys speculiger* (Valenciennes, 1846)<sup>1</sup>  
*Parexocoetus brachypterus* (Richardson, 1846)<sup>1</sup>

*Parexocoetus mento* (Valenciennes, 1846)<sup>1</sup>*Prognichthys brevipinnis* (Valenciennes, 1846)<sup>1</sup>**Family: Fistulariidae**

*Fistularia commersonii* (Ruppell, 1835)<sup>1,23</sup>  
*Fistularia petimba* (Lacepede, 1803)<sup>1</sup>

**Family: Gadidae***Physiculus peregrinus* (Gunther, 1872)<sup>18</sup>**Family: Gempylidae**

*Gempylus serpens* (Cuvier, 1829)<sup>1</sup>  
*Lepidocybium flavobrunneum* (Smith, 1849)<sup>1</sup>  
*Neopinnula orientalis* (Gilchrist and von Bond, 1924)<sup>1</sup>  
*Rexea prometheoides* (Bleeker, 1856)<sup>1</sup>  
*Ruvettus pretiosus* Cocco, 1829<sup>1</sup>

**Family: Gerreidae**

*Gerres erythrourus* (Bloch, 1791)<sup>1,21</sup>  
*Gerres longirostris* (Lacepede, 1801)<sup>1,21</sup>  
*Gerres filamentosus* (Cuvier, 1829)<sup>1</sup>  
*Gerres limbatus* Cuvier, 1830<sup>1,21</sup>  
*Gerres oblongus* (Cuvier, 1830)<sup>1</sup>  
*Gerres oyena* (Forsskal, 1775)<sup>1</sup>  
*Pentaprion longimanus* (Cantor, 1850)<sup>1</sup>

**Family: Gobiidae**

*Acentrogobius caninus* (Valenciennes, 1837)<sup>19</sup>  
*Acentrogobius masoni* (Day, 1873)<sup>19</sup>  
*Acentrogobius viridipunctatus* (Valenciennes, 1837)<sup>19</sup>  
*Alburnus arborella* (Bonaparte 1841)<sup>19,20</sup>  
*Amblyeleotris spp.*<sup>2</sup>  
*Amblyeleotris diagonalis* Polunin & Lubbock, 1979<sup>5</sup>  
*Amblyeleotris steinitzi* (Klausewitz, 1974)<sup>5</sup>  
*Amblyeleotris periophthalma* (Bleeker, 1853)<sup>21,22</sup>  
*Amblyeleotris wheeleri* (Polunin & Lubbock, 1977)<sup>22</sup>  
*Amblygobius hectori* (Smith, 1957)<sup>5</sup>  
*Amblygobius nocturnus* (Herre, 1945)<sup>22</sup>  
*Amblygobius semicinctus* (Bennett, 1833)<sup>22</sup>  
*Asterropteryx semipunctatus* Rüppell, 1830<sup>22</sup>  
*Asterropteryx spp.*<sup>2</sup>  
*Bathygobius fuscus* (Ruppell, 1830)<sup>19</sup>  
*Bostrychus sinensis* Lacepede, 1801<sup>19,20</sup>  
*Bryaniops spp.*<sup>2</sup>  
*Butis butis* (Hamilton, 1822)<sup>19,21</sup>  
*Butis koilomatodon* (Bleeker, 1849)<sup>19,20</sup>  
*Callogobius mannarensis* Rangarajan 1968<sup>22</sup>  
*Callogobius hasselti* (Bleeker, 1851)<sup>22</sup>  
*Callogobius spp.*<sup>2</sup>  
*Cryptocentrus cryptocentrus* (Valenciennes, 1837)<sup>2,22</sup>  
*Cryptocentrus caeruleomaculatus* (Herre, 1933)<sup>22</sup>  
*Cryptocentrus cinctus* (Herre, 1936)<sup>22</sup>  
*Ctenogobius aurocingulus* (Herre, 1935)<sup>22</sup>

*Ctenogobios spp.*<sup>2</sup>  
*Eleotris fusca* (Forster, 1801)<sup>19, 20</sup>  
*Exyrias belissimus* (Smith, 1959)<sup>20, 21, 22</sup>  
*Eviota zonura* Jordan & Seale, 1906<sup>19, 21</sup>  
*Fusigobius spp.*<sup>5</sup>  
*Glossogobius giuris* (Hamilton, 1822)<sup>19, 20</sup>  
*Gnatholepis spp.*<sup>2</sup>  
*Gobiodon citrinus* (Rüppell, 1838)<sup>5</sup>  
*Gobiodon quinquestrigatus* (Valenciennes, 1837)<sup>20, 21, 22</sup>  
*Gobiodon atrangulatus* Garman, 1903<sup>22</sup>  
*Gobiodon rivulatus* (Rüppell, 1830)<sup>19, 21</sup>  
*Istigobius spp.*<sup>2</sup>  
*Istigobius decoratus* (Herre, 1927)<sup>5</sup>  
*Istigobius ornatus* (Rüppell, 1830)<sup>19, 21, 22</sup>  
*Oligolepis acutipennis* (Valenciennes, 1837)<sup>19</sup>  
*Ophiocara porocephala* (Valenciennes, 1837)<sup>19</sup>  
*Oplopomus oplopomus* (Valenciennes, 1837)<sup>22</sup>  
*Oxyurichthys microlepis* (Bleeker, 1849)<sup>19</sup>  
*Oxyurichthys tentacularis* (Valenciennes, 1837)<sup>19</sup>  
*Paragobiodon echinocephalus* (Rüppell, 1830)<sup>22</sup>  
*Paragobiodon lacunicolus* (Kendall & Goldsborough, 1911)<sup>20, 22</sup>  
*Periophthalmus barbarus* (Linnaeus, 1766)<sup>19, 21</sup>  
*Periophthalmus argentilineatus* Valenciennes 1837<sup>19, 21</sup>  
*Pleurosicya bilobata* (Koumans, 1941)<sup>19, 21</sup>  
*Priolepis semidoliata* (Valenciennes, 1837)<sup>19, 21</sup>  
*Psammogobius biocellatus* (Valenciennes, 1837)<sup>19, 20</sup>  
*Pseudogobius javanicus* (Bleeker, 1856)<sup>19, 21</sup>  
*Sicyopterus lagocephalus* (Pallas, 1770)<sup>19, 21</sup>  
*Stenogobius gymnopomus* (Bleeker, 1853)<sup>19, 21</sup>  
*Stigmatogobius sadanundio* (Hamilton, 1822)<sup>19, 21</sup>  
*Valenciennea helsdingenii* (Bleeker, 1858)<sup>5</sup>  
*Valenciennea puellaris* (Tomiya, 1956)<sup>5</sup>  
*Valenciennea sexguttata* (Valenciennes, 1837)<sup>5</sup>  
*Valenciennea strigata* (Broussonet, 1782)<sup>5</sup>  
*Valenciennea longipinnis* (Lay & Bennett, 1839)<sup>20, 22</sup>  
*Valenciennea muralis* (Valenciennes, 1837)<sup>22</sup>  
*Valenciennea helsdingenii* (Bleeker, 1858)<sup>20, 22</sup>

#### Family: Gonostomidae

*Phosichthys argenteus* Hutton, 1872<sup>18, 21</sup>  
*Polymetme corythaeola* (Alcock, 1898)<sup>18, 20</sup>

#### Family: Haemulidae

*Diagramma pictum* (Thunberg, 1792)<sup>1, 5, 21</sup>  
*Plectorhinchus ceylonensis* (Smith, 1956)<sup>1, 14</sup>  
*Plectorhinchus gibbosus* (Lacepede, 1802)<sup>1</sup>  
*Plectorhinchus schotaf* (Forsskål, 1775)<sup>1, 21</sup>  
*Plectorhinchus lineatus* (Linnaeus, 1758)<sup>1, 7</sup>  
*Plectorhinchus vittatus* (Linnaeus, 1758)<sup>1, 5</sup>  
*Plectorhinchus albovittatus* (Ruppel, 1838)<sup>5, 9</sup>  
*Plectorhinchus orientalis* (Linnaeus, 1758)<sup>7</sup>  
*Pomadasys argenteus* (Forsskal, 1775)<sup>1</sup>  
*Pomadasys argyreus* (Valenciennes, 1833)<sup>1</sup>

*Pomadasys commersonnii* (Lacepede, 1802)<sup>1</sup>  
*Pomadasys furcatus* (Schneider, 1801)<sup>1</sup>  
*Pomadasys kaakan* (Cuvier, 1830)<sup>1</sup>  
*Pomadasys maculatus* (Bloch, 1797)<sup>1, 21</sup>  
*Pomadasys multimaculatum* (Playfair, 1866)<sup>1</sup>  
*Pomadasys olivaceus* (Day, 1875)<sup>1, 21</sup>  
*Pomadasys guoraca* (Cuvier, 1829)<sup>21, 22</sup>

#### Family: Halosauridae

*Aldrovandia affinis* (Günther, 1877)<sup>1, 21</sup>

#### Family: Hemiramphidae

*Euleptorhamphus viridis* (van Hasselt, 1823)<sup>18</sup>  
*Hemiramphus archipelagicus* Collette and Parin, 1978<sup>1</sup>  
*Hemiramphus far* (Forsskal, 1775)<sup>1</sup>  
*Hemiramphus lutkei* (Valenciennes, 1846)<sup>1</sup>  
*Hyporhamphus limbatus* (Valenciennes, 1846)<sup>1</sup>  
*Hyporhamphus dussumieri* (Valenciennes, 1846)<sup>1</sup>  
*Hyporhamphus quoyi* (Valenciennes, 1846)<sup>1</sup>  
*Rhynchorhamphus georgii* (Valenciennes, 1846)<sup>1</sup>  
*Rhynchorhamphus malabaricus* Collette, 1976<sup>1</sup>

#### Family: Holocentridae

*Myripristis kuntee* (Cuvier, 1831)<sup>1</sup>  
*Myripristis botche* Cuvier, 1829<sup>1, 21</sup>  
*Myripristis adusta* (Bleeker, 1853)<sup>2, 5, 10</sup>  
*Myripristis berndti* Jordan & Evermann, 1903<sup>5</sup>  
*Myripristis murdjan* (Forsskål, 1775)<sup>5</sup>  
*Myripristis chryseres* Jordan & Evermann, 1903<sup>10</sup>  
*Myripristis botche* Cuvier, 1829<sup>10</sup>  
*Myripristis pralinia* Cuvier, 1829<sup>10</sup>  
*Myripristis violacea* Bleeker, 1851<sup>10</sup>  
*Neoniphon samara* (Forsskal, 1775)<sup>2, 5</sup>  
*Neoniphon opercularis* (Valenciennes, 1831)<sup>22</sup>  
*Sargocentron diadema* (Lacepede, 1803)<sup>1, 5</sup>  
*Sargocentron punctatissimum* (Cuvier, 1829)<sup>1</sup>  
*Sargocentron rubrum* (Forsskal, 1775)<sup>1, 5</sup>  
*Sargocentron spiniferum* (Forsskal, 1775)<sup>1, 5</sup>  
*Sargocentron caudimaculatum* (Rüppell, 1838)<sup>2, 5</sup>

#### Family: Istiophoridae

*Istiophorus platypterus* (Shaw and Nodder, 1792)<sup>1, 6, 13, 14</sup>  
*Makaira indica* (Cuvier, 1832)<sup>1, 13, 14</sup>  
*Makaira mazara* (Jordan & Snyder, 1901)<sup>13, 14</sup>  
*Tetrapturus angustirostris* Tanaka, 1915<sup>1, 21</sup>  
*Tetrapturus audax* (Philippi, 1889)<sup>1, 13, 14</sup>

#### Family: Kuhliidae

*Kuhlia mugil* (Forste, 1801)<sup>1</sup>  
*Kuhlia rupestris* (Lacepede, 1802)<sup>1</sup>

#### Family: Kurtidae

*Kurtus indicus* Bloch, 1786<sup>1</sup>

**Family: Kyphosidae***Kyphosus cinerascens* (Forsskal, 1775) <sup>1</sup>**Family: Labridae**

*Anampses meleagrides* Valenciennes, 1840 <sup>1</sup>  
*Anampses caeruleopunctatus* Rüppell, 1829 <sup>5</sup>  
*Anampses lineatus* Randall, 1972 <sup>5</sup>  
*Anampses melanurus* Bleeker, 1857 <sup>22</sup>  
*Bodianus bilunulatus* (Lacepede, 1801) <sup>1, 5</sup>  
*Bodianus diana* Lacepede, 1802 <sup>1, 5</sup>  
*Bodianus axillaris* (Bennett, 1832) <sup>2, 5</sup>  
*Bodianus neilli* (Day, 1867) <sup>5</sup>  
*Bodianus macrourus* (Lacepede, 1801) <sup>22</sup>  
*Cheilinus chlorourus* (Bloch, 1791) <sup>1, 20</sup>  
*Cheilinus fasciatus* Bloch, 1791 <sup>1</sup>  
*Cheilinus trilobatus* Lacepede, 1801 <sup>1</sup>  
*Cheilinus undulatus* Ruppell, 1828 <sup>1</sup>  
*Cheilio inermis* (Forsskal, 1775) <sup>1</sup>  
*Choerodon anchorago* (Bloch, 1791) <sup>1</sup>  
*Choerodon robustus* Gunther, 1862 <sup>1</sup>  
*Cirrhitlabrus rubrisquamis* Randall & Emery, 1983 <sup>5</sup>  
*Coris cuvieri* (Bennett, 1831) <sup>1, 21</sup>  
*Coris aygula* Lacepede, 1802 <sup>1, 5, 9</sup>  
*Coris frerei* Gunther, 1866 <sup>1, 5</sup>  
*Coris cuvieri* (Bennett, 1831) <sup>5</sup>  
*Coris batuensis* (Bleeker, 1856-57) <sup>22</sup>  
*Diproctacanthus xanthurus* (Bleeker, 1856) <sup>22</sup>  
*Epibulus insidiator* Pallas, 1770 <sup>1, 20</sup>  
*Gomphosus caeruleus* Lacepede, 1801 <sup>1, 5</sup>  
*Halichoeres hortulanus* (Lacepede, 1801) <sup>1, 2, 5</sup>  
*Halichoeres dussumieri* (Valenciennes, 1839) <sup>1, 2</sup>  
*Halichoeres marginatus* (Ruppell, 1835) <sup>1, 2, 5</sup>  
*Halichoeres scapularis* (Bennett, 1831) <sup>1, 2, 5</sup>  
*Halichoeres zeylonicus* (Bennett, 1832) <sup>1</sup>  
*Halichoeres nebulosus* (Valenciennes, 1839) <sup>2</sup>  
*Halichoeres timorensis* (Bleeker, 1852) <sup>2</sup>  
*Halichoeres leucoxanthus* Randall & Smith, 1982 <sup>2, 5</sup>  
*Halichoeres margaritaceus* (Valenciennes, 1839) <sup>20, 22</sup>  
*Halichoeres notospilus* (Günther, 1864) <sup>20, 22</sup>  
*Halichoeres biocellatus* Schultz, 1960 <sup>20, 22</sup>  
*Halichoerus spp.* <sup>2</sup>  
*Hemigymnus fasciatus* (Bloch, 1792) <sup>1, 5</sup>  
*Hemigymnus melapterus* (Bloch, 1791) <sup>1, 5</sup>  
*Hologymnosus annulatus* (Lacepede, 1801) <sup>1</sup>  
*Hologymnosus doliatus* (Lacepede, 1801) <sup>1</sup>  
*Labroides dimidiatus* (Lacepede, 1839) <sup>1, 5, 7</sup>  
*Labroides bicolor* (Fowler and Bean, 1928) <sup>5, 9</sup>  
*Macropharyngodon ornatus* Randall, 1978 <sup>5</sup>  
*Macropharyngodon meleagris* (Valenciennes, 1839) <sup>22</sup>  
*Novaculichthys taeniourus* Lacepede, 1801 <sup>1, 5</sup>  
*Oxycheilinus digramma* (Lacepede, 1801) <sup>1, 21</sup>  
*Paracheilinus mccoskeri* Randall & Harmelin-Vivien, 1977 <sup>5</sup>  
*Pseudodax moluccanus* (Valenciennes, 1839) <sup>1</sup>

*Pseudocheilinus hexataenia* (Bleeker, 1857) <sup>5</sup>  
*Pseudocheilinus octotaenia* Jenkins, 1901 <sup>20, 22</sup>  
*Pseudojuloides erythropros* Randall & Randall, 1981 <sup>22</sup>  
*Stethojulis spp.* <sup>2</sup>  
*Stethojulis bandanensis* (Bleeker, 1851) <sup>5</sup>  
*Stethojulis trilineata* (Bloch & Schneider, 1801) <sup>5</sup>  
*Stethojulis interrupta* (Bleeker, 1851) <sup>22</sup>  
*Stethojulis albovittata* (Bonnaterre, 1788) <sup>22</sup>  
*Stethojulis strigiventer* (Bennett, 1833) <sup>22</sup>  
*Thalassoma hebraicum* (Lacepede, 1801) <sup>2</sup>  
*Thalassoma janseni* (Bleeker, 1856) <sup>2, 5</sup>  
*Thalassoma hardwickii* (Bennett, 1830) <sup>2, 5</sup>  
*Thalassoma quinquevittatum* (Lay & Bennett, 1839) <sup>2, 5</sup>  
*Thalassoma lunare* (Linnaeus, 1758) <sup>1, 5, 7</sup>  
*Thalassoma purpureum* (Forsskal, 1775) <sup>1, 5</sup>  
*Thalassoma trilobatum* (Lacepede, 1801) <sup>1</sup>  
*Thalassoma amblycephalum* (Bleeker, 1856) <sup>22</sup>  
*Xyrichtys pavo* (Valenciennes, 1839) <sup>1, 5</sup>  
*Xyrichtys pentadactylus* (Linnaeus, 1758) <sup>1</sup>

**Family: Lactariidae***Lactarius lactarius* (Schneider, 1801) <sup>1</sup>**Family: Leiognathidae**

*Equulites elongatus* (Günther, 1874) <sup>1, 21</sup>  
*Equulites rivulatus* (Temminck & Schlegel, 1845) <sup>18</sup>  
*Equulites leuciscus* (Günther, 1860) <sup>1, 21</sup>  
*Eubleekeria splendens* (Cuvier, 1829) <sup>1, 21</sup>  
*Gazza achlamys* Jordan and Starks, 1917 <sup>1</sup>  
*Gazza minuta* (Bloch, 1797) <sup>1</sup>  
*Leiognathus berbisi* (Valenciennes, 1835) <sup>1</sup>  
*Leiognathus brevirostris* (Valenciennes, 1835) <sup>1</sup>  
*Leiognathus daura* (Cuvier, 1829) <sup>1</sup>  
*Leiognathus dussumieri* (Valenciennes, 1835) <sup>1</sup>  
*Leiognathus equulus* (Forsskal, 1775) <sup>1, 8</sup>  
*Leiognathus fasciatus* (Lacepede, 1803) <sup>1</sup>  
*Leiognathus lineolatus* (Valenciennes, 1835) <sup>1</sup>  
*Leiognathus longispinis* (Valenciennes, 1835) <sup>1, 21</sup>  
*Nuchequula blochii* (Valenciennes, 1835) <sup>1, 21</sup>  
*Photopectoralis bindus* (Valenciennes, 1835) <sup>1, 21</sup>  
*Secutor insidiator* (Bloch, 1797) <sup>1</sup>  
*Secutor ruconius* (Hamilton-Buchanan, 1822) <sup>1</sup>

**Family: Lethrinidae**

*Gnathodentex aureolineatus* (Lacepede, 1802) <sup>1, 20</sup>  
*Gymnocranius elongatus* Senta, 1973 <sup>1</sup>  
*Gymnocranius grandoculis* (Valenciennes, 1830) <sup>1</sup>  
*Gymnocranius griseus* (Schlegel, 1844) <sup>1</sup>  
*Lethrinus conchyliaius* (Smith, 1959) <sup>1</sup>  
*Lethrinus crocineus* Smith, 1959 <sup>1</sup>  
*Lethrinus harak* (Forsskal, 1775) <sup>1</sup>  
*Lethrinus lentjan* (Lacepede, 1802) <sup>1</sup>  
*Lethrinus mahsena* (Forsskal, 1775) <sup>1</sup>  
*Lethrinus microdon* Valenciennes, 1830 <sup>1</sup>

*Lethrinus nebulosus* (Forsskal, 1775)<sup>1,14</sup>  
*Lethrinus obsoletus* (Forsskal, 1775)<sup>1</sup>  
*Lethrinus olivaceus* Valenciennes, 1830<sup>1,14</sup>  
*Lethrinus ornatus* Valenciennes, 1830<sup>1</sup>  
*Lethrinus rubrioperculatus* Sato, 1978<sup>1</sup>  
*Lethrinus semicinctus* Valenciennes, 1830<sup>1</sup>  
*Lethrinus variegates* Valenciennes, 1830<sup>1</sup>  
*Lethrinus spp.*<sup>1</sup>  
*Monotaxis grandoculis* (Forsskal, 1775)<sup>1</sup>  
*Wattsia mossambica* (Smith, 1975)<sup>1</sup>

**Family: Lobotidae**

*Lobotes surinamensis* (Bloch, 1790)<sup>1</sup>

**Family: Lophiidae**

*Lophiodes mutilus* (Alcock, 1893)<sup>1</sup>  
*Lophiomus setigerus* (Vahl, 1797)<sup>1</sup>

**Family: Lutjanidae**

*Aphareus furca* (Lacepede, 1802)<sup>1</sup>  
*Aphareus rutilans* Cuvier, 1830<sup>1</sup>  
*Aprion virescens* Valenciennes, 1830<sup>1</sup>  
*Etelis carbunculus* Cuvier, 1828<sup>1</sup>  
*Etelis coruscans* Valenciennes, 1862<sup>1</sup>  
*Etelis radiosus* Anderson, 1981<sup>1</sup>  
*Lipocheilus carnolabrum* (Chan, 1970)<sup>1</sup>  
*Lutjanus argentimaculatus* (Forsskal, 1775)<sup>1,14</sup>  
*Lutjanus bengalensis* (Bloch, 1790)<sup>1</sup>  
*Lutjanus biguttatus* (Valenciennes, 1830)<sup>1</sup>  
*Lutjanus bohar* (Forsskal, 1775)<sup>1</sup>  
*Lutjanus guilcheri* Fourmanoir, 1959<sup>1</sup>  
*Lutjanus johnii* (Bloch, 1792)<sup>1</sup>  
*Lutjanus kasmira* (Forsskal, 1775)<sup>1,5</sup>  
*Lutjanus lemniscatus* (Valenciennes, 1830)<sup>1</sup>  
*Lutjanus lunulatus* (Park, 1797)<sup>1</sup>  
*Lutjanus lutjanus* Bloch, 1790<sup>1</sup>  
*Lutjanus madras* (Valenciennes, 1831)<sup>1</sup>  
*Lutjanus malabaricus* (Bloch and Schneider, 1801)<sup>1</sup>  
*Lutjanus monostigma* (Cuvier, 1828)<sup>1</sup>  
*Lutjanus quinquelineatus* (Bloch, 1790)<sup>1,5</sup>  
*Lutjanus rivulatus* (Cuvier, 1828)<sup>1,14</sup>  
*Lutjanus russellii* (Bleeker, 1849)<sup>1,21</sup>  
*Lutjanus sanguineus* (Cuvier, 1828)<sup>1</sup>  
*Lutjanus sebae* (Cuvier, 1828)<sup>1,5</sup>  
*Lutjanus vitta* (Quoy and Gaimard, 1824)<sup>1,20</sup>  
*Lutjanus decussatus* (Cuvier, 1828)<sup>1,5</sup>  
*Lutjanus ehrenbergii* (Peters, 1869)<sup>1</sup>  
*Lutjanus erythropterus* Bloch, 1790<sup>1</sup>  
*Lutjanus fulviflamma* (Forsskal, 1775)<sup>1,14</sup>  
*Lutjanus fulvus* (Schneider, 1801)<sup>1,2</sup>  
*Lutjanus gibbus* (Forsskal, 1775)<sup>1</sup>  
*Macolor niger* (Forsskal, 1775)<sup>1,5</sup>  
*Paracaesio sordida* Abe and Shinohara, 1962<sup>1,21</sup>  
*Paracaesio xanthura* Bleeker, 1869<sup>1,20</sup>

*Pinjalo pinjalo* (Bleeker, 1850)<sup>1</sup>  
*Pinjalo lewisi* (Randall, Allen and Anderson, 1987)<sup>1</sup>  
*Pristipomoides filamentosus* (Valenciennes, 1830)<sup>1</sup>  
*Pristipomoides multidentis* (Day, 1870)<sup>1</sup>  
*Pristipomoides sieboldii* (Bleeker, 1857)<sup>1</sup>  
*Pristipomoides typus* Bleeker, 1852<sup>1,14</sup>  
*Pristipomoides zonatus* (Valenciennes, 1830)<sup>1</sup>

**Family: Macrouridae**

*Caelorinchus flabellispinnis* (Alcock 1894)<sup>18</sup>  
*Coryphaenoides woodmasoni* (Alcock, 1890)<sup>1</sup>  
*Hymenocephalus heterolepis* (Alcock, 1889)<sup>1</sup>

**Family: Malacanthidae**

*Malacanthus brevirostris* Guichenot, 1848<sup>5</sup>  
*Malacanthus latovittatus* (Lacepede, 1802)<sup>1,5</sup>

**Family: Megalopidae**

*Megalops cyprinoides* (Broussonet, 1782)<sup>1</sup>

**Family: Menidae**

*Mene maculata* (Bloch and Schneider, 1801)<sup>1</sup>

**Family: Ptereleotridae**

*Nemateleotris decora* Randall & Allen, 1973<sup>5</sup>  
*Nemateleotris magnifica* Fowler, 1938<sup>5</sup>  
*Ptereleotris evides* (Jordan & Hubbs, 1925)<sup>5</sup>  
*Ptereleotris hanae* (Jordan & Snyder, 1901)<sup>5</sup>  
*Ptereleotris heteroptera* (Bleeker, 1855)<sup>5</sup>  
*Ptereleotris microlepis* (Bleeker, 1856)<sup>5</sup>  
*Ptereleotris zebra* (Fowler, 1938)<sup>5</sup>  
*Ptereleotris monoptera* Randall & Hoese, 1985<sup>22</sup>

**Family: Molidae**

*Mola mola* (Linnaeus, 1841)<sup>1</sup>  
*Ranzania laevis* (Pennant, 1776)<sup>1</sup>

**Family: Monacanthidae**

*Acreichthys tomentosus* (Linnaeus, 1758)<sup>1</sup>  
*Aluterus monoceros* (Linnaeus, 1758)<sup>1</sup>  
*Aluterus scriptus* (Osbeck, 1765)<sup>1</sup>  
*Amanses scopas* (Cuvier, 1829)<sup>2,5</sup>  
*Anacanthus barbatus* (Linnaeus, 1758)<sup>1</sup>  
*Cantherhines pardalis* (Ruppell, 1835)<sup>1</sup>  
*Oxymonacanthus longirostris* (Bloch & Schneider, 1801)<sup>5</sup>  
*Paramonacanthus choirocephalus* (Bleeker, 1852)<sup>1</sup>  
*Paramonacanthus nipponensis* (Kamohara, 1939)<sup>1</sup>  
*Pervagor janthinosoma* (Bleeker, 1854)<sup>5</sup>  
*Stephanolepis diaspros* Fraser-Brunner, 1940<sup>1</sup>

**Family: Monocentridae**

*Monocentris japonica* (Houttuyn, 1782)<sup>1,21</sup>

**Family: Monodactylidae**

*Monodactylus argenteus* (Linnaeus, 1758)<sup>1,5</sup>  
*Monodactylus falciformis* Lacepede, 1801<sup>1</sup>  
*Monodactylus kottelati* Pethiyagoda, 1991<sup>1</sup>

**Family: Moridae**

*Physiculus argyropastus* Alcock, 1893<sup>1</sup>

**Family: Moringuidae**

*Moringua bicolor* Kaup, 1856<sup>1</sup>

**Family: Mugilidae**

*Liza macrolepis* (Smith, 1849)<sup>1</sup>  
*Liza melinoptera* (Valenciennes, 1836)<sup>1</sup>  
*Liza parsia* (Hamilton-Buchanan, 1822)<sup>1</sup>  
*Liza subviridis* (Valenciennes, 1836)<sup>1</sup>  
*Liza tade* (Forsskal, 1775)<sup>1,21</sup>  
*Liza vaigiensis* (Quoy and Gaimard, 1824)<sup>1</sup>  
*Mugil cephalus* Linnaeus, 1758<sup>1</sup>  
*Oedalechilus labiosus* (Valenciennes, 1836)<sup>1</sup>  
*Sicamugil cascasia* (Hamilton, 1822)<sup>1,20</sup>  
*Valamugil buchani* (Bleeker, 1853)<sup>1</sup>  
*Valamugil cunnesius* (Valenciennes, 1836)<sup>1</sup>  
*Valamugil seheli* (Forsskal, 1775)<sup>1</sup>  
*Valamugil speigleri* (Bleeker, 1858)<sup>1</sup>

**Family: Mullidae**

*Mulloidichthys flavolineatus* (Lacepede, 1802)<sup>1,5</sup>  
*Mulloidichthys vanicolensis* (Valenciennes, 1831)<sup>1</sup>  
*Mulloidichthys mimicus* Randall & Gueze, 1980<sup>22</sup>  
*Parupeneus barberinus* (Lacepede, 1801)<sup>1</sup>  
*Parupeneus bifasciatus* (Lacepede, 1801)<sup>1,5</sup>  
*Parupeneus heptacanthus* (Lacepede, 1802)<sup>1,21</sup>  
*Parupeneus cyclostomus* (Lacepede, 1801)<sup>1,5</sup>  
*Parupeneus indicus* (Shaw, 1803)<sup>1,5</sup>  
*Parupeneus macronema* (Lacepede, 1801)<sup>1,5</sup>  
*Parupeneus rubescens* (Lacepede, 1801)<sup>1</sup>  
*Upeneus japonicus* (Houttuyn, 1782)<sup>1,21</sup>  
*Upeneus moluccensis* (Bleeker, 1855)<sup>1</sup>  
*Upeneus sulphureus* Cuvier, 1829<sup>1</sup>  
*Upeneus sundaicus* (Bleeker, 1855)<sup>1</sup>  
*Upeneus taeniopterus* Cuvier, 1829<sup>1</sup>  
*Upeneus tragula* Richardson, 1845<sup>1</sup>  
*Upeneus vittatus* (Forsskal, 1775)<sup>1</sup>

**Family: Muraenesocidae**

*Congresox talabon* (Cuvier, 1829)<sup>1</sup>  
*Congresox talabonoides* (Bleeker, 1853)<sup>1</sup>  
*Muraenesox bagio* (Hamilton-Buchanan, 1822)<sup>1</sup>  
*Muraenesox cinereus* (Forsskal, 1775)<sup>1</sup>  
*Serrivomer beanii* Gill & Ryder, 1883<sup>1,21</sup>

**Family: Muraenidae**

*Echidna delicatula* (Kaup, 1856)<sup>1</sup>

*Echidna nebulosa* (Ahl, 1789)<sup>1,5,21,23</sup>  
*Echidna xanthospilos* (Bleeker, 1859)<sup>1,21</sup>  
*Echidna polyzona* (Richardson, 1845)<sup>22</sup>  
*Enchelycore bayeri* (Schultz, 1953)<sup>22</sup>  
*Gymnomuraena zebra* (Shaw, 1797)<sup>5</sup>  
*Gymnothorax favagineus* (Bloch and Schneider, 1801)<sup>1,5</sup>  
*Gymnothorax fimbriatus* (Bennett, 1831)<sup>1</sup>  
*Gymnothorax meleagris* (Shaw and Nodder, 1795)<sup>1</sup>  
*Gymnothorax pseudothyrsoides* (Bleeker, 1852)<sup>1</sup>  
*Gymnothorax punctatus* (Bloch and Schneider, 1801)<sup>1,22</sup>  
*Gymnothorax rueppellii* (McClelland, 1844)<sup>1,21</sup>  
*Gymnothorax undulatus* (Lacepede, 1803)<sup>1,23</sup>  
*Gymnothorax javanicus* (Bleeker, 1859)<sup>2,23</sup>  
*Gymnothorax breedeni* McCosker & Randall, 1977<sup>22</sup>  
*Gymnothorax buroensis* (Bleeker, 1857)<sup>22</sup>  
*Gymnothorax chilospilus* (Bleeker, 1856)<sup>22</sup>  
*Gymnothorax enigmaticus* McCosker & Randall, 1982<sup>22</sup>  
*Gymnothorax flavimarginatus* (Rüppell, 1830)<sup>22</sup>  
*Gymnothorax herrei* Beebe & Tee-Van, 1933<sup>22</sup>  
*Gymnothorax melanospilus* (Bennett,<sup>22</sup>  
*Gymnothorax permistus* (Smith, 1962)<sup>22</sup>  
*Gymnothorax pindae* Smith, 1962<sup>22</sup>  
*Gymnothorax polyuranodon* (Bleeker, 1853)<sup>22</sup>  
*Gymnothorax zonipectis* Seale, 1906<sup>22</sup>  
*Gymnothorax pictus* (Ahl, 1789)<sup>1,21</sup>  
*Gymnothorax thyrsoides* (Richardson, 1845)<sup>1,20</sup>  
*Gymnothorax griseus* (Lacepede, 1803)<sup>21,22</sup>  
*Pseudechidna brummeri* (Bleeker, 1859)<sup>1,21</sup>  
*Rhinomuraena quaesita* Garman, 1888<sup>5</sup>  
*Strophidon sathete* (Hamilton, 1822)<sup>1,21</sup>  
*Uropterygius concolor* (Ruppell, 1835)<sup>1</sup>  
*Uropterygius marmoratus* (Lacepede, 1803)<sup>1</sup>

**Family: Myctophidae**

*Diaphus knappi* Nafpaktitis, 1978<sup>18,21</sup>  
*Diaphus splendidus* (Brauer, 1904)<sup>1,21</sup>  
*Lampanyctus macropterus* (Brauer, 1904)<sup>18</sup>

**Family: Nemipteridae**

*Nemipterus bipunctatus* (Ehrenberg, 1830)<sup>1</sup>  
*Nemipterus furcosus* (Valenciennes, 1831)<sup>1</sup>  
*Nemipterus japonicus* (Bloch, 1791)<sup>1</sup>  
*Nemipterus nematophorus* (Bleeker, 1853)<sup>1</sup>  
*Nemipterus peronii* (Valenciennes, 1830)<sup>1</sup>  
*Nemipterus randalli* Russell, 1986<sup>1</sup>  
*Nemipterus zysron* (Bleeker, 1856-57)<sup>1</sup>  
*Nemipterus hexodon* (Quoy & Gaimard, 1824)<sup>18</sup>  
*Parascalopsis aspinosa* (Rao and Rao, 1981)<sup>1</sup>  
*Parascalopsis eriomma* (Jordan and Richardson, 1909)<sup>1</sup>  
*Parascalopsis inermis* (Schlegel, 1843)<sup>1</sup>  
*Scolopsis bilineata* (Bloch, 1793)<sup>1,20</sup>  
*Scolopsis bimaculatus* Ruppell, 1828<sup>1,21</sup>  
*Scolopsis taeniatus* (Ehrenberg, 1830)<sup>1,21</sup>  
*Scolopsis vosmeri* (Bloch, 1792)<sup>1,21</sup>

**Family: Neoscopelidae**

*Neoscopelus macrolepidotus* Johnson, 1863<sup>18</sup>

**Family: Nomeidae**

*Cubiceps whiteleggii* (Waite, 1894)<sup>18, 21</sup>

**Family: Ogcocephalidae**

*Coelophrys micropa* (Alcock, 1891)<sup>1, 21</sup>

*Haliuetaea stellata* (Vahl, 1797)<sup>1</sup>

**Family: Ophichthidae**

*Bascanichthys kirkii* (Günther, 1870)<sup>19, 21</sup>

*Callechelys marmorata* (Bleeker, 1853)<sup>19, 21</sup>

*Leiuranus semicinctus* (Lay & Bennett, 1839)<sup>19, 21</sup>

*Muraenichthys gymnopterus* (Bleeker, 1853)<sup>19</sup>

*Myrichthys colubrinus* (Boddaert, 1781)<sup>5</sup>

*Myrichthys maculosus* (Cuvier, 1816)<sup>5</sup>

*Ophichthus rutidoderma* (Bleeker, 1853)<sup>19, 21</sup>

*Ophichthus apicalis* (Anonymous [Bennett], 1830)<sup>19, 20</sup>

*Ophichthus altipennis* (Kaup, 1856)<sup>19, 20</sup>

*Ophichthus polyophthalmus* Bleeker, 1864<sup>19, 21</sup>

*Pisodonophis cancrivorus* (Richardson, 1848)<sup>19, 20</sup>

**Family: Ophidiidae**

*Hepthocara simum* (Alcock, 1892)<sup>1</sup>

*Monomitopus conjugator* (Alcock, 1896)<sup>1</sup>

*Hypopleuron caninum* Smith & Radcliffe, 1913<sup>18, 20</sup>

**Family: Ostraciidae**

*Lactoria cornuta* (Linnaeus, 1758)<sup>5</sup>

*Lactoria fornasini* (Biancorni, 1846)<sup>19</sup>

*Ostracion cubicus* Linnaeus, 1758<sup>5</sup>

*Ostracion meleagris* Shaw, 1796<sup>5, 7, 19</sup>

*Ostracion tuberculatum* Linnaeus, 1758<sup>7</sup>

*Tetrosomus gibbosus* (Linnaeus, 1758)<sup>5</sup>

**Family: Paralepididae**

*Lestidium nudum* Gilbert, 1905<sup>18</sup>

**Family: Paralichthyidae**

*Pseudorhombus arsius* (Hamilton-Buchanan, 1822)<sup>1</sup>

*Pseudorhombus elevatus* Ogilby, 1912<sup>1</sup>

*Pseudorhombus javanicus* (Bleeker, 1853)<sup>1</sup>

*Pseudorhombus malayanus* Bleeker, 1866<sup>1</sup>

*Pseudorhombus triocellatus* (Schneider, 1801)<sup>1</sup>

**Family: Pempheridae**

*Pempheris oualensis* Cuvier, 1831<sup>2</sup>

*Pempheris schwenkii* Bleeker, 1855<sup>2</sup>

*Pempheris vanicolensis* Cuvier, 1831<sup>22</sup>

*Parapriacanthus spp.*<sup>2</sup>

**Family: Percophidae**

*Bembrops caudimacula* Steindachner, 1876<sup>1, 18, 21</sup>

**Family: Peristediidae**

*Peristedion riversandersoni* Alcock, 1894<sup>19</sup>

*Peristedion halyi* (Day, 1888)<sup>19</sup>

*Satyrichthys adeni* (Lloyd, 1907)<sup>19, 21</sup>

**Family: Pinguipedidae**

*Parapercis clathrata* Ogilby, 1910<sup>5</sup>

*Parapercis cylindrical* (Bloch, 1792)<sup>5</sup>

*Parapercis hexophthalma* (Ehrenberg, 1829)<sup>1, 5</sup>

*Parapercis millepunctata* (Gunther, 1860)<sup>1, 5</sup>

*Parapercis pulchella* (Schlegel, 1843)<sup>1</sup>

*Parapercis punctata* (Cuvier, 1829)<sup>1</sup>

*Parapercis robinsoni* (Fowler, 1932)<sup>1</sup>

*Parapercis signata* Randall, 1984<sup>5</sup>

**Family: Platycephalidae**

*Cociella crocodile* (Tilesius, 1812)<sup>1</sup>

*Grammoplites scaber* (Linnaeus, 1758)<sup>1</sup>

*Grammoplites suppositus* (Troschel, 1840)<sup>1</sup>

*Inegocia japonica* (Tilesius, 1812)<sup>1</sup>

*Platycephalus indicus* (Linnaeus, 1758)<sup>1</sup>

*Rogadius pristiger* (Cuvier, 1829)<sup>1</sup>

*Rogadius serratus* (Cuvier, 1829)<sup>1</sup>

*Sorsogona tuberculata* (Cuvier, 1829)<sup>1</sup>

*Suggrundus macracanthus* (Bleeker, 1869)<sup>1</sup>

**Family: Plesiopidae**

*Plesiops nigricans* (Ruppell, 1828)<sup>1</sup>

**Family: Pleuronectidae**

*Poecilopsetta colorata* Gunther, 1880<sup>1</sup>

*Poecilopsetta praelonga* Alcock, 1894<sup>1</sup>

*Samaris cristatus* Gray, 1831<sup>1</sup>

*Samariscus longimanus* Norman, 1927<sup>1</sup>

**Family: Plotosidae**

*Plotosus canius* Hamilton-Buchanan, 1822<sup>1</sup>

*Plotosus limbatus* Valenciennes, 1840<sup>1</sup>

*Plotosus lineatus* (Thunberg, 1787)<sup>1, 5</sup>

**Family: Polymixiidae**

*Polymixia japonica* Günther, 1877<sup>18, 21</sup>

**Family: Polynemidae**

*Eleutheronema tetradactylum* (Shaw, 1804)<sup>1</sup>

*Filimanus similis* Feltes, 1991<sup>1</sup>

*Filimanus xanthonema* (Valenciennes, 1831)<sup>1</sup>

*Leptomelanosoma indicum* (Shaw, 1804)<sup>1, 21</sup>

*Polydactylus sexfilis* (Valenciennes, 1831)<sup>1, 21</sup>

*Polydactylus sextarius* (Bloch & Schneider, 1801)<sup>1, 21</sup>

*Polynemus plebeius* Broussonet, 1782<sup>1</sup>  
*Polynemus paradiseus* (Linnaeus, 1758)<sup>1</sup>

**Family: Pomacentridae**

*Abudefduf septemfasciatus* (Cuvier, 1830)<sup>2</sup>  
*Abudefduf sordidus* (Forsskål, 1775)<sup>2</sup>  
*Abudefduf vaigiensis* (Quoy & Gaimard, 1825)<sup>2, 5</sup>  
*Abudefduf saxatilis* (Linnaeus, 1758)<sup>7</sup>  
*Abudefduf notatus* (Day, 1870)<sup>22</sup>  
*Abudefduf sexfasciatus* (Lacepede, 1801)<sup>22, 23</sup>  
*Abudefduf bengalensis* (Bloch, 1787)<sup>22</sup>  
*Amblyglyphidodon leucogaster* (Bleeker, 1847)<sup>22</sup>  
*Amphiprion clarkii* (Bennett, 1830)<sup>5, 12</sup>  
*Amphiprion nigripes* Regan, 1908<sup>5</sup>  
*Amphiprion sebae* Bleeker, 1853<sup>5</sup>  
*Amphiprion akallopisos* Bleeker, 1853<sup>22</sup>  
*Amphiprion chrysogaster* Cuvier, 1830<sup>22</sup>  
*Centropyge bispinosus* (Gunther, 1860)<sup>5, 9</sup>  
*Chromis atripectoralis* Welander & Schultz, 1951<sup>5</sup>  
*Chromis dimidiata* (Klunzinger, 1871)<sup>5</sup>  
*Chromis viridis* (Cuvier, 1830)<sup>5</sup>  
*Chromis caeruleus* (Cuvier, 1830)<sup>7</sup>  
*Chromis lepidolepis* Bleeker, 1877<sup>22</sup>  
*Chromis nigrura* Smith, 1960<sup>22</sup>  
*Chromis ternatensis* (Bleeker, 1856)<sup>22</sup>  
*Chromis opercularis* (Günther, 1867)<sup>22</sup>  
*Chromis weberi* Fowler & Bean, 1928<sup>22</sup>  
*Chrysiptera brownriggii* (Bennett, 1828)<sup>2, 5</sup>  
*Chrysiptera glauca* (Cuvier, 1830)<sup>2</sup>  
*Chrysiptera biocellata* (Quoy & Gaimard, 1825)<sup>2, 5</sup>  
*Chrysiptera spp.*<sup>2</sup>  
*Chrysiptera kuiteri* (Allan and Rajasuriya, 1995)<sup>5</sup>  
*Chrysiptera unimaculata* (Cuvier, 1830)<sup>22</sup>  
*Dascyllus aruanus* (Linnaeus, 1758)<sup>5</sup>  
*Dascyllus carneus* Fischer, 1885<sup>5</sup>  
*Dascyllus trimaculatus* (Rüppell, 1829)<sup>2, 5, 7</sup>  
*Lepidozygus tapeinosoma* (Bleeker, 1856)<sup>22</sup>  
*Neoglyphidodon bonang* (Bleeker, 1852)<sup>2</sup>  
*Neoglyphidodon melas* (Cuvier, 1830)<sup>22</sup>  
*Neopomacentrus azyron* (Bleeker, 1877)<sup>2, 5</sup>  
*Neopomacentrus cyanomos* (Bleeker, 1856)<sup>5</sup>  
*Neopomacentrus taeniurus* (Bleeker, 1856)<sup>5</sup>  
*Plectroglyphidodon dickii* (Liénard, 1839)<sup>2, 23</sup>  
*Plectroglyphidodon lacrymatus* (Quoy & Gaimard, 1825)<sup>2, 23</sup>  
*Plectroglyphidodon johnstonianus* Fowler & Ball, 1924<sup>22</sup>  
*Plectroglyphidodon imparipennis* (Vaillant & Sauvage, 1875)<sup>22</sup>  
*Plectroglyphidodon leucozonus* (Bleeker, 1859)<sup>22</sup>  
*Pomacentrus chrysurus* Cuvier, 1830<sup>2</sup>  
*Pomacentrus indicus* Allen, 1991<sup>2</sup>  
*Pomacentrus trilineatus* Cuvier, 1830<sup>2</sup>

*Pomacentrus proteus* Allen, 1991<sup>2</sup>  
*Pomacentrus similis* Allen, 1991<sup>5, 12</sup>  
*Pomacentrus melanochir* Bleeker, 1877<sup>7</sup>  
*Pomacentrus caeruleus* Quoy & Gaimard, 1825<sup>22</sup>  
*Pomacentrus coelestis* Jordan & Starks, 1901<sup>22</sup>  
*Pomacentrus pavo* (Bloch, 1787)<sup>22</sup>  
*Pomacentrus philippinus* Evermann & Seale, 1907<sup>22</sup>  
*Pomacentrus tripunctatus* Cuvier, 1830<sup>22</sup>  
*Pygoplites diacanthus* (Boddaert, 1772)<sup>5, 9</sup>  
*Stegastes albifasciatus* (Schlegel & Müller, 1839)<sup>22</sup>  
*Stegastes fasciolatus* (Ogilby, 1889)<sup>22, 23</sup>  
*Stegastes lividus* (Forster, 1801)<sup>22</sup>  
*Stegastes nigricans* (Lacepède, 1802)<sup>22</sup>  
*Stegastes obreptus* (Whitley, 1948)<sup>22</sup>

**Family: Pomacanthidae**

*Apolemichthys xanthurus* (Bennett, 1833)<sup>3, 5</sup>  
*Apolemichthys trimaculatus* (Cuvier, 1831)<sup>9</sup>  
*Centropyge flavipectoralis* (Randall and Klausewitz, 1977)<sup>3, 5, 9</sup>  
*Centropyge eibli* Klausewitz, 1963<sup>3, 5</sup>  
*Centropyge multispinis* (Playfair, 1867)<sup>3</sup>  
*Centropyge bispinosus* (Gunther, 1860)<sup>5, 9</sup>  
*Pomacanthus imperator* (Bloch, 1787)<sup>3, 5</sup>  
*Pomacanthus annularis* (Bloch, 1787)<sup>3, 5, 7, 23</sup>  
*Pomacanthus semicirculatus* (Cuvier, 1831)<sup>3, 5, 7</sup>  
*Pygoplites diacanthus* (Boddaert, 1772)<sup>5, 9</sup>

**Family: Priacanthidae**

*Cookeolus japonicus* (Cuvier, 1829)<sup>1</sup>  
*Heteropriacanthus cruentatus* (Lacepede, 1801)<sup>1</sup>  
*Priacanthus hamrur* (Forsskål, 1775)<sup>1</sup>  
*Priacanthus tayenus* Richardson, 1846<sup>1</sup>

**Family: Pristigasteridae**

*Ilisha elongata* (Bennett, 1830)<sup>1</sup>  
*Ilisha filigera* (Valenciennes, 1847)<sup>1</sup>  
*Ilisha kampeni* (Weber and de Beaufort, 1913)<sup>1</sup>  
*Ilisha megaloptera* (Swainson, 1839)<sup>1</sup>  
*Ilisha melastoma* (Schneider, 1801)<sup>1</sup>  
*Ilisha obfuscate* Wongratana, 1983<sup>1</sup>  
*Ilisha sirishai* Seshagiri Rao, 1975<sup>1</sup>  
*Ilisha striatula* Wongratana, 1983<sup>1</sup>  
*Opisthopterus tardoore* (Cuvier, 1829)<sup>1</sup>  
*Pellona dayi* Wongratana, 1983<sup>1</sup>  
*Pellona ditchela* (Valenciennes, 1847)<sup>1</sup>  
*Raconda russeliana* Gray, 1831<sup>1</sup>

**Family: Psettodidae**

*Psettodes erumei* (Schneider, 1801)<sup>1</sup>



**Family: Pseudochromidae**

*Chlidichthys inornatus* Lubbock, 1976<sup>5</sup>  
*Pseudochromis dilectus* Lubbock, 1976<sup>5</sup>  
*Pseudochromis fuscus* Müller & Troschel, 1849<sup>5</sup>

**Family: Rachycentridae**

*Rachycentron canadum* (Linnaeus, 1766)<sup>1</sup>

**Family: Scaridae**

*Calotomus carolinus* (Valenciennes, 1840)<sup>1</sup>  
*Calotomus spinidens* (Quoy and Gaimard, 1824)<sup>1</sup>  
*Cetoscarus bicolor* (Rüppell, 1829)<sup>5</sup>  
*Chlorurus rhakoura* Randall & Anderson, 1997<sup>2</sup>  
*Chlorurus atrilunula* (Randall & Bruce, 1983)<sup>5</sup>  
*Chlorurus oedema* (Snyder, 1909)<sup>1,21</sup>  
*Chlorurus sordidus* (Forsskål, 1775)<sup>1,21</sup>  
*Chlorurus strongylocephalus* (Bleeker, 1854)<sup>21,22</sup>  
*Hipposcarus harid* (Forsskal, 1775)<sup>1</sup>  
*Leptoscarus vaigiensis* (Quoy and Gaimard, 1824)<sup>1</sup>  
*Scarus ghobban* Forsskal, 1775<sup>1</sup>  
*Scarus niger* Forsskal, 1775<sup>1</sup>  
*Scarus psittacus* Forsskal, 1775<sup>1</sup>  
*Scarus quoyi* Valenciennes, 1840<sup>1</sup>  
*Scarus rivulatus* Valenciennes, 1840<sup>1</sup>  
*Scarus rubroviolaceus* Bleeker, 1847<sup>1</sup>  
*Scarus russellii* Valenciennes, 1840<sup>1</sup>  
*Scarus frenatus* Lacepède, 1802<sup>22</sup>  
*Scarus caudofasciatus* (Günther, 1862)<sup>22</sup>

**Family: Scatophagidae**

*Scatophagus argus* (Bloch, 1758)<sup>1</sup>

**Family: Sciaenidae**

*Argyrosomus amoyensis* (Bleeker, 1863)<sup>1</sup>  
*Chrysochir aureus* (Richardson, 1846)<sup>1</sup>  
*Daysciaena albida* (Cuvier, 1830)<sup>1,20,21</sup>  
*Dendrophysa russellii* (Cuvier, 1830)<sup>1,21</sup>  
*Johnius amblycephalus* (Bleeker, 1855)<sup>1</sup>  
*Johnius belangerii* (Cuvier, 1830)<sup>1</sup>  
*Johnius carouna* (Cuvier, 1830)<sup>1</sup>  
*Johnius carutta* (Bloch, 1793)<sup>1</sup>  
*Johnius elongatus* Mohan, 1976<sup>1,20</sup>  
*Johnius macropterus* (Bleeker, 1853)<sup>1</sup>  
*Johnius macrorhynchus* (Mohan, 1976)<sup>1</sup>  
*Johnius mannarensis* (Mohan, 1969)<sup>1</sup>  
*Johnius trewavasae* Sasaki, 1992<sup>1,20</sup>  
*Johnius borneensis* (Bleeker, 1851)<sup>1,20,21</sup>  
*Kathala axillaris* (Cuvier, 1830)<sup>1</sup>  
*Nibea maculata* (Schneider, 1801)<sup>1</sup>  
*Nibea soldado* (Lacepede, 1802)<sup>1</sup>  
*Otolithes cuvieri* Trewavas, 1947<sup>1</sup>  
*Otolithes ruber* (Schneider, 1801)<sup>1</sup>  
*Otolithoides biauritus* (Cantor, 1850)<sup>1</sup>  
*Panna microdon* (Bleeker, 1849)<sup>1</sup>  
*Pennahia anea* (Bloch, 1793)<sup>1</sup>

*Protonibea diacanthus* (Lacepede, 1802)<sup>1</sup>  
*Pterotolithus maculatus* (Kuhl and Van Hassel, 1830)<sup>1</sup>

**Family: Scombridae**

*Acanthocybium solandri* (Cuvier, 1831)<sup>1,6,13</sup>  
*Auxis rochei* (Risso, 1810)<sup>1,6,13,14</sup>  
*Auxis thazard* (Lacepede, 1800)<sup>1,6,13,14</sup>  
*Euthynnus affinis* (Cantor, 1849)<sup>1,6,13,14</sup>  
*Gymnosarda unicolor* (Ruppell, 1838)<sup>1</sup>  
*Katsuwonus pelamis* (Linnaeus, 1758)<sup>1,6,13,14</sup>  
*Rastrelliger kanagurta* (Cuvier, 1817)<sup>1,20</sup>  
*Sarda orientalis* (Temminck and Schlegel, 1844)<sup>1</sup>  
*Scomberomorus commersoni* (Lacepede, 1801)<sup>1,6,13,14</sup>  
*Scomberomorus guttatus* (Bloch and Schneider, 1801)<sup>1,13</sup>  
*Scomberomorus koreanus* (Kishinouye, 1915)<sup>1</sup>  
*Scomberomorus lineolatus* (Cuvier, 1831)<sup>1,13</sup>  
*Thunnus albacares* (Bonnaterre, 1788)<sup>1,6,13,14</sup>  
*Thunnus abesus* (Lowe, 1839)<sup>1,6,13,14</sup>  
*Thunnus tonggol* (Bleeker, 1851)<sup>1,13</sup>

**Family: Howellidae**

*Howella sherborni* (Norman, 1930)<sup>18</sup>

**Family: Scorpaenidae**

*Apistus carinatus* (Bloch & Schneider, 1801)<sup>21,22</sup>  
*Choridactylus multibarbus* Richardson, 1848<sup>22</sup>  
*Dendrochirus biocellatus* (Fowler, 1938)<sup>5</sup>  
*Dendrochirus brachypterus* (Cuvier, 1829)<sup>5</sup>  
*Dendrochirus zebra* (Cuvier, 1829)<sup>5</sup>  
*Inimicus filamentosus* (Cuvier, 1829)<sup>22</sup>  
*Minous monodactylus* (Bloch & Schneider, 1801)<sup>22</sup>  
*Pterois antennata* (Bloch, 1787)<sup>5</sup>  
*Pterois russelli* Bennett, 1831<sup>5</sup>  
*Pterois volitans* (Linnaeus, 1758)<sup>2,5,7,23</sup>  
*Pterois radiata* (Cuvier, 1829)<sup>5,9</sup>  
*Pterois miles* (Bennett, 1828)<sup>7</sup>  
*Pterois mombasae* (Smith, 1957)<sup>22</sup>  
*Parascorpaena picta* (Cuvier, 1829)<sup>2</sup>  
*Parascorpaena bleekeri* (Day, 1878)<sup>22</sup>  
*Pseudovespicula dracaena* (Cuvier, 1829)<sup>20,22</sup>  
*Rhinopias frondosa* (Gunther, 1891)<sup>22</sup>  
*Rhinopias eschmeyeri* Condé, 1977<sup>22</sup>  
*Scorpaenodes parvipinnis* (Garrett, 1864)<sup>5</sup>  
*Scorpaenodes guamensis* (Quoy & Gaimard, 1824)<sup>22</sup>  
*Scorpaenodes parvipinnis* (Garrett, 1864)<sup>21,22</sup>  
*Scorpaenopsis diabolus* (Cuvier, 1829)<sup>22</sup>  
*Scorpaenopsis gibbosa* (Bloch & Schneider, 1801)<sup>22</sup>  
*Scorpaenopsis venosa* (Cuvier, 1829)<sup>22</sup>  
*Scorpaenopsis oxycephala* (Bleeker, 1849)<sup>22</sup>  
*Setarchus longiceps* (Gunther)<sup>22</sup>  
*Sebastapistes cyanostigma* (Bleeker, 1856)<sup>22</sup>  
*Sebastapistes erostris* (Alcock, 1896)<sup>22</sup>  
*Sebastapistes strongia* (Cuvier, 1829)<sup>22</sup>  
*Synanceia verrucosa* Bloch & Schneider, 1801<sup>22</sup>

*Synanceia horrida* (Linnaeus, 1766)<sup>22</sup>  
*Taenianotus triacanthus* Lacepede, 1802<sup>22</sup>  
*Tetraroge niger* (Cuvier, 1829)<sup>20, 22</sup>

#### Family: Serranidae

*Aethaloperca rogae* (Forsskal, 1775)<sup>1, 21</sup>  
*Cephalopholis argus* (Schneider, 1801)<sup>1, 5, 7, 23</sup>  
*Cephalopholis aurantia* (Schneider, 1801)<sup>1</sup>  
*Cephalopholis boenack* (Bloch, 1790)<sup>1, 5, 7</sup>  
*Cephalopholis formosa* (Shaw, 1804)<sup>1, 5</sup>  
*Cephalopholis leopardus* (Lacepede, 1801)<sup>1</sup>  
*Cephalopholis minata* (Forsskal, 1775)<sup>1, 5, 14</sup>  
*Cephalopholis sexmaculata* (Ruppell, 1828)<sup>1, 5</sup>  
*Cephalopholis sonnerati* (Valenciennes, 1825)<sup>1, 2</sup>  
*Cephalopholis urodeta* (Forster, 1801)<sup>1</sup>  
*Cromileptes altivelis* (Valenciennes, 1828)<sup>1</sup>  
*Diploprion bifasciatum* Cuvier, 1828<sup>1</sup>  
*Epinephelus areolatus* (Forsskal, 1775)<sup>1</sup>  
*Epinephelus bleekeri* (Vaillant, 1877)<sup>1</sup>  
*Epinephelus caeruleopunctatus* (Bloch, 1790)<sup>1, 5</sup>  
*Epinephelus chlorostigma* (Valenciennes, 1828)<sup>1</sup>  
*Epinephelus coioides* (Hamilton, 1822)<sup>1</sup>  
*Epinephelus diacanthus* (Valenciennes, 1828)<sup>1</sup>  
*Epinephelus erythrurus* (Valenciennes, 1828)<sup>1</sup>  
*Epinephelus fasciatus* (Forsskal, 1775)<sup>1</sup>  
*Epinephelus faveatus* (Valenciennes, 1828)<sup>1</sup>  
*Epinephelus flavocaeruleus* (Lacepede, 1802)<sup>1, 5, 9</sup>  
*Epinephelus fuscoguttatus* (Forsskal, 1775)<sup>1</sup>  
*Epinephelus hexagonatus* (Schneider, 1801)<sup>1</sup>  
*Epinephelus lanceolatus* (Bloch, 1790)<sup>1, 5, 9</sup>  
*Epinephelus latifasciatus* (Temminck and Schlegel, 1842)<sup>1</sup>  
*Epinephelus longispinis* (Kner, 1865)<sup>1</sup>  
*Epinephelus malabaricus* (Bloch and Schneider, 1801)<sup>1, 14</sup>  
*Epinephelus merra* Bloch, 1793<sup>1, 23</sup>  
*Epinephelus poecilonotus* (Temminck and Schlegel, 1842)<sup>1</sup>  
*Epinephelus radiatus* (Day, 1867)<sup>1, 20</sup>  
*Epinephelus tauvina* (Forsskal, 1775)<sup>1</sup>  
*Epinephelus tukula* Morgans, 1959<sup>1</sup>  
*Epinephelus undulosus* (Quoy and Gaimard, 1824)<sup>1, 14</sup>  
*Epinephelus rivulatus* (Valenciennes, 1830)<sup>22</sup>  
*Epinephelus spilotoceps* Schultz, 1953<sup>22</sup>  
*Grammistes sexlineatus* (Thunberg, 1792)<sup>1, 5</sup>  
*Plectropomus laevis* (Lacepede, 1801)<sup>1, 5</sup>  
*Plectropomus pessuliferus* (Fowler, 1904)<sup>1</sup>  
*Pogonoperca punctata* (Valenciennes, 1830)<sup>5</sup>  
*Pseudanthias cooperi* (Regan, 1902)<sup>5</sup>  
*Pseudanthias evansi* (Smith, 1954)<sup>5</sup>  
*Pseudanthias hypselosoma* Bleeker, 1878<sup>5</sup>  
*Pseudanthias ignites* (Randall & Lubbock, 1981)<sup>5</sup>  
*Pseudanthias squamipinnis* (Peters, 1855)<sup>5</sup>  
*Rabaulichthys stigmaticus* Randall & Pyle, 1989<sup>5</sup>  
*Variola albimarginata* (Baissac, 1952)<sup>1, 5</sup>  
*Variola louti* (Forsskal, 1775)<sup>1, 5</sup>

#### Family Siganidae

*Siganus canaliculatus* (Park, 1797)<sup>1</sup>  
*Siganus javus* (Linnaeus, 1766)<sup>1</sup>  
*Siganus lineatus* (Valenciennes, 1835)<sup>1</sup>  
*Siganus spinus* (Linnaeus, 1758)<sup>1</sup>  
*Siganus stellatus* (Forsskal, 1775)<sup>1</sup>  
*Siganus vermiculatus* (Valenciennes, 1835)<sup>1</sup>  
*Siganus virgatus* (Valenciennes, 1835)<sup>1</sup>  
*Siganus argenteus* (Quoy & Gaimard, 1825)<sup>22</sup>  
*Siganus guttatus* (Bloch, 1787)<sup>22</sup>

#### Family Sillaginidae

*Sillago aeolus* Jordan and Evermann, 1902<sup>1</sup>  
*Sillago ingenuua* McKay, 1985<sup>1</sup>  
*Sillago lutea* McKay, 1985<sup>1</sup>  
*Sillago sihama* (Forsskal, 1775)<sup>1</sup>  
*Sillago vincenti* McKay, 1980<sup>1</sup>

#### Family Soleidae

*Brachirus orientalis* (Bloch & Schneider, 1801)<sup>1, 21</sup>  
*Heteromycteris oculus* (Alcock, 1889)<sup>1</sup>  
*Solea elongata* Day, 1877<sup>1</sup>  
*Synaptura commersonii* (Lacepède, 1802)<sup>1, 21</sup>  
*Zebrias quagga* Kaup, 1858<sup>1</sup>  
*Zebrias synapturoides* (Jenkins, 1910)<sup>1</sup>

#### Family: Solenostomidae

*Solenostomus paradoxus* (Pallas, 1770)<sup>1, 5</sup>  
*Solenostomus cyanopterus* Bleeker, 1854<sup>22</sup>  
*Solenostomus spp.*<sup>2</sup>

#### Family: Sparidae

*Acanthopagrus berda* (Forsskal, 1775)<sup>1</sup>  
*Acanthopagrus bifasciatus* (Forsskal, 1775)<sup>1</sup>  
*Acanthopagrus latus* (Houttuyn, 1758)<sup>1</sup>  
*Argyrops spinifer* (Forsskal, 1775)<sup>1</sup>  
*Rhabdosargus sarba* (Forsskal, 1775)<sup>1</sup>

#### Family: Sphyraenidae

*Sphyraena acutipinnis* Day, 1876<sup>1</sup>  
*Sphyraena barracuda* (Walbaum, 1792)<sup>1</sup>  
*Sphyraena forsteri* Cuvier, 1829<sup>1</sup>  
*Sphyraena jello* Cuvier, 1829<sup>1</sup>  
*Sphyraena obtusata* Cuvier, 1829<sup>1</sup>

#### Family: Sternoptychidae

*Polyipnus spinosus* Gunther, 1887<sup>18</sup>

#### Family: Stomiidae

*Astronesthes richardsoni* (Poey, 1852)<sup>18</sup>  
*Stomias nebulosus* (Alcock, 1889)<sup>1</sup>

**Family Stromateidae***Pampus argenteus* (Euphrasen, 1788) <sup>1</sup>*Pampus chinensis* (Euphrasen, 1788) <sup>1</sup>**Family: Syngnathidae***Corythoichthys amplexus* Dawson & Randall, 1975 <sup>5</sup>*Corythoichthys flavofasciatus* (Rüppell, 1838) <sup>19, 21</sup>*Doryrhamphus excisus* Kaup, 1856 <sup>21, 22</sup>*Doryrhamphus janssi* (Herald & Randall, 1972) <sup>20, 22</sup>*Doryrhamphus* spp.<sup>2</sup>*Halicampus grayi* Kaup, 1856 <sup>19, 21</sup>*Hippocampus kuda* Bleeker, 1852 <sup>5</sup>*Hippocampus fuscus* Ruppell 1838 <sup>22</sup>*Hippocampus spinosissimus* Weber 1913 <sup>22</sup>*Ichthyocampus carce* (Hamilton, 1822) <sup>19, 20</sup>*Microphis brachyurus* (Bleeker, 1854) <sup>19</sup>*Microphis cunocalus* (Hamilton, 1822) <sup>19, 20</sup>*Siokunichthys southwelli* (Duncker, 1910) <sup>19, 21</sup>*Syngnathoides biaculeatus* (Bloch, 1785) <sup>19</sup>*Trachyrhamphus serratus* (Temminck & Schlegel, 1850) <sup>19, 20</sup>*Trachyrhamphus longirostris* Kaup, 1856 <sup>19</sup>**Family: Synodontidae***Saurida nebulosa* (Valenciennes, 1849) <sup>1</sup>*Saurida tumbil* (Bloch, 1795) <sup>1</sup>*Saurida undosquamis* Richardson, 1848 <sup>1</sup>*Synodus binotatus* Schultz, 1953 <sup>1</sup>*Synodus dermatogenys* Fowler, 1912 <sup>1</sup>*Synodus indicus* (Day, 1873) <sup>1</sup>*Synodus jaculum* Russell and Cressey, 1979 <sup>1</sup>*Synodus sageneus* Waite, 1905 <sup>1</sup>*Synodus variegatus* (Lacepede, 1803) <sup>1, 22</sup>*Trachinocephalus myops* (Forster, 1801) <sup>1</sup>**Family: Terapontidae***Pelates quadrilineatus* (Bloch, 1790) <sup>1</sup>*Terapon jarbua* (Forsskal, 1775) <sup>1</sup>*Terapon puta* (Cuvier, 1829) <sup>1</sup>*Terapon theraps* (Cuvier, 1829) <sup>1</sup>**Family: Tetraodontidae***Arothron nigropunctatus* (Bloch & Schneider, 1801) <sup>2, 5</sup>*Arothron meleagris* (Anonymous, 1798) <sup>2, 5, 23</sup>*Arothron mappa* (Lesson, 1831) <sup>5</sup>*Arothron hispidus* (Linnaeus, 1758) <sup>5</sup>*Arothron stellatus* (Anonymous, 1798) <sup>20, 22</sup>*Arothron immaculatus* (Bloch & Schneider, 1801) <sup>22</sup>*Canthigaster solandri* (Richardson, 1845) <sup>2, 5, 23</sup>*Canthigaster janthinoptera* (Bleeker, 1855) <sup>5</sup>*Canthigaster valentine* (Bleeker, 1853) <sup>5</sup>*Canthigaster coronata* (Vaillant & Sauvage, 1875) <sup>7</sup>**Family: Toxotidae***Toxotes chatareus* (Hamilton – Buchanan, 1822) <sup>1</sup>**Family: Trachichthyidae***Gephyroberyx darwinii* (Johnson, 1866) <sup>1</sup>*Hoplostethus mediterraneus* Cuvier, 1829 <sup>1</sup>**Family: Triacanthidae***Halimochirurgus centriscoides* Alcock, 1899 <sup>18</sup>*Pseudotriacanthus strigifer* (Cantor, 1849) <sup>1</sup>*Triacanthus biaculeatus* (Bloch, 1786) <sup>1, 19</sup>**Family: Trichiuridae***Eupleurogrammus glossodon* (Bleeker, 1866) <sup>1</sup>*Eupleurogrammus muticus* (Gray, 1831) <sup>1</sup>*Lepturacanthus pantului* (Gupta, 1966) <sup>1</sup>*Lepturacanthus savala* (Cuvier, 1829) <sup>1</sup>*Trichiurus gangeticus* Gupta, 1966 <sup>1</sup>*Trichiurus lepturus* Linnaeus, 1758 <sup>1</sup>**Family: Trichonotidae***Trichonotus setiger* Bloch and Schneider, 1801 <sup>1, 20</sup>**Family: Triglidae***Lepidotrigla longipinnis* Alcock, 1890 <sup>1, 21</sup>*Lepidotrigla faurei* (Gilchirst & Thompson, 1914) <sup>18</sup>*Pterygotrigla leptacanthus* (Günther, 1880) <sup>18, 20</sup>**Family: Tripterygiidae***Tripterygion* spp.<sup>2</sup>**Family: Uranoscopidae***Ichthyoscopus lebeck* Bloch and Schneider, 1801 <sup>1, 21</sup>**Family: Veliferidae***Velifer hypselopterus* Bleeker, 1879 <sup>18, 21</sup>**Family: Xiphidae***Xiphias gladius* Linnaeus, 1758 <sup>1, 6, 13, 14</sup>**Family: Zanclidae***Zanclus cornutus* (Linnaeus, 1758) <sup>1, 5, 7, 23</sup>**Family: Zenionidae***Zenion leptolepis* (Gilchrist & von Bonde, 1924) <sup>18, 21</sup>**Cartilaginous Fishes.****Sharks.****Family: Alopiidae***Alopias vulpinus* (Bonnaterre, 1788) <sup>1, 16, 17</sup>*Alopias superciliosus* (Lowe, 1839) <sup>17</sup>*Alopias pelagicus* (Nakamura, 1935) <sup>17</sup>

**Family: Carcharhinidae**

*Carcharhinus albimarginatus* (Ruppell, 1837) <sup>1, 17</sup>  
*Carcharhinus altimus* (Springer, 1950) <sup>1, 16, 17</sup>  
*Carcharhinus amblyrhynchoides* (Whitley, 1934) <sup>1, 16, 17</sup>  
*Carcharhinus amboinensis* (Muller and Henle, 1839) <sup>1, 16, 17</sup>  
*Carcharhinus brevipinna* (Muller and Henle, 1839) <sup>1, 16, 17</sup>  
*Carcharhinus dussumieri* (Valenciennes, 1839) <sup>1, 16, 17</sup>  
*Carcharhinus falciformis* (Bibron, 1839) <sup>1, 14, 16, 17</sup>  
*Carcharhinus hemiodon* (Valenciennes, 1839) <sup>1, 16, 17</sup>  
*Carcharhinus limbatus* (Valenciennes, 1839) <sup>1, 16, 17</sup>  
*Carcharhinus longimanus* (Poey, 1861) <sup>1, 14, 15, 16, 17</sup>  
*Carcharhinus macloti* (Muller and Henle, 1839) <sup>1, 16, 17</sup>  
*Carcharhinus melanopterus* (Quoy and Gaimard, 1824) <sup>1, 5, 16, 17</sup>  
*Carcharhinus plumbeus* (Nardo, 1827) <sup>17</sup>  
*Carcharhinus sealei* (Pietschmann, 1916) <sup>1, 16, 17</sup>  
*Carcharhinus sorrah* (Valenciennes, 1839) <sup>1, 16, 17</sup>  
*Carcharhinus wheeleri* (Garrick, 1982) <sup>15, 16, 17</sup>  
*Carcharhinus amblyrhynchos* (Bleeker, 1856) <sup>15, 17</sup>  
*Carcharhinus leucas* (Müller & Henle, 1839) <sup>15</sup>  
*Carcharodon carcharias* (Linnaeus, 1758) <sup>11, 15, 16, 17</sup>  
*Galeocerdo cuvier* (Peron and Le Seuer, 1822) <sup>1, 15, 16, 17</sup>  
*Glyphis gangeticus* (Müller & Henle, 1839) <sup>15</sup>  
*Lamiopsis temmincki* (Muller & Henle, 1839) <sup>16, 17</sup>  
*Loxodon macrorhinus* Muller and Henle, 1839 <sup>1, 16, 17</sup>  
*Negaprion acutidens* (Ruppell, 1837) <sup>1, 16, 17</sup>  
*Negaprion brevirostris* (Poey, 1868) <sup>15, 17</sup>  
*Prionace glauca* (Linnaeus, 1758) <sup>1, 6, 14, 15, 16, 17</sup>  
*Rhizoprionodon acutus* (Ruppell, 1837) <sup>1, 16, 17</sup>  
*Rhizoprionodon oligolinx* Springer, 1964 <sup>1, 16, 17</sup>  
*Scoliodon laticaudus* Muller and Henle, 1838 <sup>1, 16, 17</sup>  
*Triaenodon obesus* (Ruppell, 1837) <sup>1, 5, 16, 17</sup>

**Family: Echinorhinidae**

*Echinorhinus brucus* (Bonaterre, 1788) <sup>1, 16, 17</sup>

**Family: Ginglymostomatidae**

*Nebrius ferrugineus* (Lesson, 1830) <sup>1, 16, 17</sup>

**Family: Hemigaleidae**

*Chaenogaleus macrostoma* Bleeker, 1852 <sup>1, 16, 17</sup>  
*Hemigaleus microstoma* Bleeker, 1852 <sup>1, 16, 17</sup>  
*Hemipristis elongatus* (Klunzinger, 1871) <sup>1, 16, 17</sup>

**Family: Hemiscylliidae**

*Chiloscyllium griseum* Muller and Henle, 1838 <sup>1, 5, 16, 17</sup>  
*Chiloscyllium indicum* (Gmelin, 1789) <sup>1, 5, 16, 17</sup>  
*Chiloscyllium plagiosum* (Bennett, 1830) <sup>1, 5, 16, 17</sup>

**Family: Hexanchidae**

*Hexanchus griseus* (Bonaterre, 1788) <sup>17</sup>  
*Notorynchus cepedianus* (Peron, 1807) <sup>16, 17</sup>

**Family: Lamnidae**

*Isurus oxyrinchus* Rafinesque, 1810 <sup>1, 15, 16, 17</sup>

*Isurus paucus* (Guitart Manday, 1966) <sup>17</sup>

*Isurus spp.* <sup>14</sup>

**Family: Odontaspidae**

*Carcharias tricuspidatus* Day, 1878 <sup>1, 21</sup>  
*Eugomphodus taurus* (Rafinesque, 1810) <sup>15, 16, 17</sup>  
*Odontaspis noronhai* (Maul, 1955) <sup>17</sup>  
*Odontaspis ferox* (Risso, 1810) <sup>17</sup>

**Family: Proscylliidae**

*Eridacnis radcliffei* Smith, 1913 <sup>1, 16, 17</sup>

**Family: Pseudocarchariidae**

*Pseudocarcharias kamoharai* (Matsubara, 1936) <sup>17</sup>

**Family: Rhincodontidae**

*Rhincodon typus* Smith, 1828 <sup>1, 16, 17</sup>

**Family: Scyliorhinidae**

*Atelomycterus marmoratus* Bennett, 1830 <sup>1, 17</sup>  
*Halaelurus hispidus* Alcock, 1891 <sup>1, 17</sup>

**Family: Sphyrnidae**

*Eusphyra blochii* (Cuvier, 1817) <sup>1, 16, 17</sup>  
*Sphyrna lewini* (Griffith and Smith, 1834) <sup>1, 16, 17</sup>  
*Sphyrna mokarran* (Ruppell, 1837) <sup>1, 15, 16, 17</sup>  
*Sphyrna zygaena* (Linnaeus, 1758) <sup>1, 15, 16, 17</sup>

**Family: Squalidae**

*Centrophorus squamosus* (Bonaterre, 1788) <sup>17</sup>  
*Centroscyllium ornatum* (Alcock, 1889) <sup>17</sup>  
*Dalatias licha* (Bonaterre, 1788) <sup>17</sup>

**Family: Stegostomatidae**

*Stegostoma fasciatum* (Hermann, 1783) <sup>1, 16, 17</sup>

**Family: Triakidae**

*Mustelus manazo* (Bleeker, 1854) <sup>17</sup>  
*Mustelus mosis* (Hemprich and Ehrenbergh, 1899) <sup>1, 16, 17</sup>

**Batoids,****Family: Dasyatidae**

*Dasyatis kuhlii* (Muller and Henle, 1841) <sup>1, 4, 17</sup>  
*Dasyatis marginatus* (Blyth, 1860) <sup>1, 4, 17</sup>  
*Dasyatis pastinacus* (Linnaeus, 1758) <sup>17</sup>  
*Dasyatis zugei* (Muller and Henle, 1841) <sup>1, 4, 17</sup>  
*Himantura bleekeri* (Blyth, 1860) <sup>1, 17</sup>  
*Himantura gerrardi* (Gray, 1851) <sup>1, 4, 17</sup>  
*Himantura imbricata* (Bloch and Schneider, 1801) <sup>1, 17, 20</sup>  
*Himantura uarnak* (Forsskal, 1775) <sup>1, 4, 17</sup>  
*Pastinachus sephen* (Forsskal, 1775) <sup>1, 4, 17</sup>  
*Taeniura lymma* (Forsskal, 1775) <sup>1, 17</sup>  
*Taeniura meyeni* Muller and Henle, 1841 <sup>1, 17</sup>  
*Urogymnus asperrimus* (Bloch and Schneider, 1801) <sup>1, 17</sup>

**Family: Gymnuridae**

*Gymnura poecilura* (Shaw, 1804)<sup>1, 17</sup>

**Family: Mobulidae**

*Mobula kuhlii* (Valenciennes in Muller and Henle, 1841)<sup>1, 4, 17</sup>

*Mobula eregoodootenkee* (Cuvier, 1829)<sup>1, 4, 17</sup>

*Mobula japanica* (Muller and Henle, 1841)<sup>4</sup>

*Mobula tarapacana* (Philippi, 1892)<sup>4</sup>

**Family: Myliobatididae**

*Aetobatus narinari* (Euphrasen, 1790)<sup>1, 4, 14, 17</sup>

*Aetomylaeus maculatus* (Gray, 1834)<sup>1, 17, 20</sup>

*Aetomylaeus nichofii* (Bloch and Schneider, 1801)<sup>1, 17</sup>

**Family Rhinopteridae**

*Rhinoptera adpersa* (Muller and Henle, 1841)<sup>1, 17</sup> *Rhi-*

*noptera javanica* (Muller and Henle, 1841)<sup>1, 4, 14, 17</sup>

**Family: Narcinidae**

*Narke dipterygia* (Bloch and Schneider, 1801)<sup>1, 17</sup>

*Narcine brunnea* Annandale, 1909<sup>1, 17</sup>

*Narcine timlei* (Bloch and Schneider, 1801)<sup>1, 17</sup>

**Family: Pristidae**

*Anoxypristis cuspidata* (Latham, 1794)<sup>1, 17, 20</sup>

*Pristis microdon* Latham, 1794<sup>1, 17</sup>

*Pristis zijsron* Bleeker, 1851<sup>1, 17</sup>

**Family: Rajidae**

*Fenestraja mamillidens* (Alcock, 1889)<sup>1, 17, 20, 21</sup>

**Family: Rhinobatidae**

*Glaucostegus granulatus* (Cuvier, 1829)<sup>1, 17, 20, 21</sup>

*Rhina ancylostoma* Bloch and Schneider, 1801<sup>1, 17</sup>

*Rhinobatos annandalei* Norman, 1926<sup>1, 17</sup>

*Rhynchobatus djiddensis* (Forsskal, 1775)<sup>1, 17</sup>

**Total = 1377**

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## Provisional Checklist of the Leafhoppers (Hemiptera: Cicadellidae) in Sri Lanka

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### Introduction

Leafhoppers are small phytophagous insects with a worldwide distribution in almost all habitat types. They belong to Family Cicadellidae, the largest family in the Suborder Auchenorrhyncha of the Order Hemiptera, which includes more than 22,000 described species in 40 subfamilies and 98 tribes (Oman *et al.*, 1990; Dietrich, 2005). Phytophagous feeding habit of the adults and the nymphal stages of leafhoppers results in four types of plant injuries: loss of plant sap due to feeding, contamination of plant with phytotoxins through injection of toxic saliva while feeding, enhancing fungus growth and transmission of disease causing microbes such as virus and phytoplasma. Among the 22,000 known species of leafhoppers, 170 have been reported as vectors of plant pathogens of cultivated crops.

### Taxonomy

Since the description of 130 species by Melichar (1903) and 62 species belonging to 40 genera by Distant (1908, 1916 & 1918), the family Cicadellidae has not been extensively examined in Sri Lanka for nearly 80 years. In 1994, Dworakowska has described 76 species of Sri Lankan leafhoppers including 7 genera and 22 species that are new to science, after examining the specimens located in the Natural History Museum in London. Thereafter, Viraktamath and Parvathi (2002) and Viraktamath (2007b) described three new genera and seven new species. This was followed by the description of a new subgenus and a new species by Viraktamath & Ganeswaran (2009). Finally, Ganeswaran, *et al.*, (2007, 2008a and 2009) have added one genus and 5 species with their host plant records, to the list of Sri Lankan leafhopper fauna.

Of the 25 subfamilies of Cicadellidae found in the Indian sub-continent 17 are found in Sri Lanka. At present the leafhopper fauna of Sri Lanka consists of 257 species belonging to 120 genera.

### Distribution

Leafhoppers of Sri Lanka are distributed throughout the island and their distribution is mainly related to the vegetation type. Many species recorded from Sri Lanka are known only from museum specimens and the information of their ecology and host plant association is not available (Melicher, 1903; Distant, 1908, 1916 & 1918). A recent study on leafhoppers in Sri Lanka by the author (from 2006-2008), revealed more information about species (including the discovery of new species), their host plant associations and distribution patterns. For instance, *Kamaza sadakorni* Dworakowska, earlier recorded from Bangkok (Thailand) on *Erythrina fusca* and Manthal (Jammu and Kashmir, India) on *Ficus* sp, was found breeding extensively on wing bean in Kandy District (Ganeswaran, *et al.*, 2008). This study further indicated that species richness and abundance of leafhoppers were higher in natural ecosystems compared to managed ecosystems.

## Threats

The majority of leafhoppers except tiny Typhlocybines (which can disperse by wind) are generally slow dispersers associated with specialized habitats or limited numbers of host plants. Therefore, these species are potentially threatened by habitat destruction or fragmentation due to human activities. Only a few species were observed in vegetable plots (S = 25) and paddy fields (S = 27) compared to Grassland (S=49) and forest with scattered grass patches (S=58) in the Mid country Wet Zone of Sri Lanka (Gnaneswaran, 2010) and species diversity appears to be high in natural habitats. Thus, damage to such natural habitats as a result of human activities pose a major threat to leafhoppers.

## Research Gaps

The natural history of the Sri Lankan leafhoppers has been neglected by native scientists for nearly 100 years since the work done by Distant (1918). Their role in the ecosystem was not given due consideration apart from being considered as a pest/ disease vector in agro-ecosystem. Recent studies have led to the discovery of several new species of leafhoppers from Sri Lanka. This clearly indicates that there can be more species present in Sri Lanka unknown to science and the need to carry out detail investigation on this less known yet economically important faunal group.

## Recommendations

1. An intensive island wide survey should be conducted by academic/research institutions to document the diversity, density and distribution of the leafhoppers.
2. Appropriate molecular biological studies should be promoted within the country to confirm the taxonomic and vector status of the leafhoppers.
3. Ecological studies should be encouraged in different ecosystems throughout the island, with the aim of identifying whether leafhoppers can be used as indicator species to measure habitat quality.

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## Provisional Checklist of Leafhoppers in Sri Lanka

Leafhopper Species	Distribution (DZ, WZ,IMZ)	Habitat	Host plants /at light
<b>Sub family: Acostemminae</b>			
<i>Acostemma walkeri</i> Kirkakdy	WZ	H	long bean
<b>Sub family: Agalliinae</b>			
<i>Austroagallia bifurcata</i> Sawai Singh and Gill	DZ, WZ	G	grass, flower bush
<i>Austroagallia quadtrinotata</i> (Melichar)	DZ, WZ	G	grass, flower bush
<b>Sub family: Cicadellinae</b>			
<i>Anatkina helena</i> (Distant)	WZ	F	grass
<i>Anagonalia melichari</i> (Distant)	WZ	F	grass
<i>Atkinsoniella</i> sp.	WZ	F	grass
<i>Cofana lineata</i> (Distant)	DZ, WZ,IMZ	P,V,F	grass , paddy
<i>Cofana spectra</i> (Distant)	DZ, WZ,IMZ	P,V,F	grass, paddy, brinjal
<i>Cofana unimaculata</i> (Signoret)	DZ, WZ,IMZ	P,V,F	grass
<i>Cofana</i> sp.	WZ	F	grass
<i>Kolla ceylonica</i> (Melichar)	DZ, WZ,IMZ	C,P,V,F	grass, coconut
<i>Kolla paulula</i> (Walker)	DZ, WZ,IMZ	F, C	grass
<i>Ujna delicatula</i> Distant	IMZ	F	grass
<i>Ujna</i> sp	IMZ	F	grass
<b>Sub family: Coelidiinae</b>			
<i>Calodia ostenta</i> (Distant)	WZ	H,F	grass, croton
<i>Thagria introducta</i> (Distant)	WZ	F	grass
<b>Sub family: Deltocephalinae</b>			
<i>Aconeurella</i> sp.l	DZ, WZ,IMZ	P,G	grass
<i>Aconeurella indica</i>	DZ, WZ,IMZ	P,G	grass
<i>Balclutha rudrostriata</i> (Melichar)	DZ, WZ,IMZ	V,P,G	grass
<i>Balclutha incisa</i> (Mastumura)	DZ, WZ,IMZ	V,G	grass
<i>Balclutha rosea</i> (Scott)	WZ,IMZ	V,G	grass
<i>Balclutha viridinervis</i> Mastumura	WZ, IMZ	V,G	grass
<i>Banus oblatu</i> s Distant	WZ	F	grass
<i>Changwhania ceylonensis</i> (Baker)	WZ,IMZ	P,G	grass
<i>Chiasmus mustilinus</i> (Distant)	DZ, WZ,IMZ	G	grass
<i>Chiasmus</i> sp.	DZ WZ,IMZ	G	grass
<i>Cicadulina bipunctata</i> (Melichar)	WZ,IMZ	P,G	grass
<i>Exitianus indicus</i> (Distant)	DZ, WZ,IMZ	P,G,F,C	grass
<i>Exitianus nanus</i> (Distant)	DZ, WZ,IMZ	P,G,F	grass
<i>Goniagnathus (T.) zeylonicus</i> Viraktamath &Gnaneswaran	IMZ	G	grass
<i>Goniagnathus (T.) nervosus</i> Distant	WZ,IMZ	F,G,	grass

<i>Goniagnathus (T.) puntifer</i> (Walker)	DZ, WZ,IMZ	C,G	grass
<i>Goniagnathus (T.) fumosus</i> Distant	DZ	G	grass
<i>Goniagnathus (T.) appallans</i> Baker	DZ	G	grass
<i>Hecalus arcuatus</i> (Motschulsky)	DZ, WZ,IMZ	P,G	grass
<i>Hecalus porrectus</i> (Walker)	DZ, WZ,IMZ	P,G	grass
<i>Hecalus paraumballaensis</i> Rao	DZ, WZ	H	at light
<i>Hecalus.ghaurii</i> Rao and Ramakrishnan	WZ	G	grass
<i>Hecalus prasinus</i> (Mastumura)	DZ	G	grass
<i>Hecalus nervosus</i> Melichar	WZ	G	grass
<i>Hishimonus phycitis</i> (Distant)	DZ, WZ,IMZ	V,G,T,H,C	grass. brinjal, tea, coconut
<i>Leofa (Leofa) mysorensis</i> (Distant)	DZ	G	grass
<i>Litura unda</i> Knight	DZ, WZ,IMZ	T,G	tea, grass
<i>Macrosteles vaga</i> (Melichar)	WZ	G	grass
<i>Maiestas distincta</i> (Motschulsky)	DZ, WZ,IMZ	P,G	grass
<i>Maiestas portica</i> (Melichar)	DZ, WZ,IMZ	P,G	grass
<i>Maiestas dorsalis</i> (Motschulsky)	DZ, WZ,IMZ	P,V,G	Paddy, grass, coconut
<i>Maiestas sp.</i>	DZ	G	grass
<i>Monobazus fuscovarius</i> (Distant)	DZ, WZ,IMZ	F,G,O,S	Grass,
<i>Nephotettix parvas</i> Ishihara & Kiwase	DZ, WZ,IMZ	P,G,V	paddy, grass
<i>Nephotettix virescens</i> (Distant) Pruthi	DZ, WZ,IMZ	P,G,C	paddy, grass
<i>Nephotettix malayanus</i> shihara and Kawase	DZ, WZ,IMZ	P,G	paddy, grass
<i>Nephotettix nigropictus</i> (Stal)	DZ, WZ,IMZ	P,G,V	paddy, grass
<i>Neohotettix sympatricus</i> Ghauri	DZ, WZ,IMZ	G	Grass
<i>Orosius albicinctus</i> Distant	WZ,IMZ	V,O	grass, mango
<i>Platyrectus marginatus</i> Melichar	WZ,IMZ	F,G,C	Grass
<i>Scaphoideus morosus</i> Melichar	WZ	F,G,C	Grass and at light
<i>Scaphoideus sculptellus</i> Virak. & Mohan	WZ	F,G	grass
<i>Scaphotettix sp.</i>	IMZ	F	grass
<i>Stirellus sp I.</i>	WZ	G	grass
<i>Stirellus sp II</i>	DZ, WZ	G	grass
<i>Stirellus indra</i> (Distant)	DZ, WZ,IMZ	V,G,C	grass
<i>Stirellus jacosa</i> Melichar	DZ, WZ,IMZ	V,G,G	grass
<i>Yuanamia sp. New</i>	WZ	G	grass
<b>Subfamily: Lassinae</b>			
<i>Batrocomorphus sp. I</i>	DZ, WZ	F,G	grass
<i>Batrocomorphus sp. II</i>	DZ,IMZ	F,G	grass
<i>Batrocomorphus sp.III</i>	DZ	F,G	grass

<i>Krisna sp. female only</i>	WZ	H	mussaenda and at light
<b>Sub family: Idiocerinae</b>			
<i>Amritodus brevistylus</i> Viraktamath.	DZ, WZ,IMZ	O,H,F	mango
<i>Busoniomimus manjunaththi</i> Virak.& Vira	DZ, WZ,IMZ	F	clove
<i>Jogocerus freytagi</i> Viraktamath	IMZ	F	attariya
<i>Idioscopus nitidulus</i> (Walker)	DZ, WZ,IMZ	O,H,F	mango, asoka
<i>Idioscopus nagpurensis</i> (Pruthi)	DZ, WZ,IMZ	O,H,F	mango, jampola, cocoa avocado,na, rambuttan, carambola,teak, pepper, coffee
<i>Idioscopus clypealis</i> (Lethierry)	DZ, WZ,IMZ	O,H,F	mango, jampola, avocado, na, rambutan, teak ,cocoa carambola, teak,pepper, coffee.
<i>Idioscopus unimaculatus</i> (Melichar)	WZ	F	badulla, na
<b>Sub family: Ledrinae</b>			
<i>Petacephala sp.</i>	IMZ	G,C	grass
<b>Sub family : Macropsinae</b>			
<i>Pediopsoides (Pediopsoids) sp.</i>	WZ	F,G	grass
<i>Macropsis sp.</i>	WZ	F,G	grass
<b>Sub family: Nirvaninae</b>			
<i>Kana thoracica</i> Distant	WZ	F,G	grass
<i>Nirvana pallida</i> Melichar	DZ, WZ,IMZ	V,F,G	grass
<i>Nirvana suturalis</i> Melichar	WZ	F,G	grass
<i>Sophonia longitudinalis</i> (Distant)	WZ	F,G	grass
<b>Sub family: Penthiminae</b>			
<i>Neodartus acocephaloides</i> Melichar	DZ, WZ,IMZ	F,G,V	grass
<i>Uzelina thaloriensis</i> Sharma	WZ	F	grass
<i>Penthimia sp.</i>	WZ	F	grass
<i>Thambila sp.</i>	WZ	F	grass
<b>Sub family : Selanocephalinae</b>			
<i>Bhatia olivercea</i> Melichar	WZ	F,G	grass
<i>Bhatia Distanti</i> Zang and Webb	WZ	F,G	grass
<i>Drabescus conspicuus</i> Distant	WZ	F,G	grass
<i>Drabescus stramineus</i> Distant	WZ	F,G	grass
<i>Kutata transversa</i> Zang and Webb	WZ	F,G	grass
<b>Subfamily: Signoretinae</b>			
<i>Preta gratiosa</i> Melichar	DZ, WZ,IMZ	G	grass
<b>Sub family: Typhlocybinae</b>			

<i>Alebroides nigroscutellata</i> (Distant)	WZ	G	grass, at light
<i>Amrasca biguttula biguttula</i> (Ishida)	DZ, WZ,IMZ	V, H	brinjal, okra, bitter-gourd, potato, cow pea. at light
<i>Amrasca splendens</i> Ghauri	DZ, WZ	O, H	mango, asoka, ,at light
<i>Baguoidea rubra</i> (Melichar)	WZ	H	at light
<i>Empoasca</i> sp.	WZ,IMZ	O,H	mango, rambutan, cocoa
<i>Empoasca</i> ( <i>E.</i> ) <i>maculifrons</i> Dworak.	DZ, WZ,IMZ	P,V,G	grass
<i>Empoasca</i> ( <i>E.</i> ) <i>cilla</i> Dworak.	DZ, WZ,IMZ	P,V,G	grass
<i>Empoasca</i> ( <i>Bza</i> ) <i>regularis</i> Dworak.	WZ	F	grass, at light
<i>Empoasca</i> ( <i>Empoasca</i> ) <i>triangularis</i> Dworak.	WZ	V	agati, beat root , carrot, brinjal, bush bean, long bean, castor
<i>Faiga dropica</i> Dwarakowsha	WZ	F	grass, at light
<i>Apheliona bioculata</i> (Melichar)	WZ	F,G	grass
<i>Heliona constricta</i> Melichar	WZ	F,H	at light
<i>Kamaza sadakorni</i> Dworakowska	WZ	V,H	winged bean
<i>Lankasca centromaculata</i> (Melichar)	DZ, WZ,IMZ	O,F,	cocoa, mousey mi, at light
<i>Motschulskyia</i> ( <i>Togaritettix</i> ) <i>serratus</i> (Mats.)	WZ,IMZ	F,O	mango,rambutan at light
<i>Seriana sagara</i> Dworakowska	WZ	F,G	grass
<i>Seriana</i> sp I	WZ	F,G,C	indian almond
<i>Thaia subrufa</i> (Motschulsky)	WZ	P,G	grass
<i>Thia</i> ( <i>Nlunga</i> ) sp.	WZ	G	grass
<i>Uzeldikra citrina</i> (Melichar)	WZ	G	grass
<i>Velu caricae</i> Ghauri	WZ	F,	at light
<b>Sub family : Xestocephalinae</b>			
<i>Xestocephalus</i> sp.	WZ,IMZ	F	at light

**Habitat:**C-Coconut estate; F- Forest; G- Grass land; H-Home garden; O- Orchard; P- Paddy; T- Tea estate; V- Vegetable garden;

**Ecological Zone:** DZ- Dry Zone; WZ- Wet Zone; IMZ- Intermediate Zone

## A Provisional Checklist of Dung Beetles (Coleoptera: Scarabaeidae) in Sri Lanka

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### Introduction

Dung beetles are scavengers that feed and breed on dung, carrion, decaying fungi, or litter. The Scarabaeinae subfamily comprises about 4,500 described species known as true dung beetles exclusively feeding on dung. There are dung-feeding beetles in other families, such as the Geotrupidae (the earth-boring dung beetles) and Aphodiinae. Aphodiinae beetles are relatively small and comprise the bulk of dung dwellers. Scarabaeinae are more common in tropical regions, but in northern latitudes Aphodiinae tend to dominate the dung beetle assemblage. Dung beetles mainly use herbivore and omnivore dung, particularly from mammals, but occasionally from birds and reptiles. They provide several ecological services such as waste removal, secondary seed dispersal and vertebrate parasite suppression. Dung beetles are characterized by how they process dung. These groups are called guilds or clades of which there are four rollers (telecoprid nesters), tunnelers (paracoprid nesters), dwellers (endocoprid nesters) and kleptoparasites. Dung beetles have well-understood ecological roles and species composition is known to change distinctly across habitat types.

### Taxonomy

Scarabaeinae dung beetles of Sri Lanka have been recorded in two classic, regional volumes covering parts of South Asia, Arrow 1931 and Balthasar 1963. These volumes cover the diversity of lamellicorn beetles in a wide geographical region from Sri Lanka, India, China, Java and Arabia. The *Monograph of the Scarabaeidae and Aphodiidae of the Palaearctic and Oriental region Coleoptera: Lamellicornia* by Vladimir Balthasar (1963) includes fifty dung beetle species found in Sri Lanka, whereas the whole volume describes the distribution of dung beetles in Europe, Central, South and Southeast Asia. Prior to Arrow's (1931) relatively comprehensive publication on the Sri Lankan lamellicorn fauna (beetles with lamellate terminal segments in the antennae; includes the scarabaeids and stag beetles), a single paper briefly discussed some of the lamellicorns collected in Sri Lanka by Gille, 1924. It records 47 species from three subfamilies: Coprinae, Aphodiinae and Troginae. More recent work includes a study on the diversity of dung beetles in dung of cattle and buffalo conducted in Kandy, Sri Lanka (Nawodinee & Edirisinghe, 2007) and a four year ecological study that assessed the effects of habitat fragmentation and land use change on dung beetle communities of the lowland wet zone of Sri Lanka (Kudavidanage, 2012). This was coupled with an island-wide survey to document the species distributions of dung beetle across the bio-climatic zones of Sri Lanka (Kudavidanage, 2012; Lekamge, in preparation). The geographic distribution of dung beetles sampled was compared with the historical distributions indicated by Arrow (1931) to identify possible changes in distribution patterns. Specimens collected were identified through the assistance of the National Museum of Sri Lanka, Ashoka Trust of India, the British Museum of Natural History, the ScarabNet Global Taxon Database Version 1.5 and primarily, Oxford University Museum of Natural History which supported the taxonomic work. The checklist is yet to be completed in collaboration with the above institutes. The current list consists of all Scarabaeinae dung beetles recorded in Sri Lanka including species recorded by Arrow (1931),

Balthasar (1963), ScarabNet, the ScarabNet Global Taxon Database Version 1.5, specimen collections at the National Museum of Sri Lanka, Oxford University Museum of Natural History, British Museum of Natural History, and species recorded during the field surveys. Potentially new species and dung/dung dwelling beetles of other families/sub families (Aphodiinae, Hystaridae, Cyanidae, Elataridae, Chrysomalidae, Trogidae, Bostrichidae and Scirtidae) are excluded from this list.

## Distribution

ScarabNet Global Taxon Database lists 81 species of Scarabaeinae beetles belonging to eight tribes from Sri Lanka. The most recent study identified 103 species of the same tribes. Out of the 103 species listed for Sri Lanka, 21 species (21%) are endemic while 63 species (61%) are found in the Indo-Sri Lankan region. The remaining species show a wider distribution. However, these numbers are likely to change once the ongoing survey and taxonomic work is completed including the description of several potentially new species. Some of the endemics recorded recently were previously only known from the type specimen (*i.e.*, *Sisyphus tarantula*, which was collected from the same location as the type). Genus *Onthophagus* comprises of the highest number of species found in Sri Lanka. These include species that show an island wide distribution (*i.e.* *Onthophagus unifaciatus*, *O. Cervus*, *O. spinifex*) as well as species showing restricted distribution (*i.e.* *Onthophagus martialis*, *O. igneus*), where some species showing a clear restriction to certain bio-geographical zones (*i.e.* *Onthophagus fuscopunctatus* - restricted to coastal areas in the dry and arid zones). *Catharcus molossus*, *Sisyphus longipes* and *Copris signatus* are the most commonly found species while *Catharcus molossus*, is the largest tunneler beetle recorded in Sri Lanka. This species often visit homes attracted by the light.

There are distinctive differences between dry and wet zone communities which can be attributed to the environmental conditions and the distribution of large mammals. Dry zone has the highest species richness and abundance of dung beetles. The wet zone supports a diverse dung beetle assemblage; however, biomass per unit area is much low compared to the dry zone. The number of species recorded from the montane zone clearly was less than that of the other zones. *Paragymnopleurus melanarius* is the largest roller species found in the wet zone while *Scarabaeus gangeticus*, the largest crepuscular roller beetle found in Sri Lanka, display a clear habitat preference to the dry and arid zones (sandy soil) where cattle and other large mammals are abundant. Genus *Ochicanthon* is represented by four species in the Sri Lanka and two of them (*O. cingalense* and *O. triste*) were only recorded in the montane zone above 1200 m asl. *Panelus setosus* was found only in the low and mid country wet zone and *Caccobius ultor*, *C. lilliputanus*, *O. ludio* in the low-country intermediate zone. The genera *Paraliatongus*, *Euoniticellus*, *Drepanocerus* and *Panelus* were represented by single species only. More intense sampling is required with multiple bait types and sampling methods to establish the final geographic range of each species.

Some of the species in historical records were not found during the present survey. For example only one species in the genus *Scarabaeus*, *S. gangeticus*, was found in the present study. The other two species, *Scarabaeus erichsoni* and *Scarabaeus sanctus*, were not recorded. Further, *Onthophagus regalis* and *O. questus* recorded by Arrow (1931) were also not recorded during this study. Several previously recorded species from the genera *Gymnopleurus*, *Caccobius*,

*Onthophagus* and *Panelus* were also not recorded during extensive surveys. Five out of the known six *Gymnopleurus* species were found except *G. Smaragdifer*.

Shifts in the distribution patterns were also observed for some species. For instance, *P. melanarius* that was known to be widely distributed across the wet zone in the past was recorded only from relatively undisturbed areas and good forests during this survey. *Caccobius unicornis* which was only recorded from the wet zone by Arrow (1931) was also found in the dry zone. Likewise, *Onthophagus laevigatus* that was earlier recorded in the wet-zone, was only recorded from the dry and arid zones during our survey.

The distribution of Scarabaeinae beetles can be attributed to species-specific habitat preferences interacting with climatic/geographic variation across the island and anthropogenic modifications of habitats. Spatial diversity is influenced primarily by climate, elevation, vegetation types, available dung types and microhabitat conditions created by canopy, shrub cover, soil and litter properties. These directly affect predation, foraging and reproduction of dung beetles. Mammals are the major suppliers of dung resources. Although diversity and endemism of the mammals are high in the wet and montane zones, the dry zone forests contain most of the large mammals that are the primary suppliers of dung. The species richness of dung beetles tends to increase with rainfall. Dung beetles reproduce during rainy seasons, leading to more dung burial for egg laying. Community structure, abundance and diversity, are often negatively correlated with elevation. Lower productivity at higher elevations is suggested as one of the reasons for this decline. Further, body size of a species is considered to be a function of environmental productivity. This is consistent with the findings of this survey where smaller species were found to dominate the species assemblage in the montane zone while large and medium sized species were more abundant in all other zones.

### **Threats and conservation priorities**

Dung beetles are strongly influenced by climate change, forest modification, deforestation and alteration of microhabitat conditions. Large dung beetles are especially susceptible to the loss of forest cover. For instance, *P. melmarius*, is vulnerable to loss of forest cover and populations decrease rapidly in open, modified areas. Change of favourable environmental conditions can significantly alter forest dung beetle communities. Forest loss results in increased predation by natural enemies, and loss of mammals providing dung resources. Sri Lanka has undergone massive loss of forest cover in the last century. With few exceptions, the effects of these changes on the insect fauna are virtually unknown. It is known that native, forest-inhabiting dung beetle species undergo local extinction in areas where tree cover has disappeared. In addition, deforestation in the wet zone during the 19<sup>th</sup> century caused many large mammals to move to the dry zone. Large mammals in the wet zone are mostly restricted to forests and exist in small populations.

Altered habitats are often replaced by different communities that are more adapted to new conditions. In the dry and arid zones, large beetles like *Scrabaeus gangeticus* appear to be highly adapted to open environments and take advantage of the surfeit of dung. However, in the wet zone, dung beetle biomass is high in forest habitats compared to open modified areas. Some of the modified open habitats of the lowland wet zone of Sri Lanka are occupied by dung beetle communities that are much less functionally efficient than the forest communities occupying the same area.



Forest dwelling dung beetles may benefit from good forest cover and increased connectivity between forest fragments. Sustainable management of modified habitats to increase habitat complexity, shade and soil quality and availability of dung resources through the presence of mammals can favour healthy dung beetle communities. Overuse of pesticides and fertilizer is a known threat to dung beetles elsewhere. Use of pesticides and other chemicals in intensely cultivated areas adjoining large forests and fragments may have detrimental effects.

Community education efforts can greatly contribute to the sustainable management of human modified areas. Importance of dung beetles and their ecological services, specifically their role in enhancing soil fertility are not well known and understood by the local communities. Wanton destruction of dung beetles is an issue infrequently discussed. *Catharsius molossus* is often burned in rural areas due to a mythological belief among tea plantations workers.

Collecting and killing of *Scarabaeus gangaticus* was observed in the arid agricultural areas. Awareness development can reduce negative impacts of human activities and facilitate more biodiversity friendly anthropogenic habitats.

### **Research needs and recommendations**

The “imbalance in the number of collections, experts, and species” is a common problem faced by many countries in the Asian region including Sri Lanka. Many Sri Lankan invertebrates are less known, revised taxonomic keys are rarely available, and reference collections with type specimens are primarily found in European museums. On the Indian subcontinent, the taxonomy of most invertebrate groups has not been revised since the publication of the *Fauna of British India* series in the mid-1900s. Constraints of limited access to reference specimens and lack of taxonomic expertise encountered at the initial stages of the recent dung beetle survey were tackled through resources and collaboration provided by the Oxford University Museum of Natural History. The completion of the dung beetle checklist for Sri Lanka, establishing the status of species and description of new species will require a greater sampling effort considering geographical, microhabitat, seasonal and food habit variations expressed by dung beetles. Further, more sampling is required to verify if the absence of previously recorded species. All endemic species recorded in the present study were found in the wet zone, and most were rare. This could be attributed either to natural rarity or to endemics being more vulnerable to disturbances in this landscape. Clear morphological variations were observed within certain species indicating the need for in depth taxonomic revision of Scarabaeinae dung beetles. Shifting distribution of species ranges were observed by comparing current records with the published historical records, and the locations of specimens from multiple museums. These should be interpreted in the light of changing natural habitats, climate change and resource availability. The recent inclusion of dung beetles in the global IUCN database marked a turning point in dung beetles conservation. Globally, more than 12% of the dung beetle species are threatened, and most have a restricted range, or are rare forest-dwelling species. The impacts of deforestation and land use change are heavily impinging on faunal communities. Recent studies conducted in Sri Lanka using dung beetles as an indicator of habitat change highlights the importance of assessing faunal community and functional responses to habitat disturbance.

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## A Provisional Checklist of Dung Beetles (Coleoptera: Scarabaeidae) of Sri Lanka

### Tribe: Canthonini

- Ochicanthon cingalense* Arrow, 1931<sup>R</sup>  
*Ochicanthon tristis* Arrow, 1931<sup>R</sup>  
*Panelus puncticollis* Arrow, 1931<sup>R</sup>  
*Panelus setosus* Arrow, 1931<sup>R</sup>  
*Panelus imitator* Balthasar, 1972<sup>R</sup>  
*Panelus ceylonicus* Balthasar, 1972<sup>R</sup>  
*Panelus fallax* Balthasar, 1972<sup>R</sup>  
*Panelus pernitidus* Balthasar, 1972<sup>R</sup>

### Tribe: Coprini

- Catharsius capucinus* Fabricius, 1781<sup>T</sup>  
*Catharsius granulatus* Sharp, 1875<sup>T</sup>  
*Catharsius molossus* Linnaeus, 1758<sup>T</sup>  
*Catharsius pethecius* Fabricius 1775<sup>T</sup>  
*Copris repertus* Walker, 1858<sup>T</sup>  
*Copris sodalis* Walker, 1858<sup>T</sup>  
*Copris fricator* Fabricius, 1787<sup>T</sup>  
*Copris indicus* Harold, 1867<sup>T</sup>  
*Paracopris signatus* Walker, 1858<sup>T</sup>  
*Heliocopris bucephalus* Fabricius, 1775<sup>T</sup>

### Tribe: Gymnopleurini

- Gymnopleurus cyaneus* Fabricius, 1798<sup>R</sup>  
*Gymnopleurus (Garreta) smaragdifer* Walker, 1858<sup>R</sup>  
*Gymnopleurus (Metagymnopleurus) koenigi* Fabricius, 1775<sup>R</sup>  
*Gymnopleurus (Metagymnopleurus) miliaris* Fabricius, 1775<sup>R</sup>  
*Gymnopleurus (Metagymnopleurus) parvus* MacLeay, 1821<sup>R</sup>  
*Gymnopleurus (Metagymnopleurus) gemmatus* Harold, 1871<sup>R</sup>  
*Paragymnopleurus melanarius* Harold, 1867<sup>R</sup>

### Tribe: Oniticellini

- Drepanocerus setosus* Wiedemann, 1823<sup>R</sup>  
*Euoniticellus pallipes* Fabricius, 1781<sup>D</sup>  
*Liatongus (Paraliatongus) rhadamistus* Fabricius, 1775<sup>D</sup>

### Tribe: Onitini

- Ontis philemon* Fabricius, 1801<sup>D</sup>  
*Ontis singhalensis* Lansberge, 1875<sup>D</sup>  
*Ontis subopacus* Arrow, 1931<sup>D</sup>

### Tribe: Onthophagini

- Caccobius rufipennis* Motschulsky, 1858<sup>D</sup>  
*Caccobius (Caccophilus) indicus* Harold, 1867<sup>D</sup>  
*Caccobius (Caccophilus) aterrimus* Fabricius, 1798<sup>D</sup>  
*Caccobius (Caccophilus) diminutives* Walker, 1858<sup>D</sup>  
*Caccobius (Caccophilus) meridionalis* Boucomont, 1914<sup>D</sup>  
*Caccobius (Caccophilus) unicornis* Fabricius, 1798<sup>D</sup>  
*Caccobius (Caccophilus) vulcanus* Fabricius, 1801<sup>D</sup>  
*Caccobius (Caccophilus) ultor* Sharp, 1875<sup>D</sup>  
*Cleptocaccobius durantoni* Cambefort, 1985<sup>D</sup>  
*Cleptocaccobius (Caccophilus) inermis* Arrow, 1931<sup>D</sup>  
*Haroldius krali* Utsunomiya & Masumoto, 2000<sup>D</sup>  
*Haroldius herrenorum* Paulian, 1985<sup>D</sup>  
*Onthophagus amphinasus*<sup>T</sup>  
*Onthophagus centricornis* Fabricius, 1798<sup>T</sup>  
*Onthophagus cervus* Fabricius, 1798<sup>T</sup>  
*Onthophagus cryptogenus* Boucomont, 1914<sup>T</sup>  
*Onthophagus difficilis* Walker, 1858<sup>T</sup>  
*Onthophagus ensifer* Boucomont, 1914<sup>T</sup>  
*Onthophagus favrei* Boucomont, 1914<sup>T</sup>  
*Onthophagus fuscopunctatus* Fabricius, 1798<sup>T</sup>  
*Onthophagus gemma*  
*Onthophagus gravis* Walker, 1858<sup>T</sup>  
*Onthophagus hystrix* Boucomont, 1914<sup>T</sup>  
*Onthophagus igneus* Vigor, 1825<sup>T</sup>  
*Onthophagus keiseri* Frey, 1956<sup>T</sup>  
*Onthophagus laevigatus* Fabricius, 1798<sup>T</sup>  
*Onthophagus ludio* Boucomont, 1914<sup>T</sup>  
*Onthophagus (Furconthophagus) lilliputanus* Lansberge, 1883<sup>T</sup>  
*Onthophagus martialis* Boucomont, 1914<sup>T</sup>  
*Onthophagus militaris* Boucomont, 1914<sup>T</sup>  
*Onthophagus castetsi*  
*Onthophagus negligens* Walker, 1858<sup>T</sup>  
*Onthophagus parvulus* Fabricius, 1798<sup>T</sup>  
*Onthophagus politus* Fabricius, 1798<sup>T</sup>  
*Onthophagus pusillus* Fabricius, 1798<sup>T</sup>  
*Onthophagus pygmaeus* Schaller, 1783<sup>T</sup>  
*Onthophagus refulgens* Arrow, 1931??<sup>T</sup>  
*Onthophagus regalis* Arrow, 1907<sup>T</sup>  
*Onthophagus spinifex* Fabricius, 1881<sup>T</sup>  
*Onthophagus taprobanus* Arrow, 1931<sup>T</sup>  
*Onthophagus tritinctus* Boucomont, 1914<sup>T</sup>  
*Onthophagus turbatus* Walker, 1858<sup>T</sup>  
*Onthophagus troglodyte* (Wiedemann, 1823)<sup>T</sup>  
*Onthophagus unifasciatus* Schaller, 1783<sup>T</sup>

*Onthophagus gemma* Sharp, 1875<sup>T</sup>  
*Onthophagus refulgens*  
*Onthophagus heterorrhinus* Lansberge, 1885<sup>T</sup>  
***Onthophagus sparsepunctatus*** Frey, 1956<sup>T</sup>  
*Onthophagus (C.) occipitalis* Lansberge, 1885<sup>T</sup>  
*Onthophagus (C.) quadridentatus* Fabricius, 1798<sup>T</sup>  
*Onthophagus (Digionthophagus) bonasus* Fabricius, 1775<sup>T</sup>  
*Onthophagus (Digionthophagus) gazella* (catta) Fabricius, 1787<sup>T</sup>  
*Onthophagus (Micronthophagus) ochreatus* d'Orbigny, 1897<sup>T</sup>  
*Onthophagus (Micronthophagus) oculatus* Arrow, 1931<sup>T</sup>  
***Onthophagus (Onthophagiellus) solmani*** Stebnicka, 1975<sup>T</sup>  
*Onthophagus (Proagoderus) pactolus* Fabricius, 1787<sup>T</sup>  
*Onthophagus (Colobonthophagus) dama* Fabricius, 1798<sup>T</sup>  
*Onthophagus (Paraphanaeomorphus) bifaciatus* Fabricius 1781<sup>T</sup>

*Onthophagus (Parascatonomus) quaestus* Sharp, 1875<sup>T</sup>  
*Onthophagus (Proagoderus) gemmatus* Peringuey, 1901<sup>T</sup>  
*Onthophagus (Serrophorus) rectecornutus* Lansberge, 1883<sup>T</sup>  
***Phaedotrogus ceylonicus*** Balthasar, 1972<sup>T</sup>  
*Phalops divisus* Wiedemann, 1823<sup>T</sup>

**Tribe: Scarabaeini**

*Scarabaeus gangeticus* Castelnau, 1840<sup>R</sup>  
*Scarabaeus sanctus* Fabricius, 1798<sup>R</sup>  
*Scarabaeus (Kheper) erichsoni* Harold, 1867<sup>R</sup>

**Tribe: Sisyphini**

***Neosisyphus tarantula*** Arrow, 1909<sup>R</sup>  
*Sisyphus longipes* Olivier, 1789<sup>R</sup>  
*Sisyphus indicus* Hope, 1831<sup>R</sup>  
*Sisyphus (Crispatus) hirtus* Wiedemann, 1823<sup>R</sup>

**Functional groups: R= roller; T= tunneler; D= dweller**

## **Records of Centipede Fauna In Sri Lanka**

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### **Introduction**

Sri Lanka, even though a small island is listed as one of the biodiversity hotspots of the world (Bossuyt *et al.*, 2004; Myers *et al.*, 2000). Most invertebrate fauna of Sri Lanka have been inadequately studied both in terms of their diversity and conservation priorities (Attems 1930; Balan *et al.*, 2012; IUCN Sri Lanka and MoENR 2007; Sureshan *et al.*, 2006). Sri Lanka consists of miscellaneous geographic and climatic zones joined with vast environment diversity and maintains a rich diversity of species in the whole island. This has been comprehensive for flora and fauna especially in vertebrates fauna and several invertebrate fauna too (Bambaradeniya 2006). Centipedes are not as popular as Butterflies, Dragonflies and Fresh water crabs. The last comprehensive study was conducted more than a century ago by several foreign researchers such as Newport (1845), A. Humbert (1865), Haase (1887), R.I Pocock (1892), Verhoeff (1905), F. Silvestri (1903). In 1973 E.H Eason described a new centipedes fauna from the collection by R.I Pocock from 1890 to 1901 in British Natural History Museum. There is no involvement of local researchers in centipedes' taxonomy in Sri Lanka.

Literature review is in progress by the authors contributing to a significant revision of our understanding of the actual diversity of Centipedes in the Sri Lanka. Aims of this paper are to provide a check list of centipede fauna of Sri Lanka and to highlight research gaps and priorities for further investigation.

### **Materials And Methods**

All scientific names of centipedes cited by Pocock in Vol. 7 (1892) of the Journal of the Bombay Natural History Society are recorded below in checklist format. The checklist was completed with author and year of each name, current order and family in which the species is placed and the current valid name. The information incorporated in this checklist includes the synonyms of each species. For the delegation of the current valid names for each species, the latest taxonomic scrutiny reference was reviewed. The authors follow the works of Newport G. (1844), Templeton R. (1846), Haase E. (1887), Silvestri F. (1919), Verhoeff K.W. (1925), Attems C. (1930, 1947), Dowdy W.W. (1951), Koch L.E. (1983, 1985) Eason E.H. (1990), Shelley R.M. (2000), Edgecombe G.D & Giribet G. (2004, 2009), Lewis J, Edgecombe G, Shelley R (2005), Edgecombe G.D (2011), Edgecombe and Bonato (2011) and Schileyko A.A & Stagl V. (2004). Also, all current valid names were checked with the use of the online database Chilobase (Minelli *et al.*, 2006).

### **Results And Discussion**

According to literature the centipedes of Sri Lanka belong to four orders, representing six families. The total centipedes species in Sri Lanka described to date includes 19 species; classified under Order Scolopendromorpha (Family Scolopendridae – 12 species), Order Geophilomorpha (Family Mecistocephalidae – 2 species, Oryidae – 1 species), Order

Lithobiomorpha (Family Lithobiidae – 2 species) Order Scutiggeromorpha (Family Scutiggerinidae – 1 species, Family Scutiggeridae – 1 species).

## List of the Species

### Order - Scolopendromorpha Pocock, 1895

#### Family - Scolopendridae Newport, 1844

- 1). *Scolopendra hardwickei* Newport, 1844 Synonym(s): *Scolopendra bicolor* Humbert, 1865, *Scolopendra histrionica* C.L. Koch, 1847
- 2). *Scolopendra crassa* Templeton, 1846
- 3). *Scolopendra subspinipes* Leach, 1815. Synonym(s): *Otostigmus politoides* Attems, 1953, *Otostigmus politoides* Attems, 1953, *Otostigmus puncticeps* Attems, 1953, *Rhomboccephalus gambiae* Newport, 1845, *Rhomboccephalus smaragdinus* Butler, 1876, *Scolopendra aringensis* Sinclair, 1901, *Scolopendra atra* Wood, 1861, *Scolopendra audax* Gervais, 1837, *Scolopendra aurantipes* Tömösváry, 1885, *Scolopendra bispinipes* Wood, 1862, *Scolopendra borbonica* Blanchard, 1844, *Scolopendra byssina* Wood, 1861, *Scolopendra cephalica* Wood, 1861, *Scolopendra ceylonensis* Newport, 1845, *Scolopendra damnosa* L. Koch, 1878, *Scolopendra dinodon* Wood, 1861, *Scolopendra elongata* Porat, 1871, *Scolopendra flava* Newport, 1845, *Scolopendra flavicornis* Tömösváry, 1885, *Scolopendra gervaisii* Newport, 1845, *Scolopendra gracilipes* Wood, 1861, *Scolopendra lutea* Newport, 1845, *Scolopendra machaeropus* Attems, 1900, *Scolopendra macracanthus* Bollman, 1889, *Scolopendra mactans* C.L. Koch, 1847, *Scolopendra meyeri* Haase, 1887, *Scolopendra nesuphila* Wood, 1862, *Scolopendra newporti* Lucas, 1849, *Scolopendra ornata* Newport, 1845, *Scolopendra parvidens* Wood, 1861, *Scolopendra placeae* Newport, 1845, *Scolopendra planiceps* Newport, 1845, *scolopendra plumbeolata* Wood, 1861, *Scolopendra polyodonta* Daday, 1893, *Scolopendra rarispina* Gervais, 1847, *Scolopendra repens* Wood, 1862, *colopendra rugosa* Meinert, 1886, *Scolopendra sandwichiana* Gervais, 1847, *Scolopendra septemspinosa* Brandt, 1840, *Scolopendra sexspinosa* Newport, 1844, *Scolopendra sulphurea* C.L. Koch, 1847, *Scolopendra variispinosa* Tömösváry, 1885, *Scolopendra cephalica gracilis* Wood, 1861, *Scolopendra subspinipes gracilipes* Daday, 1891, *Scolopendra subspinipes mollerii* Verhoeff, 1892
- 4). *Cormocephalus sarasinorum* Haase, 1887
- 5). *Cormocephalus inermipes* Pocock, 1891
- 6). *Rhysida ceylonica* Gravely, 1912
- 7). *Rhysida longipes* Newport, 1845. Synonym(s): *Branchiostoma affine* Kohlrausch, 1878, *Branchiostoma gracile* Kohlrausch, 1878, *Branchiostoma longipes rotundatum* Haase, 1887, *Otostigmus simplex* Chamberlin, 1913, *Rhysida yanagiharai* Takakuwa, 1935
- 8). *Rhysida immarginata* Porat, 1876. Synonym(s): *Branchiostoma gymnopus* Kohlrausch, 1878, *Branchiostoma indicum* Kohlrausch, 1878, *Branchiostoma subspinusum* Tömösváry, 1885, *Branchiostoma immarginata celebense* Haase, 1887, *Rhysida nuda brevicornis* Wang, 1951, *Rhysida nuda brevicornuta* Wang, 1951.

- 9). *Scolopendra morsitans* Linnaeus, 1758. Synonym(s): *Eurylithobius slateri* Butler, 1876, *Scolopendra afzelii* Porat, 1871, *Sv*, *Scolopendra angulipes* Newport, 1844, *Scolopendra attenuata* Porat, 1871, *Scolopendra bilineata* Brandt, 1840, *Scolopendra brachypoda* Peters, 1862, *Scolopendra brandtiana* Gervais, 1837, *Scolopendra carinipes* Humbert & Saussure, 1870, *Scolopendra chlorocephala* Porat, 1871, *Scolopendra cognata* Porat, 1871, , *Scolopendra crassipes* Brandt, 1840, *Scolopendra elegans* Brandt, 1841, *Scolopendra erythrocephala* Brandt, 1840, *Scolopendra fabricii* Newport, 1845, *Scolopendra formosa* Newport, 1845, *Scolopendra fulvipes* Brandt, 1841, *Scolopendra grandidieri* Saussure & Zehntner, 1902, *Scolopendra impressa* Porat, 1876, *Scolopendra infesta* C.L. Koch, 1847, *Scolopendra intermedia* Porat, 1871, *Scolopendra leachii* Newport, 1844, *Scolopendra limbata* Brandt, 1840, *Scolopendra lineata* Saussure & Zehntner, 1902, *Scolopendra longicornis* Newport, 1844, *Scolopendra modesta* Wood, 1862, *Scolopendra mossambica* Peters, 1862, *Scolopendra pella* Wood, 1861, *Scolopendra picturata* Porat, 1871, *Scolopendra pilosella* Porat, 1871, *Scolopendra planipes* C.L. Koch, 1847, *Scolopendra platypoides* Newport, 1844, *Scolopendra platypus* Brandt, 1840, *Scolopendra porphyra* Wood, 1861, *Scolopendra richardsoni* Newport, 1845, *Scolopendra saltatoria* Porat, 1871, *Scolopendra spinosella* Saussure & Zehntner, 1902, *Scolopendra tigrina* Newport, 1845, *Scolopendra tongana* Gervais, 1847, *Scolopendra tuberculidens* Newport, 1844, *Scolopendra vaga* Porat, 1871, *Scolopendra varia* Newport, 1845, *Scolopendra wahlbergi* Porat, 1871, *Scolopendra morsitans amazonica* Bücherl, 1946, *Scolopendra morsitans calcarata* Daday, 1891, *Scolopendra morsitans fasciata* Attems, 1930, *Scolopendra morsitans procera* Haase, 1887, *Scolopendra morsitans scopoliana* C.L. Koch, 1841, *Scolopendra morsitans sulcipes* Haase, 1887, *Trachycormocephalus jodhpurensis* Khanna, 1977.
- 10). *Ethmostigmus rubripes* Brandt, 1840. Synonym(s): *Ethmostigmus australianus* Chamberlin, 1920, *Heterostoma bisulcatum* Tömösváry, 1885, *Heterostoma crassipes* Silvestri, 1894, *Heterostoma fasciata* Newport, 1845, *Heterostoma flava* Newport G, 1845, *Heterostoma rubripes grossipes* Pocock, 1891, *Scolopendra megacephala* Newport, 1844, *Scolopendra rapax* Gervais, 1847, *Scolopendra scabriventris* Newport, 1844, *Scolopendra spinulosa* Brandt, 1840, *Scolopendra squalidens* Newport, 1844, *Scolopendra sulcicornis* Newport, 1844, *Scolopendra sulcidens* Newport, 1844.
- 11). *Otostigmus (Otostigmus) ceylonicus* Haase, 1887.
- 12). *Otostigmus (Otostigmus) scaber* Porat, 1876. Synonym(s): *Branchiotrema multicarinatum* Kohlrausch, 1878, *Otostigmus carinatus* Porat, 1876, *Otostigmus malayanus* Chamberlin, 1914, *Otostigmus (Otostigmus) striatus* Takakuwa, 1940, *Otostigmus carinatus insulare* Haase, 1887, *Otostigmus (Otostigmus) striatus porteri* Dobroruka, 1960, *Otostigmus (Otostigmus) striatus striatus* Takakuwa, 1940.

**Order- Geophilomorpha** Pocock, 1895

**Family- Mecistocephalidae**

- 13). *Mecistocephalus heteropus* Humbert, 1865,
- 14). *Mecistocephalus subinsularis* Silvestri, 1919,

### Family- Oryidae Cook, 1896

- 15). *Orphnaeus brevilabiatu*s Newport, 1845. Synonym(s) *Orphnaeus bilineatus* Peters, 1855, *Orphnaeus lividus* Meinert, 1870, *Orphnaeus phosphoreus* Linnaeus, 1758, *Orphnaeus xanti* Tömösváry, 1885,  
**Order - Lithobiomorpha** Pocock, 1895  
**Family- Lithobiidae** Newport, 1844
- 16). *Australobius sculpturatus* Pocock, 1901. Synonym(s): *Australobius ceylanicus* Attems, 1909.
- 17). *Australobius palnis* Eason, 1973  
**Order - Scutigeromorpha**  
**Family - Scutigerinidae**
- 18). *Scutigerina weberi* Silvestri, 1903. Synonym(s): *Scutigerina transvaalicus* Silvestri, 1903.  
**Order- Scutigeridae** Gervais, 1837
- 19). *Thereuopodina tenuicornis* Verhoeff, 1905.

According to the present knowledge altogether 19 described centipedes' species from five families occur in Sri Lanka. It is evident that at present we know very little about centipedes of Sri Lanka. According to published information on the ecology and biology, endemic representatives are virtually non-existent, while our knowledge on the taxonomy and distribution is very poor. Also, not a single centipedes species from Sri Lanka is included in the National 2007 IUCN Red List.

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## **The IUCN Red List Categories**

(Source: [www.redlist.org](http://www.redlist.org))

Technical definitions of the IUCN of the IUCN Red List Categories and Criteria are given in the IUCN Red List Categories and Criteria: Version 3.1 booklet and the Guidelines for using the IUCN Red List Categories and Criteria.

### **Extinct (EX)**

A taxon is Extinct when there is no reasonable doubt that the last individual has died. A taxon is presumed Extinct when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.

### **Extinct In The Wild (EW)**

A taxon is Extinct in the Wild when it is known only to survive in cultivation, in captivity or as a naturalized population (or populations) well outside the past range. A taxon is presumed Extinct in the Wild when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.

### **Critically Endangered (CR)**

A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered and it is therefore considered to be facing an extremely high risk of extinction in the wild.

### **Endangered (EN)**

A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered (see Section V), and it is therefore considered to be facing a very high risk of extinction in the wild.

### **Vulnerable (VU)**

A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable (see Section V), and it is therefore considered to be facing a high risk of extinction in the wild.

### **Near Threatened (NT)**

A taxon is Near Threatened when it has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future.

### **Least Concern (LC)**

A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant taxa are included in this category.

**Data Deficient (DD)**

A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that threatened classification is appropriate. It is important to make positive use of whatever data are available. In many cases great care should be exercised in choosing between DD and a threatened status. If the range of a taxon is suspected to be relatively circumscribed, and a considerable period of time has elapsed since the last record of the taxon, threatened status may well be justified.

**Not Evaluated (NE)**

A taxon is Not Evaluated when it has not yet been evaluated against the criteria.

**Critically Endangered 'Possibly Extinct' CR (PE)**

Although an evidentiary approach to classifying extinctions is appropriate, this approach biases analyses of recent extinctions when based only on those species classified as Extinct or Extinct in the Wild (when individuals survive only in captivity). For example, the number of recent extinctions documented on the IUCN Red List is likely to be a significant underestimate, even for well-known taxa such as birds. The tag of 'possibly extinct' has therefore been developed to identify those Critically Endangered species that are likely already Extinct, but for which confirmation is required. Taxa tagged as possibly extinct would then be included within bounded estimates of the number of recent extinctions to indicate plausible uncertainty in contemporary rates of extinction.

Note that 'possibly extinct' is a tag, and not a new Red List Category.

**Summary of the five criteria (A–E) used to evaluate if a taxon belongs in a threatened category (Critically Endangered, Endangered or Vulnerable).**

Use any of the criteria A–E	Critically Endangered	Endangered	Vulnerable
<b>A. Population reduction</b>	Declines measured over the longer of 10 years or 3 generations		
<b>A1</b>	≥ 90%	≥ 70%	≥ 50%
<b>A2, A3 &amp; A4</b>	≥ 80%	≥ 50%	≥ 30%
<b>A1.</b>	Population reduction observed, estimated, inferred, or suspected in the past where the causes of the reduction are clearly reversible <b>AND</b> understood <b>AND</b> have ceased, based on and specifying any of the following:		
<b>(a)</b>	direct observation		
<b>(b)</b>	an index of abundance appropriate to the taxon		
<b>(c)</b>	a decline in area of occupancy (AOO), extent of occurrence (EOO) and/or habitat quality		
<b>(d)</b>	actual or potential levels of exploitation		
<b>(e)</b>	effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.		
<b>A2.</b>	Population reduction observed, estimated, inferred, or suspected in the past where the causes of reduction may not have ceased <b>OR</b> may not be understood <b>OR</b> may not be reversible, based on (a) to (e) under A1.		
<b>A3.</b>	Population reduction projected or suspected to be met in the future (up to a maximum of 100 years) based on (b) to (e) under A1.		
<b>A4.</b>	An observed, estimated, inferred, projected or suspected population reduction (up to a maximum of 100 years) where the time period must include both the past and the future, and where the causes of reduction may not have ceased <b>OR</b> may not be understood <b>OR</b> may not be reversible, based on (a) to (e) under A1.		
<b>B. Geographic range in the form of either B1 (extent of occurrence) AND/OR B2 (area of occupancy)</b>			
<b>B1.</b> Extent of occurrence (EOO)	< 100 km <sup>2</sup>	< 5,000 km <sup>2</sup>	< 20,000 km <sup>2</sup>
<b>B2.</b> Area of occupancy (AOO)	< 10 km <sup>2</sup>	< 500 km <sup>2</sup>	< 2,000 km <sup>2</sup>
<b>AND at least 2 of the following:</b>			
<b>(a)</b> Severely fragmented, <b>OR</b>			
Number of locations	= 1	≤ 5	≤ 10
<b>(b)</b> Continuing decline in any of: <b>(i)</b> extent of occurrence; <b>(ii)</b> area of occupancy; <b>(iii)</b> area, extent and/or quality of habitat; <b>(iv)</b> number of locations or subpopulations; <b>(v)</b> number of mature individuals.			
<b>(c)</b> Extreme fluctuations in any of: <b>(i)</b> extent of occurrence; <b>(ii)</b> area of occupancy; <b>(iii)</b> number of locations or subpopulations; <b>(iv)</b> number of mature individuals.			
<b>C. Small population size and decline</b>			
Number of mature individuals	< 250	< 2,500	< 10,000
<b>AND either C1 or C2:</b>			
<b>C1.</b> An estimated continuing decline of at least: (up to a max. of 100 years in future)	25% in 3 years or 1 generation	20% in 5 years or 2 generations	10% in 10 years or 3 generations
<b>C2.</b> A continuing decline <b>AND</b> (a) and/or (b):			
<b>(a i)</b> Number of mature individuals in each subpopulation:	< 50	< 250	< 1,000
<b>or</b>			
<b>(a ii)</b> % individuals in one subpopulation =	90–100%	95–100%	100%
<b>(b)</b> Extreme fluctuations in the number of mature individuals.			
<b>D. Very small or restricted population</b>			
<b>Either:</b>			
Number of mature individuals	< 50	< 250	<b>D1.</b> < 1,000
Restricted area of occupancy			<b>AND/OR</b> <b>D2.</b> typically: AOO < 20 km <sup>2</sup> or number of locations ≤ 5
<b>E. Quantitative Analysis</b>			
Indicating the probability of extinction in the wild to be:	≥ 50% in 10 years or 3 generations (100 years max.)	≥ 20% in 20 years or 5 generations (100 years max.)	≥ 10% in 100 years

