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The National Red List 2012 of Sri Lanka

Conservation status of the Fauna and Flora

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The National Red List 2012 of Sri Lanka

Conservation Status of the Fauna and Flora

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

Red Listing Team

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,
Ministry of Environment.

A Brief Overview of the Biodiversity of Sri Lanka

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Sri Lanka, with a total land area of 65,610 km^2 is a tropical island situated in the Indian Ocean. The southwestern region of Sri Lanka, encompassing approximately 20,000 km^2, 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 mange 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 Fonseka (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 (*Macrodiplax 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 defonsekai* 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. *Elattoneura 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 faunisitic 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
Family: Calopterygidae					
Neurobasis chinensis (Linnaeus, 1758)	E: Oriental Green-wing	VU	B1ab(iii)	LC	
Vestalis apicalis Selys, 1873	E: Black-tipped Flashwing	VU	B1ab(iii)	LC	
Family: Chlorocyphidae					
Libellago adami Fraser, 1939	E: Sri Lanka Adam's Gem	VU	B1ab(iii)		
Libellago finalis **(**Hagen in Selys, 1869)	E: Sri Lanka Ultima Gem	VU	B1ab(iii)		
Libellago greeni (Laidlaw, 1924)	E: Sri Lanka Green's Gem	EN	B2ab(iii)		
Libellago corbeti van der Poorten, 2009	E: Sri Lanka Ebony Gem	CR	B2ab(iii)		
Family: Euphaeidae					
Euphaea splendens Hagen in Selys, 1853	E: Sri Lanka Shining Gossamerwing	NT			
Family: Lestidae					
Lestes praemorsus Hagen in Selys, 1862	E: Scalloped Spreadwing	NT			
Lestes elatus Hagen in Selys, 1862	E: White Tipped Spreadwing	LC		LC	
Lestes malabaricus Fraser, 1929	E: Malabar Spreadwing	DD			
Sinhalestes orientalis (Hagen in Selys, 1859)	E: Sri Lanka Emerald Spreadwing	DD		CR	B1ab(iii)+ 2ab(iii)
Indolestes divisus (Hagen in Selys, 1862)	E: Sri Lanka E: Metallic-backed Reedling	EN	B1ab(iii)+ 2ab(iii)		
Indolestes gracilis (Hagen in Selys, 1862)	E: Mountain Reedling	VU	B1ab(iii)	LC	
Family: Coenagrionidae					
Agriocnemis femina (Brauer, 1868)	E: White-backed Wisp	CR	B2ab(iii)	LC	
Agriocnemis pygmaea (Rambur, 1842)	E: Wandering Wisp	LC		LC	
Mortonagrion ceylonicum Lieftinck, 1971	E: Sri Lanka Midget	EN	B1ab(iii)+2ab(iii)	DD	
Onychargia atrocyana Selys, 1865	E: Marsh Dancer	VU	B1ab(iii)	LC	
Paracercion malayanum (Selys, 1876)	E: Malay Lilysquatter	LC		LC	
Enallagma parvum Selys, 1876	E: Little Blue	DD		LC	
Aciagrion occidentale Laidlaw, 1919	E: Asian Slim	VU	B1ab(iii)	LC	
Ischnura aurora (Brauer, 1865)	E: Dawn Bluetail	NT		LC	

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

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

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

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

Scientific Name	Common Name	NSG	Criteria	GCS	Criteria
Tramea limbata (Desjardins, 1832)	E: Sociable Glider	LC		LC	
Tholymis tillarga (Fabricius, 1798)	E: Foggy-winged Twister	LC		LC	
Zyxomma petiolatum Rambur, 1842	E: Dingy Duskflyer	NT		LC	
Aethriamanta brevipennis (Rambur, 1842)	E: Elusive Adjutant	LC		LC	
Macrodiplax cora (Kaup in Brauer, 1867)	E: Costal Pennant	VU	B1ab(iii)	LC	
Urothemis signata (Rambur, 1842)	E: Scarlet Basker	LC		LC	
Zygonyx iris 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) 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., *Tetraponera* 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 net work 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
Subfamily: Aenictinae			
Aenictus biroi Forel		DD	
Aenictus ceylonicus (Mayr)	E: Asian Reddish Brown Army Ant	DD	
Aenictus fergusoni (Karavaive)		EN	B2ab(iii)
Aenictus pachycerus (Dalla Torre)	E: Army Ant	EN	B1ab(iii)
Aenictus porizonoides Walker		DD	
Subfamily: Aneuretinae			
Aneuretus simoni Emery	E: Sri Lankan Relict Ant	EN	B1+2ab(iii)
Subfamily: Myrmicinae			
Myrmecina striata Emery		CR	B2ab(iii)
Acanthomyrmex luciolae Emery		DD	
Anillomyrma decamera Emery		DD	
Calyptomyrmex tamil Baroni Urbani		DD	
Calyptomyrmex vedda Baroni Urbani		DD	
Calyptomyrmex singalensis Baroni Urbani		DD	
Cardiocondyla nuda (Mayr)		CR	B2ab(iii)
Cataulacus simoni Emery		DD	
Cataulacus taprobanae Smith F.		DD	
Crematogaster anthracina Smith F.		DD	
Crematogaster biroi Mayr		EN	B2ab(iii)
Crematogaster apicalis Motchoulsky		DD	
Crematogaster brunnescens Motchoulsky		DD	
Crematogaster dohrni Mayr	S: Kodaya	VU	B1ab(iii)
Crematogaster pellens Walker		DD	
Crematogaster politula Forel		CR	B1+2ab(iii)
Crematogaster ransonneti Mayr		DD	
Crematogaster rogenhoferi Mayr	E: Thai Tree Ant	CR	B2ab(iii)
Crematogaster rogeri Mayr		DD	
Crematogaster rothneyi Forel	S: Kodaya	LC	
Lophomyrmex quadrispinosus (Jerdon)		LC	
Meranoplus bicolor (Guerin-Meneville)		LC	
Metapone greeni Forel		DD	
Metapone johni Karavaiev		DD	
Monomorium floricola (Jerdon)	E: Flower Ant S: Thel Koombiya	LC	
Monomorium subopacum (Smith F.)		DD	
Monomorium taprobanae Forel	E: Sri Lanka Flower Ant	DD	
Monomorium latinode Mayr		DD	
Monomorium criniceps (Mayr)		EN	B1+2ab(iii)
Monomorium destructor (Jerdon)	E: Singapore Ant S: Rathu Koombiya	LC	
Monomorium mayri Forel		DD	
Monomorium pharaonis (L.)	E: Pharaoh Ant	LC	
Monomorium rogeri (Mayr)		DD	

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

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

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

Scientific Name	Common Name	NCS	Criteria
Camponotus sericeus (Fabricius)	E: Golden Backed Carpenter Ant	LC	
Camponotus sesquipedalis Roger		DD	
Camponotus varians Roger		DD	
Camponotus variegatus (Smith F.)		CR	B2ab(iii)
Lepisiota capensis (Mayr)	E: Black Sugar Ant	CR	B2ab(iii)
Lepisiota frauenfeldi (Mayr)		VU	B1ab(iii)
Lepisiota opaca (Mayr)		VU	B1ab(iii)
Myrmoteras ceylonica Gregg		DD	
Oecophylla smaragdina (Fabricius)	E: Weaver ant S: Dimiya	LC	
Paratrechina longicornis (Latrielle)	E: Longhorn Crazy Ant S: Kalu Koombiya	LC	
Paratrechina indica Forel		EN	B1+2ab(iii)
Paratrechina taylori (Forel)		DD	
Nylanderia yerburyi (Forel)		LC	
Plagiolepis jerdonii Forel		VU	B1ab(iii)
Plagiolepis pissina Roger		DD	
Polyrhachis bugnioni Forel		DD	
*Polyrhachis exercita (*Walker)		DD	
Polyrhachis horni Emery		DD	
Polyrhachis jerdonii Forel		EN	B1+2ab(iii)
Polyrhachis nigra Mayr		DD	
Polyrhachis rupicapra Roger		DD	
Polyrhachis thrinax Roger		DD	
Polyrhachis tibialis Santschi		DD	
Polyrhachis xanthippe Forel		DD	
Polyrhachis yerburyi Forel		DD	
Polyrhachis convexa Roger		VU	B1ab(iii)
Polyrhachis illaudata Walker		CR	B1+2ab(iii)
Polyrhachis punctillata Roger		VU	B1ab(iii)
Polyrhachis rastellata (Latreille)		CR	B2ab(iii)
Polyrhachis scissa (Roger)		EN	B2ab(iii)
Polyrhachis sophocles Forel		DD	
Prenolepis naorojii Forel		CR	B2ab(iii)
Pseudolasius isabellae 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 land mark 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
Family: Colletidae		
Hylaeus krombeini Snelling, 1980	CR	B2ab(iii)
Hylaeus sedens Snelling, 1980	CR	B2ab(iii)
Family: Halicitidae		
Austronomia krombeini Hirashima, 1978	NT	
Austronomia notiomorpha Hirashima, 1978	NT	
Ceylalictus cereus (Nurse, 1901)	EN	B1ab(iii)+2ab(iii)
Ceylalictus horni (Strand, 1913)	CR	
Ceylalictus taprobanae (Cameron, 1897)	EN	B2ab(iii)
Curvinomia formosa (Smith, 1858)	EN	B2ab(iii)
Curvinomia iridiscens (Smith, 1857)	EN	B2ab(iii)
Gnathonomia nasicana Bingham, 1897	EN	B2ab(iii)
Halictus (Seladonia) lucidipennis Smith, 1853	LC	
Halictus trincomalicus Cameron, 1903	CR	B2ab(iii)
Homalictus paradnanus (Strand, 1914)	EN	B1ab(iii)
Homalictus singhalensis (Blüthgen, 1926)	CR	B1ab(iii)+2ab(iii)
Hoplonomia westwoodi (Gribodo, 1894)	LC	
Lasioglossum (Ctenonomia) amblypygus (Strand, 1913)	VU	B1ab(iii)
Lasioglossum (Ctenonomia) cire (Cameron, 1897)	VU	B1ab(iii)
Lasioglossum (Ctenonomia) clarum (Nurse, 1902)	NT	
Lasioglossum (Ctenonomia) semisculptum (Cockerell, 1911)	CR	B2ab(iii)
Lasioglossum (Ctenonomia) semisculptum (Cockerell, 1911)	CR	
Lasioglossum (Ctenonomia) vagans (Smith, 1857)	VU	B1ab(iii)
Lasioglossum (Ctenonomia) albescens (Smith, 1853)	EN	B1ab(iii)
Lasioglossum (Evylaeus) carinifrons (Cameron, 1904)	LC	
Lasioglossum (Nesohalictus) halictoides (Smith, 1859)	VU	B1ab(iii)
Lasioglossum (Nesohalictus) serenum (Cameron, 1897)	LC	
Lasioglossum (Sudila) alphenum (Cameron, 1897)	LC	
Lasioglossum (Sudila) aulacophorum (Strand, 1913)	EN	B1ab(iii)+2ab(iii)
Lasioglossum (Sudila) bidentatum (Cameron, 1898)	CR	B1ab(iii)+2ab(iii)
Lasioglossum (Sudila) kandiense (Cockerell, 1913)	CR	B2ab(iii)
Lipotriches (Austronomia) ustula (Cockerell, 1911)	EN	B2ab(iii)
Lipotriches austella (Hirashima, 1978)	EN	B1ab(iii)
Lipotriches cromberi (Cockerell, 1911)	EN	B2ab(iii)
Lipotriches edirisinghei Pauly, 2006	VU	B1ab(iii)
Lipotriches exagens (Walker, 1860)	EN	B1ab(iii)
Lipotriches fulvinerva (Cameron, 1907)	EN	
Lipotriches pulchriventris (Cameron, 1897)	CR	B2ab(iii)
*Lipotriches sp nr. Comperta (*Cockerell, 1912)	CR	B2ab(iii)
Nomia (Hoplonomia) strigata (Fabricius, 1793)	CR	B2ab(iii)
Nomia biroi Friese, 1913	EN	B1ab(iii)
Nomia butteli Friese, 1913	CR	B2ab(iii)
Nomia crassipes Fabricius 1798	NT	
Nomia crassiuscula Friese, 1913	CR	B2ab(iii)

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

Scientific Name	NCS	Criteria
Family: Apidae		
Amegilla (Glossamegilla) violacea Lepeletier, 1841	VU	B1ab(iii)
Amegilla (Zebramegilla) fallax Smith, 1879	NT	
Amegilla (Zebramegilla) subcoerulea Lepeletier, 1841	CR	B2ab(iii)
Amegilla (Zonamegilla) cingulifera Cockerell, 1910	EN	B1ab(iii)+2ab(iii)
Amegilla (Zonamegilla) comberi Cockerell, 1911	NT	
Amegilla (Zonamegilla) niveocincta (Smith, 1854)	CR	B2ab(iii)
Amegilla (Zonamegilla) puttalama Strand, 1913	VU	B1ab(iii)
Amegilla (Zonamegilla) subinsularis (Strand)	EN	B1ab(iii)+2ab(iii)
Amegilla (Zonamegilla) zonata Linnaeus, 1758	VU	B1ab(iii)
Apis cerana Fabricius, 1793	VU	B1ab(iii)
Apis dorsata Fabricius, 1793	EN	B2ab(iii)
Apis florea Fabricius, 1787	EN	B2ab(iii)
Braunsapis cupulifera Vachal, 1894	CR	B2ab(iii)
Braunsapis mixta Smith, 1852	LC	
Braunsapis picitarsis Cameron, 1902	EN	B1ab(iii)+2ab(iii)
Ceratina (Ceratinidia) hieroglyphica Smith, 1854	LC	
Ceratina (Pithitis) binghami Cockerell, 1910	LC	
Ceratina (Pithitis) smaragdula Fabricius, 1787	EN	B2ab(iii)
Ceratina (Simoceratina) tanganyicensis Strand, 1911	CR	B2ab(iii)
Ceratina (Xanthoceratina) beata Cameron, 1897	CR	B2ab(iii)
Nomada antennata Meade-Waldo, 1913	CR	B2ab(iii)
Nomada bicellula Schwarz, 1990	EN	B1ab(iii)
Nomada priscilla Nurse, 1902	CR	B1ab(iii)+2ab(iii)
Nomada wickwari Meade-Waldo, 1913	CR	B2ab(iii)
Tetralonia commixtana Strand, 1913	CR	B2ab(iii)
Tetralonia fumida Cockerell, 1911	CR	B2ab(iii)
Tetralonia taprobanicola Strand, 1913	CR	B2ab(iii)
Thyreus ceylonicus Friese, 1905	NT	
Thyreus histrio Fabricius, 1775	NT	
Thyreus insignis Meyer, 1912	EN	B2ab(iii)
Thyreus ramosellus Cockerell, 1919	EN	B2ab(iii)
Thyreus surniculus Lieftinck, 1959	CR	B2ab(iii)
Thyreus takaonis Cockerell, 1911	LC	
Trigona iridipennis Smith, 1854	LC	
Xylocopa amethystina Fabricius, 1793	VU	B1ab(iii)
Xylocopa auripennis Lepeletier, 1841	CR	B2ab(iii)
Xylocopa bhowara Maa, 1938	VU	B1ab(iii)
Xylocopa bryorum Fabricius, 1775	CR	B2ab(iii)
Xylocopa confusa Perez, 1901	EN	B1ab(iii)
Xylocopa dejeanii Lepeletier, 1841	EN	B1ab(iii)
Xylocopa fenestrata Fabricius, 1798	NT	
Xylocopa nasalis Westwood, 1842	CR	B2ab(iii)
Xylocopa ruficornis Fabricius, 1804	EN	B1ab(iii)+2ab(iii)
Xylocopa tenuiscapa Westwood, 1840	LC	
Xylocopa tranquibarica 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 Papilionoidae) 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 superceded by the work of van Nieukerken *et. al.,* (2011) in which all seven families of butterflies, including the skippers, are now classified in the superfamily Papilionoidae. 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 Hesperiidae (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 Hesperiidae (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*, *Azanus 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 Arippu 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
Family: Papilionidae					
Graphium agamemnon Linnaeus, 1758	E: Tailed Jay; S: Thudanga Pralapani	LC			
Graphium antiphates Cramer, 1775	E: Fivebar Swordtail; S: Pancha iri kaga-waligaya	EN	B2ab(iii)		
Graphium doson Felder, 1864	E: Common Jay ; S: Pralapani	LC			
Graphium nomius Esper, 1784	E: Spot Swordtail; S: Thith Kaga-waligaya	VU	B1ab(iii)		
Graphium sarpedon Linnaeus, 1758	E: Bluebottle ; S: Neelabomi	LC			
Pachliopta aristolochiae Fabricius, 1775	E: Common Rose ; S: Sewwandiya	LC			
Pachliopta hector Linnaeus, 1758	E: Crimson Rose; S: Arunu Sewwandiya	LC			
Pachliopta jophon Gray, 1852	E: Sri Lanka Rose; S: Sri Lanka rosa papiliya	EN	B2ab(iii)	CR*	B1+2ac
Papilio clytia Linnaeus, 1758	E: Mime; S: Rawana Papiliya	LC			
Papilio crino Fabricius, 1792	E: Banded Peacock; S: Mayurabada	VU	B2ab(iii)		
Papilio demoleus Linnaeus, 1758	E: Lime Butterfly; S: Dehirisiya	LC			
Papilio helenus Linnaeus, 1758	E: Red Helen; S: Maha Kela Papiliya	VU	B1ab(iii)		
Papilio polymnestor Cramer, 1775	E: Blue Mormon ; S: Neela Parindaya	LC			
Papilio polytes Linnaeus, 1758	E: Common Mormon; S: Wesgaththi	LC			
Troides darsius Gray, 1852	E: Sri Lanka Birdwing; S: Sri Lanka Maha Kurulu Piya Paliliya	LC			
Family: Pieridae					
Appias albina Boisduval, 1836	E: Common Albatross; S: Dingupath Samanalaya	LC			
Appias galene Cramer, 1777	E: Sri Lanka Lesser Albatross; S: Sri Lanka Thundu Dingupath Samanalaya	LC			
Appias indra Moore, 1857	E: Plain Puffin; S: Dumbara-sudana	CR	B1ab(iii)+ 2ab(iii)		
Appias libythea Fabricius, 1775	E: Striped Albatross; S: Iri Sudana	LC			
Appias lyncida Cramer, 1779	E: Chocolate Albatross; S: Dumburuwan Sudana	LC			
Belenois aurota Fabricius, 1793	E: Pioneer ;S: Apsaravi	LC			
Catopsilia pomona Fabricius, 1775	E: Lemon Emigrant; S: Dehi seriya	LC			
Catopsilia pyranthe Linnaeus, 1758	E: Mottled Emigrant; S: Lapa seriya	LC			
Catopsilia scylla Linnaeus, 1763	E: Orange Migrant	LC			

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

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

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

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

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

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

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

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

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
Sarangesa dasahara Moore, 1866	E: Common Small Flat ; S: Kuda Kunchika	NT			
Spialia galba Fabricius, 1793	E: Indian Skipper ; S: Indu-pimma	LC			
Suastus gremius Fabricius, 1798	E: Indian Palm Bob ; S: Indu-thala Bobaya	LC			
Suastus minuta Moore, 1877	E: Ceylon Palm Bob; S: Hela-thala Bobaya	EN	B2ab(iii)		
Tagiades japetus Stoll, 1781	E: Ceylon Snow Flat; S: Hima Kunchika	LC			
Tagiades litigiosa Möschler, 1878	E: Water Snow Flat; S: Diya Kunchika	VU	B2ab(iii)		
Tapena thwaitesi Moore, 1881	E: Black Angle; S: Kalu Mulla	EN	B1ab(iii)+ 2ab(iii)		
Taractrocera maevius Fabricius, 1793	E: Common Grass Dart; S: Thana-sara	LC			
Telicota bambusae Moore, 1878	E: Dark Palmdart ; S: Anduru Thala-sara	VU	B1ab(iii)		
Telicota colon Fabricius, 1775	E: Pale Palmdart; S: Thala-sara)	NT			
Thoressa decorata Moore, 1881	E: Sri Lanka Decorated Ace; S: Sri Lanka Sithirasiya	EN	B1ab(iii)+ 2ab(iii)		
Udaspes folus 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 confuscius* 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 hypothised 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
Family: Agelenidae			
Tegenaria taprobanica Strand, 1907		DD	
Tegenaria domestica (Clerck, 1757)		DD	
Family: Araneidae			
Anepsion maritatum (O. P.-Cambridge, 1877)		DD	
Arachnura scorpionides Vinson, 1863	E: Scorpion spider	LC	
Araneus enucleatus (Karsch, 1879)		DD	
Araneus minutalis (Simon, 1889)		DD	
Araneus mitificus (Simon, 1886)	E: Kidney garden spider/ Pale Orb Weaver	LC	
Araneus obtusatus (Karsch, 1891)		DD	
Argiope aemula (Walckenaer, 1841)	E: Andrew's Cross Spider; S: Kaha visithuru kathira dal viyanna	LC	
Argiope aetherea (Walckenaer, 1841)		DD	
Argiope anasuja Thorell, 1887	E: Signature Spider; S: Liyana dal viyanna	LC	
Argiope catenulata (Doleschall, 1859)	E: Grass cross spider; S: Thana kathira dal viyanna	DD	
Argiope pulchella Thorell, 1881		DD	
Argiope taprobanica Thorell, 1887		DD	
Caerostris indica Strand, 1915	E: Indian Bark spider; S: Indu kadan makuluwa	CR	B2ab(iii)
Chorizopes frontalis O. P.-Cambridge, 1870		DD	
Chorizopes mucronatus Simon, 1895		DD	
Cyclosa quinqueguttata (Thorell, 1881)		DD	
Cyclosa bifida (Doleschall, 1859)	E: Long-bellied Cyclosa Spider	LC	
Cyclosa insulana (Costa, 1834)	E: Brown Lobed Spider	LC	
Cyrtarachne perspicillata (Doleschall, 1859)		DD	
Cyrtarachne raniceps Pocock, 1900		DD	
Cyrtophora cicatrosa (Stoliczka, 1869)		DD	
Cyrtophora citricola (Forsskål, 1775)		DD	
Cyrtophora exanthematica(Doleschall,1859)		DD	
Cyrtophora moluccensis (Doleschall, 1857)	E: Common Tent-web Spider	LC	
Cyrtophora unicolor (Doleschall, 1857)		DD	
Eriovixia laglaizei (Simon, 1877)		LC	
Gasteracantha cancriformis (Linnaeus, 1758)	E: Star Spider, Spiny-backed Orbweaver	CR	B2ab(iii)
Gasteracantha geminata (Fabricius, 1798)	E: Common Spiny orb-weavers/ Common Kite Spider; S: Podu Sarungal makuluwa	LC	
Gasteracantha remifera Butler, 1873		DD	
Gea spinipes C. L. Koch, 1843		CR	B2ab(iii)
Gea subarmata Thorell, 1890		DD	
Glyptogona duriuscula Simon, 1895		DD	
Hypsosinga taprobanica (Simon, 1895)		DD	
Macracantha arcuata (Fabricius, 1793)	E: Long-horned Orb-weaver; S: Digu agathi sarungala makuluwa	CR	B2ab(iii)

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

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

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

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

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

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

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

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

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

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

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

Scientific Name	Common Name	NCS	Criteria
Peritraeus hystrix Simon, 1895		DD	
Phrynarachne ceylonica (O. P.-Cambridge, 1884)		DD	
Phrynarachne decipiens (Forbes, 1883)		CR	B2ab(iii)
Phrynarachne fatalis O. P.-Cambridge, 1899		DD	
Phrynarachne rothschildi Pocock & Rothschild, 1903		DD	
Runcinia bifrons (Simon, 1895)		DD	
Stiphropus sigillatus (O. P.-Cambridge, 1883)		DD	
Tagulis mystacinus Simon, 1895		DD	
Talaus oblitus O. P.-Cambridge, 1899		DD	
Tarrocanus capra Simon, 1895		DD	
Thomisus callidus (Thorell, 1890)		DD	
Thomisus elongatus Stoliczka, 1869		DD	
Thomisus granulifrons Simon, 1906		DD	
Thomisus pugilis Stoliczka, 1869		DD	
Thomisus spectabilis Doleschall, 1859		DD	
Thomisus stoliczkai (Thorell, 1887)		DD	
Tmarus fasciolatus Simon, 1906		DD	
Tmarus taiwanus Ono, 1977		CR	B2ab(iii)
Family: Titanoecidae			
Pandava laminata (Thorell, 1878)		DD	
Family: Uloboridae			
***Hyptiotes analis* Simon, 1892**		DD	
Miagrammopes ferdinandi O. P.-Cambridge, 1870		DD	
Miagrammopes thwaitesi O. P.-Cambridge, 1870		DD	
Uloborus bigibbosus Simon, 1905		DD	
Uloborus umboniger Kulczyn'ski, 1908*		DD	
Zosis geniculata (Olivier, 1789)	E: Grey house Spider/ Common house cribellate orb weaver; S: Podu peeru dal viyanna	LC	
Family: Zodariidae			
Cryptothele ceylonica O. P.-Cambridge, 1877		DD	
Habronestes bradleyi (O. P.-Cambridge, 1869)		DD	
Hermippus cruciatus Simon, 1905		DD	
Suffasia attidiya Benjamin & Jocqué, 2000		CR	B2ab(iii)
Suffasia mahasumana Benjamin & Jocqué, 2000		DD	
Family: Zorocratidae			
Campostichomma manicatum Karsch, 1891		DD	
Family: Zoropsidae			
Devendra pardalis (Simon, 1898)		DD	
Devendra pumilus (Simon, 1898)		DD	
Devendra seriatus (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^2) has 34 species (Ng *et al*., 2001). Another unique feature of Sri Lankan freshwater crabs is that they show 98.04% endemicity 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^2) now contains natural forest. The wet zone of Sri Lanka also has a very high population density (700 per km^2) 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^{-1} yr^{-1} 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
Family: Gecarcinucidae					
Ceylonthelphusa alpina Bahir & Yeo, 2005		CR	B1ab(iii)+2ab(iii)	EN	B1ab(iii)+2ab(iii)
Ceylonthelphusa armata (Ng, 1993)		CR	B1ab(iii)+2ab(iii)	EN	B1ab(iii)+2ab(iii)
Ceylonthelphusa callista (Ng, 1995)		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
Ceylonthelphusa cavatrix (Bahir, 1998)		CR	B2ab(iii)	EN	B1ab(iii)+2ab(iii)
Ceylonthelphusa diva Bahir & Yeo, 2005		CR	B2ab(iii)	EN	B1ab(iii)+2ab(iii)
Ceylonthelphusa durrelli Bahir & Yeo, 2005		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
Ceylonthelphusa kandambyi Bahir, 1999		EN	B1ab(iii)+2ab(iii)	NT	
Ceylonthelphusa kotagama (Bahir, 1998)		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
Ceylonthelphusa nata Ng & Tay, 2001		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
Ceylonthelphusa orthos Ng & Tay, 2001		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
Ceylonthelphusa rugosa (Kingsley, 1880)		NT		LC	
Ceylonthelphusa sanguinea (Ng, 1995)		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
Ceylonthelphusa savitriae Bahir & Yeo, 2005		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
Ceylonthelphusa sentosa Bahir , 1999		EN	B1ab(iii)+2ab(iii)	LC	
Ceylonthelphusa soror (Zehntner,1894)		EN	B1ab(iii)+2ab(iii)	LC	
Ceylonthelphusa venusta (Ng,1995)		CR	B2ab(iii)	NT	
Clinothelphusa kakoota Tay & Ng, 2001		CR	B1ab(iii)+2ab(iii)	CR	B1ab(iii)
Mahatha adonis Ng & Tay, 2001		NT		LC	
Mahatha helaya Bahir & Yeo, 2005		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
Mahatha iora Ng & Tay, 2001		CR	B2ab(iii)	CR	B1ab(iii)
Mahatha lacuna Bahir & Yeo, 2005		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
Mahatha ornatipes (Roux,1915)		NT		LC	
Mahatha regina Bahir & Yeo, 2005		CR	B2ab(iii)	CR	B1ab(iii)+2ab(iii)
Oziothelphusa ceylonensis (Fernando, 1960)		NT		LC	
Oziothelphusa dakuna Bahir & Yeo, 2005		CR	B2ab(iii)	EN	B1ab(iii)
Oziothelphusa gallicola Bahir & Yeo, 2005		CR	B2ab(iii)	EN	B1ab(iii)+2ab(iii)

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

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

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

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

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

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

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

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

Scientific Name	Common Name	NCS	Criteria
Nicida prestoni (Sykes 1897)		CR	B2ab(iii)
Family: Pupinidae			
Tortulosa aurea (Pfeiffer 1855)	E: Sri Lanka Tortu's Opercu-late Snail	CR	B1+2ab(iii)
Tortulosa austeniana (Benson 1853)		CR	B2ab(iii)
Tortulosa barnaclei (Tomlin 1928)		DD	
Tortulosa blanfordi (Dohrn 1862)		DD	
Tortulosa colletti (Sykes 1898)		CR	B2ab(iii)
Tortulosa congener (Sykes 1905)		CR	B1+2ab(iii)
Tortulosa connectens (Fulton 1903)		DD	
Tortulosa cumingi (Pfeiffer 1857)		EN	B1+2ab(iii)
Tortulosa decora (Benson 1853)		EN	B1+2ab(iii)
Tortulosa duplicata (Pfeiffer 1855)		CR	B2ab(iii)
Tortulosa eurytrema (Pfeiffer 1852)		DD	
Tortulosa greeni (Sykes 1899)		EN	B1+2ab(iii)
Tortulosa haemastoma (Pfeiffer 1857)		EN	B1+2ab(iii)
Tortulosa hartleyi (Tomlin 1928)		DD	
Tortulosa layardi (Pfeiffer 1851)		EN	B2ab(iii)
Tortulosa leucocheilus (Adams & Sowerby 1866)		DD	
Tortulosa marginata (Pfeiffer 1854)		EN	B1+2ab(iii)
Tortulosa nevilli (Sykes 1898)		EN	B1+2ab(iii)
Tortulosa nietneri (Nevill 1871)		DD	
Tortulosa prestoni (Sykes 1905)		DD	
Tortulosa pyramidata (PfeifFer 1852)		EN	B1+2ab(iii)
Tortulosa rugosa (Fulton 1904)		DD	
Tortulosa smithi (Sykes 1905)		CR	B2ab(iii)
Tortulosa sykesi (Fulton 1904)		CR	B2ab(iii)
Tortulosa templemani (Pfeiffer 1854)		CR	B2ab(iii)
Tortulosa thwaitesi (Pfeiffer 1852)		CR	B2ab(iii)
Family: Truncatellidae			
Truncatella ceylanica (Pfeiffsr 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; Goonatialke, 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 19th 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 20th 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, Systomus 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*, *Macrognathus 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 Ichtyological 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 nigromaginata* are only known from a single location (point endemics). Further, some species such as *Dawkinsia srilankensis, Laubuca insularis, Systomus 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*, *Systomus 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 as 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
Family: Cyprinidae					
Amblypharyngodon grandisquamis Jordan & Starks, 1917	E:Sri Lanka Large Silver Carplet; S:Gangiliya	EN	B1ab(iii)+ 2ab(iii)		
Amblypharyngodon melettinus (Valenciennes,1844)	E: Silver Carplet; S: Soraya	LC		LC	
Dawkinsia singhala (Dunker, 1912) syn. ***Puntius singhala***	E: Sri Lanka Filamented Barb; S:Damkola pethiya	LC		LC	
Dawkinsia srilankensis (Senanayake,1985) syn. ***Puntius srilankensis***	E:Sri Lanka Blotched Filamented Barb ; S:Dankuda pethiya	CR	B2ab(iii)	CR	
Devario aequipinnatus (McClelland, 1839)	E:Sri Lanka Knuckles Danio; S:Dumbara saalaya, Damkola saalaya	CR	B2ab(iii)	LC	
Devario malabaricus (Jerdon,1849)	E:Giant Danio; S:Rath kailaya, Damkola saalaya	LC		LC	
Devario pathirana (Kottelat & Pethiyagoda, 1990)	E:Sri Lanka Barred Danio; S: Pathirana saalaya	CR	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)
Esomus thermoicos (Valenciennes,1842)	E:Sri Lanka Flying Barb; S:Ravul dandiya, Thatu dandiya	LC		LC	
Garra ceylonensis Bleeker,1863	E:Sri Lanka Stone Sucker; S:Gal paanduruva, Gal paandiya	VU	B2ab(iii)	EN	
Garra phillipsi Deraniyagala, 1933	E:Sri Lanka Philips' Garra; S:Gal paanduruva, Gal paandiya	DD		DD	
Labeo dussumieri (Valenciennes,1842)	E:Common Labeo; S:Hiri kanaya, Gan kanaya	LC		LC	
Labeo fisheri Jordan & Starks,1917	E:Sri Lanka Mountain Labeo; S:Loku gadaya, Kalu gadaya, Weli gadaya, Gadaya	CR	B2ab(iii)	EN	B1ab(iii)
Labeo lankae Deraniyagala, 1952	E:Sri Lanka Orange-Fin Labeo; S:Thambalaya, Thambalaya vanna, Hiri kanaya	CR	B2ab(iii)	CR	A1c+2c, C1
Laubuca insularis Pethiyagoda, Kottelat, Silva, Maduwage & Meegaskumbura, 2008	E: Sri Lanka Knuckles Laubuca; S: Dumbara kara-adaya	CR	B2ab(iii)		
Laubuca lankensis (Deraniyagala, 1960)	E: Sri Lanka Blue Laubuca; S: Nilkara kara-adaya	VU	B1ab(iii)		
Laubuca ruhuna 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
Laubuca varuna Pethiyagoda, Kottelat, Silva, Maduwage & Meegaskumbura, 2008	E:Sri Lanka Varuna Laubuca; Varuna kara-adaya	CR	B2ab(iii)		
Pethia bandula (Kottelat & Pethiyagoda, 1991) syn. ***Puntius bandula***	E:Sri Lanka Bandula Barb; S: Bandula pethiya, Jayanthiya	CR	B1ab(iii)+ 2ab(iii)	CR	B1+2c, C1
Pethia cumingii (Gunther, 1868) syn. ***Puntius cumingii***	E: Sri Lanka Cuming's Barb; S:Depulliya, Pothya	EN	B1ab(iii)+ 2ab(iii)	LR/cd	
Pethia melanomaculata (Deraniyagala, 1956) syn. ***Puntius melanomaculatus***	E: Sri Lanka tic tac Barb; S: Pothaya	VU	B1ab(iii)		
Pethia nigrofasciata (Gunther, 1868) syn. ***Puntius nigrofasciatus***	E:Sri Lanka Black Ruby Barb; S:Bulath hapaya, Manamaalaya	EN	B2ab(iii)	LR/cd	
Pethia reval (Meegaskumbura, Silva, Maduwage & Pethiyagoda, 2008) syn. ***Puntius reval***	E: Sri Lanka Redfined Barb; S: Ratuwaral pothaya	EN	B1ab(iii)+ 2ab(iii)		
Puntius bimaculatus (Bleeker,1863)	E:Redside Barb; S: Ipili kadaya	LC		LC	
Puntius dorsalis (Jerdon,1849)	E:Long-Snouted Barb; S:Katu pethiya, Katu kuriya, Rathu varal pethiya	LC			
Puntius kamalika Silva, Maduwage & Pethiyagoda, 2008	E: Sri Lanka Kamalica's Barb; S: Mada pethiya	EN	B1ab(iii)+ 2ab(iii)		
Puntius kelumi Pethiyagoda, Silva, Maduwage & Meegaskumbura, 2008	E: Sri Lanka Redeye Barb; S: Rathu-es katupethiya	EN	B1ab(iii)+ 2ab(iii)		
Puntius layardi (Günther, 1868)	E: Sri Lanka Layards bard; S: Leyardge katupethiya	DD			
Puntius tetraspilus (Günther, 1868)	E: Sri Lanka four spot Long snouted bard; S: Siu tit katupethiya	DD			
Puntius thermalis (Valenciennes, *in* Cuvier & Valenciennes, 1844)	E:Swamp Barb; S:Kota pethiya: S: Kota pethiya	LC		LC	
Puntius titteya Deraniyagala 1929	E:Sri Lanka Cherry Barb; S: Le thiththaya	EN	B2ab(iii)	LR/cd	
Puntius vittatus (Day,1865)	E:Silver Barb; S: Bandi thiththaya, Podi pethiya, Ipili kadaya	LC		LC	
Rasbora armitagei Silva, Maduwage & Pethiyagoda, 2010	E: Sri Lanka Armitagi Rasbora; S: Rakvana dandiya	CR	B1ab(iii)+ 2ab(iii)		
Rasbora dandiya (Valenciennes, *in* Cuvier & Valenciennes, 1844*)*	E:Broad line Strip Rasbora; S: Dandiya, Kudamassa	LC			
Rasbora microcephalus (Jerdon, 1849)	E:Narrow line Rasbora S: Kiri dandiya, Kudamassa	LC		LC	

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

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
Mystus vittatus (Bloch,1794)	E: Striped Dwarf Catfish; S: Iri ankutta, Hiri ankutta	LC		LC	
Mystus ankutta Pethiyagoda, Silva & Maduwage, 2008	E: Sri Lanka Dwarf Catfish; S: Sri Lanka ankutta	EN	B1ab(iii)+ 2ab(iii)		
Mystus seengtee (Sykes, 1839)	E: Yellow Catfish; S: Path ankutta	LC			
Family: Claridae					
Clarias brachysoma Gunther 1864	E:Sri Lanka Walking Catfish; S:Magura,Vel magura, Kaha magura	NT			
Family: Siluridae					
*Ompok bimaculatus (*Bloch,1794)	E: Butter Catfish; S: Walapoththa, Penavalaya,Kokassa	LC		NT	
Wallago attu (Bloch & Schneider, 1801)	E:Shark Catfish; S:Walaya, Maha Walaya	EN	B2ab(iii)	NT	
Family: Heteropneustidae					
Heteropneustes fossilis (Bloch,1797)	E:Stinging Catfish; S:Hunga, Kaha hunga, Le hunga	LC		LC	
Family: Gobiidae					
Awaous melanocephalus (Bleeker,1849)	E: Scribbled Goby; S:Bali Weligowwa	LC			
Glossogobius giuris Hamilton, 1822	E:Bar-Eyed Goby; S:Maha weligowwa, Bali weligemba	LC			
Oligolepis acutipennis (Valenciennes, 1837)	E: Sharptail goby; S: Weligowwa	DD			
Schismatogobius deraniyagalai Kottelat & Pethiyagoda, 1989	E:Redneck Goby; S:Kata rathu weligowwa	EN	B1ab(iii)+ 2ab(iii)		
Sicyopterus griseus Day,1878	E:Stone Goby; S:Maha gal weligowwa	CR	B1ab(iii)+ 2ab(iii)	LC	
Sicyopterus halei (Day,1888)	E:Red-Tailed Goby; S:Gal weligowwa	CR	B2ab(iii)	DD	
Sicyopus jonklaasi (Klausewitz & Henrich,1986)	E:Sri Lanka Lipstick Goby; S:Thol rathu weligowwa	EN	B1ab(iii)+ 2ab(iii)	DD	
*Stenogobius malabaricus (*Day,1865)	E:Malabar Goby; S:Weligowwa	DD			
Stiphodon martenstyni Watson,1998	E:Sri Lanka Martenstyn's Goby; S: Weligowwa	CR(PE)	B2ab(iii)		
Family: Anguillidae					
Anguilla bicolor Mc Clelland, 1844	E:Level Finned Eel; S:Mada aandha, kakkutu aandha, kalapu aandha	LC		LC	
Anguilla nebulosa 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
Family: Mastacembelidae					
Mastacembelus armatus (Lacepede, 1803)	E:Marbled Spiny Eel; S:Gan theliya, Oya theliya	LC		LC	
Macrognathus pentophthalmos Gronow	Sri Lanka spiny eel	CR(PE)	B1ab(iii)+ 2ab(iii)		
Family: Synbranchidae					
Monopterus desilvai Bailey & Gans, 1998	E:Sri Lanka Lesser Swamp Eel; S:Dumburu potta aandha, potta aandha	CR	B2ab(iii)		
Ophisternon bengalense Mc Clelland, 1844	E:'Asian Swamp Eel; S:Potta aandha	CR	B1ab(iii)+ 2ab(iii)	LC	
Family: Channidae					
Channa ara (Deraniyagala,1945)	E:Sri Lanka Giant Snakehead; S:Aara, Kalumaha, Gangara	EN	B2ab(iii)		
Channa gachua (Bleeker,1877)	E: Brown Snakehead; S:Paradal kanaya, kanaya	LC		LC	
Channa orientalis (Bloch & Schneider, 1801)	E:Smooth-Breasted Snakehead; S:Kola kanaya, Gas kanaya	VU	B1ab(iii)		
Channa punctata (Bloch,1794)	E:Spotted Snakehead; S:Mada kanaya, mada ara, madakariya	LC		LC	
Channa striata (Bloch,1793)	E:Murrel; S: Loola, Halpath maha	LC		LC	
Family: Aplocheilidae					
Aplocheilus dayi (Steindachner, 1892)	E:Sri Lanka Day's Killifish; S:Uda handaya	EN	B2ab(iii)		
Aplocheilus parvus (Raj,1919)	E:Dwarf Panchax; S:Kalapu handaya, Uda handaya	LC			
Aplocheilus werneri Meinken, 1966	E:Sri Lanka Werneri's Killifish; S: Iri handaya	EN	B1ab(iii)+ 2ab(iii)		
Family: Belonidae					
Xenentodon cancila Hamilton, 1822	E:Freshwater Gar Fish; S:Yonna	NT		LC	
Family: Cichlidae					
Etroplus suratensis (Bloch, 1785)	E:Green Chromide; S:Koraliya, Mal koraliya	LC		LC	
Etroplus maculatus (Bloch, 1785)	E:Orange Chromide; S:Kaha koraliya, Ralliya, Ran koraliya	LC		LC	
Family: Belontidae					
Belontia signata (Gunther 1861)	E:Sri Lanka Combtail; S: Thalkossa, Pulutta, Kola moda	NT		LR/cd	
Malpulutta kretseri Deraniyagala, 1937	E:Sri Lanka Ornate Paradise Fish; S: Malpulutta	CR	B2ab(iii)	LR/cd	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
Pseudosphromenus cupanus (Cuvier, 1831)	E:Spike Tailed Paradise Fish; S: Pulutta, Thalkossa, Thal kadaya	LC		LC	
Family: Anabantidae					
Anabas testudineus (Bloch,1795)	E:Climbing Perch; S:Kaavaiya, Pol kaavaiya	LC		DD	
Family: Eleotridae					
Butis butis (Hamilton, 1822)	E: Upside-down Sleeper; S: Uduppuva, Vaniya	LC		LC	
Eleotris fusca (Forster, 1801)	E:Brown Gudgeon, Dusky Sleeper; S: Puwakbadilla	LC		LC	
Family: Adrianichthyidae					
Oryzias dancena (Hamilton 1822)	E: Common Blue Eye; Indian ricefish; S: Handi hadaya	DD		LC	
Oryzias carnaticus (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 km² 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 km² 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); Manamenrda-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
Family: Bufonidae					
Adenomus dasi Manamendra-Arachchi & Pethiyagoda, 1998	E:Das's dwarf toad; S: Das ge kuru gemba	CR	B2ab(iii)	CR	B1ab(iii)+ 2ab(iii))
Adenomus kandianus (Günther, 1872)	E:Kandy dwarf toad; S:Mahanuwara kuru gemba	CR	B2ab(iii)	EX	
Adenomus kelaartii (Günther, 1858)	E:Kelaart's dwarf toad; S: Kelaartge kuru gemba	VU	B1ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Duttaphrynus atukoralei Bogert & Senanayake, 1966	E:Atukorale's toad S:Atukoralage gemba	NT			
Duttaphrynus kotagamai Fernando & Dayawansa, 1994	E:Kotagama's toad; S:Kotagamage gemba	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Duttaphrynus melanostictus Schneider, 1799	E:Common toad; S:Gey gemba	LC			
Duttaphrynus noellerti Manamendra-Arachchi & Pethiyagoda, 1998	E:Nollert's toad; S: Nollertge gemba	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)
Duttaphrynus scaber Schneider, 1799	E:Schneider's toad; S:Schneiderge gemba	VU	B1ab(iii)		
Family: Microhylidae					
Kaloula taprobanica (Parker, 1934)	E:Sri Lankan bullfrog; S:Visithuru rathu gemba	LC			
Microhyla karunaratnei Fernando & Siriwardhane, 1996	E:Karunaratne's narrow-mouthed frog; S: Karunaratnege muva patu madiya	EN	B1ab(iii)+ 2ab(iii)	CR	B1ab(iii)
Microhyla ornata (Duméril & Bibron, 1841)	E:Ornate narrow mouthed frog; S:Visithuru muva patu madiya	LC			
Microhyla rubra (Jerdon, 1854)	E:Red narrow mouthed frog; S:Rathu muva patu madiya	LC			
Microhyla zeylanica Parker & Hill, 1949	E:Sri Lanka narrow mouthed frog; S:Lanka muva patu madiya	CR	B2ab(iii)	EN	B1+2
Ramanella nagaoi Manamendra-Arachchi & Pethiyagoda, 2001	E:Nagao's ramanella; S:Nagaoge mota hombu madiya	EN	B1ab(iii)+ 2ab(iii)	VU	D2
Ramanella obscura (Günther, 1864)	E:Obscure ramanella; S: Dumburu mota hombu madiya	VU	B1ab(iii)		
Ramanella palmata **(**Parker, 1934)	E:Parker's ramanella; S:Parkerge mota hombu madiya	CR	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)
Ramanella variegata (Stoliczka, 1872)	E:Variegated ramanella; S:Bada sudu mota hombu madiya	LC			

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

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
Family: Rhacophoridae					
Pseudophilautus abundus Manamendra-Arachchi & Pethiyagoda, 2005	E:Labugama shrub frog; S:Labugama panduru madiya	EN	B1ab(iii)+ 2ab(iii)		
Pseudophilautus adspersus (Günther, 1872)	E:Thwaites's shrub frog; S:Thwaitesge panduru madiya	EX		EX	
Pseudophilautus alto Manamendra-Arachchi & Pethiyagoda, 2005	E:Horton Plains shrub frog; S:Mahaeliya panduru madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus asankai Manamendra-Arachchi & Pethiyagoda, 2005	E:Asanka's shrub frog; S: Asankage panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus auratus Manamendra-Arachchi & Pethiyagoda, 2005	E:Golden shrub frog; S:Ranwan panduru madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus caeruleus Manamendra-Arachchi & Pethiyagoda, 2005	E:Blue thigh shrub frog; S:Nil kalawethi panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus cavirostris (Günther, 1869)	E:Hollow-snouted shrub frog; S:Hirigadu panduru madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus cuspis Manamendra-Arachchi & Pethiyagoda, 2005	E:Sharp-snouted shrub frog; S: Thiyunu hombu panduru madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus decoris Manamendra-Arachchi & Pethiyagoda, 2005	E:Elegant shrub frog; S:Bhushana panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus dimbullae (Shreve, 1940)	E:Dimbulla shrub frog; S:Dimbulla panduru madiya	EX		EX	
Pseudophilautus eximius (Shreve, 1940)	E:Queenwood shrb frog; S:Queenwood panduru madiya	EX		EX	
Pseudophilautus extirpo Manamendra-Arachchi & Pethiyagoda, 2005	E:Blunt-snouted shrub frog; S:Mota-hombu panduru madiya	EX		EX	
Pseudophilautus femoralis (Günther, 1864)	E:Leaf-nesting shrub frog; S:Pala panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus fergusonianus (Ahl, 1927)	E:Ferguson's shrub frog; S:Fergusonge panduru madiya	VU	B1ab(iii)		
Pseudophilautus folicola Manamendra-Arachchi & Pethiyagoda, 2005	E:Leaf dwelling shrub frog; S:Vakutu kola panduru madiya	VU	B1ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus frankenbergi Manamendra-Arachchi & Pethiyagoda, 2005	E:Frankenberg's shrub frog; S:Frankenbergge panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus fulvus 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
Pseudophilautus halyi Manamendra-Arachchi & Pethiyagoda, 2005	E:Pattipola shrub frog; S:Pattipola panduru madiya	EX		EX	
Pseudophilautus hallidayi Manamendra-Arachchi & Pethiyagoda, 2005	E:Halliday's shrub frog; S::Hallidayge panduru madiya	EN	B1ab(iii)+ 2ab(iii)	VU	B1ab(iii)
Pseudophilautus hoffmanni Manamendra-Arachchi & Pethiyagoda, 2005	E:Hoffman's shrub frog; S:Hoffmange panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus hoipolloi Manamendra-Arachchi & Pethiyagoda, 2005	E:Anthropogenic shrub frog; S:Gevathu panduru madiya	EN	B1ab(iii)+ 2ab(iii)		
Pseudophilautus hypomelas (Günther, 1876)	E:Webless shrub frog; S:Patala rahith apnduru madiya	EX		EX	
Pseudophilautus leucorhinus (Lichtenstein, Weinland & Von Martens, 1856)	E:White-nosed shrub frog; S:Sudu nasethi panduru madiya	EX		EX	
Pseudophilautus limbus Manamendra-Arachchi & Pethiyagoda, 2005	E:Haycock shrub frog; S:Haycock panduru madiya	CR	B2ab(iii)	CR	B1ab(iii)
Pseudophilautus lunatus Manamendra-Arachchi & Pethiyagoda, 2005	E:Handapan Ella shrub frog; S:Handapan ella panduru madiya	CR	B2ab(iii)	CR	B1ab(iii)+ 2ab(iii)
Pseudophilautus macropus (Günther, 1869)	E:Bigfoot shrub frog; S:Vishala padethi panduru madiya	CR	B1ab(iii)	CR	B1ab(iii)+ 2ab(iii)
Pseudophilautus malcolmsmithi (Ahl, 1927)	E:Malcomsmith's shrub frog; S:Malcomsmithge panduru madiya	EX		EX	
Pseudophilautus microtympanum (Günther, 1859)	E:Small eared shrub frog; S:Kudakan panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus mittermeieri Megaskumbura & Manamendra-Arachcchi, 2005	E:Mittermeier's shrub frog; S:Mittermeierge panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)
Pseudophilautus mooreorum Megaskumbura & Manamendra-Arachcchi, 2005	E:Moore's shrub frog; S:Moorige panduru madiya	CR	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus nanus (Günther, 1869)	E:Southern shrub frog; S:Dakunu diga panduru madiya	EX		EX	
Pseudophilautus nasutus (Günther, 1869)	E:Pointed-snouted shrub frog; S:Ul hombu panduru madiya	EX		EX	
Pseudophilautus nemus Megaskumbura & Manamendra-Arachcchi, 2005	E:Whistling shrub frog; S:Urahanbana panduru madiya	CR	B2ab(iii)	CR	B1ab(iii)+ 2ab(iii)
Pseudophilautus ocularis Megaskumbura & Manamendra-Arachcchi, 2005	E:Golden-eyed shrub frog; S:Ranwan-es ethi panduru madiya	CR	B1ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus oxyrhynchus (Günther, 1872)	E:Sharp-snouted shrub frog; S:Thiyunu hombu panduru madiya	EX		EX	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
Pseudophilautus papillosus Megaskumbura & Manamendra-Arachcchi, 2005	E:Papillated shrub frog; S:Dive-getithathi panduru madiya	CR	B1ab(iii)+ 2ab(iii)	CR	B1ab(iii)+ 2ab(iii)
Pseudophilautus pleurotaenia (Boulenger, 1904)	E:Side-striped shrub frog; S:Pathi thirethi panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus popularis Megaskumbura & Manamendra-Arachcchi, 2005	E:Common shrub frog; S:Sulabha panduru madiya	NT		EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus poppiae Megaskumbura & Manamendra-Arachcchi, 2005	E:Poppy's shrub frog; S:Poppyge panduru madiya	CR	B1ab(iii)+ 2ab(iii)		
Pseudophilautus procax Megaskumbura & Manamendra-Arachcchi, 2005	E:Cheeky shrub frog; S:Kammule pellamethi panduru madiya	CR	B2ab(iii)	CR	B1ab(iii)+ 2ab(iii)
Pseudophilautus regius Megaskumbura & Manamendra-Arachcchi, 2005	E:Polonnaruwa shrub frog; S:Rajarata panduru madiya	VU	B1ab(iii)		
Pseudophilautus reticulatus (Günther, 1864)	E:Reticulated thigh shrub frog; S:Jalabha panduru madiya	EN	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus rugatus (Ahl, 1927)	E:Farnland shrub frog; S:Farnland panduru madiya	EX		EX	
Pseudophilautus rus Megaskumbura & Manamendra-Arachcchi, 2005	E:Kandian shrub frog; S:Nuwara panduru madiya	CR	B2ab(iii)		
Pseudophilautus sarasinorum (Müller, 1887)	E:Muller's shrub frog; S:Mullerge panduru madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus schmarda (Kelaart, 1854)	E:Schmarda's shrub frog; S:Gorahendi panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus semiruber (Annandale, 1913)	E:Annandale's shrub frog; S:Annandalege panduru madiya	DD			
Pseudophilautus silus 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)
Pseudophilautus silvaticus Manamendra-Arachchi & Pethiyagoda, 2005	E:Forest shrub frog; S:Kela panduru madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus simba Manamendra-Arachchi & Pethiyagoda, 2005	E:Sinharaja shrub frog; S:Sinharaja panduru madiya	CR	B2ab(iii)	CR	B1ab(iii)+ 2ab(iii)
Pseudophilautus sordidus Manamendra-Arachchi & Pethiyagoda, 2005	E:Grubby shrub frog; S:Anduru lapavan panduru madiya	VU	B1ab(iii)		
Pseudophilautus stellatus (Kelaart, 1853)	E:Spotted shrub frog; S:Pulli sahitha panduru madiya	CR (PE)		EX	
Pseudophilautus steineri 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
Pseudophilautus stictomerus (Günther, 1876)	E:Orange canthal shrub frog; S:Thembili-hombu ethi panduru madiya	EN	B1ab(iii)+ 2ab(iii)		
Pseudophilautus stuarti Manamendra-Arachchi & Pethiyagoda, 2005	E:Stuart's shrub frog; S:Stuartge panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus temporalis (Günther, 1864)	E:Striped-snouted shrub frog; S:Hombu thirethi panduru madiya	EX		EX	
Pseudophilautus variabilis (Günther, 1859)	E:Gunther's shrub frog; S:Guntherge panduru madiya	EX		EX	
Pseudophilautus viridis Manamendra-Arachchi & Pethiyagoda, 2005	E:Dull-green shrub frog; S:Anduru kola panduru madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus zal Manamendra-Arachchi & Pethiyagoda, 2005	E:White blotched shrub frog; S:Sudu pulli ethi panduru madiya	EX		EX	
Pseudophilautus zimmeri Manamendra-Arachchi & Pethiyagoda, 2005	E:Rummassala shrub frog; S:Rummassala panduru madiya	EX		EX	
Pseudophilautus zorro Manamendra-Arachchi & Pethiyagoda, 2005	E:Gannoruwa shrub frog; S:Gannoruwa panduru madiya	CR	B2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Pseudophilautus pardus Meegaskumbura, M., Manamendra-Arachchi, K & Pethiyagoda, R., 2007	E:Leopard shrub frog	EX		EX	
Pseudophilautus maia Ferguson, 1876		EX		EX	
Pseudophilautus singu Meegaskumbura, M., Manamendra-Arachchi, K & Pethiyagoda, R., 2009		EN	B1ab(iii)+ 2ab(iii)	EN	B2ab(ii,iii)
Pseudophilautus tanu Meegaskumbura, M., Manamendra-Arachchi, K & Pethiyagoda, R., 2009	E: Sri Lanka petite frog	EN	B1ab(iii)+ 2ab(iii)	EN	B2ab(iii)
Pseudophilautus schneideri Meegaskumbura, M. & Manamendra-Arachchi, K., 2011	E:Schneider's shrub frog; S:Schneiderge panduru madiya	EN	B1ab(iii)+ 2ab(iii)		
Pseudophilautus hankeni Meegaskumbura, M. & Manamendra-Arachchi, K., 2011	E:Hanken's shrub frog; S:Hankenge panduru madiya	CR	B2ab(iii)		
Polypedates cruciger Blyth, 1852	E:Common hourglass tree frog; S:Sulabha pahimbu gas madiya	LC			
Polypedates maculatus (Gray, 1834)	E:Spotted tree frog; S:Pulli gas madiya	LC			
Polypedates ranwellai Wickranasinghe, Munindradasa & Fernando, 2012	E: Ranwellas tree frog	CR	B2ab(iii)		
Taruga eques 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
Taruga fastigo Manamendra-Arachchi & Pethiyagoda, 2001	E:Morningside tree frog; S:Ensal watta gas madiya	CR	B1ab(iii)+ 2ab(iii)	CR	B1ab(iii)
Taruga longinasus (Ahl, 1931)	E:Long-snouted tree frog; S:Dik hombu gas madiya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+ 2ab(iii)
Family: Icthyophiidae					
Ichthyophis glutinosus (Linnaeus, 1758)	E:Ceylon caecilian; S: Kaha hiridanda	VU	B1ab(iii)		
Ichthyophis orthoplicatus Taylor, 1965	E:Pattipola caecilian; S:Dumburu hiridanda	EN	B1ab(iii)+ 2ab(iii)	VU	B1ab(iii)
Ichthyophis pseudangularis 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 parvimaculatus* to *H. parvimaculatus* (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 endemicity 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 refugees 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
Family: Crocodylidae					
Crocodylus palustris Lesson, 1831	E: Mugger crocodile / Marsh crocodile; S: Hala kimbula; T: Kulathi Muthalei	NT		VU	A1a, C2a
Crocodylus porosus Schneider,1801	E: Saltwater crocodile / Estuarine crocodile; S: Gata kimbula; T: Semmukku Muthalei	EN	B2ab(iii)	LR/lc	
Family: Bataguridae					
Melanochelys trijuga (Schweigger, 1812)	E: Black turtle; S: Gal ibba; T: Amai, Karuppu Amai	LC		LR/ nt	
Family: Cheloniidae					
Caretta caretta (Linnaeus, 1758)	E: Loggerhead sea turtle; S: Olugedi kasbaeva / Kannadi kasbaeva; T: Perunthalai Amai	EN	B2ab(iii)	EN	A1abd
Chelonia mydas (Linnaeus, 1758)	E: Green turtle; S: Gal kasbaeva / Mas kasbaeva / Vali kasbaeva; T: Pal Amai	EN	B2ab(iii)	EN	A2bd
Eretmochelys imbricata (Linnaeus, 1766)	E: Hawksbill sea turtle; S: Pothu kasbaeva / Leli kasbaeva; T: Nanja Amai	EN	B2ab(iii)	CR	A2bd
Lepidochelys olivacea (Eschscholtz, 1829)	E: Olive ridley sea turtle; S: Batu kasbaeva / Mada kasbaeva; T: Pul Amai	EN	B2ab(iii)	VU	A2bd
Family: Dermochelidae					
Dermochelys coriacea (Vandelli, 1761)	E: Leatherback sea turtle; S: Dara kasbaeva / Tun Dara kasbaeva; T: Dhoni Amai	EN	B2ab(iii)	CR	A1abd
Family: Testudinidae					
Geochelone elegans (Schoepff, 1795)	E: Indian star tortoise; S: Mevara ibba/ Taraka ibba; T: Katu Amai	NT		LR/lc	
Family: Trionychidae					
Lissemys ceylonensis (Gray, 1856)	E: Flapshell turtle; S: Kiri ibba; T: Pal Amai	LC			
Family: Agamidae					
Calotes calotes (Linnaeus, 1758)	E: Green garden lizard; S: Pala katussa; T: Pachai Karata	LC			
Calotes ceylonensis (Müller, 1887)	E: Painted lip lizard; S: Tholavisituru katussa	NT			
Calotes desilvai Bahir & Maduwage, 2005	E: Desilvas' whistling lizard / Desilvas' forest lizard; S: Desilvage sivuruhandalana katussa	CR	B2ab(iii)		
Calotes liocephalus Günther, 1872	E: Crestless lizard; S: Kondu datirahita katussa	EN	B2ab(iii)	EN	B1+2bc
Calotes liolepis Boulenger, 1885	E: Whistling lizard / Forest lizard; S: Sivuruhandalana katussa	NT			

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
Calotes nigrilabris Peters, 186**0**	E: Black cheek lizard; S: Kalu kopul katussa	EN	B1ab(iii) +2ab(iii)		
Calotes versicolor (Daudin, 1802)	E: Common garden lizard; S: Gara katussa	LC			
Ceratophora aspera Günther, 1864	E: Rough horn lizard; S: Raluang katussa / Kuru angkatussa	EN	B1ab(iii) +2ab(iii)	VU	B1ab
Ceratophora erdeleni Pethiyagoda & Manamendra-Arachchi. 1998	E: Erdelen's horn lizard; S: Erdelenge angkatussa	CR	B1ab(iii)		
Ceratophora karu Pethiyagoda & Manamendra-Arachchi. 1998	E: Karunaratne's horn lizard; S: Karunaratnage angkatusua	CR	B1ab(iii)		
Ceratophora stoddartii Gray, 1835	E: Rhinohorn lizard; S: Kagamuva angkatussa	EN	B1ab(iii) +2ab(iii)		
Ceratophora tennentii Günther and Gray, 1861	E: Leafnose lizard; S: Pethi angkatussa.	CR	B2ab(iii)	EN	B1+2bc
Cophotis ceylanica Peters, 1861	E: Pygmy lizard; S: Kandukara kurukatussa	EN	B1ab(iii) +2ab(iii)		
Cophotis dumbara Samarawickrama, Ranawana, Rajapaksha, Ananjeva, Orlov, Ranasinghe & Samarawickrama, 2006	E: Knuckles pygmy lizard; S: Dumbara kurukatussa	CR	B2ab(iii)	CR	B1ab(iii)
Lyriocephalus scutatus (Linnaeus, 1758)	E: Lyre head lizard / Hump-snouted lizard; S: Gatahombu katussa / Karamal bodiliya	VU	B1ab(iii)	NT	
Otocryptis nigristigma Bahir & Silva, 2005	E: Black spotted kangaroo lizard; S: Wiyali Pinum katussa	LC			
Otocryptis wiegmanni Wagler, 1830	E: Sri Lankan kangaroo lizard; S: Gomu talikatussa / Pinum katussa /	LC			
Sitana ponticeriana Cuvier, 1829	E: Fanthroated lizard; S: Pulina talikatussa / Vali katussa	LC		LC	
Family: Chameleonidae					
Chamaeleo zeylanicus Laurenti, 1768	E: Sri Lankan chameleon; S: Bodilima / Bodiliya	EN	B2ab(iii)		
Family: Gekkonidae					
Calodactylodes illingworthorum Deraniyagala, 1953	E: Lankan golden gecko; S: Maha galhuna	EN	B2ab(iii)		
Cnemaspis alwisi Wickramasinghe & Munundradasa, 2007	E: Alwis's day gecko; S: Alwisge divasarihuna	NT			
Cnemaspis amith Manamendra-Arachchi, Batuwita & Pethiyagoda, 2007	E: Amith's day gecko; S: Amithge divasarihuna	CR	B2ab(iii)		
Cnemaspis clivicola Manamendra-Arachchi, Batuwita & Pethiyagoda, 2007	E: Montain day gecko; S: Kandukara divasarihuna	CR	B2ab(iii)		
Cnemaspis gemunu Bauer, De Silva, greenbaum & Jackman, 2007	E: Gemunu's day gecko; S: Gemunuge divasarihuna	CR	B1ab(iii) +2ab(iii)		
Cnemaspis kallima Manamendra-Arachchi, Batuwita & Pethiyagoda, 2007	E: Gammaduwa day gecko; S: Gammaduva divasarihuna	CR	B1ab(iii) +2ab(iii)		
Cnemaspis kandiana (Kelaart, 1853)	E: Kandyan day gecko; S: Kandukara divasarihuna	EN	B1ab(iii) +2ab(iii)	LC	
Cnemaspis kumarasinghei Wickramasinghe & Munundradasa, 200**7**	E: Kumarasinghe's day gecko; S: Kumarasinghege divasarihuna	EN	B1ab(iii) +2ab(iii)		

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

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

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

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

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

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

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

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
Family: Viperidae					
Daboia russelii (Shaw & Nodder, 1797)	E: Russell's viper; S: Tith Polonga/ Gata polaga	LC			
Echis carinatus (Schneider, 1801)	E: Saw scale viper; S: Vali polonga	VU	B2ab(iii)		
Hypnale hypnale (Merrem, 1820)	E: The Merrem's Hump nose viper; S: Polonthelissa	LC			
Hypnale nepa (Laurenti, 1768)	E: Merrem's hump-nosed viper; S: Polonthelissa/ Kunakatuwa	EN	B2ab(iii)	LC	
Hypnale zara (Gray, 1849)	E: Stripe-necked hump-nosed viper; S: Wayiram gelathi Kunakatuwa	VU	Biab(iii)		
Hypnale sp. 'amal' Maduwage, Silva, Manamendra-Arachchi & Pethiyagoda, 2009	E: Amal's Hump nose viper; S: A: Amalge polonthelissa	CR	B2ab(iii)		
Trimeresurus trigonocephalus (Sonini 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 14th century birds have been extensively featured in Sinhalese poetry *Sandesha Kavya.* Detailed documentation of the Sri Lankan avifauna began in the 16th 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 18th 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. levaillantii* 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* (Rassmussen, 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. lherminieri* (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 kramerii, 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[PE] (Possibly Endemic)

* Only the breeding population has been considered in this assessment

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
Family: Phasianidae					
Francolinus pictus (Jardine & Selby, 1828)	E:Painted Francolin; S: Thith Ussa-watuwa; T: Varna cowthari.	CR	B1ab(iii)	LC	
Francolinus pondicerianus (Gmelin, 1789)	E:Grey Francolin; S: Alu Ussa-watuwa; T: Cowthari.	NT		LC	
Coturnix chinensis Linnaeus, 1766	E:Blue Quail; S: Nil piriwatuwa, Wil-watuwa; T: Neelamaarbuk kaadai.	EN	B2ab(iii)	LC	
Perdicula asiatica (Latham, 1790)	E:Jungle Bush-quail; S: Wana panduru watuwa, Wil watuwa; T: Kaatuputhar kaadai.	CR	B2ab(iii)	LC	
Galloperdix bicalcarata (Forster, 1781)	E:Sri Lanka Spurfowl; S: Sri Lanka haban kukula; T: Sinnak kaatuk koli.	NT		LC	
Gallus lafayetii Lesson, 1831	E: Sri Lanka Junglefowl; S: Sri Lanka Wali kukula; T: Kattu-koli	LC		LC	
Pavo cristatus Linnaeus, 1758	E:Indian Peafowl; S: Monara; T: Neela mayil.	LC		LC	
Family: Anatidae					
Dendrocygna javanica (Horsfield, 1821)	E:Lesser Whistling-duck; S: Heen thamba seruwa; T: Siriya seelkani siravi.	LC		LC	
Nettapus coromandelianus (Gmelin, 1789)	E:Cotton pygmy -goose; S: Mal seruwa; T: Kullathara.	NT		LC	
Anas poecilorhyncha Forster, JR 1781*	E: Spot-billed Duck; S: Thithhota tharava	CR	B1ab(iii)+ 2ab(iii)	LC	
Family: Turnicidae					
Turnix suscitator (Gmelin, 1789)	E: Barred Buttonquail; S: Punchi bola watuyuruwa; T: Kadai	LC		LC	
Family: Picidae					
Dendrocopos nanus (Vigors, 1832)	E:Brown-capped Woodpecker; S:Bora isasi piri-kerala, Mal Kerella; T: Sinna marang kothi.	LC		LC	
Dendrocopos mahrattensis (Latham, 1801)	E:Yellow-crowned Woodpecker; S: Kahasilu Piri -kerala; T: Manjal nettri marang kothi.	NT		LC	
Celeus brachyurus (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
Picus chlorolophus Vieillot, 1818	E:Lesser Yellownape; S: Heen kahagelasi Kerela, Konde -kaha Kerela; T: Manjal pidari siru marang kothi.	NT		LC	
Picus xanthopygaeus (Gray & Gray, 1846)	E:Streak-throated Woodpecker; S: Irigela Kerela; T: Sethil vayittru marang kothi.	EN	B1ab(iii) +2abI(iii)	LC	
Dinopium benghalense (Linnaeus, 1758)	E:Black-rumped Flameback; S: Ginipita pili-kerela, Pita-rang Kerela; T: Siriya pon muthuhu marang kothi.	LC		LC	
Chrysocolaptes lucidus (Scopoli, 1786) [PE]	E:Greater Flameback ; S:Lepita maha-kerela, Mukalang Kerela; T: Periya ponmuthuhu marang kothi.	LC			
Chrysocolaptes festivus (Boddaert, 1783)	E:White -naped Woodpecker; S: Sudugelesi maha-kerela, Maha-rang Kerela; T: Karumuthuhu marang kothi.	VU	B2ab(iii)		
Family: Ramphastidae					
Megalaima zeylanica (Gmelin, 1788)	E:Brown-headed Barbet; S: Polos Kottoruwa; T: Paluppu thalai kukkuruvan.	LC		LC	
Megalaima flavifrons (Cuvier, 1816)	E:Sri Lanka Yellow-fronted Barbet; S: Sri Lanka kahamunath Kottoruwa, Mukalang Kottoruwa; T:Ilankai manjal kuruttu kukkuravan.	LC		LC	
Megalaima rubricapillus (Gmelin, 1788) [PE]	E: Crimson-fronted Barbet ; S: Rathmunath Kottoruwa, Mal Kottoruwa; T: Sennettri kukkuravan.	LC		LC	
Megalaima haemacephala (Müller, 1776)	E: Coppersmith Barbet; S: Rathlaya Kottoruwa, Mal Kottoruwa; T: Senmaarbu Kukkuruvan	LC		LC	
Family: Bucerotidae					
Ocyceros gingalensis (Shaw, 1811)	E: Sri Lanka Grey Hornbill; S: Sri Lanka Alu Kandetta; T: Ilankai naarai irattai chondu kuruvi.	LC		LC	
Anthracoceros coronatus (Boddaert, 1783)	E: Malabar Pied Hornbill; S: Poru Kandetta; T: Malabar karuppuvellai iruvaayan.	LC		NT	
Family: Upopidae					
Upupa epops Linnaeus, 1758	E:Eurasian Hoopoe; S: Poroluwa; T: Kondalthi.	LC		LC	

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

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

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

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
Caprimulgus indicus Latham, 1790	E:Grey Nightjar; S: Alu bimbassa; T: Kaatu pakki.	VU	B1ab(iii)	LC	
Caprimulgus atripennis Jerdon, 1845	E:Jerdon's Nightjar; S: Digupenda bimbassa; T: Jerdon pakki.	LC		LC	
Caprimulgus asiaticus Latham, 1790	E:Indian Nightjar; S: Indu Bimbassa; T: Siru pakki.	LC		LC	
Family: Columbidae					
Columba livia Gmelin, 1789	E;Rock Pigeon; S: Pareviya; T:Maada Puraa.	CR-considering only wild population	B2ab(iii)	LC	
Columba torringtoniae (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)
Stigmatopelia chinensis (Scopoli, 1786)	E:Spotted Dove; S: Alu-kobeiya; T: Pulli Puraa.	LC		LC	
Streptopelia decaocto (Frivaldszky, 1838)	E:Eurasian Collared Dove; S: Mala kobeiya; T: Panjavaran Puraa.	NT		LC	
Chalcophaps indica (Linnaeus, 1758)	E:Emerald Dove; S: Neela kobeiya; T: Pathekai Puraa.	LC		LC	
Treron bicinctus (Jerdon, 1840)	E:Orange-breasted Green-pigeon; S: Layaran batagoya; T: Orange maarbu Pachai Puraa.	LC		LC	
Treron pompadora (Gmelin, 1789) [PE]	E:Pompadour Green Pigeon; S: Pitadam Batagoya; T: Sambal nettri Pachai Puraa.	LC		LC	
Treron phoenicopterus (Latham, 1790)	E:Yellow-footed Green-Pigeon; S: Ranpa Batagoya; T: Manjal kaal pachai puraa.	CR	B2ab(iii)	LC	
Ducula aenea (Linnaeus, 1766)	E:Green Imperial-Pigeon; S: Nil Mahagoya; T: Pachai arasa Puraa.	LC		LC	
Family: Rallidae					
Gallirallus striatus (Linnaeus, 1766)	E:Slaty-breasted Rail; S:Layalu Geli-reluwa; T: Saambal maarbu sambang koli.	VU	B2ab(iii)	LC	
Amaurornis phoenicurus (Pennant, 1769)	E:White-breasted Waterhen; S: Layasudu korawakka; T: Ven maarbu kaanaang koli.	LC		LC	
Porzana fusca (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
Gallicrex cinerea (Gmelin, 1789)	E:Watercock; S:Korawa; T: Thaneer kolli.	NT		LC	
Porphyrio porphyrio (Linnaeus, 1758)	E:Purple Swamphen; S:Dam madi-kithala; T: Neela thodai koli.	LC		LC	
Gallinula chloropus (Linnaeus, 1758)	E:Common Moorhen; S: Podu galinuwa, Wil kukkula; T: Thaalai koli.	LC		LC	
Fulica atra Linnaeus, 1758	E:Common Coot; S: Podu kithala; T: Nama koli.	LC		LC	
Rallina eurizonoides Lafresnaye, 1845*	E: Slaty-legged Crake; S: Alupa keraliya	CR	B1ab(iii)+ 2ab(iii)	LC	
Family: Rostratulidae					
Rostratula benghalensis (Linnaeus, 1758)	E:Greater Painted-Snipe; S:Raja ulu-kaswatuwa; T: Mayil ullaan.	VU	B2ab(iii)		
Family: Jacanidae					
Hydrophasianus chirurgus (Scopoli, 1786)	E:Pheasant-Tailed Jacana; S: Savul-diyasana, Pan kukula; T: Neela vaal illaik koli.	LC		LC	
Family: Burhinidae					
Burhinus oedicnemus (Linnaeus, 1758)	E:Eurasian Thick-Knee; S:Golu-kirala; T: Perungkanni.	LC		LC	
Esacus recurvirostris (Cuvier, 1829)	E:Great Thick-Knee; S: Gal kirala; T: Valaimukku perungkanni.	LC		LC	
Family: Recurvirostridae					
Himantopus himantopus (Linnaeus, 1758)	E: Black-Winged Stilt; S:Kalupiya ipalpava, Kalapu-kirala; T: Nedungkaal ullaan.	LC		LC	
Family: Charadriidae					
Charadrius dubius Scopoli, 1786	E:Little Ringed Plover; S:Punchi mala oleviya; T: Sinna pattani uppuk kothi.	VU	B2ab(iii)	LC	
Charadrius alexandrinus Linnaeus, 1758	E:Kentish Plover; S:Kent oleviya; T: Kentish pattani uppuk kothi.	VU	B2ab(iii)	LC	
Vanellus malarbaricus (Boddaert, 1783)	E:Yellow-Wattled Lapwing; S:Kaha yatimal kirala; T: Manjal mooku aart kaati.	LC		LC	
Vanellus indicus (Boddaert, 1783)	E:Red-Wattled Lapwing; S:Rath yatimal kirala; T: Sihappu mooku aart kaati.	LC		LC	
Family: Glareolidae					
Glareola maldivarum Forster, 1795	E:Oriental Pranticole; S: Mala javasariya; T: Thotkuruvi.	EN	B2ab(iii)	LC	
Glareola lactea Temminck, 1820	E:Small Pranticole; S:Ounchi javasariya; T: Sinna Thotkuruvi.	VU	B1ab(iii)	LC	
Cursorius coromandelicus Gmelin, 1789	E: Indian Courser; S: Javalihiniya	CR	B1ab(iii)+ 2ab(iii)	LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
Family: Laridae					
Sterna bergii Lichtenstein, 1823	E:Great Crested Tern; S:Maha konda muhudulihiniya; T: Periya kondai aalaa.	NT		LC	
Sterna nilotica Brehm,1830*	E:Gull-billed Tern; S: Galuthudu muhudulihiniya	CR	B1ab(iii)+ 2ab(iii)	LC	
Sterna caspia Pallas, 1770*	E: Caspian Tern; S:kaspiya muhudulihiniya	CR	B1ab(iii)+ 2ab(iii)	LC	
Sterna dougallii Montagu, 1813	E: Roseate Tern; S:Arunu muhudulihiniya	CR	B1ab(iii)+ 2ab(iii)	LC	
Sterna hirundo Linnaeus, 1758*	E: Common Tern; S: Podu muhudulihiniya	CR	B1ab(iii)+ 2ab(iii)	LC	
Sterna albifrons Pallas, 1764*	E: Little Tern; S: Punchi muhudulihiniya	VU	B2ab(iii)	LC	
Sterna saundersi Hume, 1877*	E: Saunder's Tern; S: Sondara muhudulihiniya	CR	B1ab(iii)+ 2ab(iii)	LC	
Sterna anaethetus Scopoli, 1786*	E: Bridled Tern; S: Katakali muhudulihiniya	CR	B1ab(iii)+ 2ab(iii)	LC	
Sterna fuscata Linnaeus, 1766*	E: Sooty Tern; S: Dumbutu muhudulihiniya	CR	B1ab(iii)+ 2ab(iii)	LC	
Family: Dromadidae					
Dromas ardeola Paykull, 1805*	E: Crab Plover; S: kakulu-oleviya	CR	B1ab(iii)+ 2ab(iii)	LC	
Family: Accipitridae					
Aviceda jerdoni (Blyth, 1842)	E:Jerdon's Baza; S: Bora saratakussa, Kurulugoya; T: Jerdon parunthu.	EN	B1ab(iii) +2ab(iii)	LC	
Pernis ptilorhyncus (Temminck, 1821)	E:Oriental Honey-Buzzard; S: Silu bambarakussa, Rajaliya; T: Then parunthu.	NT		LC	
Elanus caeruleus (Desfontaines, 1789)	E:Black-Winged Kite; S: Kaluuris pathanakussa, kurulugoya; T: Karunthol parunthu.	NT		LC	
Milvus migrans (Boddaert, 1783)	E: Black Kite; S: Bora parakussa, Ukussa; T: Karum parunthu.	LC			
Haliastur indus (Boddaert, 1783)	E:Brahminy Kite; S:Bamunu piyakussa, Ukussa; T: Sem parunthu.	LC		LC	
Haliaeetus leucogaster (Gmelin, 1788)	E:White-Bellied Sea-eagle; S: Kusa alli muhudukussa; T: Ven vayitru kadat kaluhu.	LC		LC	
Ichthyophaga ichthyaetus (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
Spilornis cheela (Latham, 1790)	E:Crested Serpent-eagle; S: Silu sarapakussa; T: Kondai paambu kaluhu.	LC		LC	
Accipiter trivirgatus (Temminck, 1824)	E:Crested Goshawk; S:Silu kurulugoya, kurulugoya; T: Kondai valooru.	VU	B1ab(iii)	LC	
Accipiter badius (Gmelin, 1788)	E:Shikra; S:Kurulugoya; T: Valooru.	LC		LC	
Accipiter virgatus (Temminck, 1822)	E:Besra; S: Besra kurulugoya; T: Kaatuk kaluhu.	VU	B2ab(iii)	LC	
Ictinaetus malayensis (Temminck, 1822)	E:Black Eagle; S: Kalukussa, kalu rajaliya; T: Karung kaluhu.	NT		LC	
Hieraaetus kienerii (G.de Sparre, 1835)	E:Rufous-bellied Eagle; S:Kusarath rajaliya; T: Sevvayitru kaluhu.	NT			
Spizaetus cirrhatus (Gmelin, 1788)	E:Changeable Hawk-eagle; S: Perali kondakussa, Konde Rajaliya; T: Niram marum kaluhu.	LC			
Spizaetus nipalensis Hodgson, 1836	E:Mountain Hawk-eagle; S:Hel kondakussa, Maha konde Rajaliya; T: Malai kaluhu.	VU	B1ab(iii)		
Family: Falconidae					
Falco tinnunculus Linnaeus, 1758	E:Common Kestrel; S: Podu ukusugoya; T: Sivappu valooru.	EN	B2ab(iii)	LC	
Falco peregrinus Tunstall, 1771	E:Peregrine Falcon, Shahin Falcon; S: Para ukusugoya; T: Periya rasali.	VU	B2ab(iii)	LC	
Family: Podicipedidae					
Tachybaptus ruficollis (Pallas, 1764)	E:Little Grebe; S:Punchi gembithuruva; T: Sinna mookulippan.	LC		LC	
Family: Anhingidae					
Anhinga melanogaster Pennant, 1769	E:Oriental Darter; S:Ahikava; T: Paambu thara.	LC		NT	
Family: Phalacrocoracidae					
Phalacrocorax niger (Vieillot, 1817)	E:Little Cormorant; S:Punchi diyakava; T: Siriya neerkaham.	LC		LC	
Phalacrocorax fuscicollis Stephens, 1826	E:Indian Cormorant; S: Indu diyakava; T: Naduthoura neerkaaham.	LC		LC	
Phalacrocorax carbo (Linnaeus, 1758)	E:Great Cormorant; S: Maha diyakava; T: Periya neerkaaham.	NT		LC	
Family: Ardeidae					

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

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

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

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

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

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
Family: Timaliidae					
Garrulax cinereifrons 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)
Pellorneum fuscocapillus (Blyth, 1849)	E:Sri Lanka Brown Capped Babbler; S: Sri Lanka Boraga piri-demalichcha; T: Ilankai kabilakulla velaikkara kuruvi.	LC		LC	
Pomatorhinus melanurus Blyth, 1847	E:Sri Lanka Scimitar Babbler; S: Sri Lanka de-demalichcha; T: Ilankai koduvaal velaikkara kuruvi.	LC		LC	
Dumetia hyperythra (Franklin, 1831)	E:Tawny-bellied Babbler; S: Kusakaha landu-demalichcha; T: Karunj chirappu vayittru silamban.	LC		LC	
Rhopocichla atriceps (Jerdon, 1839)	E:Dark Fronted Babbler; S: Vathaduru panduru-demalichcha, Parandel-kurulla; T: Karunthalai chilamban.	LC		LC	
Chrysomma sinense (Gmelin, 1789)	E:Yellow Eyed Babbler; S:Nethkaha thana-demalichcha; T: Manjal kan silamban.	LC		LC	
Turdoides rufescens (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	
Turdoides affinis (Jerdon, 1845)	E:Yellow Billed Babbler; S:Demalichcha; T: Manjal alahu silamban.	LC		LC	
Family: Alaudidae					
Mirafra affinis Blyth, 1845	E:Jerdon's Bushlark; S:Panduru gomaritta; T: Jerdan puthar vaanam paadi.	LC		LC	
Eremopterix griseus (Scopoli, 1786)	E:Ashy Crowned Sparrow Lark; S: Kirulalu Bimritta; T: Sambal thalai vaanam paadi.	LC		LC	
Alauda gulgula Franklin, 1831	E:Oriental Skylark; S: Peradigu ahsritta; T: Vaanam paadi.	LC		LC	
Family: Dicaeidae					
Dicaeum agile (Tickell, 1833)	E:Thick Billed Flowerpecker; S:Mathudu pililichcha; T: Parutha alahu malar kothi.	NT		LC	

Scientific Name	Common Name	NCS	Criteria	GCS	Criteria
Dicaeum vincens (Sclater, 1872)	E:Sri Lanka White Throated Flowerpecker; S:Sri Lanka Pililichcha; T: Ilankai venthondai malar kothi.	VU	B1ab(iiii) +2ab(iii)	NT	
Dicaeum erythrorhynchos (Latham, 1790)	E:Pale Billed Flowerpecker; S:Lathudu Pililichcha; T: Dickel malar kothi.	LC		LC	
Family: Nectariniidae					
Nectarinia zeylonica (Linnaeus, 1766)	E:Purple Rumped Sunbird; S:Nithamba dam sutikka; T: Oothapitta thenchittu.	LC		LC	
Nectarinia asiatica (Latham, 1790)	E:Purple Sunbird; S: Dam sutikka; T: Ootha thenchittu.	LC		LC	
Nectarinia lotenia (Linnaeus, 1766)	E:Long Billed Sunbird; S: Dikthudu Sutikka; T: Loten thenchittu.	LC		LC	
Family: Passeridae					
Passer domesticus (Linnaeus, 1758)	E:House Sparrow; S:Gekurulla; T: Chittukkuruvi.	LC			
Family: Motacillidae					
Anthus rufulus Vieillot, 1818	E:Paddyfield Pipit; S:Keth waratichcha; T: Vayal nettaikkaadi.	LC		LC	
Family: Ploceidae					
Ploceus manyar (Horsfield, 1821)	E:Streaked Weaver; S:Pan Wadukurulla; T: Karung keetru thookanaang kuruvi.	NT		LC	
Ploceus philippinus (Linnaeus, 1766)	E:Baya Weaver; S:Ruk Wadukurulla; T: Thookkanaang kuruvi.	LC		LC	
Family: Estrildidae					
Lonchura malabarica (Linnaeus, 1758)	E:White Throated Munia; S:Sarala Weekurulla; T:Ven thondai sillai.	VU	B2ab(iiii)	LC	
Lonchura striata (Linnaus, 1766)	E:White Rumped Munia; S:Nithamba sudu Weekurulla; T: Ven muthuhu sillai.	LC		LC	
Lonchura kelaarti (Jerdon, 1863)	E:Black Throated Munia; S:Gelakalu Weekurulla; T: Karunthondai sillai.	VU		LC	
Lonchura punctulata (Linnaeus, 1758)	E:Scaly Breasted Munia; S: Laya kayuru Weekurulla; T:Pulli sillai.	LC		LC	
Lonchura malacca (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 to1965. 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
Family : Manidae					
Manis crassicaudata Gray, 1827	E: Pangolin; S: Kaballewa	NT		NT	
Family : Soricidae					
Crocidura horsfieldi (Tomes, 1856)	E: Horsfield's shrew; S: Kunuhik-miya	CR	B2ab(iii)	DD	
Crocidura miya Phillips, 1929	E: Sri Lanka long-tailed shrew; S: Sri Lanka Kunuhik-miya	CR	B1ab(iii)	EN	B1ab(iii)+2ab(iii)
Crocidura hikmiya Meegaskumbura, Meegaskumbura, Pethiyagoda, Manamendra-arachchi & Schneider, 2007		CR	B2ab(iii)		
Feroculus feroculus (Kelaart, 1850)	E: Kelaart's long-clawed shrew; S: Pirihik-miya	EN	B1ab(iii)+ 2ab(iii)	EN	B1+2ab(ii,iii)
Solisorex pearsoni Thomas, 1924	E: Sri Lanka Pearson's long-clawed shrew; S: Sri Lanka Mahik-miya	CR	B2ab(iii)	EN	B1ab(iii)+2ab(iii)
Suncus etruscus (Savi, 1822)	E: Pigmy shrew; S: Podi Hik-miya	EN	B1ab(iii)	LC	
Suncus fellowes-gordoni Phillips,1932	E: Sri Lanka pigmy shrew; S: Sri Lanka Podi Hik-miya	EN	B1ab(iii)+ 2ab(iii)	EN	B1ab(iii)+2ab(iii)
Suncus montanus (Kelaart, 1850)	E:Sri Lanka Highland shrew; S:Sri Lanka Kandu Hik-miya	EN	B1ab(iii)+ 2ab(iii)	VU	B2ab(ii,iii)
Suncus murinus (Linnaeus, 1766)	E: Common musk shrew; S: Podhu Hik-miya	LC		LC	
Suncus zeylanicus Phillips, 1928	E: Sri Lanka jungle shrew; S: Sri Lanka Kele Hik-miya	DD		EN	B2ab(iii)
Family : Emballonuridae					
Taphozous longimanus Hardwicke, 1825	E: Long-armed sheath-tailed bat; S: Dikba Kepulum- vavula	EN	B1ab(iii)+ 2ab(iii)	LC	
Taphozous melanopogon Temminck, 1841	E: Black-bearded sheath-tailed bat; S: Ravulkalu Kepulum- vavula	VU	B1ab(iii)	LC	
Saccolaimus saccolaimus Temminck, 1838	E: Pouch-bearing sheath-tailed bat; S: Maha Kepulum- vavula	CR	B2ab(iii)	LC	

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

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

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

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

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

Scientific Name	Common Name	GCS	Criteria
Family: Balaenopteridae			
Balaenoptera acutorostrata Lacepede, 1804	E: Mink Whale; S: Minki thalmasa	LC	
Balaenoptera borealis Lesson, 1828	E: Sei Whale; S: Sei thalmasa	EN	A1ad
Balaenoptera edeni Anderson, 1879	E: Bride's whale; S: Bridege thalmasa	DD	
Balaenoptera musculus Linnaeus, 1758	E: Blue whale; S: Nil thalmasa	EN	A1abd
Balaenoptera physalus (Linnaeus, 1758)	E: Fin Whale; S: Waral thalmasa	EN	A1d
Megaptera novaeangliae (Borowski, 1781)	E: Hump-backed Whale; S: Molli thalmasa	LC	
Family: Physeteridae			
Physeter macrocephalus Linnaeus, 1758	E: Sperm Whale; S: Manda thalmasa	VU	A1d
Family: Kogiidae			
Kogia breviceps (Balaninville, 1838)	E: Pygmy Sperm Whale; S: Kurumanda thalmasa	DD	
Kogia sima (Owen, 1866)	E: Dwarf Sperm Whale; S: Mitimanda thalmasa	DD	
Family: Ziphiidae			
Indopacetus pacificus Longman, 1926	E: Longman's Beaked Whale; S: Longmange hota ul thalmasa	DD	
Mesoplodon densirostris Blainville, 1817	E: Blainville's beaked Whale; S: Blanvilge hota ul thalmasa	DD	
Mesoplodon hotaula Nishiwaki & Kamiya, 1958	E: Ginko-toothed Beaked Whale; S: Japan hota ul thalmasa	DD	
Zpihius cavirostris Cuvier, 1823	E: Cuvier's beak Whale; S: Cuvierge hota ul thalmasa	LC	
Family: Delphinidae			
Delphinus delphis Linnaeus, 1758	E: Common Dolphin; S: Podu mulla	LC	
Feresa attenuata Gray, 1875	E: Pygmy Killer Whale; S: Kuru minimaru thalmasa	DD	
Globicephala macrorhyncus Gray, 1846	E: Short-finned Pilot Whale; S: Keti waral niyamu thalmasa	DD	
Grampus griseus (Cuvier, 1812)	E: Rissos Dolphin/ Grey Dolphin; S: Malina mulla	LC	
Lagenodelphis hosei Fraser, 1957	E: Fraser's Dolphin; S: Keti hota mulla	LC	
Orcinus orca (Linnaeus, 1758)	E: Killer whale; S: Minimaru thalmasa	DD	
Peponocephala electra (Gray, 1846)	E: Melon headed Whale; S: Puhu lolu mulla	LC	
Pseudorca crassidens (Owen, 1846)	E: False Killer Whale; S: Wyaja minimaru thalmasa	DD	
Sousa chinensis (Osbeck, 1765)	E: Indo-pacific hump-back Dolphin; S: Kabara mulla	NT	
Stenella attenuata (Gray, 1846)	E: Spotted Dolphin; S: Thith mulla	LC	
Stenella coeruleoalba (Meyen, 1833)	E: Striped Dolphin; S: Wyiram mulla	LC	
Stenella longirostris (Gray, 1828)	E: Spinner Dolphin; S: Sannali mulla	DD	
Steno bredanensis (Lesson, 1828)	E: Rough-toothed Dolphin; S: Ralu dath mulla	LC	
Tursiops truncatus (Monotagu, 1821)	E: Bottle nosed Dolphin; S: Digasumbu mulla	LC	
Tursiops aduncus (Ehrenberg, 1833)	E: Indo-pacific Bottlenosed Dolphin; S: Indu digasumbu mulla	DD	
Family: Phocoenidae			
Neophocaena phocaenoides (Cuvier, 1829)	E: Finless Porpoise; S: Awaral mulla	VU	A2cde
Family: Dugongidae			
Dugong dugong (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 (Table1). 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 19th 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), Fenando (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^2 (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

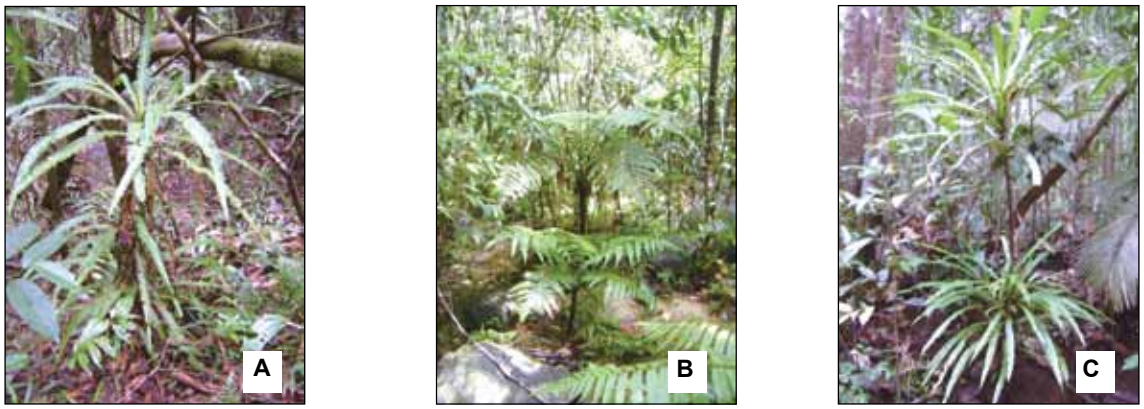
The present knowledge of ptridophytes is largely based on Shaffer-Fehre (2006) which is mainly based on morphology and specimens of existing herbarium collections rather than new information. It has been prepared during 1993-1995 period but published in 2006. However, with the advancement of plant molecular 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 *et al*. (2011)
Genera		
Antrophyum	Vittariaceae	Pteridaceae
Arthropteris	Oleandraceae	Tectariaceae
Athyrium	Woodsiaceae	Athyriaceae
Bolbitis	Lomariopsidaceae	Dryopteridaceae
Ceratopteris	Parkeriaceae	Pteridaceae
Deparia	Woodsiaceae	Athyriaceae
Diplazium	Woodsiaceae	Athyriaceae
Elaphoglossum	Lomariopsidaceae	Dryopteridaceae
Hypodematium	Woodsiaceae	Hypodematiaceae
Leucostegia	Davalliaceae	Hypodematiaceae
Lindsaea	Dennstaedtiaceae	Lindsaeaceae
Loxogramme	Loxogrammaceae	Polypodiaceae
Lygodium	Schizaeaceae	Lygodiaceae
Monogramma	Vittariaceae	Pteridaceae
Nephrolepis	Oleandraceae	Nephrolepidaceae
Pteridrys	Dryopteridaceae	Tectariaceae
Sphenomeris	Dennstaedtiaceae	Lindsaeaceae
Tectaria	Dryopteridaceae	Tectariaceae
Teratophyllum	Lomariopsidaceae	Dryopteridaceae
Vittaria	Vittariaceae	Pteridaceae
Family		
Grammitidaceae	Grammitidaceae	Polypodiaceae

Distribution

Limited research has been conducted to identify distribution of pterdophyte 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)
Blechnaceaea				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)
Totals			**21 (5)**	**42 (10)**	**88 (11)**	**70 (12)**	**40 (9)**	**12 (1)**	**63 (1)**	**200 (33)**	**336 (49)**

Table 14: List of Pteridophytes in Sri Lanka

(Endemic species are marked in **Bold** letters)

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

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

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

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

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

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

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

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

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

Family/ Scientific Name	Common name	NCS	Criteria	GCS
Oreogrammitis medialis (Baker) Parris (Syn:***Grammitis medialis*** (Baker) Ching)		VU	B1ab(i,ii,iii)	
Oreogrammitis reinwardtii (Blume) Parris (Syn:*Grammitis reinwardtii* Blume)		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
Oreogrammitis sledgei (Parris) Parris (Syn:***Grammitis sledgei*** Parris)		VU	B1ab(i,ii,iii)	
Oreogrammitis wallii(Beddome) Parris (Syn: ***Grammitis wallii***(Bedd.) Copel.)		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
Oreogrammitis zeylanica(Fée) Parris (Syn: ***Grammitis zeylanica***Fée)		NT		
Pleopeltis lanceolata Kaulf.		EN	B2ab(i,ii,iii)	
Prosaptia alata (Blume) Christ		LC		
Prosaptia ceylanicaParris		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
Prosaptia contigua (G.Forst.) C.Presl		LC		
Prosaptia obliquata (Blume) Mett.		LC		
Pyrrosia ceylanica (Giesenh.) Sledge		CR	B1ab(i,ii,iii)+2ab(i,ii,iii)	
Pyrrosia gardneri (Mett.) Sledge		LC		
Pyrrosia heterophylla (L.) Price	S: Panam-pethi, Kasi-pethi	LC		
Pyrrosia lanceolata (L.) Farw.		LC		
Pyrrosia pannosa (Mett .ex Kuhn) Ching		NT		
Pyrrosia porosa (C.Presl) Hovenkamp var. *porosa*		LC		
Radiogrammitis beddomeana(Alderw.) Parris **(syn: *Grammitis beddomeana***(Alderw.) Ching)		CR(PE)		
Scleroglossum pusillum(Blume) Alderw.		DD		
Scleroglossum sulcatum(Kuhn) Alderw.		CR	B2ab(i,ii,iii)	
Selliguea montana (Sledge) Hovenkamp		LC		
Tomophyllum epaleatum (Parris) Parris (Syn: *Ctenopteris epaleata* Parris)		EN	B1ab(i,ii,iii)+2ab(i,ii,iii)	
Tomophyllum perplexum (Parris) Parris (Syn: *Ctenopteris perplexa* Parris)		VU	B1ab(i,ii,iii)	
Tomophyllum repandulum (Mett.) Parris (Syn: *Ctenopteris repandula* (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 is 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 rain fall < 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 13th 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 prominant 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

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 prominant 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 (*Plagioclimaxes*)	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^2 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 Minneriaya 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^{o}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).

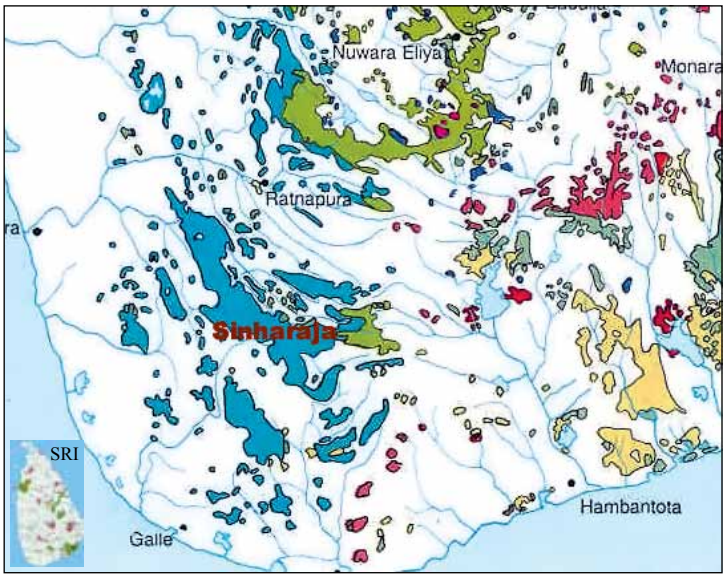

Figure. 1 Map showing the forests in the south-west of Sri Lanka. Blue = Fragmented lowland rain forests remaining in Sri Lanka, Green = Montane rain forests, Brown = Intermediate zone forests, Yellow = Dry zone forests (Source: Somasekaram et al., 1997).

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

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, biogegraphic 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 (*Stobilanthes*) 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 *Austroeupatorium 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 *villus.* 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

(saltpans, 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 provid 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 *villus* in the Mahaweil *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 *villus* 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 eco-systems. *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 *Vallisnaria 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
Aegiceras corniculatum (L.) Blanco	Myrsinaceae	LC
Avicennia marina (Forsk.) Vierh.	Avicenniaceae	LC
Avicennia officinalis L.	Avicenniaceae	NT
Bruguiera cylindrica (L.) Blume	Rhizophoraceae	EN
Bruguiera gymnorrhiza (L.) Lamk.	Rhizophoraceae	VU
Bruguiera sexangula (Lour.) Poir.	Rhizophoraceae	VU
Ceriops tagal (Perr.) C.B. Robinson	Rhizophoraceae	NT
**Ceriops decandra*(Grifith) Ding Hou	Rhizophoraceae	CR
Excoecaria agallocha L.	Euphorbiaceae	LC
Heritiera littoralis Dryand.	Sterculiaceae	NT
Lumnitzera littorea (Jack) Voigt	Combretaceae	CR
Lumnitzera racemosa Willd.	Combretaceae	NT
Nypa fruticans (Thunb.) Wurmb	Arecaceae	VU
Pemphis acidula Forst.	Lythraceae	NT
Rhizophora apiculata BL.	Rhizophoraceae	NT
Rhizophora mucronata Lamk.	Rhizophoraceae	LC
Sapium indicum Willd. (Syn *Excoecaria indica*)	Euphorbiaceae	VU
Sonneratia alba J. Smith	Sonneratiaceae	EN
Sonneratia caseolaris (L.) Engler	Sonneratiaceae	LC
Xylocarpus granatum König	Meliaceae	EN
Scyphiphora hydrophyllacea 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 a 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 in1981).

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 referringto 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 *Rhynchostylis 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 mac*carthiae (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. (Iruraja), 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 Ginigathhena, 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 establishmentof systematically planned *ex-situ* conservation centers is also of prime importance. 90% of the indigenous orchid diversity can be protectedin 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 up-dated.

- 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.

References

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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)
Hernandiaceae						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
Lindernaceae				1	2 (2)	2 (1)	4		7	5 (3)	16 (3)
Loganiacea			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
Pentaphylaceae					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
Total	**5 (4)**	**2 (2)**	**177 (72)**	**218 (102)**	**552 (272)**	**615 (220)**	**350 (83)**	**143 (10)**	**1,091 (130)**	**1,385 (594)**	**3,154 (894)**

Table 16: List of Gymnosperms in Sri Lanka

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

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

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

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

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

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

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

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

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

Family/ Scientific Name	Common name	NCS	Criteria	GCS	Criteria
Miliusa zeylanica Gardner ex Hook.f. & Thoms.		VU	B1ab(i,ii,iii)	VU[i]	A1c
Mitrephora heyneana (Hook.f. & Thoms.) Thw.		NT			
Orophea zeylanica Hook.f. & Thoms.		CR(PE)			
Phoenicanthus coriacea (Thw.) H.Huber		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
Phoenicanthus obliqua (Hook.f. & Thoms.) Alston		NT			
Polyalthia cerasoides (Roxb.) Beddome	S: Patta-Ul-Kenda	LC			
Polyalthia coffeoides (Thw. ex Hook.f. & Thoms.) Thw.	S: Omara; T: Katilla, Nedunari	LC			
Polyalthia korinti (Dunal) Thw.	S: Mi-Wenna, Ul-Kenda; T: Uluvintai	LC			
Polyalthia longifolia (Sonn.) Thw.	S: Devadara, I-Petta, O-lila, O-wila; T: Assathi, Marai-Illipa, Mara-Iluppai	LC			
Polyalthia moonii Thw.		CR(PE)			
Polyalthia persicaefolia (Hook.f. & Thoms.) Thw.		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
Polyalthia suberosa (Roxb.) Thw.	S: Kalati; T: Kalatti	EN	B2ab(i,ii,iii)		
Sageraea thwaitesii Hook.f. & Thoms.		VU	B1ab(i,ii,iii)	EN	B1+2c
Sageraea zeylanica Heusden		EN	B1ab(i,ii,iii) +2ab(i,ii,iii)		
Uvaria cordata (Dunal) Alston		VU	B1ab(i,ii,iii)		
Uvaria macropoda Hook.f. & Thoms.	S: Attu-Muddah	NT			
Uvaria narum (Dunal) Wall.	S: Pangan	VU	B1ab(i,ii,iii)		
Uvaria semecarpifolia Hook. f. & Thoms.	S: Kara-Bambara	LC			
Uvaria sphenocarpa Hook. f. & Thoms.		LC			
Uvaria zeylanica L.	S: Palanga, Palu-Kan; T: Kalu- Veppal, Karu -Veppal	LC			
Xylopia championii Hook.f. & Thoms.	S: Dat-Ketiya	LC			
Xylopia nigricans Hook.f. & Thoms.	S: Heen-Kenda; T: See-Vindai	NT			
Xylopia parvifolia (Wight) Hook. f. & Thoms.	S: Atu-Ketiya, Netawu; T: Chiddavintai	LC			
Family : Apiaceae					
Bupleurum ramosissimum Wight & Arn.	S: Wal-Enduru	VU	B1ab(i,ii,iii)		

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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Physalis micrantha Link	S: Mottu, Nalal Batu, Lin -Mottu, Heen-Mottu	DD			
Solanum erianthum D.Don	S: Hekarilla	DD			
Solanum giganteum Jacq.		DD			
Solanum lasiocarpum Dunal	S: Mala-Batu	DD			
Solanum mauritianum Scop.	S: Hakarilla	DD			
Solanum pubescens Willd.		VU	B1ab(i,ii,iii)		
Solanum torvum Sw.	S: Tibbatu, Gona-Batu	LC			
Solanum trilobatum L.	S: Wel-Tibbatu; T: Tuttuvalai	LC			
Solanum violaceum Ortega		LC			
Solanum virginianum L.	S: Kara- Batu, Katuwel-Batu; T: Kandan-Kattari	LC			
Family : Sphenocleaceae					
Sphenoclea zeylanica Gaertn.		LC			
Family : Staphyleaceae					
Turpinia malabarica Gamble	S: Kankumbala Eta-Hirilla, Garandi-Kidaran	LC			
Family : Stemonaceae					
Stemona curtisii Hook. f.		CR(PE)			
Family : Stemonuraceae					
Gomphandra coriacea Wight		VU	B1ab(i,ii,iii) +2ab(i,ii,iii)		
Gomphandra tetranda (Wall.) Sleumer		NT			
Stemonurus apicalis (Thw.) Miers	S: Urul-Honda, Uru-Kanu	NT			
Family : Stylidiaceae					
Stylidium uliginosum Sw. ex Willd.		CR(PE)			
Family : Surianaceae					
Suriana maritima L.		CR(PE)			
Family : Symplocaceae					
Symplocos bractealis Thw.	S: Bombu	EN	B1ab(i,ii,iii) +2ab(i,ii,iii)	VU[i]	B1+2c
Symplocos cochinchinensis (Lour.) S.Moore	S: Wal-Bombu, Bobu, Bombu	LC			

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

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

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

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

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

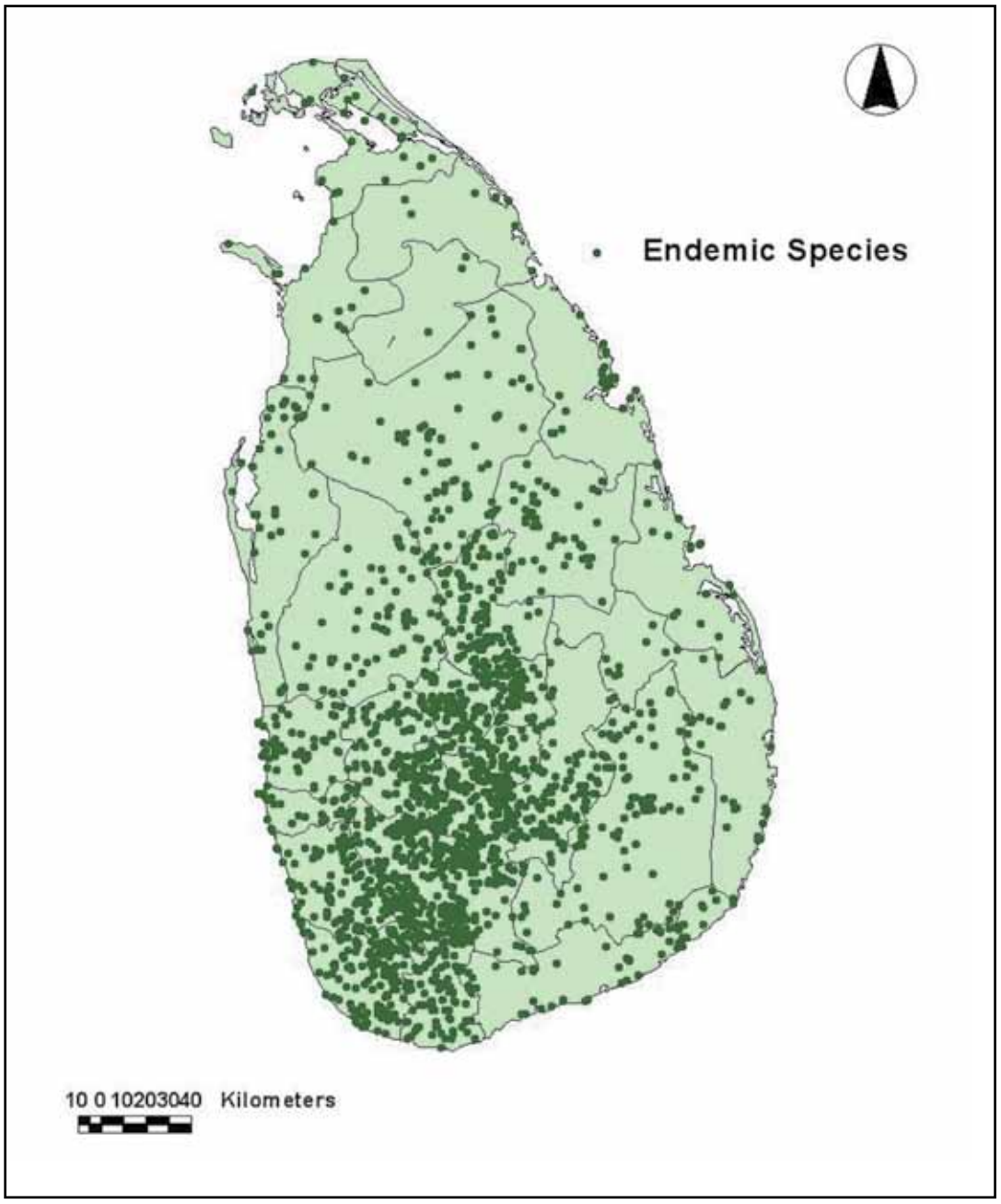
Angiosperms are flowering plants that produce seeds enclosed in a fruit. They are the most diverse group of plants with an estimated number of 200,000 to 400,000 species (Thorne, 2002). These species are classified into 415 families (APG, 2009)

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 (*Hydrocotyle*)	Araliaceae
Apostasiaceae	Orchidaceae
Asclepiadaceae	Apocynaceae
Avicenniaceae	Acanthaceae
Bombacaceae	Malvaceae
Callitrichaceae	Plantaginaceae
Capparaceae (*Cleome*)	Cleomaceae
Caprifoliaceae (*Viburnum*)	Adoxaceae
Celastraceae (*Bhesa*)	Centroplacaceae
Chenopodiaceae	Amaranthaceae
Clusiaceae (*Calophyllum, Mesua*)	Calophyllaceae
Cochlospermaceae	Bixaceae
Convallariaceae	Asparagaceae
Cuscutaceae	Convolvulaceae
Datiscaceae (*Tetrameles*)	Tetramelaceae
Dipsacaceae	Caprifoliaceae
Dracaenaceae	Asparagaceae
Euphorbiaceae (*Putranjiva, Drypetes*)	Putranjivaceae
Euphorbiaceae (*Mischodon*)	Picrodendraceae
Euphorbiaceae (*Actephila, Antidesma, Aporusa, Bischofia, Breynia, Bridelia, Cleistanthus, Fluggea, Glochidion, Margaritaria, Meineckia, Phyllanthus, Sauropus*)	Phyllanthaceae
Flacourtiaceae (*Hydnocarpus,Trichadenia*)	Achariaceae
Flacourtiaceae (*Casearia, Dovyalis, Flacourtia, Homalium, Scolopia*)	Salicaceae
Hippocrateaceae	Celastraceae
Hyacinthaceae	Asparagaceae
Hydrophyllaceae	Hydroleaceae
Icacinaceae (*Stemonurus,Gomphandra*)	Stemonuraceae
Lamiaceae (*Priva, Stachytarpheta*)	Verbenaceae
Leeaceae	Vitaceae
Lemnaceae	Araceae
Limnocharitaceae	Alismataceae
Lobeliaceae	Campanulaceae
Loganiaceae (*Fagraea*)	Gentianaceae
Melastomataceae (*Axinandra*)	Crypteroniaceae
Memecylaceae	Melastomataceae
Molluginaceae (*Gisekia*)	Gisekiaceae
Myrsinaceae	Primulaceae
Najadaceae	Hydrocharitaceae
Nyctanthaceae	Oleaceae
Periplocaceae	Apocynaceae
Phormiaceae	Xanthorrhoeaceae

Portulacaceae	Cactaceae
Potamogetonaceae (*Ruppia*)	Ruppiaceae
Rhizophoraceae (*Anisophyllea*)	Anisophylleaceae
Scrophulariaceae (*Adenosma, Bacopa, Dopatrium, Limnophila, Microcarpaea, Scoparia, Stemodia*)	Plantaginaceae
Scrophulariaceae (*Artanema,Lindernia ,Torenia*)	Linderniaceae
Scrophulariaceae (*Calceolaria*)	Calceolariaceae
Scrophulariaceae (*Centranthera, Pedicularis, Sopubia, Striga*)	Orobanchaceae
Scrophulariaceae (*Peplidium*)	Phrymaceae
Sonneratiaceae	Lythraceae
Sterculiaceae	Malvaceae
Symphoremaceae	Lamiaceae
Taccaceae	Dioscoreaceae
Theaceae (*Adinandra,Eurya,Ternstroemia*)	Pentaphylacaceae
Tiliaceae	Malvaceae
Trapaceae	Lythraceae
Trichopodaceae	Dioscoreaceae
Turneraceae (Turnera)	Passifloraceae
Ulmaceae (*Aphananthe , Celtis, Gironniera,Trema*)	Cannabaceae
Valerianaceae (*Valeriana*)	Caprifoliaceae
Verbenaceae (*Aegiphila, Clerodendrum, Glossocarya, Gmelina, Premna , Vitex*)	Lamiaceae
Viscaceae	Santalaceae
Zingiberaceae (*Costus*)	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
Poaceae	262
Fabaceae	221
Orchidaceae	184
Rubiaceae	179
Cyperaceae	170
Acanthaceae	105
Asteraceae	86
Malvaceae	72
Melastomataceae	71
Lamiaceae	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.

Area of focus	Responsible Institution/s	Technical support	Time Frame
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
Ex situ 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 needs 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 pentameral 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). Herdmen (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 Asteroiedea 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. Thilakaratne 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 mammillatus* (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

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.

** 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[NR]
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[NR]
13. Heterometra amboninae
14. Heterometra bengalensis
15. Heterometra reynaudi
16. Himerometra persica[NR]
17. Himerometra robustipinna

Family Mariametridae

18. Dichrometra sp. [NR]
19. Lamprometra palmata
20. Oxymetra finschi
21. Stephanometra echinus (?)
22. Stephanometra indica (?)
23. Stephanometra spicata
24. Stephanometra tenuipinna

Family Colobometridae

25. Cenometra herdmani
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[NR]

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. Ophiothrix exigua
18. Ophiothrix foveolata
19. Ophiothrix trilineata
20. Ophiothrix proteus
21. Ophiothrix purpurea
22. Ophiothrix nereidina

Family Ophiocomidae

23. Ophiarthrum elegans
24. Ophiocoma brevipes
25. Ophiocoma dentata[NR]
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[NR]
37. Ophiarachnella septemspinosa
38. Ophiarachnella sphenisci
39. Ophiochaeta hoeschmai[NR]
40. Ophiopeza fallax
41. Ophiopeza spinosa[NR]

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. Holothuna (Theelothuria) kurti
27. Holothuria (Theelothuria) spinifera
28. Holothuria (Thymiosycia) hilla
29. Holothuria (Thymiosycia) impatiens

Family Stichopodidae
30. Stichopus chioronotus
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 leptoclados(Ehrenberg, 1834)
Sinularia lochmodos 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 crebriplicatum 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.

Reference

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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 19th 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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Wallace, C. 1999. *Staghorn Corals of the World: a revision of the coral genus Acropora*. Collingwood, Australia: CSIRO

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 (Forskal, 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 favus (Forskal, 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 (Forskal, 1775)

Cyphastrea serailia (Forskal, 1775)

Echinopora lamellosa (Esper, 1795)

Echinopora robusta Veron, 2000

Oulophyllia crispa (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 (Forskal, 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 (Forskal, 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 eydouxi 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 (Forskal, 1775)

Porites solida (Forskal, 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).

Box 01

Phylum Mollusca Cuvier, 1793
Class: Aplacophora von Hering, 1876 – Spiny, shell-less molluscs
Class: Polyplacophora Blainville, 1816 – chitons; with 8-shell plates
Class: Monoplacophora Odhner, 1940 – cap-shell molluscs; deep sea
Class: Gastropoda Cuvier, 1795 – snails; includes shell-less slugs
Class: Bivalvia Linnaeus, 1758 – bivalves; clams, mussels, oysters
Class: Scaphopoda Keferstein in Bronn, 1862 – tusk shells
Class: Cephalopoda Cuvier, 1797 – octopuses, squids, cuttlefishes and nautiluses

After de Bruyne, 2003

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[1] (1978), Darshani de Silva[2] (2006) and D. H. Fernando[3] (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*
Astralium costatum
Astralium heimburgi (Dunker)*
Astralium rhodostoma
Astralium semicostata (Kiener, 1850) *
Astralium 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 telecopium (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 sibbaldi Sowerby, 1842 *
Strombus vittatus Linnaeus, 1758 *
*Strombus sp. 1 **

Family: Hipponicidae

Hipponix conicus (Schumacher, 1817) *
Hipponix pilosus

Family: Calyptraeidae

Cheilea tectumsinense
Crucibulum extinctorum Lamarck, 1822 *
Crucibulum violaceum
Crucibulum sp. 1 *
Syphopatella walshi (Hermannsen in Reeve, 1859) *

Family: Xenophoridae

Xenophora helvacea
Xenophora cf. *exuta *?*
Xenophora pallidula Reeve, 1843 *
Xenophora tenuis

Family: Vermetidae

Serpulorbis cf. *sipho* 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 stolida
Erosaria nebrites 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: Columbellidae

Pyrene flava Bruguiere, 1789 *
Pyrene flavida
Pyrene terpsichore Lamarck*
Pyrene testudinaria (Link, 1807) *
Pyrene turturina
Pyrene versicolor (Sowerby, 1832) *

Family: Fasciolariidae

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 *
Turrilatirus craticulatus (Linnaeus, 1758) *
Turrilatirus 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. *pellisserpentes* 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

*Conu*s (?) sp. 1 *
*Conu*s (?) 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 (Gastridium) geographus Linnaeus, 1758 *
Conus (Gastridium) 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 Roding, 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) capitaneu*s 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 Roding, 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 brevialata (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
Chalmys 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* Roding*
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*
Tellinimactra 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 Roding, 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^2 and 517,000 Km^2 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 Phyllum 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 shripms 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
Order: Pedunculata (Stalked barnacles)	
Family: Artemiidae	
Artrmia parthegenetica [22]	
Family: Lepadidae	
Lepas anserifera[1]	Goose Barnacle
Lepas anatifera[1]	Goose Barnacle
Lepas tenuivulvata[1]	Goose Barnacle
Dichelaspis equina[1]	
Dichelaspis pellucida[1]	
Paecilasma kempferi[1]	
Sculpellum grurelli[1]	
Sculpellum alcockianum[1]	
Sculpellum squamiferum[1]	
Sculpellum truncatum[1]	
Sculpellum tenue[1]	
Sculpellum subflavum[1]	
Conchoderma sp.[41]	Whale Barnacle
Order: Sessilia (Barnacles)	
Family: Chthamalidae	
Chthamalus challengeri[10]	Star Barnacles
Chthamalus stellatus[1]	Poli's Stellate barnacle
Family: Tetraclitidae	
Tetraclita squamosa[10]	Acorn Barnacle
Tetraclita serrata[1]	Volcano Barnacle
Family: Balanidae	
Balanus tintinabulum[1,10]	Acorn Barnacle
Balanus amphitrite[1,10]	Acorn Barnacle
Balanus amaryllis[1,10]	Acorn Barnacle
Balanus longirostrum[10]	Acorn Barnacle
Armatobalanus allium[1]	
Armatobalanus terebratus[1]	
Solidobalanus socialis[1]	
Solidobalanus cilliatus[1]	
Pyrgoma conjugtum[1,10]	Acorn Barnacle
Family: Cornulidae	
Chelonibia testudinaria[42]	
Stephanolepas muricata[42]	
Chelolepas cheloniae[42]	
Family: Pygomatidae	
Creusia spinulosa[1]	Coral Barnacle
Family Archaeobalanidae	
Acasta cyathus[1]	Sponge barnacle
Acasta funiculorum[1]	

Scientific Name	Common Name
Family: Asteropidae	
Asterope oculata[1]	
Asterope quadrata[1]	
Asterope arthuri[1]	
Cyclasterope similis[1]	
Family: Vypridinidae	
Cypridina faveolata[1]	
Pyrocypris chiechiae[1]	
Codonocera crenulata[1]	
Family: Sarsiellidae	
Sarsiella ornithoides[1]	
Sarsiella carinata[1]	
Sarsiella gracilis[1]	
Sarsiella similis[1]	
Sarsiella crispata[1]	
Sarsiella tumida[1]	
Family: Halocyprididae	
Conchoecia magna[1]	
Conchoecia clausii[1]	
Conchoecia acuminata[1]	
Halocypris concha[1]	
Family: Cypridae	
Macrocypris decora[1]	
Macrocypris orientalis[1]	
Macrocypris similis[1]	
Macrocypris maculata[1]	
Pontocypris robusta[1]	
Pontocypris elegans[1]	
Pontocypris rostrata[1]	
Pontocypris tumida[1]	
Eurythorocypris herdmani[1]	
Bairdia villosa[1]	
Bairdia attenata[1]	
Bairdia woodwardiana[1]	
Bairdia amygdaloides[1]	
Bairdia faveolata[1]	
Bairdia hirsuta[1]	
Bairdia inornata[1]	
Bairdia robusta[1]	
Anchistrocheles bradyi[1]	
Pseudocythere minuta[1]	
Paradoxostoma cingalense[1]	
Paradoxostoma attenuatum[1]	

Paradoxostoma stebbingi[1]	
Xestolebris margaritea[1]	
Xestolebris tumefacta[1]	
Xestolebris aurentia[1]	
Xestolebris variegata[1]	
Xestolebris squamigera[1]	
Xestolebris irrasa[1]	
Xestolebris tumida[1]	
Paracytheridea perplexa[1]	
Cytherura concinna[1]	
Loxoconcha anomala[1]	
Loxoconcha alata[1]	
Loxoconcha papillosa[1]	
Loxoconcha sculpta[1]	
Loxoconcha australis[1]	
Cythere bimammillata[1]	
Cythere darwini[1]	
Cythere inconspicua[1]	
Cythere ovalis[1]	
Cythere polytrema[1]	
Cythere rectangularis[1]	
Cythere ruperti[1]	
Cythere stimpsoni[1]	
Cythere subcuneata[1]	
Cythere knoxi[1]	
Cythere chalmersi[1]	
Cythere imthurni[1]	
Cythere thompsoni[1]	
Cythere donnani[1]	
Cythere willeyi[1]	
Cythere hornelli[1]	
Cythere halyi[1]	
Cythere kelaarti[1]	
Cythere willisi[1]	
Cythere coletti[1]	
Cythere holdsworthi[1]	
Family: Cytherellidae	
Cytherella ondaatjei[1]	
Cytherella vraspillaii[1]	
Order: Leptostraca	
Family: Nebalidae	
Nebalia bipes[1]	
Order: Stromatopoda (mantis shrimps)	
Family :Lysiosquillidae	
Lysiosquilla maculata[30,31]	Spearing / Zebra Mantis-Shrimp
Family: Odontodactylidae	
Odontodactylus scyllarus[30,31]	Peacock Mantis-Shrimp
Odontodactylus brevirostris[1]	Short-nose Mantis-Shrimp
Odontodactylus japonicus	
Family: Gonodactylidae	
Gonodactylus chiragra[1]	Smasher Shrimp
Gonodactylus smithii[33]	Purple-spot Smasher-Shrimp
Gonodactylaceus glabrous[1]	Smasher Shrimp
Gonodactylopsis herdmani[1]	Smasher Shrimp
Hoplosquilla acanthurus[1]	Smasher Shrimp
Family: Squillidae	
Harpiosquilla indica[41]	Spearer Mantis-Shrimp
Harpiosquilla raphidea[1]	Spearer Mantis-Shrimp
Oratosquilla sp.[41]	Mantis-Shrimp
Family: Protosquillidae	
Pseudosquilla cillata[1]	Rainbow Mantis Shrimp
Haptosquilla trispinosa[1]	
Chrlorisquilla spinosissima[1]	
Order:Mysida (Mysid shrimps)	
Family: Mysidae	
Siriella paulsoni[1]	Mysid shrimp
Haplostylus erythraeus[1]	Mysid shrimp
Order: Amphipoda (Amphipods)	
Family: Amaryllidae	
Vijaya tenuipes[11,12]	Amphipod
Family: Lysianassidae	
Socarnella bonide[12]	Amphipod
Lysianassa cinghalens[12]	Amphipod
Lysianassa coelochir[12]	Amphipod
Orehomenella nana[12]	Amphipod
Tryphosa eucullata[12]	Amphipod
Anonyx schmardae [12]	Amphipod
Family: Ampeliscidae	
Ampelisca tridens [12]	Amphipod
Ampelisca scabries [12]	Amphipod
Ampelisca brevicornis [12]	Amphipod
Ampelisca cyclops [12]	Amphipod
Ampelisca zamboangae[12]	Amphipod
Family: Haustoriidae	
Phtyischnopus herdmani [12]	Amphipod
Urothoe spinidigitus [12]	Amphipod

Family: Argissidae	
Argissa hamatipes[12]	Amphipod
Family: Phoxocephalidae	
Paraphoxus unicirostrata[12]	Amphipod
Family: Amphilochidae	
Cyproidea ornata[12]	Amphipod
Family: Leucothoidae	
Leucothoe spinicarpa[12]	Amphipod
Leucothoe funima[12]	Amphipod
Family: Anamyxidae	
Stenothoe gallensis[12]	Amphipod
Stenothoe monoculoides[12]	Amphipod
Family: Colomastigidae	
Colomastix pusilla[12]	Amphipod
Family: Liljborgidae	
Liljborgia pallida[12]	Amphipod
Family: Oedicerotidae	
Periculoides serra[12]	Amphipod
Family: Tironidae	
Tiron Thompsoni[12]	Amphipod
Family: Eusiridae	
Eusiroides diplinyx[12]	Amphipod
Eusiroides orchomenipes[12]	
Family: Atylidae	
Atylus grannulosa[12]	Amphipod
Family: Gammaridae	
Melita fresnelli[12]	Amphipod
Melita obtusata[12]	Amphipod
Maera othonidea[12]	Amphipod
Maera subcarinata[12]	Amphipod
Maera tenella[12]	Amphipod
Maera inaequipes[12]	Amphipod
Ceradocus rubromaculatus[12]	Amphipod
Elasmopus spinimanus[12]	Amphipod
Elasmopus pectinicrus[12]	Amphipod
Elasmopus dubius[12]	Amphipod
Parelasmopus suluensis[12]	Amphipod
Family: Dexamanidae	
Dexamine serraticrus	Amphipod
Polycheria atolli[12]	Amphipod
Family: Melphidippidae	
Hornella incerta[12]	Amphipod
Family: Aoridae	
Lembos podoceroides[12]	Amphipod
Lembos chelatus[12]	Amphipod
Family: Photidae	
Eurytheus atlanticus[12]	Amphipod
Photis longicaudata[12]	Amphipod
Photis longimanus[12]	Amphipod
Photis nana[12]	Amphipod
Cheriphotis megacheles[12]	Amphipod
Chevaria avriculae[12]	Amphipod
Family: Ampithoidae	
Ampithoe ramondi[12]	Amphipod
Family: Corophidae	
Carapus abditus[12]	Amphipod
Erichthonius macrodactylus[12]	Amphipod
Erichthonius brasillensis[12]	Amphipod
Siphonocaetes orientalis[12]	Amphipod
Corophium triaenonyx[12]	Amphipod
Family: Podoceridae	
Podocerus laevis[12]	Amphipod
Podocerus zeylanicus[12]	Amphipod
Podocerus brasillensis[12]	Amphipod
Order: Isopoda (Isopods)	
Family: Cirolanidae	
Cirolana willeyi[11]	Isopod
Family: Taneidae	
Tanais gracilis[1]	Isopod
Heterotanais crassicornis[1]	Isopod
Leptochelia mirabilis[1]	Isopod
Leptochelia lifuensis[1]	Isopod
Family: Anthuridae	
Calathura sp.[1]	Isopod
Family: Gnathiidae	
Gnathia insolita[1]	Isopod
Family: Eurydicidae	
Cirolana sulcaticaudata[1]	Isopod
Cirolana parva[1]	Isopod
Conilopheus herdmani[1]	Isopod
Hansenolana sphaeromiformis[1]	Isopod
Family: Agarthonidae	
Agarthona normani[1]	Isopod
Lanochira gardineri[1]	Isopod
Lanochira zeylanica[1]	Isopod
Family: Aegidae	
Aega ommatophylax[1]	Isopod
Rocinela orientalis[1]	Isopod
Family: Cymothoidae	
Anilocra dimidiata[1]	Isopod
Rhiothra callipia[1]	Isopod
Irona nanaoides[1]	Isopod
Nerocila sigani[18]	Isopod
Family: Sphyromidae	
Sphyroma walkeri[1]	Isopod

Cilicaea latreillii[1]	Isopod
Cilicaea whiteleggei[1]	Isopod
Cilicaea beddardi[1]	Isopod
Cymodoce bicarinata[1]	Isopod
Cymodoce inornata[1]	Isopod
Family: Amesopodidae	
Amesopous richardsonae[1]	Isopod
Family: Idoteidae	
Idotea sp.[1]	Isopod
Family: Astacillidae	
Astacilla amblyurna[1]	Isopod
Family: Janiridae	
Janira nana[1]	Isopod
Jaeropsis curvicornis[1]	Isopod
Faamily: Stenetriidae	
Stenetrium chiltoni[1]	Isopod
Family: Munnidae	
Pleurocope dasyura[1]	Isopod
Family: Ligiidae	
Ligia exotica[1]	Sea Slater /Sea roach
Order: Euphausiacea (Krill)	
Family: Euphausiidae	
Euphausia sibogae[24]	Krill
Euphausia paragibba[11]	Krill
Euphausia mutica[1]	Krill
Euphausia latifrons[1]	Krill
Nematoscelis microps[1]	Krill
Order: Decapoda (Prawns, shrimps)	
Family: Penaeidae	
Atypopeneus stenodactylus[3]	Periscope Shrimp
Metapenaeops hilarula[3]	Minstrel Shrimp
Metapenaeops mogiensis[3]	Velvet Shrimp
Metapenaeops stridulans[3]	Fiddler Shrimp
Metapenaeops toloensis[3]	Tolo Velvet Shrimp
Metapenaeus affinis[3]	Jinga Shrimp
Metapenaeus dobsoni[3]	Kadal Shrimp
Metapenaeus elegans[3]	Fine Shrimp
Metapenaeus ensis[3]	Greasyback Shrimp
Metapenaeus lysianassa [3]	Bird Shrimp
Metapenaeus monoceros[3]	Speckled Shrimp
Metapenaeus moyebi[3]	Moyebi Shrimp
Parapenaeopsis acclivirostris[3]	Hawknose Shrimp
Parapenaeopsis cornuta[3]	Coral Shrimp
Parapenaeopsis coromandelica[3]	Coromandel Shrimp
Parapenaeopsis maxillipedo[3]	Torpedo Shrimp
Parapenaeopsis nana[3]	Dwarf Shrimp
Parapenaeopsis sculptilis[3]	Rainbow Shrimp
Parapenaeopsis stylifera[3]	Kiddi Shrimp
Parapenaeopsis tenella[3]	Smoothshell Shrimp
Parapenaeopsis uncta[3]	Uncta Snrimp
Parapenaeus longipes[3]	Flamingo Shrimp
Peneus indicus[3]	Indian White Shrimp
Peneus merguiensis[3]	Banana Prawn
Penaeus canaliculatus[3]	Witch Prawn
Penaeus latisulcatus[3]	Western King-prawn
Penaeus monodon[3]	Giant Tiger Prawn
Penaeus semisulcatus[3]	Green Tiger Prawn
Penaeus japonicus[43]	
Trachypenaeus cavirostris[3]	Cocktail Shrimp
Trachypenaeus granulosus[3]	Coarse Shrimp
Trachypenaeus sedili[3]	Malayan Rough Shrimp
Family: Solenoceridae	
Solenocera choprai[4]	Ridgeback Shrimp
Solenocera crassicornis[4]	Coastal Mud Shrimp
Solenocera hexii[4]	Deep Sea Mud Shrimp
Family: Sergastidae	
Acetes indicus[4]	Jawla paste Shrimp
Acetes eurythaeus[4]	Tsivakihini paste Shrimp
Acetes japonicus[4]	
Acetes sibogei[4]	
Acetes johni[4]	
Leucifer typus[4]	
Family: Stenopodidae	
Stenopus hispidus[41]	Banded Boxing Shrimp
Stenopus cyanoscelis[41]	Blue-legged Boxing shrimp
Stenopus zanzibaricus[41]	Zanzibar Boxing Shrimp
Stenopus goyi[41]	
Stenopus sp.[41]	Kalpitiya boxing shrimp
Family: Palaemoninae	
Macrobrachium rosenbergii[3]	Giant River Prawn
Macrobrachium equidens[3]	Rough River Prawn
Macrobrachium rude[3]	Hairy River Prawn
Macrobrachium latimanus [4]	

Macrobrachium malcomsoni[4]	Monsoon River Prawn
Expalaemon stylifer[3]	Rushna Shrimp
Nematopalaemon tenuipes[4]	Spider Prawn
Brachycarpus biunguiculatus[18]	
Urocaridella antonbruunii[32]	
Family: Pontoininae	
Periclimenes imperator[32]	Emperor Shrimp
Periclimenes brevicarpalis[32]	Peacock-tail Anemone Shrimp
Periclimenes magnificus[32]	Anemone shrimp
Periclimenes holthuisi[32]	Purple spotted cleaner Shrimp
Periclimenes soror[32]	Sea star Shrimp
Periclimenes tenuipes[32]	
Periclimenes psamathe[32]	
Periclimenes incertus[18]	
Periclimenes spp.[41]	
Stegopontonia commensalis[32]	White Striped Urchin Shrimp
Vir phillippinus[32]	
Coralliocaris viridis[18]	Coral shrimp
Coralliocaris sp.[41]	
Jocuste lucina[18]	
Harpiliopsis beaupresii[18]	
Harpiliopsis depressa[18]	
Kamponia elegans[18]	
Kamponia grandis[18]	
Kamponia tenuipes[18]	
Family: Pandalidae	
Heterocarpus woodmasoni[3]	Indian Nylon Shrimp
Family: Atyidae	
Atyopsis moluccensis	
Caradina vitiensis[1]	
Family: Rhynchocinetidae	
Rhynchocinetus durbanensis[41]	Camel / Hinge-beak shrimp
Cinetorhynchus concolor[41]	Uniform-hingebeak Shrimp
hendersoni	Henderson's Hingebeak Shrimp
Family: Alphaedae	
Alpheus soror[23]	
Alpheus fasqueli[23]	Fasquel's snap-ping shrimp.
Alpheus tricolor[23]	Three-colored snapping shrimp.
Alpheus bellulus[41]	Tiger Pistol Shrimp
Alpheus ideocheles[1]	
Alpheus malleodigitatus[1]	
Alpheus spongiarum[1]	Bristle Snapping Shrimp
Alpheus paralcyone[1]	
Alpheus miersi[1]	
Alpheus pareuchirus[1]	
Alpheus bi-incisus [1]	Flathead Snapping Shrimp
Alpheus edwardsii[1]	
Alpheus malabaricus[1]	
Alpheus lottini[1]	Cauliflower coral snapping shrimp
Synalpheus laticeps[1]	
Synalpheus biunguiculatus[1]	
Synalpheus comatulorum[1]	
Synalpheus neomeris[1]	
Synalpheus carinatus[1]	
Athanas nitescens[1]	
Athanas orientalis[1]	
Potamalpheops galle[23]	
Family: Crangonidae	
Aegaeon cataphractus[1]	
Family: Hippolytidae	
Exhippolysmata ensirostris[3]	Hunter Shrimp
Lysmata amboinensis[41]	Peppermint Cleaner Shrimp
Lysmata debellius[41]	Scarlet Cleaner Shrimp
Lysmata vittata[41,1]	Pepermint Cleaner Shrimp
Saron marmorata[41,1]	Marbled Shrimp
Saron neglectus[41]	Spotted Marbled Shrimp
Saron spp.[41]	Marbled Shrimp
Thor amboinensis[41]	Ambon Shrimp
Heptacarpus futilirostris[1]	
Latreutes ceylonensis[1]	
Family: Gnathophyllidae	
Gnathophyllum americanum[41]	Bumblebee Shrimp
Family: Hymnoceridae	
Hymenocera elegans[41]	Painted/ Orchid/ Harlequin Shrimp
Family: Thalasssinidea	
Thalassina anomala[8]	Mub Lobster
Family: Palinuridae	
Panulirus ornatus[3]	Ornate Spiny Lobster
Panulirus versicolor[3]	Painted Spiny Lobster
Panulirus longipes[3]	Longlegged Spiny lobster

Panulirus homarus[3]	Scalloped Spiny lobster
Panulirus penicilliatus[3]	Pronghorn Spiny Lobster
Panulirus polyphagus[3]	Mud Spiny Lobster
Puerulus sewelli[3]	Arabian Whip lobster
Family: **Scyllaridae**	
Parribacus antarcticus[3]	Sculptured Mitten Lobster
Scyllarus batei[3]	Soft locust Lobster
Scyllarus martensii[3]	Striated locust Lobster
Thenus orientalis[3]	Flathead Lobster
Family: Nephropidae	
Enoplometopus occidentalis[41]	Red Reef lobster
Enoplometopus holthuisi[41]	Holthuis's Reef Lobster
Enoplometopus debellius[41]	Debellius's reef Lobster
Family: Galatheidae	
Uroptchas bacillimanus[9]	Squat lobster
Uroptchas indicus[9]	Squat lobster
Uroptchas nonophrys[9]	Squat lobster
Agononida prolixa[9]	Squat lobster
Allogalethea elegans[9]	Squat lobster
Galacantha bellis[9]	Squat lobster
Galathea australensis[9]	Squat lobster
Galathea corallicola[9]	Squat lobster
Munida japonica[9]	Squat lobster
Munida microps[9]	Squat lobster
Munidopsis antonil[9]	Squat lobster
Munidopsis bairdii[9]	Squat lobster
Munidopsis edwardsii[9]	Squat lobster
Munidopsis sinclari[9]	Squat lobster
Munidopsis spissata[9]	Squat lobster
Munidopsis wardeni[9]	Squat lobster
Raymunida elegantissima[9]	Squat lobster
Family: Porcellanidae	
Ancylocheles gravelei[7]	Porcellaine crab
Petrolisthes ornatus[7]	Porcellaine crab
Neopetrolisthes maculatus[41]	Porcellaine crab
Family: Hippidae	
Emerita asiatica[41]	Mole Crab
Emerita rathbunae ?[41]	Mole Crab
Family: Cenobitidae	
Cenobita rugosa[41]	Stridulating Land Hermit Crab
Cenobita c.f. perlates[41]	Strawberry Land hermit crab

Family: Diogenidae	
Aniculus aniculus (?)[41]	Red Hermit Crab
Aniculus maximus[41]	
Dardanus magistos[41]	Hairy red Hermit Crab
Dardanus logopodes[41]	Hare Hermit Crab
Dardanus pedunculatus[41]	
Dardanus guttatus[41]	Blue-knee Hermit Crab
Dardanus gemmatus[41]	Jewelled hermit crab
Dardanus setifer[41]	
Dardanus deformis[5]	Pale hermit Crab
Dardanus aspar[5]	
Diogenes diogenes[5]	
Diogenes miles[5]	
Diogenes custos[5]	
Diogenes costatus[5]	
Trizopagurus kremfi[5]	
Calcinus herbsti[5]	
Calcinus gaimardi[41]	Yellow antennae hermit Crab
Calcinus laevimanus[41]	Left-handed Hermit Crab
Calcinus seurati[41]	Seurat's hermit Crab
Calcinus taeniatus[41]	
Calcinus virescens[41]	Greenish Hermit Crab
Calcinus latens[41]	Hidden Hermit Crab
Calcinus morgani[41]	
Paguristes incomitatus[41]	
clibanarius pedavensis[5]	
clibanarius bimaculatus[41]	White finger Hermit Crab
clibanarius longitarsus[5]	Long-legged Hermit Crab
clibanarius striolatus[5]	Ribbed Hermit Crab
clibanarius merguiensis[5]	
clibanarius cruentatus[41]	Spotted Black Hermit crab
clibanarius aequabilis[7]	
Family: Paguridae	
Pagurus sp.[41]	Hermit crab
Paguritta spp.[41]	Coral boring hermits"
Family: Dromiidae	
Dromia dromia[6]	
Dromia Intermedia[1]	

Dromia dehanni[14]	Sponge crab
Dromiopsis australensis[1]	
Cryptodromia canaliculata[1]	
Cryptodromia bullifera[1]	
Cryptodromia demani[1]	
Cryptodromia hilgendorfi[1]	
Cryptodromia gilesi[1]	
Conchaecetus artificiosus[1]	
Conchaecetus andamanicus[1]	
Family: Raninnidae	
Rannina ranina[14]	Spanner Crab
Notosceles serratifrons[1]	
Family: Dorippidae	
Notopus dorsipes[1]	=Dorippe dorsipes
Dorippoides facchino[1]	=Dorippe facchino
Family: Calappidae	
Calappa calappa[41]	Giant Box Crab
Calappa lophos[2]	Box Crab
Calappa gallus[2]	Lumpy Box Crab
Calappa hepatica[2]	Reef Box Crab
Calappa capellonis[2]	Box Crab
Calappa japonica[41]	Box Crab
Calappa phillargius [2]	Box Crab
Mursia bicristimana[1]	
Cyloes marisrubri[1]	
Family: Matutidae	
Matuta planipes[41]	moon Crab
Matuta victor[2]	moon Crab
Ashtoret lunaris[41]	moon Crab
Ashtoret miersii[2]	moon Crab
Ashtoret picta[2]	moon Crab
Family: Leucosidae	
Leucosia pubescens[6]	Pebble Crab
Leucosia anatum[1]	Pebble Crab
Myra affinis[15]	Pebble Crab
Myra brevimanna[15]	Pebble Crab
Myra fugax[15]	Pebble Crab
Myrine kesslerii[15]	Pebble Crab
Cryptocnemus holdsworthi[1]	
Oreotlos havelocki[1]	
Nursia plicata[1]	
Nursia lar[1]	
Ebalia diadumenna[1]	Nut Crab
Ebalia maldiviensis[1]	Nut Crab
Euclosiana obtusifrons[1]	
Coleusia urania[1]	
Urnalena cumingi[1]	

Urnalena haematosticta[1]	
Hiplyra platycheir[1]	
Hiplyra adamsi[1]	
Hiplyra elegans[19]	
Philyra globus[1]	
Pseudophilyra tridentata[1]	
Pseudophilyra melita[1]	
Heterolithadia fallax[1]	
Arcania gracilis[1]	
Arcania erinaceus[1]	
Arcania tuberculata[1]	
Ixa pulcherrima[1]	
Ixa cylindrus[1]	
Family: Majidae	
Sunipea indicus[1]	
Menaethius monoceros[41]	
Schizophrys aspera[6]	
Paramithrax aculeatus[6]	
Hyastenus plannasius[6]	
Maja proteus[1]	
Micippa philyra[1]	
Micippa thalia[1]	
Micippa margaritifera[1]	
Micippa parca[1]	
Schizophrys aspera[1]	
Cyclax suborbicularis[1]	
Phalangipus arachnoides[1]	
Pseudomicippe nodosa[1]	
Rochinia sp.[14]	Spider crab
Hyas araneus[14]	Spider crab
Family: Inachidae	
Achaeus lacertosus[1]	
Achaeus dubia[1]	
Oncinopus aranea[1]	
Paratymolus hastatus[1]	
Camposcia retusa[1]	Decorator crab
Family: Epialtidae	
Xenocarcinus tuberculatus[1]	
Simocarcinus simplex[1]	
Menaethius monoceros[1]	
Acanthonyx scutellatus[1]	
Hyastenus pleione[1]	
Hyastenus hilgendorfi[1]	
Hyastenus convexus[1]	
Hyastenus brockii[1]	
Naxioides hirtas[1]	
Naxiodes investigatoris[1]	
Doclea rissoni[1]	

Doclea alcocki[1]	
Tylocarcinus styx[1]	
Family: Hymenosomatidae	
Elamena cristatipes[6]	
Elamena sindens[13]	
Elamena truncata[1]	
Elamenopsis woodmasoni[13]	
Elamenopsis tuberculata[13]	
Family: Aethridae	
Aethera scruposa[2,16]	Stone Crab
Drachiella sculpta[1]	
Family: Parthinopidae	
Cryptopodia angulata[20]	Bat Crab
Lambrus carinatus[1]	
Rhinolambrus pelagicus[1,2]	
Aulacolambrus hoplodontus[1]	
Lambrus calappoides[1,2]	
Pseudolambrus beaumonti[1,2]	
Pseudolambrus harpax[1]	
Aulacolambrus curvispinis[1]	
Rhinolambrus contrarius[1,2]	
Rhinolambrus longispinis[1]	
Parthenope longimanus[2]	
Parthenope echinatus[2]	
Parthenope cybelis[2]	
Parthenope lamellifrons[2]	
Parthenope longimanus[2,1]	
Parthenope petalophorus[2]	
Doldorfia horrida[2]	Rubble Crab
Cryptopodia fornicata[1,2]	Common Buckler Crab
Cryptopodia pan[1]	
Furtipodia petrosa[1]	
Family: Scalopidiidae	
Scalopidia spinosipes[1]	
Family: Pilumnidae	
Zebrida adamsi[1]	
Harrovia albolineata[1]	
Pilumnus cursor[1]	
Pilumnus longicornis[1,2]	
Pilumnus minutus[2]	
Pilumnus vespertillio[1,2]	
Actumnus setifer[1]	
Actumnus asper[1]	
Actumnus calypso[1]	
Actumnus fissifrons[1]	
Mertonia lanka[1]	

Family: Atelecyclidae	
Trachycarcinus ovalis[2]	Twin horn Helmut Crab
Family: Corystidae	
Gomeza bicornis[1]	Twin-Horn Helmut Crab
Family: Thiidae	
Palapedia integra	
Family: Portunidae	
Catoptrus nitidus[1,2]	
Lissocarcinus laevis[1,2]	
Lissocarcinus orbicularis[1,2]	
Lissocarcinus polybioides[1,2]	
Portunus pelagicus[3]	Blue swimming Crab/ Flower Crab
Portunus sanguinolentus[3]	Three-spot Swimming crab
Portunus argentatis[2]	
Portunus gracillimanus[1,2]	
Portunus grannulatus[1]	
Portunus haani[1]	
Portunus longispinus[1]	
Portunus hastatoides[1]	
Portunus convexus[1]	
Portunus petreus[1]	
Portunus euglyphus[1]	
Portunus spinipes[1]	
Portunus longispinosus[1]	
Macropipus tuberculatus[1]	
Neptunus argentatus[1]	
Neptunus hastatoides[1]	
Neptunus tenuipes(de Haan 1835)[1]	
Cavoportunus dubius[1]	
Lupocyclus rotundatus[1,2]	
Lupocyclus philippinensis[1]	
Charybdis cruciata[41]	Cross Crab
Charybdis miles[41]	Soldier Crab
Charybdis ferriata[41]	
Charybdis annulatus[2,6]	
Charybdis helleri[2]	
Charybdis lucifera[2,6]	
Charybdis natator[1,2]	
Charybdis orientalis[1,2]	
Charybdis ornata[1]	
Thalamita chaptali[1,2]	
Thalamita crenata[1,2]	Mangrove Swimming Crab
Thalamita ocules[2]	Swimming Crabs

Thalamita picta[2]	Swimming Crabs
Thalamita prymna[1,2]	Swimming Crabs
Thalamita chaptali[1]	Swimming Crabs
Thalamita sexlobata[2]	Swimming Crabs
Thalamita sima[2]	Swimming Crabs
Thalamita poissoni[1]	Swimming Crabs
Thalamita admete[1]	Swimming Crabs
Thalamita exetastica[1]	Swimming Crabs
Thalamita integra[1]	Swimming Crabs
Thalamita investigatoris[1]	Swimming Crabs
Thalamita sexlobata[1]	Swimming Crabs
Thalamita woodmasoni[1]	Swimming Crabs
Thalamita oculea[1]	Swimming Crabs
Podophthalmus sp.[41]	
Scylla cirrata[3]	Giant Mud Crab
Scylla olivacea	Orange Mud Crab
Scylla tranquebarica	Purple Mud Crab
Macropipus tuberculatus[1]	
Family: Goneplacidae	
Mertonia lankae[2]	
Family: Trapeziidae	
Trapezia wardi[41]	
Trapezia cymodoce[1,2]	Cymodoce Guard Crab
Trapezia digitalis[2]	
Trapezia ferruginea[1,2]	
Trapezia lutea[2]	
Trapezia rufopunctata[1,2]	Crimson-spotted Guard Crab
Trapezia septata[2]	Honey-combed Guard Crab
Trapezia tigrina[2]	
Trapezia maculata[1]	
Tetralia glaberrima[1,2]	
Tetralia rubridactyla[2]	
Quadrellia coronata[1,2]	
Quadrellia maculosa[2]	
Quadrellia reticulata[2]	
Family: Xanthiidae	
Actaea calculosa[1,2]	
Actaeaperonii[1]	
Actaea granulata[1]	
Actaea savignii[2,6]	
Actaea speciosa[25]	
Actaea rupelliae[1]	
Actaeodes tomentosum[2]	
Atergatis diladatus[2]	
Atergatis floridus[2]	Flowery Crab

Atergatis integerrimus[2]	Bashful Crab
Atergatopsis alcocki[2,1]	Actaea alcocki
Actumnus setifer[1,2]	
Actumnus squamosus[2]	
Carpilius maculatus[41]	Spotted reef Crab
Carpilius convexus[41]	Red Egg Crab
Cymo andreossyi[1,2]	
Cymo melanodactylus[2]	
Calmania prima[1]	
Calvactaea tumida[2]	
Chlorodiella nigra[1]	
Chlorodiella laevissima[25]	
Chlorodopsis areolata[1]	
Chlorodopsis pilumnoides[1]	
Calamania prima[2]	
Demania buccalipes[2]	
Demania splendida[1]	
Epixanthus frontalis[2]	
Euxanthus exsculptus[2]	
Euxanthus herdmani[1]	
Etisus analglypticus[2]	
Etisus splendidus[41]	Splendid Spooner
Etisus laevimanus[25,41]	Smooth Spooner
Eriphia scabricula[2]	Red-eyed Rock Crab
Eriphia sebana ?[41]	Red-eyed Rock Crab
Eriphia smithi ??[41]	Red-eyed Rock Crab
Eumedonus zebra[2]	
Forestia depressa[2]	
Gaillardius rupelliae[2]	
Gorgonariana sodalis[2]	
Harrovia albilineata[2]	
Harrovia elegans[2]	
Hypocolpus rugulosus[1]	
Halimede ochtodes[1]	
Lybia caestifera[2]	
Liomera bella[2]	
Liomera cinctimana[2]	Colourful reef crab
Liomera tristis[1]	
Liomera laevis[41]	
Liomera monticulosa[2]	
Liomera rugata[2]	
Liomera venosa[2]	Ruby Reef Crab
Lophozosymus incisus[1,2]	
Lophozosymus dodone[1]	
Lophozosymus pulchellus[1,2]	

Leptodius exaratus[1,2]	
Macromadaeus crassimanus[2]	
Macromadaeus distinguendus[1]	
Menippe rumphii[2]	
Neoxanthops lineatus[1,2]	
Nanopilumnus rouxi[2]	
Ozius rugulosus[2,6]	
Ozius tuberculosus[1]	
Palapedia nitida[1]	
Pseudoliomera speciosa[1,2]	
Pseudoliomera variolosa[1]	
Psaumis cavipes[2]	
Pseudoactaea corallina[2]	
Platypodia anaglypta[1,2]	
Platypodia ceylonica[41]	
Pilodius aereolatus[2]	
Pilodius pugil[1,2]	
Phymodius nitidens[2]	
Phymodius ungulatus[2]	
Phymodius sculptus[25]	
Paraxanthias notatus[1,2]	
Serenius ceylonicus[1,2]	
Xantho scabrerrimus[6]	
Xanthias lamarcki[1,2]	Lamarck's Crab
Xanthias punctatus[2]	
Zebrida adamsi[2]	
Zosymus anaeus[25,41]	Killer Crab
Zosymodus cavipes[2]	
Family: Cryptochiridae	
Hepalocarcinus marsupialis[2]	Coral gall crabs
Family: Pinnotheridae	
Pinnotheres margaritiferae[1]	Pea crab
Family: Ocypodidae	
Ocypode saratan[41]	Ghost Crab
Ocypode ceratophthalma[1]	Horn-eyed Ghost crab
Ocypode cordimana[2]	Smooth-handed Ghost Crab
Ocypode platytasus[1,14]	Stalk eyed ghost crab
Uca annulipes[1,2]	Fiddler Crab
Uca vocans[2]	Fiddler Crab
Uca lactea[8]	Fiddler Crab
Uca dussumieri[8]	Fiddler Crab
Dotilla myctiroides[17]	Soldier Crab
Scopimera pilula[41]	Sand-bubbler Crab

Family: Palicidae	
Pseudopalicus serripes[1,2]	
Family: Gecarcinidae	
Cardiosoma carnifex[41]	Brown land Crab
Family: Grapsidae	
Grapsus tenuicrustatus[41]	Common Sally light-foot Crab
Grapsus albolineatus[2]	Mottled Sally light-foot Crab
Grapsus strigosus[14]	Swift footed rock crab
Varuna literata[41]	Paddler Crab
Geograpsus stormii[41]	Red-brick Shore Crab
Geograpsus crinipes[1]	Brown Land Crab
Percnon planissimum[1,2]	Green-lined Flat Crab
Percnon guinotae[41]	Red-eyed Flat Crab
Plagussia depressa[1]	Rafting Crab
Metopograpsus latifrons[2]	Rock crab
Metopograpsus messor[1,8,14]	Rock crab
Metopograpsus thukhar[21]	
Parasesarma plicatum[2]	
Family: Macrophthalmidae	
Macrophthalmus latreillei[2]	Sentinel Crab
Macrophthalmus depressus[8]	
Pseudoserarma edwardsii[1]	
Neosermatium malabaricum[8]	
Venitus latreillei[1]	
Family: Sesarmidae	
Perisesarma indiarum[8]	Face-banded Sesarmine Crab
Perisesarma bidens[2,8]	Red Clawed Crab
Perisesarma darwinensis[8]	
Perisesarma bengalensis	
Perisesarma guttatum[21]	
Episesarma versicolor[21]	
Neosermatium smithii[21]	
Family: ?	
Lahaina agassizi[1]	
Thysaenys pehlevi[1]	
Naxia spinosa[1]	
Thusaenys irami[1]	
Paramithrax longispinosus[1]	
Stenocionops cervicornis[1]	
Neopalicus jukesii[1]	

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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 aiuthoratative recent lists were available and due to in sufficient 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 spices 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 [1]
Acanthurus leucosternon Bennett, 1832 [1, 5, 7]
Acanthurus lineatus (Linnaeus, 1758) [1, 5, 7, 23]
Acanthurus mata (Cuvier, 1829) [1, 5]
Acanthurus nigricauda Dunker and Mohr, 1926 [1, 5]
Acanthurus nigrofuscus (Forsskal, 1775) [1]
Acanthurus tennentii Gunther, 1861 [1, 5]
Acanthurus triostegus (Linnaeus, 1758) [1, 5, 7, 23]
Acanthurus tristis Tickell, 1888 [1, 5]
Acanthurus xanthopterus Valenciennes, 1835 [1, 5]
Acanthurus pyroferus Kittlitz, 1834 [5]
Acanthurus bariene Lesson, 1831 [2]
Acanthurus nigricans (Linnaeus, 1758) [7]
Ctenochaetus striatus Quoy and Gaimard, 1824 [1, 5, 23]
Ctenochaetus strigosus (Bennett, 1828) [1, 5]
Ctenochaetus binotatus Randall, 1955 [5]
Naso annulatus (Quoy and Gaimard, 1825) [1]
Naso brevirostris (Valenciennes, 1835) [1, 5, 7]
Naso lituratus (Bloch and Schneider, 1801) [1, 5]
Naso thynnoides (Valenciennes, 1835) [1]
Naso tuberosus Lacepede, 1802 [1]
Naso unicornis (Forsskal, 1775) [1]
Naso vlamingi (Valenciennes, 1835) [2]
Paracanthurus hepatus (Linnaeus, 1766) [5]
Zebrasoma scopas (Cuvier, 1829) [1, 5]
Zebrasoma veliferum (Bloch, 1795) [1, 20, 21]
Zebrasoma xanthurum (Blyth, 1852) [1]
Zebrasoma desjardeinii (Bennett, 1836) [5, 20]

Family: Acropomidae

Acropoma japonicum Gunther, 1859 [18]

Family: Albulidae

Albula glossodonta (Forsskal, 1775) [1]
Albula neoguinaica Valenciennes, 1846 [1]

Family: Alepocephalidae

Alepocephalus blanfordii Alcock, 1892 [1]

Family: Ambassidae

Ambassis gymnocephalus (Lacepede, 1802) [1]

Family: Anguillidae

Anguilla bengalensis bengalensis (Gray, 1831) [1]
Anguilla bicolor bicolor McClelland, 1844 [1]

Family: Antennariidae

Antennarius indicus Schultz, 1964 [5]
Antennarius maculatus (Desjardins, 1840) [5]
Antennarius pictus (Shaw, 1794) [19, 21]
Antennarius striatus (Shaw, 1794) [19, 21]
Antennatus tuberosus (Cuvier, 1817) [21]
Antennarius hispidus (Bloch & Schneider, 1801) [19]
Antennarius commerson (Lacepède, 1798) [19]
Antennarius nummifer (Cuvier, 1817) [19]
Histrio histrio (Linnaeus, 1758) [5, 19]

Family: Aploactinidae

Cocotropus monacanthus (Gilchrist, 1906) [18, 21]
Paraploactis taprobanensis (Whitley, 1933) [1, 21]

Family: Apogonidae

Acropoma japonicum Günther, 1859 [18, 20]
Apogon spp.[2]
Apogon aureus (Lacepede, 1802) [5]
Apogon fraenatus Valenciennes, 1832 [5]
Apogon nigrofasciatus (Lachner, 1953) [5]
Apogon cookii Macleay, 1881 [22]
Apogon taeniophorus Regan, 1908 [22]
Apogon cyanosoma Bleeker, 1853 [22]
Apogon apogonides (Bleeker, 1856) [22]
Apogon kallopterus Bleeker, 1856 [22]
Archamia fucata (Cantor, 1849) [20, 22]
Archaemia spp.[2]
Cheilodipterus spp.[2]
Cheilodipterus quinquelineatus Cuvier, 1828 [5]
Cheilodipterus macrodon (Lacepede, 1802) [22]
Cheilodipterus artus Smith, 1961 [22]
Sphaeramia nematoptera (Bleeker, 1856) [5]
Synagrops malayanus Weber, 1913 [18]

Family: Ariidae

Arius jella Day, 1877 [1]
Arius maculatus (Thunberg, 1792) [1, 20]
Arius subrostratus Valenciennes, 1840 [1]
Arius sumatranus Bennett, 1840 [1]
Batrachocephalus mino (Hamilton – Buchanan, 1822) [1]
Nemapteryx caelata (Valenciennes, 1840) [1, 20]
Netuma bilineata (Valenciennes, 1840) [1, 20]
Netuma thalassina (Rüppell, 1837) [1, 21]
Osteogeneiosus milittaris (Linnaeus, 1758) [1]
Plicofollis dussumieri (Valenciennes, 1840) [1, 20]
Plicofollis platystomus (Day, 1877) [1, 21]
Sciades sona (Hamilton, 1822) [1, 20]

Family: Ariommatidae

Ariomma indica (Day, 1871) [18, 20, 21]

Family: Atherinidae

Atherinomorus lacunosus (Forster, 1801) [1]

Hypoatherina temminckii (Bleeker, 1853) [1]

Family: Aulostomidae

Aulostomus chinensis (Linnaeus, 1766) [1]

Family: Balistidae

Abalistes stellatus (Lacepede, 1798) [1, 5]

Balistapus undulatus (Park, 1797) [1, 5]

Balistoides conspicillum (Bloch and Schneider, 1801) [1, 5, 9]

Balistoides viridescens (Bloch, 1801) [1, 5]

Canthidermis maculata (Bloch, 1786) [1, 21]

Melichthys indicus Randall and Klausewitz, 1973 [1, 5]

Melichthys vidua (Richardson, 1845) [20, 21, 22]

Melichthys niger (Bloch, 1786) [22]

Odonus niger (Ruppell, 1840) [1]

Pseudobalistes fuscus (Bloch and Schneider, 1801) [1, 5, 9]

Pseudobalistes flavimarginatus (Rupell, 1829) [22]

Rhinecanthus aculeatus (Linnaeus, 1758) [1, 5, 7]

Rhinecanthus rectangulus (Bloch & Schneider, 1801) [5]

Rhinecanthus verrucosus (Linnaeus, 1758) [22]

Sufflamen chrysopterus (Bloch and Schneider, 1801) [1, 5]

Sufflamen fraenatus (Bloch and Schneider, 1801) [1, 5]

Sufflamen bursa (Bloch & Schneider, 1801) [5]

Sufflamen albicaudatum (Rüppell, 1829) [21, 22]

Family: Bathyclupeidae

Bathclupea hoskynii (Alcock) [18]

Family: Batrachoididae

Allenbatrachus grunniens (Linnaeus, 1758) [1, 21]

Family: Belonidae

Ablennes hians (Valenciennes, 1846) [1]

Strongylura leiura (Bleeker, 1850) [1]

Strongylura strongylura (van Hasselt, 1823) [1]

Tylosurus acus melanotus (Bleeker, 1850) [1]

Tylosurus crocodilus crocodilus (Peron and Le Seur, 1821) [1]

Family: Blenniidae

Alticus saliens (Forster, 1788) [19]

Aspidontus taeniatus Quoy & Gaimard, 1834 [21, 22]

Aspidontus dussumieri (Valenciennes, 1836) [19, 21, 22]

Blenniella periophthalmus (Valenciennes, 1836) [19, 21]

Cirripectes stigmaticus Strasburg & Schultz, 1953 [20, 22]

Cirripectes auritus Carlson, 1981 [22]

Ecsenius bicolor (Day, 1888) [5]

Ecsenius midas Starck, 1969 [5]

Ecsenius nalolo Smith, 1959 [22]

Ecsenius yaeyamaensis (Aoyagi, 1954) [21, 22]

Ecsenius gravieri (Pellegrin, 1906) [21, 22]

Ecsenius lineatus Klausewitz, 1962 [21, 22]

Ecsenius frontalis (Valenciennes, 1836) [19, 21]

Entomacrodus striatus (Valenciennes, 1836) [19]

Entomacrodus spp.[2]

Escanius spp.[2]

Exallias brevis (Kner, 1868) [19, 21]

Helcogramma striata Hansen, 1986 [22]

Helcogramma spp. [22]

Istiblenius edentulous Forster & Schneider, 1801 [2]

Istiblennius andersoni (Day, 1870) [19]

Istiblennius lineatus (Valenciennes, 1836) [19]

Istiblennius edentulus (Forster & Schneider, 1801) [19, 21]

Istiblennius unicolor (Rupell, 1838) [19]

Meiacanthus smithi Klausewitz, 1962 [5, 22]

Petroscirtes variabilis Cantor, 1849 [20, 22]

Petroscirtes mitratus Rüppell, 1830 [20, 21, 22]

Petroscirtes breviceps (Valenciennes, 1836) [19, 20]

Plagiotremus tapeinosoma (Bleeker, 1857) [22]

Plagiotremus rhinorhynchos (Bleeker, 1852) [22]

Plagiotremus phenax Smith-Vaniz, 1976 [22]

Salarias fasciatus (Bloch, 1786) [2]

Salarias alboguttatus Kner, 1867 [19]

Family: Bothidae

Arnoglossus tapeinosoma (Bleeker, 1866) [1]

Bothus pantherinus (Ruppell, 1830) [1]

Bothus myriaster (Temminck and Schlegel, 1846) [1]

Bothus mancus (Broussonet, 1782) [5]

Chascanopsetta lugubris Alcock, 1894 [1]

Crossorhombus azureus (Alcock, 1889) [1]

Crossorhombus valderostratus (Alcock, 1890) [1]

Engyprosopon grandisquama (Temminck & Schlegel, 1846) [1, 21]

Grammatobothus polyophthalmus (Bleeker, 1866) [1]

Laeops kitaharai (Smith & Pope) [18]

Parabothus polylepis (Alcock, 1889) [1]

Family: Caesionidae

Caesio caerulaurea Lacepede, 1802 [1]

Caesio cuning (Bloch, 1791) [1]

Caesio lunaris Cuvier, 1830 [1]

Caesio teres Seale, 1906 [1]

Caesio varilineata Carpenter, 1987 [1]

Caesio xanthonota Bleeker, 1853 [1]

Dipterygonotus balteatus (Valenciennes, 1830) [1]

Gymnocaesio gymnoptera (Bleeker, 1856) [1]

Pterocaesio chrysozona (Cuvier, 1830) [1]

Pterocaesio pisang (Bleeker, 1853) [1]

Pterocaesio tessellata Carpenter, 1987 [1]
Pterocaesio tile (Cuvier, 1830) [1]

Family: Callionymidae
Synchiropus stellatus Smith, 1963 [5]

Family: Caproidae
Antigonia rubescens (Gunther, 1860) [1]
Antigonia malayana Weber, 1913 [18]

Family: Caracanthidae
Caracanthus zeylonicus (Day, 1869) [1]

Family: Carangidae
Alectis ciliaris (Bloch, 1788) [1]
Alectis indicus (Ruppell, 1830) [1]
Alepes djedaba (Forsskal, 1775) [1]
Alepes melanoptera (Swainson, 1839) [1]
Alepes vari (Cuvier, 1833) [1]
Alepes kleinii (Bloch, 1793) [1, 21]
Atropus atropos (Schneider, 1801) [1]
Atule mate (Cuvier, 1833) [1, 21]
Carangoides armatus (Ruppell, 1830) [1]
Carangoides coeruleopinnatus (Rüppell, 1830) [1, 21]
Carangoides chrysophrys (Cuvier, 1833) [1]
Carangoides ferdau (Forsskål, 1775) [1, 20]
Carangoides fulvoguttatus (Forsskal, 1775) [1, 14]
Carangoides gymnostethus (Cuvier, 1833) [1, 14]
Carangoides hedlandensis (Whitley, 1933) [1]
Carangoides malabaricus (Bloch and Schneider, 1801) [1]
Carangoides oblongus (Cuvier, 1833) [1]
Carangoides plagiotaenia (Bleeker, 1851) [1]
Carangoides praeustus (Bennett, 1830) [1]
Carangoides talamparoides (Bleeker, 1852) [1]
Carangoides coeruleopinnatus (Rüppell, 1830) [1, 21]
Caranx heberi (Bennett, 1830) [1, 14]
Caranx ignobilis (Forsskal, 1775) [1, 14]
Caranx melampygus Cuvier, 1833 [1, 20]
Caranx papuensis (Alleyne and Macleay, 1877) [1]
Caranx sexfasciatus (Quoy and Gaimard, 1824) [1]
Caranx tille (Cuvier, 1833) [1]
Decapterus macarellus (Cuvier, 1833) [1]
Decapterus macrosoma (Bleeker, 1852) [1]
Decapterus russelli (Ruppell, 1830) [1]
Elagatis bipinnulata (Quoy and Gaimard, 1824) [1]
Gnathanodon speciosus (Forsskal, 1775) [1, 5]
Megalaspis cordyla (Linnaeus, 1758) [1]
Naucrates ductor (Linnaeus, 1758) [1]
Parastromateus niger (Bloch, 1795) [1]
Scomberoides commersonianus (Lacepede, 1802) [1]
Scomberoides lysan (Forsskal, 1775) [1]
Scomberoides tala (Cuvier, 1832) [1]
Scomberoides tol (Cuvier, 1832) [1]
Selar crumenophthalmus (Bloch, 1793) [1]
Selaroides leptolepis (Cuvier, 1833) [1]
Seriola rivoliana (Valenciennes, 1833) [1]
Seriolina nigrofasciata (Ruppell, 1829) [1]
Trachinotus baillonii (Lacepede, 1801) [1]
Trachinotus blochii (Lacepede, 1801) [1]
Trachinotus mookalee (Cuvier, 1832) [1]
Trachinotus botla (Shaw, 1803) [1, 21]
Ulua mentalis (Cuvier, 1833) [1]
Uraspis helvola (Forster, 1801) [1]

Family: Carapidae
Carapus mourlani (Petit, 1934) [1]

Family: Centriscidae
Aeoliscus strigatus (Günther, 1861) [22]
Centriscus scutatus Linnaeus, 1758 [1]

Family: Centropomidae
Lates calcarifer (Bloch, 1796) [1]
Psammoperca waigiensis (Cuvier, 1828) [1]

Family: Cepolidae
Owstonia weberi (Gilchrist, 1922) [18, 21]

Family: Chaetodontidae
Chaetodon vagabundus Linnaeus, 1758 [2, 5, 7]
Chaetodon decussatus Cuvier, 1829 [2, 5]
Chaetodon cittrinellus Cuvier, 1831 [2]
Chaetodon trifascialis Quoy and Gaimard, 1825 [2, 5]
Chaetodon trifasciatus Park, 1797 [2, 5, 7]
Chaetodon meyeri Bloch and Schneider, 1801 [2, 5, 9]
Chaetodon lunula (Lacepede, 1802) [2, 5, 7]
Chaetodon collare Bloch, 1787 [2, 5]
Chaetodon auriga Forsskal, 1775 [2, 5, 7]
Chaetodon plebeius Cuvier, 1831 [2, 5, 12]
Chaetodon xanthocephalus Bennett, 1832 [2, 5, 9]
Chaetodon unimaculatus Bloch, 1787 [2, 5, 9]
Chaetodon kleinii Bloch, 1790 [2, 5]
Chaetodon madagascariensis Ahl, 1923 [3, 5, 9]
Chaetodon gardneri Norman, 1939 [3, 5]
Chaetodon semeion (Bleeker, 1855) [5, 9]
Chaetodon octofasciatus Bloch, 1787 [5, 9]
Chaetodon ornatissimus Cuvier, 1831 [5, 9]
Chaetodon ephippium Cuvier, 1831 [5, 9]
Chaetodon bennetti Cuvier, 1831 [5, 9]
Chaetodon triangulum Cuvier, 1831 [5, 9]
Chaetodon citrinellus Cuvier, 1831 [5, 7]
Chaetodon falcula Bloch, 1795 [5, 7, 9]
Chaetodon guttatissimus Bennett, 1833 [5]
Chaetodon interruptus Ahl, 1923 [5]
Chaetodon lineolatus Cuvier, 1831 [5]
Chaetodon oxycephalus Bleeker, 1853 [22]
Chaetodon melannotus Bloch & Schneider, 1801 [5]

Chaetodon mertensii Cuvier, 1831 [5]
Chaetodon rafflesi Anonymous [Bennett], 1830 [5, 9]
Forcipiger flavissimus Jordan & Evermann, 1898 [3, 5]
Forcipiger longirostris Broussonet, 1782 [3, 5]
Hemitaurichthys zoster (Bennett, 1831) [3, 5]
Heniochus singularis Smith & Radcliffe, 1911 [3, 5]
Heniochus monoceros Cuvier, 183 [3, 5, 9]
Heniochus acuminatus (Linnaeus, 1758) [3, 5, 7]
Heniochus pleurotaenia (Cuvier, 1831) [5, 9]
Heniochus diphreutes Jordan, 1903 [22]
Parachaetodon ocellatus (Cuvier, 1831) [22]
Prognathodes guyotensis (Yamamoto & Tameka, 1982) [22]

Family: Chanidae
Chanos chanos (Forsskal, 1775) [1]

Family: Chauliodontidae
Chauliodus sloani Bloch and Schneider, 1801 [1]

Family: Chaunacidae
Chaunax pictus Lowe, 1846 [1]

Family: Chirocentridae
Chirocentrus dorab (Forsskal, 1775) [1]
Chirocentrus nudus (Swainson, 1839) [1]

Family: Chlorophthalmidae
Chlorophthalmus agassizi (Bonaparte, 1850) [1]
Chlorophthalmus bicornis (Norman, 1939) [1]

Family: Cirrhitidae
Cirrhitus pinnulatus (Forster, 1801) [2]
Cirrhitichthys oxycephalus (Bleeker, 1855) [5]
Cirrhitichthys bleekeri Day, 1874 [5]
Cirrhitichthys aprinus (Cuvier, 1829) [7]
Oxycirrhites typus Bleeker, 1857 [5]
Paracirrhites forsteri (Schneider, 1801) [2, 5]
Paracirrhites arcatus (Cuvier, 1829) [5]

Family: Clinidae
Springeratus xanthosoma (Bleeker, 1857) [1, 20]

Family: Clupeidae
Amblygaster clupeoides Bleeker, 1849 [1, 14]
Amblygaster leiogaster (Valenciennes, 1847) [1]
Amblygaster sirm (Walaum, 1792) [1, 14]
Anodontostoma chacunda (Hamilton, 1822) [1, 20]
Dayella malabarica (Day, 1873) [1]
Dussumieria acuta (Valenciennes, 1847) [1, 14]
Dussumieria elopsoides Bleeker, 1849 [1, 21]
Ehirava fluviatilis Deraniyagala, 1929 [1]
Escualosa thoracata (Valenciennes, 1847) [1, 14]
Herklotsichthys quadrimaculatus (Ruppell, 1837) [1]
Hilsa kelee (Cuvier, 1829) [1]
Nematalosa galatheae Nelson and Rothman, 1973 [1]
Nematalosa nasus (Bloch, 1795) [1, 14]
Sardinella albella (Valenciennes, 1847) [1, 14]
Sardinella fimbriata (Valenciennes, 1847) [1, 21]
Sardinella gibbosa (Bleeker, 1849) [1, 14]
Sardinella jussieu (Lacepède, 1803) [1, 20]
Sardinella longiceps (Valenciennes, 1847) [1]
Spratelloides delicatulus (Bennett, 1831) [1]
Spratelloides gracilis (Temminck and Schlegel, 1846) [1]
Tenualosa ilisha (Hamilton-Buchanan, 1822) [1]
Tenualosa toli (Valenciennes, 1847) [1]

Family: Congridae
Ariosoma anago (Schlegel, 1849) [1]
Conger cinereus (Ruppell, 1828) [1]
Uroconger lepturus (Richardson, 1848) [1]

Family: Coryphaenidae
Coryphaena hippurus Linneaus, 1758 [1]

Family: Cynoglossidae
Cynoglossus arel (Schneider, 1801) [1]
Cynoglossus bilineatus (Lacepede, 1802) [1]
Cynoglossus kopsii (Bleeker, 1851) [1, 21]
Cynoglossus lingua Hamilton-Buchanan, 1822 [1]
Cynoglossus puncticeps (Richardson, 1846) [1]
Cynoglossus semifasciatus Day, 1877 [1]
Cynoglossus marleyi Regan, 1921[18]
Paraplagusia bilineata (Bloch, 1784) [1]
Symphurus septemstriatus (Alcock, 1891) [1]
Symphurus trifasciatus (Alcock, 1894) [1]

Family: Dactylopteridae
Dactyloptena orientalis (Cuvier, 1829) [1, 5]

Family: Diodontidae
Cyclichthys orbicularis (Bloch, 1785) [1, 21]
Diodon holocanthus Linneaus, 1758 [1]
Diodon hystrix (Linneaus, 1758) [1, 5, 7, 23]
Diodon liturosus Shaw, 1804 [5]

Family: Drepanidae
Drepane punctata (Linneaus, 1758) [1]

Family: Echeneidae
Echeneis naucrates Linneaus, 1758 [1, 5]
Remora australis (Bennett, 1840) [1]
Remora remora (Linneaus, 1758 [1]
Remora albescens (Temminck and Schlegel, 1843) [1]

Family: Elopidae
Elops machnata (Forsskal, 1775) [1]

Family: Emmelichthyidae

Plagiogeneion rubiginosum (Hutton, 1875) [1, 21]

Family: Engraulididae

Coilia dussumieri (Valenciennes, 1847) [1]
Coilia neglecta (Whitehead, 1968) [1]
Encrasicholina devisi (Whitly) [1]
Encrasicholina heteroloba (Ruppell, 1873) [1]
Encrasicholina punctifer Fowler, 1938 [1]
Setipinna taty (Valenciennes, 1848) [1]
Stolephorus commersonnii Lacepede, 1803 [1]
Stolephorus indicus (van Hasselt, 1823) [1]
Stolephorus insularis Hardenberg, 1933 [1]
Stolephorus waitei Jordan and Seale, 1926 [1]
Thryssa baelama (Forsskal, 1775) [1]
Thryssa dussumieri (Valenciennes, 1848) [1]
Thryssa encrasicholoides (Bleeker, 1852) [1]
Thryssa gautamiensis Babu Rao, 1971 [1]
Thryssa hamiltonii (Gray, 1835) [1]
Thryssa malabarica (Bloch, 1795) [1]
Thryssa mystax (Schneider, 1801) [1]
Thryssa polybranchialis Wongratana, 1983 [1]
Thryssa purava (Hamilton-Buchanan, 1822) [1]
Thryssa setirostris (Broussonet, 1782) [1]
Thryssa vitrirostris (Gilchrist & Thompson, 1908) [1, 21]

Family: Ephippidae

Ephippus orbis (Bloch, 1787) [1]
Platax orbicularis (Forsskal, 1775) [1, 5, 7]
Platax teira (Forsskal, 1775) [1, 5]
Platax pinnatus (Linnaeus, 1758) [5, 9]

Family: Epigonidae

Epigonus robustus (Barnard, 1927) [18, 21]
Epigonus telescopus (Risso, 1810) [18]

Family: Exocoetidae

Cheilopogon atrisignis (Jenkins, 1904) [1]
Cheilopogon cyanopterus (Valenciennes, 1846) [1]
Cheilopogon furcatus (Mitchill, 1815) [1]
Cheilopogon nigricans (Bennett, 1846) [1]
Cheilopogon spilopterus (Valenciennes, 1846) [1]
Cheilopogon suttoni (Whitley and Colefax, 1938) [1]
Cheilopogon katoptron (Bleeker, 1865) [1, 21]
Cypselurus naresii (Gunther, 1889) [1]
Cypselurus oligolepis (Bleeker, 1866) [1]
Cypselurus opisthopus (Bleeker, 1866) [1]
Cypselurus poecilopterus (Valenciennes, 1846) [1]
Exocoetus monocirrhus Richardson, 1846 [1]
Exocoetus volitans (Linnaeus, 1758) [1]
Hirundichthys coromandelensis (Hornell, 1923) [1]
Hirundichthys oxycephalus (Bleeker, 1857) [1]
Hirundichthys speculiger (Valenciennes, 1846) [1]
Parexocoetus brachypterus (Richardson, 1846) [1]
Parexocoetus mento (Valenciennes, 1846) [1]
Prognichthys brevipinnis (Valenciennes, 1846) [1]

Family: Fistulariidae

Fistularia commersonii (Ruppell, 1835) [1, 23]
Fistularia petimba (Lacepede, 1803) [1]

Family: Gadidae

Physiculus peregrinus (Gunther, 1872) [18]

Family: Gempylidae

Gempylus serpens (Cuvier, 1829) [1]
Lepidocybium flavobrunneum (Smith, 1849) [1]
Neoepinnula orientalis (Gilchrist and von Bond, 1924) [1]
Rexea prometheoides (Bleeker, 1856) [1]
Ruvettus pretiosus Cocco, 1829 [1]

Family: Gerreidae

Gerres erythrourus (Bloch, 1791) [1, 21]
Gerres longirostris (Lacepède, 1801) [1, 21]
Gerres filamentosus (Cuvier, 1829) [1]
Gerres limbatus Cuvier, 1830 [1, 21]
Gerres oblongus (Cuvier, 1830) [1]
Gerres oyena (Forsskal, 1775) [1]
Pentaprion longimanus (Cantor, 1850) [1]

Family: Gobiidae

Acentrogobius caninus (Valennciennes, 1837) [19]
Acentrogobius masoni (Day, 1873) [19]
Acentrogobius viridipunctatus (Valennciennes, 1837) [19]
Alburnus arborella (Bonaparte 1841) [19, 20]
Amblyeleotris spp. [2]
Amblyeleotris diagonalis Polunin & Lubbock, 1979 [5]
Amblyeleotris steinitzi (Klausewitz, 1974) [5]
Amblyeleotris periophthalma (Bleeker, 1853) [21, 22]
Amblyeleotris wheeleri (Polunin & Lubbock, 1977) [22]
Amblygobius hectori (Smith, 1957) [5]
Amblygobius nocturnus (Herre, 1945) [22]
Amblygobius semicinctus (Bennett, 1833) [22]
Asterropteryx semipunctatus Rüppell, 1830 [22]
Asterropteryx spp. [2]
Bathygobius fuscus (Rupell, 1830) [19]
Bostrychus sinensis Lacepède, 1801 [19, 20]
Bryaniops spp. [2]
Butis butis (Hamilton, 1822) [19, 21]
Butis koilomatodon (Bleeker, 1849) [19, 20]
Callogobius mannarensis Rangarajan 1968 [22]
Callogobius hasselti (Bleeker, 1851) [22]
Callogobius spp. [2]
Cryptocentrus cryptocentrus (Valenciennes, 1837) [2, 22]
Cryptocentrus caeruleomaculatus (Herre, 1933) [22]
Cryptocentrus cinctus (Herre, 1936) [22]
Ctenogobius aurocingulus (Herre, 1935) [22]

Ctenogobiops spp.[2]
Eleotris fusca (Forster, 1801) [19, 20]
Exyrias belissimus (Smith, 1959) [20, 21, 22]
Eviota zonura Jordan & Seale, 1906 [19, 21]
Fusigobius sp.[5]
Glossogobius giuris (Hamilton, 1822) [19, 20]
Gnatholepis spp.[2]
Gobiodon citrinus (Rüppell, 1838) [5]
Gobiodon quinquestrigatus (Valenciennes, 1837) [20, 21, 22]
Gobiodon atrangulatus Garman, 1903 [22]
Gobiodon rivulatus (Rüppell, 1830) [19, 21]
Istigobius spp.[2]
Istigobius decoratus (Herre, 1927) [5]
Istigobius ornatus (Rüppell, 1830) [19, 21, 22]
Oligolepis acutipennis (Valenciennes, 1837) [19]
Ophiocara porocephala (Valenciennes, 1837) [19]
Oplopomus oplopomus (Valenciennes, 1837) [22]
Oxyurichthys microlepis (Bleeker, 1849) [19]
Oxyurichthys tentacularis (Valenciennes, 1837) [19]
Paragobiodon echinocephalus (Rüppell, 1830) [22]
Paragobiodon lacunicolus (Kendall & Goldsborough, 1911) [20, 22]
Periophthalmus barbarus (Linnaeus, 1766) [19, 21]
Periophthalmus argentilineatus Valenciennes 1837 [19, 21]
Pleurosicya bilobata (Koumans, 1941) [19, 21]
Priolepis semidoliata (Valenciennes, 1837) [19, 21]
Psammogobius biocellatus (Valenciennes, 1837) [19, 20]
Pseudogobius javanicus (Bleeker, 1856) [19, 21]
Sicyopterus lagocephalus (Pallas, 1770) [19, 21]
Stenogobius gymnopomus (Bleeker, 1853) [19, 21]
Stigmatogobius sadanundio (Hamilton, 1822) [19, 21]
Valenciennea helsdingenii (Bleeker, 1858) [5]
Valenciennea puellaris (Tomiyama, 1956) [5]
Valenciennea sexguttata (Valenciennes, 1837) [5]
Valenciennea strigata (Broussonet, 1782) [5]
Valenciennea longipinnis (Lay & Bennett, 1839) [20, 22]
Valenciennea muralis (Valenciennes, 1837) [22]
Valenciennea helsdingenii (Bleeker, 1858) [20, 22]

Family: Gonostomidae

Phosichthys argenteus Hutton, 1872 [18, 21]
Polymetme corythaeola (Alcock, 1898) [18, 20]

Family: Haemulidae

Diagramma pictum (Thunberg, 1792) [1, 5, 21]
Plectorhinchus ceylonensis (Smith, 1956) [1, 14]
Plectorhinchus gibbosus (Lacepede, 1802) [1]
Plectorhinchus schotaf (Forsskål, 1775) [1, 21]
Plectorhinchus lineatus (Linnaeus, 1758) [1, 7]
Plectorhinchus vittatus (Linnaeus, 1758) [1, 5]
Plectorhinchus albovittatus (Ruppel, 1838) [5, 9]
Plectorhinchus orientalis (Linnaeus, 1758) [7]
Pomadasys argenteus (Forsskal, 1775) [1]
Pomadasys argyreus (Valenciennes, 1833) [1]
Pomadasys commersonnii (Lacepede, 1802) [1]
Pomadasys furcatus (Schneider, 1801) [1]
Pomadasys kaakan (Cuvier, 1830) [1]
Pomadasys maculatus (Bloch, 1797) [1, 21]
Pomadasys multimaculatum (Playfair, 1866) [1]
Pomadasys olivaceus (Day, 1875) [1, 21]
Pomadasys guoraca (Cuvier, 1829) [21, 22]

Family: Halosauridae

Aldrovandia affinis (Günther, 1877) [1, 21]

Family: Hemiramphidae

Euleptorhamphus viridis (van Hasselt, 1823) [18]
Hemiramphus archipelagicus Collette and Parin, 1978 [1]
Hemiramphus far (Forsskal, 1775) [1]
Hemiramphus lutkei (Valenciennes, 1846) [1]
Hyporhamphus limbatus (Valenciennes, 1846) [1]
Hyporhamphus dussumieri (Valenciennes, 1846) [1]
Hyporhamphus quoyi (Valenciennes, 1846) [1]
Rhynchorhamphus georgii (Valenciennes, 1846) [1]
Rhynchorhamphus malabaricus Collette, 1976 [1]

Family: Holocentridae

Myripristis kuntee (Cuvier, 1831) [1]
Myripristis botche Cuvier, 1829 [1, 21]
Myripristis adusta (Bleeker, 1853) [2, 5, 10]
Myripristis berndti Jordan & Evermann, 1903 [5]
Myripristis murdjan (Forsskål, 1775) [5]
Myripristis chryseres Jordan & Evermann, 1903 [10]
Myripristis botche Cuvier, 1829 [10]
Myripristis pralinia Cuvier, 1829 [10]
Myripristis violacea Bleeker, 1851[10]
Neoniphon samara (Forsskal, 1775) [2, 5]
Neoniphon opercularis (Valenciennes, 1831) [22]
Sargocentron diadema (Lacepede, 1803) [1, 5]
Sargocentron punctatissimum (Cuvier, 1829) [1]
Sargocentron rubrum (Forsskal, 1775) [1, 5]
Sargocentron spiniferum (Forsskal, 1775) [1, 5]
Sargocentron caudimaculatum (Rüppell, 1838) [2, 5]

Family: Istiophoridae

Istiophorus platypterus (Shaw and Nodder, 1792) [1, 6, 13, 14]
Makaira indica (Cuvier, 1832) [1, 13, 14]
Makaira mazara (Jordan & Snyder, 1901) [13, 14]
Tetrapturus angustirostris Tanaka, 1915 [1, 21]
Tetrapturus audax (Philippi, 1889) [1, 13, 14]

Family: Kuhliidae

Kuhlia mugil (Forste, 1801) [1]
Kuhlia rupestris (Lacepede, 1802) [1]

Family: Kurtidae

Kurtus indicus Bloch, 1786 [1]

Family: Kyphosidae

Kyphosus cinerascens (Forsskal, 1775) [1]

Family: Labridae

Anampses meleagrides Valenciennes, 1840 [1]
Anampses caeruleopunctatus Rüppell, 1829 [5]
Anampses lineatus Randall, 1972 [5]
Anampses melanurus Bleeker, 1857 [22]
Bodianus bilunulatus (Lacepede, 1801) [1, 5]
Bodianus diana Lacepede, 1802 [1, 5]
Bodianus axillaris (Bennett, 1832) [2, 5]
Bodianus neilli (Day, 1867) [5]
Bodianus macrourus (Lacepède, 1801) [22]
Cheilinus chlorourus (Bloch, 1791) [1, 20]
Cheilinus fasciatus Bloch, 1791[1]
Cheilinus trilobatus Lacepede, 1801[1]
Cheilinus undulatus Ruppell, 1828[1]
Cheilio inermis (Forsskal, 1775) [1]
Choerodon anchorago (Bloch, 1791) [1]
Choerodon robustus Gunther, 1862 [1]
Cirrhilabrus rubrisquamis Randall & Emery, 1983 [5]
Coris cuvieri (Bennett, 1831) [1, 21]
Coris aygula Lacepede, 1802 [1, 5, 9]
Coris frerei Gunther, 1866 [1, 5]
Coris cuvieri (Bennett, 1831) [5]
Coris batuensis (Bleeker, 1856-57) [22]
Diproctacanthus xanthurus (Bleeker, 1856) [22]
Epibulus insidiator Pallas, 1770 [1, 20]
Gomphosus caeruleus Lacepede, 1801[1, 5]
Halichoeres hortulanus (Lacepede, 1801) [1, 2, 5]
Halichoeres dussumieri (Valenciennes, 1839) [1, 2]
Halichoeres marginatus (Ruppell, 1835) [1, 2, 5]
Halichoeres scapularis (Bennett, 1831) [1, 2, 5]
Halichoeres zeylonicus (Bennett, 1832) [1]
Halichoeres nebulosus (Valenciennes, 1839) [2]
Halichoeres timorensis (Bleeker, 1852) [2]
Halichoeres leucoxanthus Randall & Smith, 1982 [2, 5]
Halichoeres margaritaceus (Valenciennes, 1839) [20, 22]
Halichoeres notospilus (Günther, 1864) [20, 22]
Halichoeres biocellatus Schultz, 1960 [20, 22]
Halichoerus spp.[2]
Hemigymnus fasciatus (Bloch, 1792) [1, 5]
Hemigymnus melapterus (Bloch, 1791) [1, 5]
Hologymnosus annulatus (Lacepede, 1801) [1]
Hologymnosus doliatus (Lacepede, 1801) [1]
Labroides dimidiatus (Lacepede, 1839) [1, 5, 7]
Labroides bicolor (Fowler and Bean, 1928) [5, 9]
Macropharyngodon ornatus Randall, 1978 [5]
Macropharyngodon meleagris (Valenciennes, 1839) [22]
Novaculichthys taeniourus Lacepede, 1801[1, 5]
Oxycheilinus digramma (Lacepède, 1801) [1, 21]
Paracheilinus mccoskeri Randall & Harmelin-Vivien, 1977 [5]
Pseudodax moluccanus (Valenciennes, 1839) [1]
Pseudocheilinus hexataenia (Bleeker, 1857) [5]
Pseudocheilinus octotaenia Jenkins, 1901 [20, 22]
Pseudojuloides erythrops Randall & Randall, 1981 [22]
Stethojulis spp.[2]
Stethojulis bandanensis (Bleeker, 1851) [5]
Stethojulis trilineata (Bloch & Schneider, 1801) [5]
Stethojulis interrupta (Bleeker, 1851) [22]
Stethojulis albovittata (Bonnaterre, 1788) [22]
Stethojulis strigiventer (Bennett, 1833) [22]
Thalassoma hebraicum (Lacepede, 1801) [2]
Thalassoma janseni (Bleeker, 1856) [2, 5]
Thalassoma hardwickii (Bennett, 1830) [2, 5]
Thalassoma quinquevittatum (Lay & Bennett, 1839) [2, 5]
Thalassoma lunare (Linnaeus, 1758) [1, 5, 7]
Thalassoma purpureum (Forsskal, 1775) [1, 5]
Thalassoma trilobatum (Lacepede, 1801) [1]
Thalassoma amblycephalum (Bleeker, 1856) [22]
Xyrichtys pavo (Valenciennes, 1839) [1, 5]
Xyrichtys pentadactylus (Linnaeus, 1758) [1]

Family: Lactariidae

Lactarius lactarius (Schneider, 1801) [1]

Family: Leiognathidae

Equulites elongatus (Günther, 1874) [1, 21]
Equulites rivulatus (Temminki & Schlegel, 1845) [18]
Equulites leuciscus (Günther, 1860) [1, 21]
Eubleekeria splendens (Cuvier, 1829) [1, 21]
Gazza achlamys Jordan and Starks, 1917 [1]
Gazza minuta (Bloch, 1797) [1]
Leiognathus berbis (Valenciennes, 1835) [1]
Leiognathus brevirostris (Valenciennes, 1835) [1]
Leiognathus daura (Cuvier, 1829) [1]
Leiognathus dussumieri (Valenciennes, 1835) [1]
Leiognathus equulus (Forsskal, 1775) [1, 8]
Leiognathus fasciatus (Lacepede, 1803) [1]
Leiognathus lineolatus (Valenciennes, 1835) [1]
Leiognathus longispinis (Valenciennes, 1835) [1, 21]
Nuchequula blochii (Valenciennes, 1835) [1, 21]
Photopectoralis bindus (Valenciennes, 1835) [1, 21]
Secutor insidiator (Bloch, 1797) [1]
Secutor ruconius (Hamilton-Buchanan, 1822) [1]

Family: Lethrinidae

Gnathodentex aureolineatus (Lacepede, 1802) [1, 20]
Gymnocranius elongatus Senta, 1973 [1]
Gymnocranius grandoculis (Valenciennes, 1830) [1]
Gymnocranius griseus (Schlegel, 1844) [1]
Lethrinus conchyliatus (Smith, 1959) [1]
Lethrinus crocineus Smith, 1959 [1]
Lethrinus harak (Forsskal, 1775) [1]
Lethrinus lentjan (Lacepede, 1802) [1]
Lethrinus mahsena (Forsskal, 1775) [1]
Lethrinus microdon Valenciennes, 1830 [1]

Lethrinus nebulosus (Forsskal, 1775) [1, 14]
Lethrinus obsoletus (Forsskal, 1775) [1]
Lethrinus olivaceus Valenciennes, 1830 [1, 14]
Lethrinus ornatus Valenciennes, 1830 [1]
Lethrinus rubrioperculatus Sato, 1978 [1]
Lethrinus semicintus Valenciennes, 1830 [1]
Lethrinus variegates Valenciennes, 1830 [1]
Lethrinus spp.[1]
Monotaxis grandoculis (Forsskal, 1775) [1]
Wattsia mossambica (Smith, 1975) [1]

Family: Lobotidae
Lobotes surinamensis (Bloch, 1790) [1]

Family: Lophiidae
Lophiodes mutilus (Alcock, 1893) [1]
Lophiomus setigerus (Vahl, 1797) [1]

Family: Lutjanidae
Aphareus furca (Lacepede, 1802) [1]
Aphareus rutilans Cuvier, 1830 [1]
Aprion virescens Valenciennes, 1830 [1]
Etelis carbunculus Cuvier, 1828 [1]
Etelis coruscans Valenciennes, 1862 [1]
Etelis radiosus Anderson, 1981 [1]
Lipocheilus carnolabrum (Chan, 1970) [1]
Lutjanus argentimaculatus (Forsskal, 1775) [1, 14]
Lutjanus bengalensis (Bloch, 1790) [1]
Lutjanus biguttatus (Valenciennes, 1830) [1]
Lutjanus bohar (Forsskal, 1775) [1]
Lutjanus guilcheri Fourmanoir, 1959 [1]
Lutjanus johnii (Bloch, 1792) [1]
Lutjanus kasmira (Forsskal, 1775) [1, 5]
Lutjanus lemniscatus (Valenciennes, 1830) [1]
Lutjanus lunulatus (Park, 1797) [1]
Lutjanus lutjanus Bloch, 1790 [1]
Lutjanus madras (Valenciennes, 1831) [1]
Lutjanus malabaricus (Bloch and Schneider, 1801) [1]
Lutjanus monostigma (Cuvier, 1828) [1]
Lutjanus quinquelineatus (Bloch, 1790) [1, 5]
Lutjanus rivulatus (Cuvier, 1828) [1, 14]
Lutjanus russellii (Bleeker, 1849) [1, 21]
Lutjanus sanguineus (Cuvier, 1828) [1]
Lutjanus sebae (Cuvier, 1828) [1, 5]
Lutjanus vitta (Quoy and Gaimard, 1824) [1, 20]
Lutjanus decussatus (Cuvier, 1828) [1, 5]
Lutjanus ehrenbergii (Peters, 1869) [1]
Lutjanus erythropterus Bloch, 1790 [1]
Lutjanus fulviflamma (Forsskal, 1775) [1, 14]
Lutjanus fulvus (Schneider, 1801) [1, 2]
Lutjanus gibbus (Forsskal, 1775) [1]
Macolor niger (Forsskal, 1775) [1, 5]
Paracaesio sordida Abe and Shinohara, 1962 [1, 21]
Paracaesio xanthura Bleeker, 1869 [1, 20]
Pinjalo pinjalo (Bleeker, 1850) [1]
Pinjalo lewisi (Randall, Allen and Anderson, 1987) [1]
Pristipomoides filamentosus (Valenciennes, 1830) [1]
Pristipomoides multidens (Day, 1870) [1]
Pristipomoides sieboldii (Bleeker, 1857) [1]
Pristipomoides typus Bleeker, 1852 [1, 14]
Pristipomoides zonatus (Valenciennes, 1830) [1]

Family: Macrouridae
Caelorinchus flabellispinnis (Alcock 1894) [18]
Coryphaenoides woodmasoni (Alcock, 1890) [1]
Hymenocephalus heterolepis (Alcock, 1889) [1]

Family: Malacanthidae
Malacanthus brevirostris Guichenot, 1848 [5]
Malacanthus latovittatus (Lacepede, 1802) [1, 5]

Family: Megalopidae
Megalops cyprinoides (Broussonet, 1782) [1]

Family: Menidae
Mene maculata (Bloch and Schneider, 1801) [1]

Family: Pterelеotridae
Nemateleotris decora Randall & Allen, 1973 [5]
Nemateleotris magnifica Fowler, 1938 [5]
Ptereleotris evides (Jordan & Hubbs, 1925) [5]
Ptereleotris hanae (Jordan & Snyder, 1901) [5]
Ptereleotris heteroptera (Bleeker, 1855) [5]
Ptereleotris microlepis (Bleeker, 1856) [5]
Ptereleotris zebra (Fowler, 1938) [5]
Ptereleotris monoptera Randall & Hoese, 1985 [22]

Family: Molidae
Mola mola (Linneaus, 1841) [1]
Ranzania laevis (Pennant, 1776) [1]

Family: Monacanthidae
Acreichthys tomentosus (Linneaus, 1758) [1]
Aluterus monoceros (Linneaus, 1758) [1]
Aluterus scriptus (Osbeck, 1765) [1]
Amanses scopas (Cuvier, 1829) [2, 5]
Anacanthus barbatus (Linneaus, 1758) [1]
Cantherhines pardalis (Ruppell, 1835) [1]
Oxymonacanthus longirostris (Bloch & Schneider, 1801) [5]
Paramonacanthus choirocephalus (Bleeker, 1852) [1]
Paramonacanthus nipponensis (Kamohara, 1939) [1]
Pervagor janthinosoma (Bleeker, 1854) [5]
Stephanolepis diaspros Fraser-Brunner, 1940 [1]

Family: Monocentridae
Monocentris japonica (Houttuyn, 1782) [1, 21]

Family: Monodactylidae

Monodactylus argenteus (Linneaus, 1758) [1, 5]
Monodactylus falciformis Lacepede, 1801 [1]
Monodactylus kottelati Pethiyagoda, 1991[1]

Family: Moridae

Physiculus argyropastus Alcock, 1893 [1]

Family: Moringuidae

Moringua bicolor Kaup, 1856 [1]

Family: Mugilidae

Liza macrolepis (Smith, 1849) [1]
Liza melinoptera (Valenciennes, 1836) [1]
Liza parsia (Hamilton-Buchanan, 1822) [1]
Liza subviridis (Valenciennes, 1836) [1]
Liza tade (Forsskal, 1775) [1, 21]
Liza vaigiensis (Quoy and Gaimard, 1824) [1]
Mugil cephalus Linneaus, 1758 [1]
Oedalechilus labiosus (Valenciennes, 1836) [1]
Sicamugil cascasia (Hamilton, 1822) [1, 20]
Valamugil buchanani (Bleeker, 1853) [1]
Valamugil cunnesius (Valenciennes, 1836) [1]
Valamugil seheli (Forsskal, 1775) [1]
Valamugil speigleri (Bleeker, 1858) [1]

Family: Mullidae

Mulloidichthys flavolineatus (Lacepede, 1802) [1, 5]
Mulloidichthys vanicolensis (Valenciennes, 1831) [1]
Mulloidichthys mimicus Randall & Gueze, 1980 [22]
Parupeneus barberinus (Lacepede, 1801) [1]
Parupeneus bifasciatus (Lacepede, 1801) [1, 5]
Parupeneus heptacanthus (Lacepède, 1802) [1, 21]
Parupeneus cyclostomus (Lacepede, 1801) [1, 5]
Parupeneus indicus (Shaw, 1803) [1, 5]
Parupeneus macronema (Lacepede, 1801) [1, 5]
Parupeneus rubescens (Lacepede, 1801) [1]
Upeneus japonicus (Houttuyn, 1782) [1, 21]
Upeneus moluccensis (Bleeker, 1855) [1]
Upeneus sulphureus Cuvier, 1829 [1]
Upeneus sundaicus (Bleeker, 1855) [1]
Upeneus taeniopterus Cuvier, 1829 [1]
Upeneus tragula Richardson, 1845 [1]
Upeneus vittatus (Forsskal, 1775) [1]

Family: Muraenesocidae

Congresox talabon (Cuvier, 1829) [1]
Congresox talabonoides (Bleeker, 1853) [1]
Muraenesox bagio (Hamilton-Buchanan, 1822) [1]
Muraenesox cinereus (Forsskal, 1775) [1]
Serrivomer beanii Gill & Ryder, 1883 [1, 21]

Family: Muraenidae

Echidna delicatula (Kaup, 1856) [1]
Echidna nebulosa (Ahl, 1789) [1, 5, 21, 23]
Echidna xanthospilos (Bleeker, 1859) [1, 21]
Echidna polyzona (Richardson, 1845) [22]
Enchelycore bayeri (Schultz, 1953) [22]
Gymnomuraena zebra (Shaw, 1797) [5]
Gymnothorax favagineus (Bloch and Schneider, 1801) [1, 5]
Gymnothorax fimbriatus (Bennett, 1831) [1]
Gymnothorax meleagris (Shaw and Nodder, 1795) [1]
Gymnothorax pseudothyrsoidea (Bleeker, 1852) [1]
Gymnothorax punctatus (Bloch and Schneider, 1801) [1, 22]
Gymnothorax rueppellii (McClelland, 1844) [1, 21]
Gymnothorax undulatus (Lacepede, 1803) [1, 23]
Gymnothorax javanicus (Bleeker, 1859) [2, 23]
Gymnothorax breedeni McCosker & Randall, 1977 [22]
Gymnothorax buroensis (Bleeker, 1857) [22]
Gymnothorax chilospilus (Bleeker, 1856) [22]
Gymnothorax enigmaticus McCosker & Randall, 1982 [22]
Gymnothorax flavimarginatus (Rüppell, 1830) [22]
Gymnothorax herrei Beebe & Tee-Van, 1933 [22]
Gymnothorax melanospilus (Bennett,) [22]
Gymnothorax permistus (Smith, 1962) [22]
Gymnothorax pindae Smith, 1962 [22]
Gymnothorax polyuranodon (Bleeker, 1853) [22]
Gymnothorax zonipectis Seale, 1906 [22]
Gymnothorax pictus (Ahl, 1789) [1, 21]
Gymnothorax thyrsoideus (Richardson, 1845) [1, 20]
Gymnothorax griseus (Lacepède, 1803) [21, 22]
Pseudechidna brummeri (Bleeker, 1859) [1, 21]
Rhinomuraena quaesita Garman, 1888 [5]
Strophidon sathete (Hamilton, 1822) [1, 21]
Uropterygius concolor (Ruppell, 1835) [1]
Uropterygius marmoratus (Lacepede, 1803) [1]

Family: Myctophidae

Diaphus knappi Nafpaktitis, 1978 [18, 21]
Diaphus splendidus (Brauer, 1904) [1, 21]
Lampanyctus macropterus (Brauer, 1904) [18]

Family: Nemipteridae

Nemipterus bipunctatus (Ehrenberg, 1830) [1]
Nemipterus furcosus (Valenciennes, 1831) [1]
Nemipterus japonicus (Bloch, 1791) [1]
Nemipterus nematophorus (Bleeker, 1853) [1]
Nemipterus peronii (Valenciennes, 1830) [1]
Nemipterus randalli Russell, 1986 [1]
Nemipterus zysron (Bleeker, 1856-57) [1]
Nemipterus hexodon (Quoy & Gaimard, 1824) [18]
Parascolopsis aspinosa (Rao and Rao, 1981) [1]
Parascolopsis eriomma (Jordan and Richardson, 1909) [1]
Parascolopsis inermis (Schlegel, 1843) [1]
Scolopsis bilineata (Bloch, 1793) [1, 20]
Scolopsis bimaculatus Ruppell, 1828 [1, 21]
Scolopsis taeniatus (Ehrenberg, 1830) [1, 21]
Scolopsis vosmeri (Bloch, 1792) [1, 21]

Family: Neoscopelidae
Neoscopelus macrolepidotus Johnson, 1863 [18]

Family: Nomeidae
Cubiceps whiteleggii (Waite, 1894) [18, 21]

Family: Ogcocephalidae
Coelophrys micropa (Alcock, 1891) [1, 21]
Halieutaea stellata (Vahl, 1797) [1]

Family: Ophichthidae
Bascanichthys kirkii (Günther, 1870) [19, 21]
Callechelys marmorata (Bleeker, 1853) [19, 21]
Leiuranus semicinctus (Lay & Bennett, 1839) [19, 21]
Muraenichthys gymnopterus (Bleeker, 1853) [19]
Myrichthys colubrinus (Boddaert, 1781) [5]
Myrichthys maculosus (Cuvier, 1816) [5]
Ophichthus rutidoderma (Bleeker, 1853) [19, 21]
Ophichthus apicalis (Anonymous [Bennett], 1830) [19, 20]
Ophichthus altipennis (Kaup, 1856) [19, 20]
Ophichthus polyophthalmus Bleeker, 1864 [19, 21]
Pisodonophis cancrivorus (Richardson, 1848) [19, 20]

Family: Ophidiidae
Hephthocara simum (Alcock, 1892) [1]
Monomitopus conjugator (Alcock, 1896) [1]
Hypopleuron caninum Smith & Radcliffe, 1913 [18, 20]

Family: Ostraciidae
Lactoria cornuta (Linnaeus, 1758) [5]
Lactoria fornasini (Biancorni, 1846) [19]
Ostracion cubicus Linnaeus, 1758 [5]
Ostracion meleagris Shaw, 1796 [5, 7, 19]
Ostracion tuberculatum Linnaeus, 1758 [7]
Tetrosomus gibbosus (Linnaeus, 1758) [5]

Family: Paralepididae
Lestidium nudum Gilbert, 1905 [18]

Family: Paralichthyidae
Pseudorhombus arsius (Hamilton-Buchanan, 1822) [1]
Pseudorhombus elevatus Ogiby, 1912 [1]
Pseudorhombus javanicus (Bleeker, 1853) [1]
Pseudorhombus malayanus Bleeker, 1866 [1]
Pseudorhombus triocellatus (Schneider, 1801) [1]

Family: Pempheridae
Pempheris oualensis Cuvier, 1831 [2]
Pempheris schwenkii Bleeker, 1855 [2]
Pempheris vanicolensis Cuvier, 1831 [22]
Parapriacanthus spp. [2]

Family: Percophidae
Bembrops caudimacula Steindachner, 1876 [1, 18, 21]

Family: Peristediidae
Peristedion riversandersoni Alcoclk, 1894 [19]
Peristedion halyi (Day, 1888) [19]
Satyrichthys adeni (Lloyd, 1907) [19, 21]

Family: Pinguipedidae
Parapercis clathrata Ogilby, 1910 [5]
Parapercis cylindrical (Bloch, 1792) [5]
Parapercis hexophthalma (Ehrenberg, 1829) [1, 5]
Parapercis millepunctata (Gunther, 1860) [1, 5]
Parapercis pulchella (Schlegel, 1843) [1]
Parapercis punctata (Cuvier, 1829) [1]
Parapercis robinsoni (Fowler, 1932) [1]
Parapercis signata Randall, 1984 [5]

Family: Platycephalidae
Cociella crocodile (Tilesius, 1812) [1]
Grammoplites scaber (Linneaus, 1758) [1]
Grammoplites suppositus (Troschel, 1840) [1]
Inegocia japonica (Tilesius, 1812) [1]
Platycephalus indicus (Linneaus, 1758) [1]
Rogadius pristiger (Cuvier, 1829) [1]
Rogadius serratus (Cuvier, 1829) [1]
Sorsogona tuberculata (Cuvier, 1829) [1]
Suggrundus macracanthus (Bleeker, 1869) [1]

Family: Plesiopidae
Plesiops nigricans (Ruppell, 1828) [1]

Family: Pleuronectidae
Poecilopsetta colorata Gunther, 1880 [1]
Poecilopsetta praelonga Alcock, 1894 [1]
Samaris cristatus Gray, 1831 [1]
Samariscus longimanus Norman, 1927 [1]

Family: Plotosidae
Plotosus canius Hamilton-Buchanan, 1822 [1]
Plotosus limbatus Valenciennes, 1840 [1]
Plotosus lineatus (Thunberg, 1787) [1, 5]

Family: Polymyxiidae
Polymixia japonica Günther, 1877 [18, 21]

Family: Polynemidae
Eleutheronema tetradactylum (Shaw, 1804) [1]
Filimanus similis Feltes, 1991 [1]
Filimanus xanthonema (Valenciennes, 1831) [1]
Leptomelanosoma indicum (Shaw, 1804) [1, 21]
Polydactylus sexfilis (Valenciennes, 1831) [1, 21]
Polydactylus sextarius (Bloch & Schneider, 1801) [1, 21]

Polynemus plebeius Broussonet, 1782 [1]
Polynemus paradiseus (Linneaus, 1758) [1]

Family: Pomacentridae

Abudefduf septemfasciatus (Cuvier, 1830) [2]
Abudefduf sordidus (Forsskål, 1775) [2]
Abudefduf vaigiensis (Quoy & Gaimard, 1825) [2, 5]
Abudefduf saxatilis (Linnaeus, 1758) [7]
Abudefduf notatus (Day, 1870) [22]
Abudefduf sexfasciatus (Lacepede, 1801) [22, 23]
Abudefduf bengalensis (Bloch, 1787) [22]
Amblyglyphidodon leucogaster (Bleeker, 1847) [22]
Amphiprion clarkii (Bennett, 1830) [5, 12]
Amphiprion nigripes Regan, 1908 [5]
Amphiprion sebae Bleeker, 1853 [5]
Amphiprion akallopisos Bleeker, 1853 [22]
Amphiprion chrysogaster Cuvier, 1830 [22]
Centropyge bispinosus (Gunther, 1860) [5, 9]
Chromis atripectoralis Welander & Schultz, 1951 [5]
Chromis dimidiata (Klunzinger, 1871) [5]
Chromis viridis (Cuvier, 1830) [5]
Chromis caeruleus (Cuvier, 1830) [7]
Chromis lepidolepis Bleeker, 1877 [22]
Chromis nigrura Smith, 1960 [22]
Chromis ternatensis (Bleeker, 1856) [22]
Chromis opercularis (Günther, 1867) [22]
Chromis weberi Fowler & Bean, 1928 [22]
Chrysiptera brownriggii (Bennett, 1828) [2, 5]
Chrysiptera glauca (Cuvier, 1830) [2]
Chrysiptera biocellata (Quoy & Gaimard, 1825) [2, 5]
Chrysiptera spp. [2]
Chrysiptera kuiteri (Allan and Rajasuriya, 1995) [5]
Chrysiptera unimaculata (Cuvier, 1830) [22]
Dascyllus aruanus (Linnaeus, 1758) [5]
Dascyllus carneus Fischer, 1885 [5]
Dascyllus trimaculatus (Rüppell, 1829) [2, 5, 7]
Lepidozygus tapeinosoma (Bleeker, 1856) [22]
Neoglyphidodon bonang (Bleeker, 1852) [2]
Neoglyphidodon melas (Cuvier, 1830) [22]
Neopomacentrus azysron (Bleeker, 1877) [2, 5]
Neopomacentrus cyanomos (Bleeker, 1856) [5]
Neopomacentrus taeniurus (Bleeker, 1856) [5]
Plectroglyphidodon dickii (Liénard, 1839) [2, 23]
Plectroglyphidodon lacrymatus (Quoy & Gaimard, 1825) [2, 23]
Plectroglyphidodon johnstonianus Fowler & Ball, 1924 [22]
Plectroglyphidodon imparipennis (Vaillant & Sauvage, 1875) [22]
Plectroglyphidodon leucozonus (Bleeker, 1859) [22]
Pomacentrus chrysurus Cuvier, 1830 [2]
Pomacentrus indicus Allen, 1991 [2]
Pomacentrus trilineatus Cuvier, 1830 [2]
Pomacentrus proteus Allen, 1991 [2]
Pomacentrus similis Allen, 1991 [5, 12]
Pomacentrus melanochir Bleeker, 1877 [7]
Pomacentrus caeruleus Quoy & Gaimard, 1825 [22]
Pomacentrus coelestis Jordan & Starks, 1901 [22]
Pomacentrus pavo (Bloch, 1787) [22]
Pomacentrus phillippinus Evermann & Seale, 1907 [22]
Pomacentrus tripunctatus Cuvier, 1830 [22]
Pygoplites diacanthus (Boddaert, 1772) [5, 9]
Stegastes albifasciatus (Schlegel & Müller, 1839) [22]
Stegastes fasciolatus (Ogilby, 1889) [22, 23]
Stegastes lividus (Forster, 1801) [22]
Stegastes nigricans (Lacepède, 1802) [22]
Stegastes obreptus (Whitley, 1948) [22]

Family: Pomacanthidae

Apolemichthys xanthurus (Bennett, 1833) [3, 5]
Apolemichthys trimaculatus (Cuvier, 1831) [9]
Centropyge flavipectoralis (Randall and Klausewitz, 1977) [3, 5, 9]
Centropyge eibli Klausewitz, 1963 [3, 5]
Centropyge multispinis (Playfair, 1867) [3]
Centropyge bispinosus (Gunther, 1860) [5, 9]
Pomacanthus imperator (Bloch, 1787) [3, 5]
Pomacanthus annularis (Bloch, 1787) [3, 5, 7, 23]
Pomacanthus semicirculatus (Cuvier, 1831) [3, 5, 7]
Pygoplites diacanthus (Boddaert, 1772) [5, 9]

Family: Priacanthidae

Cookeolus japonicus (Cuvier, 1829) [1]
Heteropriacanthus cruentatus (Lacepede, 1801) [1]
Priacanthus hamrur (Forsskal, 1775) [1]
Priacanthus tayenus Richardson, 1846 [1]

Family: Pristigasteridae

Ilisha elongata (Bennett, 1830) [1]
Ilisha filigera (Valenciennes, 1847) [1]
Ilisha kampeni (Weber and de Beaufort, 1913) [1]
Ilisha megaloptera (Swainson, 1839) [1]
Ilisha melastoma (Schneider, 1801) [1]
Ilisha obfuscate Wongratana, 1983 [1]
Ilisha sirishai Seshagiri Rao, 1975 [1]
Ilisha striatula Wongratana, 1983 [1]
Opisthopterus tardoore (Cuvier, 1829) [1]
Pellona dayi Wongratana, 1983 [1]
Pellona ditchela (Valenciennes, 1847) [1]
Raconda russeliana Gray, 1831 [1]

Family: Psettodidae

Psettodes erumei (Schneider, 1801) [1]

Family: Pseudochromidae

Chlidichthys inornatus Lubbock, 1976 [5]
Pseudochromis dilectus Lubbock, 1976 [5]
Pseudochromis fuscus Müller & Troschel, 1849 [5]

Family: Rachycentridae

Rachycentron canadum (Linneaus, 1766) [1]

Family: Scaridae

Calotomus carolinus (Valenciennes, 1840) [1]
Calotomus spinidens (Quoy and Gaimard, 1824) [1]
Cetoscarus bicolor (Rüppell, 1829) [5]
Chlorurus rhakoura Randall & Anderson, 1997 [2]
Chlorurus atrilunula (Randall & Bruce, 1983) [5]
Chlorurus oedema (Snyder, 1909) [1, 21]
Chlorurus sordidus (Forsskål, 1775) [1, 21]
Chlorurus strongylocephalus (Bleeker, 1854) [21, 22]
Hipposcarus harid (Forsskal, 1775) [1]
Leptoscarus vaigiensis (Quoy and Gaimard, 1824) [1]
Scarus ghobban Forsskal, 1775 [1]
Scarus niger Forsskal, 1775 [1]
Scarus psittacus Forsskal, 1775 [1]
Scarus quoyi Valenciennes, 1840 [1]
Scarus rivulatus Valenciennes, 1840 [1]
Scarus rubroviolaceus Bleeker, 1847 [1]
Scarus russelii Valenciennes, 1840 [1]
Scarus frenatus Lacepède, 1802 [22]
Scarus caudofasciatus (Günther, 1862) [22]

Family: Scatophagidae

Scatophagus argus (Bloch, 1758) [1]

Family: Sciaenidae

Argyrosomus amoyensis (Bleeker, 1863) [1]
Chrysochir aureus (Richardson, 1846) [1]
Daysciaena albida (Cuvier, 1830) [1, 20, 21]
Dendrophysa russellii (Cuvier, 1830) [1, 21]
Johnius amblycephalus (Bleeker, 1855) [1]
Johnius belangerii (Cuvier, 1830) [1]
Johnius carouna (Cuvier, 1830) [1]
Johnius carutta (Bloch, 1793) [1]
Johnius elongatus Mohan, 1976 [1, 20]
Johnius macropterus (Bleeker, 1853) [1]
Johnius macrorhynus (Mohan, 1976) [1]
Johnius mannarensis (Mohan, 1969) [1]
Johnius trewavasae Sasaki, 1992 [1, 20]
Johnius borneensis (Bleeker, 1851) [1, 20, 21]
Kathala axillaris (Cuvier, 1830) [1]
Nibea maculata (Schneider, 1801) [1]
Nibea soldado (Lacepede, 1802) [1]
Otolithes cuvieri Trewavas, 1947 [1]
Otolithes ruber (Schneider, 1801) [1]
Otolithoides biauritus (Cantor, 1850) [1]
Panna microdon (Bleeker, 1849) [1]
Pennahia anea (Bloch, 1793) [1]
Protonibea diacanthus (Lacepede, 1802) [1]
Pterotolithus maculates (Kuhl and Van Hassel, 1830) [1]

Family: Scombridae

Acanthocybium solandri (Cuvier, 1831) [1, 6, 13]
Auxis rochei (Risso, 1810) [1, 6, 13, 14]
Auxis thazard (Lacepede, 1800) [1, 6, 13, 14]
Euthynnus affinis (Cantor, 1849) [1, 6, 13, 14]
Gymnosarda unicolor (Ruppell, 1838) [1]
Katsuwonus pelamis (Linnaeus, 1758) [1, 6, 13, 14]
Rastrelliger kanagurta (Cuvier, 1817) [1, 20]
Sarda orientalis (Temminck and Schlegel, 1844) [1]
Scomberomorus commersoni (Lacepede, 1801) [1, 6, 13, 14]
Scomberomorus guttatus (Bloch and Schneider, 1801) [1, 13]
Scomberomorus koreanus (Kishinouye, 1915) [1]
Scomberomorus lineolatus (Cuvier, 1831) [1, 13]
Thunnus albacares (Bonnaterre, 1788) [1, 6, 13, 14]
Thunnus abesus (Lowe, 1839) [1, 6, 13, 14]
Thunnus tonggol (Bleeker, 1851) [1, 13]

Family: Howellidae

Howella sherborni (Norman, 1930) [18]

Family: Scorpaenidae

Apistus carinatus (Bloch & Schneider, 1801) [21, 22]
Choridactylus multibarbus Richardson, 1848 [22]
Dendrochirus biocellatus (Fowler, 1938) [5]
Dendrochirus brachypterus (Cuvier, 1829) [5]
Dendrochirus zebra (Cuvier, 1829) [5]
Inimicus filamentosus (Cuvier, 1829) [22]
Minous monodactylus (Bloch & Schneider, 1801) [22]
Pterois antennata (Bloch, 1787) [5]
Pterois russelli Bennett, 1831 [5]
Pterois volitans (Linnaeus, 1758) [2, 5, 7, 23]
Pterois radiata (Cuvier, 1829) [5, 9]
Pterois miles (Bennett, 1828) [7]
Pterois mombasae (Smith, 1957) [22]
Parascorpaena picta (Cuvier, 1829) [2]
Parascorpaena bleekeri (Day, 1878) [22]
Pseudovespicula dracaena (Cuvier, 1829) [20, 22]
Rhinopias frondosa (Gunther, 1891) [22]
Rhinopias eschmeyeri Condé, 1977 [22]
Scorpaenodes parvipinnis (Garrett, 1864) [5]
Scorpaenodes guamensis (Quoy & Gaimard, 1824) [22]
Scorpaenodes parvipinnis (Garrett, 1864) [21, 22]
Scorpaenopsis diabolus (Cuvier, 1829) [22]
Scorpaenopsis gibbosa (Bloch & Schneider, 1801) [22]
Scorpaenopsis venosa (Cuvier, 1829) [22]
Scorpaenopsis oxycephala (Bleeker, 1849) [22]
Setarchus longiceps (Gunther) [22]
Sebastapistes cyanostigma (Bleeker, 1856) [22]
Sebastapistes erostris (Alcock, 1896) [22]
Sebastapistes strongia (Cuvier, 1829 [22]
Synanceia verrucosa Bloch & Schneider, 1801 [22]

Synanceia horrida (Linnaeus, 1766) [22]
Taenianotus triacanthus Lacepede, 1802 [22]
Tetraroge niger (Cuvier, 1829) [20, 22]

Family: Serranidae

Aethaloperca rogaa (Forsskal, 1775) [1, 21]
Cephalopholis argus (Schneider, 1801) [1, 5, 7, 23]
Cephalopholis aurantia (Schneider, 1801) [1]
Cephalopholis boenack (Bloch, 1790) [1, 5, 7]
Cephalopholis formosa (Shaw, 1804) [1, 5]
Cephalopholis leopardus (Lacepede, 1801) [1]
Cephalopholis minata (Forsskal, 1775) [1, 5, 14]
Cephalopholis sexmaculata (Ruppell, 1828) [1, 5]
Cephalopholis sonnerati (Valenciennes, 1825) [1, 2]
Cephalopholis urodeta (Forster, 1801) [1]
Cromileptes altivelis (Valenciennes, 1828) [1]
Diploprion bifasciatum Cuvier, 1828 [1]
Epinephelus areolatus (Forsskal, 1775) [1]
Epinephelus bleekeri (Vaillant, 1877) [1]
Epinephelus caeruleopunctatus (Bloch, 1790) [1, 5]
Epinephelus chlorostigma (Valenciennes, 1828) [1]
Epinephelus coioides (Hamilton, 1822) [1]
Epinephelus diacanthus (Valenciennes, 1828) [1]
Epinephelus erythrurus (Valenciennes, 1828) [1]
Epinephelus fasciatus (Forsskal, 1775) [1]
Epinephelus faveatus (Valenciennes, 1828) [1]
Epinephelus flavocaeruleus (Lacepede, 1802) [1, 5, 9]
Epinephelus fuscoguttatus (Forsskal, 1775) [1]
Epinephelus hexagonatus (Schneider, 1801) [1]
Epinephelus lanceolatus (Bloch, 1790) [1, 5, 9]
Epinephelus latifasciatus (Temminck and Schlegel, 1842) [1]
Epinephelus longispinis (Kner, 1865) [1]
Epinephelus malabaricus (Bloch and Schneider, 1801) [1, 14]
Epinephelus merra Bloch, 1793 [1, 23]
Epinephelus poecilonotus (Temminck and Schlegel, 1842) [1]
Epinephelus radiatus (Day, 1867) [1, 20]
Epinephelus tauvina (Forsskal, 1775) [1]
Epinephelus tukula Morgans, 1959 [1]
Epinephelus undulosus (Quoy and Gaimard, 1824) [1, 14]
Epinephelus rivulatus (Valenciennes, 1830) [22]
Epinephelus spilotoceps Schultz, 1953 [22]
Grammistes sexlineatus (Thunberg, 1792) [1, 5]
Plectropomus laevis (Lacepede, 1801) [1, 5]
Plectropomus pessuliferus (Fowler, 1904) [1]
Pogonoperca punctata (Valenciennes, 1830) [5]
Pseudanthias cooperi (Regan, 1902) [5]
Pseudanthias evansi (Smith, 1954) [5]
Pseudanthias hypselosoma Bleeker, 1878 [5]
Pseudanthias ignites (Randall & Lubbock, 1981) [5]
Pseudanthias squamipinnis (Peters, 1855) [5]
Rabaulichthys stigmaticus Randall & Pyle, 1989 [5]
Variola albimarginata (Baissac, 1952) [1, 5]
Variola louti (Forsskal, 1775) [1, 5]

Family Siganidae

Siganus canaliculatus (Park, 1797) [1]
Siganus javus (Linneaus, 1766) [1]
Siganus lineatus (Valenciennes, 1835) [1]
Siganus spinus (Linneaus, 1758) [1]
Siganus stellatus (Forsskal, 1775) [1]
Siganus vermiculatus (Valenciennes, 1835) [1]
Siganus virgatus (Valenciennes, 1835) [1]
Siganus argenteus (Quoy & Gaimard, 1825) [22]
Siganus guttatus (Bloch, 1787) [22]

Family Sillaginidae

Sillago aeolus Jordan and Evermann, 1902 [1]
Sillago ingenuua McKay, 1985 [1]
Sillago lutea McKay, 1985 [1]
Sillago sihama (Forsskal, 1775) [1]
Sillago vincenti McKay, 1980 [1]

Family Soleidae

Brachirus orientalis (Bloch & Schneider, 1801) [1, 21]
Heteromycteris oculus (Alcock, 1889) [1]
Solea elongata Day, 1877 [1]
Synaptura commersonnii (Lacepède, 1802) [1, 21]
Zebrias quagga Kaup, 1858 [1]
Zebrias synapturoides (Jenkins, 1910) [1]

Family: Solenostomidae

Solenostomus paradoxus (Pallas, 1770) [1, 5]
Solenostomus cyanopterus Bleeker, 1854 [22]
Solenostomus spp.[2]

Family: Sparidae

Acanthopagrus berda (Forsskal, 1775) [1]
Acanthopagrus bifasciatus (Forsskal, 1775) [1]
Acanthopagrus latus (Houttuyn, 1758) [1]
Argyrops spinifer (Forsskal, 1775) [1]
Rhabdosargus sarba (Forsskal, 1775) [1]

Family: Sphyraenidae

Sphyraena acutipinnis Day, 1876 [1]
Sphyraena barracuda (Walbaum, 1792) [1]
Sphyraena forsteri Cuvier, 1829 [1]
Sphyraena jello Cuvier, 1829 [1]
Sphyraena obtusata Cuvier, 1829 [1]

Family: Sternoptychidae

Polyipnus spinosus Gunther, 1887 [18]

Family: Stomiidae

Astronesthes richardsoni (Poey, 1852) [18]
Stomias nebulosus (Alcock, 1889) [1]

Family Stromateidae
Pampus argenteus (Euphrasen, 1788) [1]
Pampus chinensis (Euphrasen, 1788) [1]

Family: Syngnathidae

Corythoichthys amplexus Dawson & Randall, 1975 [5]
Corythoichthys flavofasciatus (Rüppell, 1838) [19, 21]
Doryrhamphus excisus Kaup, 1856 [21, 22]
Doryrhamphus janssi (Herald & Randall, 1972) [20, 22]
Doryrhamphus spp.[2]
Halicampus grayi Kaup, 1856 [19, 21]
Hippocampus kuda Bleeker, 1852 [5]
Hippocampus fuscus Ruppell 1838 [22]
Hippocampus spinosissimus Weber 1913 [22]
Ichthyocampus carce (Hamilton, 1822) [19, 20]
Microphis brachyurus (Bleeker, 1854) [19]
Microphis cuncalus (Hamilton, 1822) [19, 20]
Siokunichthys southwelli (Duncker, 1910) [19, 21]
Syngnathoides biaculeatus (Bloch, 1785) [19]
Trachyrhampus serratus (Temminck & Schlegel, 1850) [19, 20]
Trachyrhampus longirostris Kaup, 1856 [19]

Family: Synodontidae
Saurida nebulosa (Valenciennes, 1849) [1]
Saurida tumbil (Bloch, 1795) [1]
Saurida undosquamis Richardson, 1848 [1]
Synodus binotatus Schultz, 1953 [1]
Synodus dermatogenys Fowler, 1912 [1]
Synodus indicus (Day, 1873) [1]
Synodus jaculum Russell and Cressey, 1979 [1]
Synodus sageneus Waite, 1905 [1]
Synodus variegatus (Lacepede, 1803) [1, 22]
Trachinocephalus myops (Forster, 1801) [1]

Family: Terapontidae
Pelates quadrilineatus (Bloch, 1790) [1]
Terapon jarbua (Forsskal, 1775) [1]
Terapon puta (Cuvier, 1829) [1]
Terapon theraps (Cuvier, 1829) [1]

Family: Tetraodontidae
Arothron nigropunctatus (Bloch & Schneider, 1801) [2, 5]
Arothron meleagris (Anonymous, 1798) [2, 5, 23]
Arothron mappa (Lesson, 1831) [5]
Arothron hispidus (Linnaeus, 1758) [5]
Arothron stellatus (Anonymous, 1798) [20, 22]
Arothron immaculatus (Bloch & Schneider, 1801) [22]
Canthigaster solandri (Richardson, 1845) [2, 5, 23]
Canthigaster janthinoptera (Bleeker, 1855) [5]
Canthigaster valentine (Bleeker, 1853) [5]
Canthigaster coronata (Vaillant & Sauvage, 1875) [7]

Family: Toxotidae
Toxotes chatareus (Hamilton – Buchanan, 1822) [1]

Family: Trachichthyidae
Gephyroberyx darwinii (Johnson, 1866) [1]
Hoplostethus mediterraneus Cuvier, 1829 [1]

Family: Triacanthidae
Halimochirurgus centriscoides Alcock, 1899 [18]
Pseudotriacanthus striglifer (Cantor, 1849) [1]
Triacanthus biaculeatus (Bloch, 1786) [1, 19]

Family: Trichiuridae
Eupleurogrammus glossodon (Bleeker, 1866) [1]
Eupleurogrammus muticus (Gray, 1831) [1]
Lepturacanthus pantului (Gupta, 1966) [1]
Lepturacanthus savala (Cuvier, 1829) [1]
Trichiurus gangeticus Gupta, 1966 [1]
Trichiurus lepturus Linnaeus, 1758 [1]

Family: Trichonotidae
Trichonotus setiger Bloch and Schneider, 1801 [1, 20]

Family: Triglidae
Lepidotrigla longipinnis Alcock, 1890 [1, 21]
Lepidotrigla faurei (Gilchirst & Thompson, 1914) [18]
Pterygotrigla leptacanthus (Günther, 1880) [18, 20]

Family: Tripterygiidae
Tripterigion spp.[2]

Family: Uranoscopidae
Ichthyscopus lebeck Bloch and Schneider, 1801 [1, 21]

Family: Veliferidae
Velifer hypselopterus Bleeker, 1879 [18, 21]

Family: Xiphidae
Xiphias gladius Linnaeus, 1758 [1, 6, 13, 14]

Family: Zanclidae
Zanclus cornutus (Linnaeus, 1758) [1, 5, 7, 23]

Family: Zenionidae
Zenion leptolepis (Gilchrist & von Bonde, 1924) [18, 21]

Cartilaginous Fishes.

Sharks.

Family: Alopiidae
Alopias vulpinus (Bonnaterre, 1788) [1, 16, 17]
Alopias superciliosus (Lowe, 1839) [17]
Alopias pelagicus (Nakamura, 1935) [17]

Family: Carcharhinidae

Carcharhinus albimarginatus (Ruppell, 1837) [1, 17]
Carcharhinus altimus (Springer, 1950) [1, 16, 17]
Carcharhinus amblyrhynchoides (Whitley, 1934) [1, 16, 17]
Carcharhinus amboinensis (Muller and Henle, 1839) [1, 16, 17]
Carcharhinus brevipinna (Muller and Henle, 1839) [1, 16, 17]
Carcharhinus dussumieri (Valenciennes, 1839) [1, 16, 17]
Carcharhinus falciformis (Bibron, 1839) [1, 14, 16, 17]
Carcharhinus hemiodon (Valenciennes, 1839) [1, 16, 17]
Carcharhinus limbatus (Valenciennes, 1839) [1, 16, 17]
Carcharhinus longimanus (Poey, 1861) [1, 14, 15, 16, 17]
Carcharhinus macloti (Muller and Henle, 1839) [1, 16, 17]
Carcharhinus melanopterus (Quoy and Gaimard, 1824) [1, 5, 16, 17]
Carcharhinus plumbeus (Nardo, 1827) [17]
Carcharhinus sealei (Pietschmann, 1916) [1, 16, 17]
Carcharhinus sorrah (Valenciennes, 1839) [1, 16, 17]
Carcharhinus wheeleri (Garrick, 1982) [15, 16, 17]
Carcharhinus amblyrhynchos (Bleeker, 1856) [15, 17]
Carcharhinus leucas (Müller & Henle, 1839) [15]
Carcharodon carcharias (Linnaeus, 1758) [11, 15, 16, 17]
Galeocerdo cuvier (Peron and Le Seuer, 1822) [1, 15, 16, 17]
Glyphis gangeticus (Müller & Henle, 1839) [15]
Lamiopsis temmincki (Muller & Henle, 1839) [16, 17]
Loxodon macrorhinus Muller and Henle, 1839 [1, 16, 17]
Negaprion acutidens (Ruppell, 1837) [1, 16, 17]
Negaprion brevirostris (Poey. 1868) [15, 17]
Prionace glauca (Linneaus, 1758) [1, 6, 14, 15, 16, 17]
Rhizoprionodon acutus (Ruppell, 1837) [1, 16, 17]
Rhizoprionodon oligolinx Springer, 1964 [1, 16, 17]
Scoliodon laticaudus Muller and Henle, 1838 [1, 16, 17]
Triaenodon obesus (Ruppell, 1837) [1, 5, 16, 17]

Family: Echinorhinidae

Echinorhinus brucus (Bonnaterre, 1788) [1, 16, 17]

Family: Ginglymostomatidae

Nebrius ferrugineus (Lesson, 1830) [1, 16, 17]

Family: Hemigaleidae

Chaenogaleus macrostoma Bleeker, 1852 [1, 16, 17]
Hemigaleus microstoma Bleeker, 1852 [1, 16, 17]
Hemipristis elongatus (Klunzinger, 1871) [1, 16, 17]

Family: Hemiscylliidae

Chiloscyllium griseum Muller and Henle, 1838 [1, 5, 16, 17]
Chiloscyllium indicum (Gmelin, 1789) [1, 5, 16, 17]
Chiloscyllium plagiosum (Bennett, 1830) [1, 5, 16, 17]

Family: Hexanchidae

Hexanchus griseus (Bonaterre, 1788) [17]
Notorynchus cepedianus (Peron, 1807) [16, 17]

Family: Lamnidae

Isurus oxyrinchus Rafinesque, 1810 [1, 15, 16, 17]
Isurus paucus (Guitart Manday, 1966) [17]
Isurus spp. [14]

Family: Odontaspididae

Carcharias tricuspidatus Day, 1878 [1, 21]
Eugomphodus taurus (Rafinesque, 1810) [15, 16, 17]
Odontaspis noronhai (Maul, 1955) [17]
Odontaspis ferox (Risso, 1810) [17]

Family: Proscylliidae

Eridacnis radcliffei Smith, 1913 [1, 16, 17]

Family: Pseudocarchariidae

Pseudocarcharias kamoharai (Matsubara, 1936) [17]

Family: Rhincodontidae

Rhincodon typus Smith, 1828 [1, 16, 17]

Family: Scyliorhinidae

Atelomycterus marmoratus Bennett, 1830 [1, 17]
Halaelurus hispidus Alcock, 1891 [1, 17]

Family: Sphyrnidae

Eusphyra blochii (Cuvier, 1817) [1, 16, 17]
Sphyrna lewini (Griffith and Smith, 1834) [1, 16, 17]
Sphyrna mokarran (Ruppell, 1837) [1, 15, 16, 17]
Sphyrna zygaena (Linnaeus, 1758) [1, 15, 16, 17]

Family: Squalidae

Centrophorus squamosus (Bonaterre, 1788) [17]
Centroscyllium ornatum (Alcock, 1889) [17]
Dalatias licha (Bonnaterra, 1788) [17]

Family: Stegostomatidae

Stegostoma fasciatum (Hermann, 1783) [1, 16, 17]

Family: Triakidae

Mustelus manazo (Bleeker, 1854) [17]
Mustelus mosis (Hemprich and Ehrenbergh, 1899) [1, 16, 17]

Batoids.

Family: Dasyatididae

Dasyatis kuhlii (Muller and Henle, 1841) [1, 4, 17]
Dasyatis marginatus (Blyth, 1860) [1, 4, 17]
Dasyatis pastinacus (Linnaeus, 1758) [17]
Dasyatis zugei (Muller and Henle, 1841) [1, 4, 17]
Himantura bleekeri (Blyth, 1860) [1, 17]
Himantura gerrardi (Gray, 1851) [1, 4, 17]
Himantura imbricata (Bloch and Schneider, 1801) [1, 17, 20]
Himantura uarnak (Forsskal, 1775) [1, 4, 17]
Pastinachus sephen (Forsskal, 1775) [1, 4, 17]
Taeniura lymma (Forsskal, 1775) [1, 17]
Taeniura meyeni Muller and Henle, 1841 [1, 17]
Urogymnus asperrimus (Bloch and Schneider, 1801) [1, 17]

Family: Gymnuridae

Gymnura poecilura (Shaw, 1804) [1, 17]

Family: Mobulidae

Mobula kuhlii (Valenciennes in Muller and Henle, 1841) [1, 4, 17]

Mobula eregoodootenkee (Cuvier, 1829) [1, 4, 17]

Mobula japanica (Muller and Henle, 1841) [4]

Mobula tarapacana (Philippi, 1892) [4]

Family: Myliobatididae

Aetobatus narinari (Euphrasen, 1790) [1, 4, 14, 17]

Aetomylaeus maculatus (Gray, 1834) [1, 17, 20]

Aetomylaeus nichofii (Bloch and Schneider, 1801) [1, 17]

Family Rhinopteridae

Rhinoptera adspersa (Muller and Henle, 1841) [1, 17] *Rhinoptera javanica* (Muller and Henle, 1841) [1, 4, 14, 17]

Family: Narcinidae

Narke dipterygia (Bloch and Schneider, 1801) [1, 17]

Narcine brunnea Annandale, 1909 [1, 17]

Narcine timlei (Bloch and Schneider, 1801) [1, 17]

Family: Pristidae

Anoxypristis cuspidata (Latham, 1794) [1, 17, 20]

Pristis microdon Latham, 1794 [1, 17]

Pristis zijsron Bleeker, 1851 [1, 17]

Family: Rajidae

Fenestraja mamillidens (Alcock, 1889) [1, 17, 20, 21]

Family: Rhinobatidae

Glaucostegus granulatus (Cuvier, 1829) [1, 17, 20, 21]

Rhina ancylostoma Bloch and Schneider, 1801 [1, 17]

Rhinobatos annandalei Norman, 1926 [1, 17]

Rhynchobatus djiddensis (Forsskal, 1775) [1, 17]

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 & Gnaneswaran (2009). Finally, Gnaneswaran, *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 (Gnaneswaran, *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
Sub family: Acostemminae			
Acostemma walkeri Kirkakdy	WZ	H	long bean
Sub family: Agalliinae			
Austroagallia bifurcata Sawai Singh and Gill	DZ, WZ	G	grass, flower bush
Austroagallia quadtrinotata (Melichar)	DZ, WZ	G	grass, flower bush
Sub family: Cicadellinae			
Anatkina helena (Distant)	WZ	F	grass
Anagonalia melichari (Distant)	WZ	F	grass
Atkinsoniella sp.	WZ	F	grass
Cofana lineata (Distant)	DZ, WZ,IMZ	P,V,F	grass , paddy
Cofana spectra (Distant)	DZ, WZ,IMZ	P,V,F	grass, paddy, brinjal
Cofana unimaculata (Signoret)	DZ, WZ,IMZ	P,V,F	grass
Cofana sp.	WZ	F	grass
Kolla ceylonica (Melichar)	DZ, WZ,IMZ	C,P,V,F	grass, coconut
Kolla paulula (Walker)	DZ, WZ,IMZ	F, C	grass
Ujna delicatula Distant	IMZ	F	grass
Ujna sp	IMZ	F	grass
Sub family: Coelidiinae			
Calodia ostenta (Distant)	WZ	H,F	grass, croton
Thagria introducta (Distant)	WZ	F	grass
Sub family: Deltocephalinae			
Aconeurella sp.I	DZ, WZ,IMZ	P,G	grass
Aconeurella indica	DZ, WZ,IMZ	P,G	grass
Balclutha rudrostriata (Melichar)	DZ, WZ,IMZ	V,P,G	grass
Balclutha incisa (Mastumura)	DZ, WZ,IMZ	V,G	grass
Balclutha rosea (Scott)	WZ,IMZ	V,G	grass
Balclutha viridinervis Mastumura	WZ, IMZ	V,G	grass
Banus oblatus Distant	WZ	F	grass
Changwhania ceylonensis (Baker)	WZ,IMZ	P,G	grass
Chiasmus mustilinus (Distant)	DZ, WZ,IMZ	G	grass
Chiasmus sp.	DZ WZ,IMZ	G	grass
Cicadulina bipunctata (Melichar)	WZ,IMZ	P,G	grass
Exitianus indicus (Distant)	DZ, WZ,IMZ	P,G,F,C	grass
Exitianus nanus (Distant)	DZ, WZ,IMZ	P,G,F	grass
Goniagnathus (*T.*) *zeylonicus* Viraktamath &Gnaneswaran	IMZ	G	grass
Goniagnathus (*T.*) *nervosus* Distant	WZ,IMZ	F,G,	grass

Goniagnathus (*T.*) *puntifer* (Walker)	DZ, WZ,IMZ	C,G	grass
Goniagnathus (*T.*) *fumosus* Distant	DZ	G	grass
Goniagnathus (*T.*) *appallans* Baker	DZ	G	grass
Hecalus arcuatus (Motschulsky)	DZ, WZ,IMZ	P,G	grass
Hecalus porrectus (Walker)	DZ, WZ,IMZ	P,G	grass
Hecalus paraumballaensis Rao	DZ, WZ	H	at light
Hecalus.ghaurii Rao and Ramakrishnan	WZ	G	grass
Hecalus prasinus (Mastumura)	DZ	G	grass
Hecalus nervosus Melichar	WZ	G	grass
Hishimonus phycitis (Distant)	DZ, WZ,IMZ	V,G,T,H,C	grass. brinjal, tea, coconut
Leofa (*Leofa*) *mysorensis* (Distant)	DZ	G	grass
Litura unda Knight	DZ, WZ,IMZ	T,G	tea, grass
Macrosteles vaga (Melichar)	WZ	G	grass
Maiestas distincta (Motschulsky)	DZ, WZ,IMZ	P,G	grass
Maiestas portica (Melichar)	DZ, WZ,IMZ	P.G	grass
Maiestas dorsalis (Motschulsky)	DZ, WZ,IMZ	P,V,G	Paddy, grass, coconut
Maiestas sp,	DZ	G	grass
Monobazus fuscovarious (Distant)	DZ, WZ,IMZ	F,G,O,S	Grass,
Nephotettix parvas Ishihara & Kiwase	DZ, WZ,IMZ	P,G,V	paddy, grass
Nephotettix virescencs (Distant) Pruthi	DZ, WZ,IMZ	P,G.C	paddy, grass
Nephotettix malayanus shihara and Kawase	DZ, WZ,IMZ	P,G	paddy, grass
Nephotettix nigropictus (Stal)	DZ, WZ,IMZ	P,G,V	paddy, grass
Neohotettix sympatricus Ghauri	DZ, WZ,IMZ	G	Grass
Orosius albicinctus Distant	WZ,IMZ	V,O	grass, mango
Platyrectus marginatus Melichar	WZ,IMZ	F,G,C	Grass
Scaphoideus morosus Melichar	WZ	F,G,C	Grass and at light
Scaphoideus sculptellus Virak. & Mohan	WZ	F,G	grass
Scaphotettix sp.	IMZ	F	grass
Stirellus sp I.	WZ	G	grass
Stirellus sp II	DZ, WZ	G	grass
Stirellus indra (Distant)	DZ, WZ,IMZ	V,G,C	grass
Stirellus jacosa Melichar	DZ, WZ,IMZ	V,G,G	grass
Yuanamia sp. New	WZ	G	grass
Subfamily: Lassinae			
Batrocomorphus sp. I	DZ, WZ	F,G	grass
Batrocomorphus sp. II	DZ,IMZ	F,G	grass
Batrocomorphus sp.III	DZ	F,G	grass

Krisna sp. *female only*	WZ	H	mussaenda and at light
Sub family: Idiocerinae			
Amritodus brevistylus Viraktamath.	DZ, WZ,IMZ	O,H,F	mango
Busoniomimus manjunaththi Virak.& Vira	DZ, WZ,IMZ	F	clove
Jogocerus freytagi Viraktamath	IMZ	F	attariya
Idioscopus nitidulus (Walker)	DZ, WZ,IMZ	O,H,F	mango, asoka
Idioscopus nagpurensis (Pruthi)	DZ, WZ,IMZ	O,H,F	mango, jampola, cocoa avocado,na, rambuttan, carambola,teak, pepper, coffee
Idioscopus clypealis (Lethierry)	DZ, WZ,IMZ	O,H,F	mango, jampola, avocado, na, rambutan, teak ,cocoa carambola, teak,pepper, coffee.
Idioscopus unimaculatus (Melichar)	WZ	F	badulla, na
Sub family: Ledrinae			
Petacephala sp.	IMZ	G,C	grass
Sub family : Macropsinae			
Pediopsoides (*Pediopsoids*) sp.	WZ	F,G	grass
Macropsis sp.	WZ	F,G	grass
Sub family: Nirvaninae			
Kana thoracica Distant	WZ	F,G	grass
Nirvana pallida Melichar	DZ, WZ,IMZ	V,F.G	grass
Nirvana suturalis Melichar	WZ	F,G	grass
Sophonia longitudinalis (Distant)	WZ	F,G	grass
Sub family: Penthiminae			
Neodartus acocephaloides Melichar	DZ, WZ,IMZ	F,G,V	grass
Uzelina thaloriensis Sharma	WZ	F	grass
Penthimia sp.	WZ	F	grass
Thambila sp.	WZ	F	grass
Sub family : Selanocephalinae			
Bhatia olivercea Melichar	WZ	F,G	grass
Bhatia Distanti Zang and Webb	WZ	F,G	grass
Drabescus conspicuus Distant	WZ	F,G	grass
Drabescus stramineus Distant	WZ	F,G	grass
Kutata transversa Zang and Webb	WZ	F,G	grass
Subfamily: Signoretinae			
Preta gratiosa Melichar	DZ, WZ,IMZ	G	grass
Sub family: Typhlocybinae			

Alebroides nigroscutellata (Distant)	WZ	G	grass, at light
Amrasca biguttula biguttula (Ishida)	DZ, WZ,IMZ	V, H	brinjal, okra, bitter-gourd, potato, cow pea. at light
Amrasca splendens Ghauri	DZ, WZ	O, H	mango, asoka, ,at light
Baguoidea rubra (Melichar)	WZ	H	at light
Empoasca sp.	WZ,IMZ	O,H	mango, rambutan, cocoa
Empoascanara (*E.*) *maculifrons* Dworak.	DZ, WZ,IMZ	P,V,G	grass
Empoascanara (*E.*) *cilla* Dworak.	DZ, WZ,IMZ	P,V,G	grass
Empoascanara (*Bza*) *regularis* Dworak.	WZ	F	grass, at light
Empoasca (*Empoasca*) *triangularis* Dworak.	WZ	V	agati, beat root , carrot, brinjal, bush bean, long bean, castor
Faiga dropica Dwarakowsha	WZ	F	grass, at light
Apheliona bioculata (Melichar)	WZ	F,G	grass
Heliona constricta Melichar	WZ	F,H	at light
Kamaza sadakorni Dworakowska	WZ	V,H	winged bean
Lankasca centromaculata (Melichar)	DZ, WZ,IMZ	O,F,	cocoa, mousey mi, at light
Motschulskyia (*Togaritettix*) *serratus* (Mats.)	WZ,IMZ	F,O	mango,rambuttan at light
Seriana sagara Dworakowska	WZ	F,G	grass
Seriana sp I	WZ	F,G,C	indian almond
Thaia subrufa (Motschulsky)	WZ	P,G	grass
Thia (*Nlunga*) sp.	WZ	G	grass
Uzeldikra citrina (Melichar)	WZ	G	grass
Velu caricae Ghauri	WZ	F,	at light
Sub family : Xestocephalinae			
Xestocephalus sp.	WZ,IMZ	F	at light

Habitat:C-Coconut estate; **F**- Forest; **G**- Grass land**; H**-Home garden; **O**- Ochard: **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 changes 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, Aphodiiane 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. Specimen 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 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*., *Sysiphus 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 Onthoph*agus fuscopunctatus - restricted to coastal areas in the dry and arid zones). Catharcius molossus, Sisyphus longipes and Copris signatus are the most commonly found species while Catharcius *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 the in 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 reasons, 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. melrnarius*, 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 19th 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 S*carabaeus 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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Nichols, E., Larsen, T., Spector, S., Davis, A.L., Escobar, F., Favila, M., and Vuline, K. 2007. Global dung beetle response to tropical forest modification and fragmentation: A quantitative literature review and meta-analysis. Biol Conserv *137*, 1-19.

A Provisional Checklist of Dung Beetles (Coleoptera: Scarabaeidae) of Sri Lanka

Tribe: Canthonini

Ochicanthon cingalense Arrow, 1931 [R]

Ochicanthon tristis Arrow, 1931 [R]

Panelus puncticollis Arrow, 1931 [R]

Panelus setosus Arrow, 1931 [R]

Panelus imitator Balthasar, 1972 [R]

Panelus ceylonicus Balthasar, 1972 [R]

Panelus fallax Balthasar, 1972 [R]

Panelus pernitidus Balthasar, 1972 [R]

Tribe: Coprini

Catharsius capucinus Fabricius, 1781 [T]

Catharsiu granulates Sharp, 1875 [T]

Catharsius molossus Linnaeus, 1758 [T]

Catharsius pethecius Fabricius 1775 [T]

Copris repertus Walker, 1858 [T]

Copris sodalis Walker, 1858 [T]

Copris fricator Fabricius, 1787 [T]

Copris indicus Harold, 1867 [T]

Paracopris signatus Walker, 1858 [T]

Heliocopris bucephalus Fabricius, 1775 [T]

Tribe: Gymnopleurini

Gymnopleurus cyaneus Fabricius, 1798 [R]

Gymnopleurus (Garreta) smaragdifer Walker, 1858 [R]

Gymnopleurus (Metagymnopleurus) koenigi Fabricius, 1775 [R]

Gymnopleurus (Metagymnopleurus) miliaris Fabricius, 1775 [R]

Gymnopleurus (Metagymnopleurus) parvus MacLeay, 1821 [R]

Gymnopleurus (Metagymnopleurus) gemmatus Harold, 1871 [R]

Paraymnopleurus melanarious Harold, 1867 [R]

Tribe: Oniticellini

Drepanocerus setosus Wiedemann, 1823 [R]

Euoniticellus pallipes Fabricius, 1781 [D]

Liatongus (Paraliatongus) rhadamistus Fabricius, 1775 [D]

Tribe: Onitini

Ontis philemon Fabricius, 1801 [D]

Ontis singhalensis Lansberge, 1875 [D]

Ontis subopacus Arrow, 1931 [D]

Tribe: Onthophagini

Caccobius rufipennis Motschulsky, 1858 [D]

Caccobius (Caccophilus) indicus Harold, 1867 [D]

Caccobius (Caccophilus) aterrimus Fabricius, 1798 [D]

Caccobius (Caccophilus) diminutives Walker, 1858 [D]

Caccobius(Caccophilus) meridionalis Boucomont, 1914 [D]

Caccobius(Caccophilus) unicornis Fabricius, 1798 [D]

Caccobius(Caccophilus) vulcanus Fabricius, 1801 [D]

Caccobius (Caccophilus) ultor Sharp, 1875 [D]

Cleptocaccobius durantoni Cambefort, 1985 [D]

Cleptocaccobius (Caccophilus inermis Arrow, 1931 [D]

Haroldius krali Utsunomiya & Masumoto, 2000 [D]

Haroldius herrenorum Paulian, 1985 [D]

Onthophagus amphinasus [T]

Onthophagus centricornis Fabricius, 1798 [T]

Onthophagus cervus Fabricius, 1798 [T]

Onthophagus cryptogenus Boucomont, 1914 [T]

Onthophagus difficilis Walker, 1858 [T]

Onthophagus ensifer Boucomont, 1914 [T]

Onthophagus favrei Boucomont, 1914 [T]

Onthophagus fuscopunctatus Fabricius, 1798 [T]

Onthophagus gemma

Onthophagus gravis Walker, 1858 [T]

Onthophagus hystrix Boucomont, 1914 [T]

Onthophagus igneus Vigor, 1825 [T]

Onthophagus keiseri Frey, 1956 [T]

Onthophagus laevigatus Fabricius, 1798 [T]

Onthophagus ludio Boucomont, 1914 [T]

Onthophagus (Furconthophagus) lilliputanus Lansberge, 1883 [T]

Onthophagus martialis Boucomont, 1914 [T]

Onthophagus militaris Boucomont, 1914 [T]

Onthophagus castetsi

Onthophagus negligens Walker, 1858 [T]

Onthophagus parvulus Fabricius, 1798 [T]

Onthophagus politus Fabricius, 1798 [T]

Onthophagus pusillus Fabricius, 1798 [T]

Onthophagus pygmaeus Schaller, 1783 [T]

Onthophagus refulgens Arrow, 1931?? [T]

Onthophagus regalis Arrow, 1907 [T]

Onthophagus spinifex Fabricius, 1881 [T]

Onthophagus taprobanus Arrow, 1931 [T]

Onthophagus tritinctus Boucomont, 1914 [T]

Onthophagus turbatus Walker, 1858 [T]

Onthophagus troglodyte (Wiedemann, 1823) [T]

Onthophagus unifasciatus Schaller, 1783 [T]

Onthophagus gemma Sharp, 1875 [T]

Onthophagus refulgens

Onthophagus heterorrhinus Lansberge, 1885 [T]

Onthophagus sparsepunctatus Frey, 1956 [T]

Onthophagus (C.) occipitalis Lansberge, 1885 [T]

Onthophagus (C.) quadridentatus Fabricius, 1798 [T]

Onthophagus (Digionthophagus) bonasus Fabricius, 1775 [T]

Onthophagus (Digionthophagus) gazella (catta) Fabricius, 1787 [T]

Onthophagus (Micronthophagus) ochreatus d'Orbigny, 1897 [T]

Onthophagus (Micronthophagus) oculatus Arrow, 1931 [T]

Onthophagus (Onthophagiellus) solmani Stebnicka, 1975 [T]

Onthophagus (Proagoderus) pactolus Fabricius, 1787 [T]

Onthophagus (Colobonthophagus) dama Fabricius, 1798 [T]

Onthophagus(Paraphanaeomorphus) bifaciatus Fabricius 1781 [T]

Onthophagus (Parascatonomus) quaestus Sharp, 1875 [T]

Onthophagus (Proagoderus) gemmatus Peringuey, 1901 [T]

Onthophagus(Serrophorus) rectecornutus Lansberge, 1883 [T]

Phaedotrogus ceylonicus Balthasar, 1972 [T]

Phalops divisus Wiedemann, 1823 [T]

Tribe: Scarabaeini

Scarabaeus gangeticus Castelnau, 1840 [R]

Scarabaeus sanctus Fabricius, 1798 [R]

Scarabaeus (Kheper) erichsoni Harold, 1867 [R]

Tribe: Sisyphini

Neosisyphus tarantula Arrow, 1909 [R]

Sisyphus longipes Olivier, 1789 [R]

Sisyphus indicus Hope, 1831 [R]

Sisyphus (Crispatus) hirtus Wiedemann, 1823 [R]

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 Scutigeromorpha (Family Scutigerinidae – 1 species, Family Scutigeridae – 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, *Rhombocephalus gambiae* Newport, 1845, *Rhombocephalus 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 molleri* 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 subspinosum 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 porphyratainia* 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 brevilabiatus 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)

Technical definitions of the IUCN of the IUCN REd List Categories and Criteria are give 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 is 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**
A. Population reduction	Declines measured over the longer of 10 years or 3 generations		
A1	≥ 90%	≥ 70%	≥ 50%
A2, A3 & A4	≥ 80%	≥ 50%	≥ 30%
Al. Population reduction observed, estimated, inferred, or suspected in the past where the causes of the reduction are clearly reversible **AND** understood **AND** have ceased, based on and specifying any of the following: **(a)** direct observation **(b)** an index of abundance appropriate to the taxon **(c)** a decline in area of occupancy (AOO), extent of occurrence (EOO) and/or habitat quality **(d)** actual or potential levels of exploitation **(e)** effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.			
A2. Population reduction observed, estimated, inferred, or suspected in the past where the causes of reduction may not have ceased **OR** may not be understood **OR** may not be reversible, based on (a) to (e) under Al.			
A3. Population reduction projected or suspected to be met in the future (up to a maximum of 100 years) based on (b) to (e) under Al.			
A4. 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 **OR** may not be understood **OR** may not be reversible, based on (a) to (e) under Al.			
B. Geographic range in the form of either B1 (extent of occurrence) AND/OR B2 (area of occupancy)			
B1. Extent of occurrence (EOO)	< 100 km²	< 5,000 km²	< 20,000 km²
B2. Area of occupancy (AOO)	< 10 km²	< 500 km²	< 2,000 km²
AND at least 2 of the following:			
(a) Severely fragmented, **OR** Number of locations	= 1	≤ 5	≤ 10
(b) Continuing decline in any of: **(i)** extent of occurrence; **(ii)** area of occupancy; **(iii)** area, extent and/or quality of habitat; **(iv)** number of locations or subpopulations; **(v)** number of mature individuals.			
(c) Extreme fluctuations in any of: **(i)** extent of occurrence; **(ii)** area of occupancy; **(iii)** number of locations or subpopulations; **(iv)** number of mature individuals.			
C. Small population size and decline			
Number of mature individuals	< 250	< 2,500	< 10,000
AND either C1 or C2:			
C1. 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
C2. A continuing decline **AND** (a) and/or (b):			
(a i) Number of mature individuals in each subpopulation:	< 50	< 250	< 1,000
or			
(a ii) % individuals in one subpopulation =	90–100%	95–100%	100%
(b) Extreme fluctuations in the number of mature individuals.			
D. Very small or restricted population			
Either:			
Number of mature individuals	< 50	< 250	**D1.** < 1,000
			AND/OR
	Restricted area of occupancy		**D2.** typically: AOO < 20 km² or number of locations ≤ 5
E. Quantitative Analysis			
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