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## Journal of Threatened Taxa

Building evidence for conservation globally

[www.threatenedtaxa.org](http://www.threatenedtaxa.org)

ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

### COMMUNICATION

#### NEW ADDITIONS TO THE LARVAL FOOD PLANTS OF SRI LANKAN BUTTERFLIES (INSECTA: LEPIDOPTERA: PAPILIONOIDEA)

Himesh Dilruwan Jayasinghe, Sarath Sanjeewa Rajapakshe & Tharindu Ranasinghe

26 February 2021 | Vol. 13 | No. 2 | Pages: 17731-17740

DOI: 10.11609/jott.6875.13.2.17731-17740



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## New additions to the larval food plants of Sri Lankan butterflies (Insecta: Lepidoptera: Papilionoidea)

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**Abstract:** Larval food plants (LFPs) of Sri Lankan butterflies have been well documented recently with the aid of studies done by numerous researchers. In this paper, we present further records, 118 LFPs used by 83 butterflies and 145 plant-butterfly combinations. LFPs of *Lethe dynsate* and *Potanthus pseudomaesa pseudomaesa* are reported for the first time in Sri Lanka. Important observations, possible LFPs and LFP preferences of rare and threatened butterfly species, are discussed. This information on plant-butterfly interactions will play an important role in conservation management of both plant and butterfly species.

**Keywords:** *Caprona alida lanka*, plant-butterfly interactions, *Potanthus pseudomaesa pseudomaesa*, *Rinorea decora*, threatened species.

**Editor:** Anonymity requested.

**Date of publication:** 26 February 2021 (online & print)

**Citation:** Jayasinghe, H.D., S.S. Rajapakshe & T. Ranasinghe (2021). New additions to the larval food plants of Sri Lankan butterflies (Insecta: Lepidoptera: Papilionoidea). *Journal of Threatened Taxa* 13(2): 17731–17740. <https://doi.org/10.11609/jott.6875.13.2.17731-17740>

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**Funding:** Self-funded.

**Competing interests:** The authors declare no competing interests.

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**Acknowledgements:** We thank the Department of Wildlife Conservation and Forest Department for providing us necessary permission to carry out the research and to Dr. George van der Poorten, the principal investigator of the research. We also thank Chathura Udayanga, Gehan Rajiv, Kalana Wijesundara, Lasantha Aberathna, Narmadha Dangampola, Nuwan Chathuranga and Sujeewa Gunasena for providing necessary information to compile this manuscript and Hiranya Sudasinghe for critical comments that helped to improve the manuscript.



## INTRODUCTION

The knowledge on the natural history of Sri Lankan butterflies has been increasing rapidly over the past two decades, mainly due to the increase in the numerous field studies carried out by various researchers on butterflies, including their early stages, that had been published as research papers, detailed books, field guide books, leaflets and as other social media material (Gamage 2007; Jayasinghe 2014; Jayasinghe et al. 2015, 2020; van der Poorten & van der Poorten 2016, 2018). The availability of information has led many amateur naturalists to get interested and actively involved in the study of butterflies and now even contribute to the development of knowledge database on butterflies of Sri Lanka.

Early stages of Sri Lankan butterflies have been described in detail in several recently published research papers (van der Poorten & van der Poorten 2011a,b, 2012a,b,c, 2013a,b, 2014; Gunawardana et al. 2015; Priyadarshana et al. 2015; Herath et al. 2020), which provide information on their larval food plants (LFPs) as well. A research article focused on LFPs on Sri Lankan butterflies (Jayasinghe et al. 2014) provided 480 species of LFPs for 207 species of butterflies out of the 245 species known in the country during that time. Further, it documented 785 plant – butterfly combinations. Since then three more butterfly species have been added to the Sri Lankan inventory (van der Poorten & van der Poorten 2016, 2018), and a few more LFPs had been recorded.

Further studies carried out during the last few years revealed some more undocumented LFPs of Sri Lankan butterflies, which are presented in this paper. Some plant species which were not identified up to the species level in previous publication (Jayasinghe et al. 2014) are identified here as well. Recent nomenclatural and systematic changes in LFPs which were already documented in aforementioned publications are also addressed.

## MATERIALS AND METHODS

The data presented in this paper is primarily based on studies carried out during 2014–2019 by the authors. Field studies were conducted throughout the country in various habitats, including the northern and eastern regions of the country, which were not studied for decades due to their inaccessibility. Materials and methods adopted for field observations, field notes, data

collection, photography, lab works, and identification of butterfly species and plant species follow Jayasinghe et al. (2014). The lab rearing studies were carried out in Soragune (6.747N & 80.893E) Badulla District, Malwana (6.968N & 80.006E) Gampaha District and Kandumulla (7.075N & 80.071E) Gampaha District. Rearing of hill country species was restricted to Soragune, since the temperature and other climatic conditions are suited best out of all the three locations and due to relatively easy accessibility to collect fresh food material regularly from the field. Low country species, both from the wet zone and dry zone were reared at all the three locations, but rearing of northern species were mainly restricted to Malwana. Apart from identification from guide books, some plant species had to be confirmed by studying herbarium sheets at the National Herbarium at Peradeniya and online available herbarium sheets at K, BM, E, and L (Thiers 2020).

All the species of plants presented in this paper are confirmed LFPs in Sri Lanka. Here we consider a species as a confirmed LFP, when the butterfly larvae reared on it until maturity, or the early stages and egg laying behaviors observed regularly in the field on a given plant species. Even the larvae found on certain plants, if they were unable to complete the larval stage on those plants are not considered as confirmed LFPs. We observed that certain butterfly species (i.e., *Acraea terpsicore*) are trying to test new species of LFPs, but are not always successful. Certain butterfly larvae were found on non LFPs in the field, probably while they are moving from one plant to another or accidentally fell off. Species such as *Delias eucharis* and *Papilio clytia lankeswara* were observed shifting their LFPs for pupation. The data presented here, other than the studies carried out by the authors were included only if they were verified by detailed photographs and the plant species especially were identified by the authors based on information provided by those individuals.

Nomenclature of the butterflies follows van der Poorten & van der Poorten (2016). Classification and nomenclature of angiosperms, which had been subjected to dramatic changes due to recent molecular phylogenetic studies are based on (POWO 2019), and (WCSP 2020)

## RESULTS & DISCUSSION

A total of 118 species of angiosperms, belongs to 44 families are newly added to the Sri Lankan butterfly LFPs check list. These plants include 23 endemic, 67



indigenous, and 27 exotic species. These plant species are used by 63 species of butterflies. LFPs for *Letho dynsate* (Hewitson, 1863) & *Potanthus pseudomaesa pseudomaesa* (Moore, [1881]) are reported for the first time in Sri Lanka. This represents 145 plant-butterfly interactions and the detailed list is given in Annexure 1.

Names of plants mentioned in previous publications (Jayasinghe et al. 2014; van der Poorten & van der Poorten 2016, 2018) should read as follows.

**Acanthaceae:** *Dipteracanthus prostratus* - *Ruellia prostrata* Poir., *Dyschoriste erecta* - *D. madurensis* (Brum.f.) Kuntze, *Dyschoriste litoralis* - *D. nagchana* (Nees) Bennet, *Justicia procumbens* - *Rostellularia procumbens* (L.) Nees, *Phaulopsis imbricata* - *P. dorsiflora* (Retz.) Santapau, *Stenosiphonium cordifolium* - *Strobilanthes cordifolia* (Vahl) J.R.I.Wood, *Strobilanthes diandra* - *S. diandra* var. *diandra* (Nees) Alston

**Annonaceae:** *Polyalthia cerasoides* - *Huberantha cerasoides* (Roxb.) Chaowasku, *Polyalthia korinti* - *Huberantha korinti* (Dunal) Chaowasku, *Polyalthia longifolia* - *Monoon longifolium* (Sonn.) B.Xue & R.M.K.Saunders

**Apocynaceae:** *Anodendron paniculatum* - *A. parviflorum* (Roxb.) I.M.Turner, *Ceropegia candelabrum* - *C. candelabrum* var. *candelabrum* L., *Dregea volubilis* - *Wattakaka volubilis* (L.f.) Stapf, *Gymnema lactiferum* - *Marsdenia lactifera* (L.) I.M.Turner, *Holostemma adakodien* - *Cynanchum annularium* (Roxb.) Liede & Khanum, *Pergularia daemia* - *P. daemia* subsp. *daemia* (Forssk.) Chiov, *Tylophora cordifolia* - *Vincetoxicum cordifolium* (Thwaites) Kuntze, *Tylophora flexuosa* - *Vincetoxicum flexuosum* var. *tenuis* (Blume) Schneidt, Meve & Liede, *Tylophora indica* - *Vincetoxicum indicum* (Burm.f.) Mabb., *Tylophora multiflora* - *Vincetoxicum iphisia* Meve & Liede, *Tylophora pauciflora* - *Vincetoxicum bracteatum* (Thunb.) Meve & Liede

**Cleomaceae:** *Cleome rutidosperma* - *C. rutidosperma* var. *burmanni* (Wight & Arn.) Siddiqui & S.N.Dixit, *Crateva adansonii* - *C. adansonii* subsp. *odora* (Buch.-Ham.) Jacobs.

**Costaceae:** *Costus speciosus* - *Hellenia speciosa* (J.Koenig) S.R.Dutta

**Euphorbiaceae:** *Dimorphocalyx glabellus* - *D. glabellus* var. *glabellus* Thwaites

**Fabaceae:** *Abrus pulchellus* - *A. melanospermus* Hassk., *Acacia caesia* - *Senegalia caesia* (L.) Maslin, Seigler & Ebinger, *Acacia eburnea* - *Vachellia eburnea* (L.f.) P.J.H.Hurter & Mabb., *Acacia leucophloea* - *Vachellia leucophloea* (Roxb.) Maslin, Seigler & Ebinger, *Acacia nilotica* - *Vachellia nilotica* (L.) P.J.H.Hurter & Mabb., *Acacia pennata* - *Senegalia pennata* (L.)

Maslin, *Acacia planifrons* - *Vachellia planifrons* (Wight & Arn.) Ragup., Seigler, Ebinger & Maslin, *Bauhinia racemosa* - *Piliostigma racemosum* (Lam.) Benth., *Calliandra calothyrsus* - *C. houstoniana* (Mill.) Standl., *Caesalpinia bonduc* - *Guilandina bonduc* L., *Caesalpinia hymenocarpa* - *Mezoneuron hymenocarpum* Wight & Arn. ex Prain, *Caesalpinia sappan* - *Biancaea sappan* (L.) Tod., *Chamaecrista auricoma* - *C. leschenaultiana* (DC.) O.Deg., *Chamaecrista nictitans* - *C. nictitans* var. *glabrata* (Vogel) H.S.Irwin & Barneby, *Dalbergia pseudo-sissoo* - *D. rostrata* Hassk., *Desmodium heterocarpon* - *Grona heterocarpa* var. *heterocarpa* (L.) H.Ohashi & K.Ohashi, *Desmodium heterophyllum* - *Grona heterophylla* (Willd.) H.Ohashi & K.Ohashi, *Desmodium triflorum* - *Grona triflora* (L.) H.Ohashi & K.Ohashi, *Falcataria moluccana* - *F. falcata* (L.) Greuter & R.Rankin, *Pueraria phaseoloides* - *Neustanthus phaseoloides* (Roxb.) Benth., *Sesbania bispinosa* - *S. aculeata* (Schreb.) Pers.

**Icacinaceae:** *Nothapodytes nimmoniana* - *Mappia nimmoniana* (J.Graham) Byng & Stull

**Lauraceae:** *Neolitsea cassia* - *N. cassia* var. *cassia* (L.) Kosterm.

**Linderniaceae:** *Lindernia anagallis* - *Vandellia anagallis* (Burm.f.) T.Yamaz., *Lindernia antipoda* - *Bonnaya antipoda* (L.) Druce, *Lindernia crustacea* - *Torenia crustacea* (L.) Cham. & Schtdl., *Lindernia pusilla* - *Vandellia diffusa* L.

**Malvaceae:** *Grewia daminae* - *G. tiliifolia* Vahl

**Molluginaceae:** *Mollugo cerviana* - *Hypertelis cerviana* (L.) Thulin

**Moraceae:** *Ficus nervosa* - *F. nervosa* subsp. *minor* (King) C.C.Berg, *Ochrosia oppositifolia* - *Artocarpus gomezianus* Wall. ex Trécul

**Ochnaceae:** *Gomphia serrata* - *Campylospermum serratum* (Gaertn.) Bittrich & M.C.E.Amaral

**Orchidaceae:** *Malaxis versicolor* - *Crepidium versicolor* (Lindl.) Sushil K.Singh, Agrawala & Jalal

**Phyllanthaceae:** *Sauropus bacciformis* - *Synostemon bacciformis* (L.) G.L.Webster

**Poaceae:** *Eragrostis amabilis* - *E. viscosa* (Retz.) Trin., *Panicum maximum* - *Urochloa maxima* (Jacq.) R.D.Webster, *Sinarundinaria debilis* - *Kuruna debilis* (Thwaites) Attigala, Kaththr. & L.G.Clark

**Primulaceae:** *Embelia ribes* - *E. ribes* var. *ribes* Burm.f.

**Rhamnaceae:** *Ziziphus napeca* - *Z. linnaei* M.A.Lawson

**Rutaceae:** *Euodia suaveolens* - *E. hortensis* J.R.Forst. & G.Forst., *Micromelum minutum* - *M. minutum* var. *ceylanicum* B.C.Stone, *Paramignya monophylla* - *P. monophylla* var. *monophylla* Wight

**Sabiaceae:** *Meliosma pinnata* – *M. arnottiana* (Wight) Walp., *Meliosma simplicifolia* – *M. simplicifolia* subsp. *simplicifolia* (Roxb.) Walp.

**Salvadoraceae:** *Salvadora persica* - *Salvadora persica* var. *wightiana* (Planch. ex Thwaites) Verdc.

**Sapindaceae:** *Dodonaea viscosa* – *D. viscosa* subsp. *viscosa* Jacq., *Lepisanthes tetraphylla* – *L. tetraphylla* var. *tetraphylla* (Vahl) Radlk.

**Symplocaceae:** *Symplocos cochinchinensis* – *S. acuminata* (Blume) Miq.

**Thymelaceae:** *Gnidia glauca* - *Lasiosiphon glaucus* Fresen.

**Violaceae:** *Hybanthus enneaspermus* - *Afrohybanthus enneaspermus* (L.) Flicker, *Viola betonicifolia* – *V. betonicifolia* subsp. *betonicifolia* Sm.

**Zingiberaceae:** *Amomum fulviceps* - *Meistera fulviceps* (Thwaites) Skornick. & M.F.Newman, *Amomum trichostachyum* - *Meistera trichostachya* (Alston) Skornick. & M.F.Newman

*Grewia carpinifolia* Juss. is considered as an African species in (POWO 2019) and the valid identity of the plant described under this name in (Dassanayake & Fosberg 1991) is doubtful. *Pericopsis mooniana* Thwaites for *Curetis thetis* (Drury, 1773) in Jayasinghe et al. (2014) was a mis-identification of recently discovered *Curetis siva* Evans, 1954. *Entada rheedei* Spreng. for *Nacaduba pactolus ceylonica* Fruhstorfer, 1916 in Priyadarshana et al. (2015) was probably a mis-identification of *Entada zeylanica* Kosterm., since *E. rheedei* is not growing in both the localities given in the publication (Kostermans 1980).

Following plants that were not identified up to the species level in Jayasinghe et al. (2014) are identified here.

*Eurema hecabe hecabe* (Linnaeus, 1758) - *Sesbania procumbens* Wight & Arn.; *Tirumala septentrionis musikanos* (Fruhstorfer, 1910) - *Cosmostigma cordatum* (Poir.) M.R.Almeida; *Hypolycaena nilgirica* Moore, [1884] - *Luisia zeylanica* Lindl.; *Celaenorrhinus spilothyrus* (R. Felder, 1868) - *Strobilanthes viscosa* var. *digitalis* (Nees) C.B.Clarke; *Coladenia tissa* Moore, [1881] - *Mallotus philippensis* (Lam.) Müll.Arg.

*Sesbania procumbens* is newly reported in Sri Lanka (de Vlas 2019) in this study, which was considered to be an endemic species to India (Rao et al. 2019), from water logging habitats of the downstream areas of Yodha Wewa at Murunkan (8.8611 N & 80.0145 E).

All the summarized published data, including the data in this publication, reveals LFPs of 223 butterfly species. The butterfly fauna of Sri Lanka consists of a single

carnivorous species *Spalgis epeus epeus* (Westwood, 1851) (van der Poorten & van der Poorten 2016) and another possible carnivorous species *Spindasis greeni* Heron, 1896 (van der Poorten & van der Poorten 2012c). Early stages of the remaining 23 species are yet to be discovered in Sri Lanka, though some of these indigenous species have been reared in other countries (Nitin et al. 2018). Seven species and five subspecies out of these 23 are endemic to Sri Lanka. Even though the LFPs of these species are not yet confirmed, clues for some species were observed during the field studies. *Mycalesis rama* (Moore, 1892) was most frequently observed among *Ochlandra stridula* in lowland rainforests and very rarely go beyond these bushes while mating pairs were observed in Yagirala forest reserve (6.376 N & 80.169 E) among these bushes. *Arhopala ormistoni* Riley, 1920 is a very rare butterfly species which was originally described from Nakiyadeniya in southern wet zone (Woodhouse 1949) and not known for decades until its appearance in a disjunct population at the eastern intermediate zone (van der Poorten & van der Poorten 2016). One of its closely allied species *Arhopala bazaloides lanka* (Evans, 1957) is using a Dipterocarpaceae species as its sole LFP, initially, which was described as early stages of *A. ormistoni* by a mis-identification (van der Poorten & van der Poorten 2013a). An unusual population of more than 50 individuals of *A. ormistoni* was found recently in the catchment area of Namal Oya reservoir (7.321N & 81.521E). The only plant species belonging to the family Dipterocarpaceae in this micro-habitat is confirmed during this study as *Vatica obscura*, the species that was tentatively identified previously as an egg-laying plant of this butterfly (van der Poorten & van der Poorten 2016). Though the adult individuals of endemic *Udara singalensis* (R. Felder, 1868) and *Thoressa decorata* (Moore, 1881) are quite regularly seen, there are no any clues about their LFPs. Mostly, males of these species are seen in the field, but we never had a chance to follow females who are searching for LFPs. The remaining endemic species *Tajuria arida* Riley, 1923, *Nacaduba ollyetti* Corbet, 1947, and *Spindasis nubilus* (Moore, [1887]) are very rare and only a few adult individuals have been observed in the recent past (Jayasinghe et al. 2015; van der Poorten & van der Poorten 2016).

Together with the new information provided in this paper, a total of 582 plants identified up to the species level, belonging to 75 families has been confirmed as LFPs of Sri Lankan butterflies. This list comprises 70 endemic, 351 indigenous and 161 exotic species. There are further 15 confirmed LFPs, which are, however, not identified up to the species level. Most of these



unidentified plants belong to the family Poaceae. The total butterfly-plant interactions are summed up to 1091, with the details given in this paper.

According to the documented information available up to now, there are only two endemic species of butterflies that use a single endemic plant as their sole LFP. That is the interactions between *Halpe egena* (R. Felder, 1868) - *Davidsea attenuata* (van der Poorten & van der Poorten 2016) and *Lethe dynsate* (Hewitson, 1863) - *Ochlandra stridula*. It is, however, possible that these butterflies are using other bamboo species as well since many of the related butterfly species feed on several Poaceae species. The only LFP identified of the endemic *Lethe daretis* (Hewitson, 1863) is the endemic *Kuruna debilis* (van der Poorten & van der Poorten 2012b), but this butterfly was observed by us laying eggs on an unidentified grass species at the lawn of Hakgala botanic garden (6.923N & 80.821E) and successfully reared them on the same grass until the emergence of the adult butterflies. *Appias galene* (C. & R. Felder, 1865) has been reported to feed on endemic *Drypetes gardneri* (Jayasinghe et al. 2014) at Pitawala (7.542N & 80.750E), but its preferred LFP is *Drypetes sepiaria*. Endemic *Baoris penicillata* Moore, [1881] prefers to feed on the endemic *Ochlandra stridula* (Jayasinghe et al. 2014; van der Poorten & van der Poorten 2016), but it can adapt to other exotic bamboo species as well. *Coladenia tissa* Moore, [1881] is reported here, to feed on endemic *Pityranthe verrucosa*, but it has many other non-endemic LFPs (Jayasinghe et al. 2014). *Elymnias singhala* Moore, [1875] has been reported to feed on two endemic species, namely *Calamus ovoideus* (Jayasinghe et al. 2014) and *Loxococcus rupicola* (van der Poorten & van der Poorten 2016), but also feed on other palm species as well. The two distantly related endemics, namely *Kallima philarchus* (Westwood, 1848) and *Celaenorhynchus spilothyrsus* (R. Felder, 1868) depend on various endemic *Strobilanthes* species as their LFPs (Jayasinghe et al. 2014; van der Poorten & van der Poorten 2016).

Ca. 20% of the indigenous and endemic LFP species are categorized under threatened categories in the National Red Data List (MOE 2012). Some of the LFPs considered as 'extinct' and 'possibly extinct' were recently rediscovered during this LFP identification research (Jayasinghe 2015; de Vlas & de Vlas 2014; de Vlas 2019). The rediscovered, endemic species *Rinorea decora* is found in three locations, including a recent new locality at Sulugune (7.469N & 80.900E) in the Dumbara mountain range. This is the sole LFP of the Critically Endangered butterfly *Phalanta alcippe*

*ceylonica* (Manders, 1903), which is also restricted to the same area. We were able to find this very rare, micro-habitat specific plant by tracing the butterflies who are looking for suitable plants for egg laying and we observed early stages at all the three locations. This incident reveals the importance of conserving the LFPs for the conservation of butterflies. The preferred LFP of the Critically Endangered butterfly *Catochrysops panormus panormus* (C. Felder, 1860), *Flemingia macrophylla*, was considered to be possibly extinct until it was rediscovered during this research. Fortunately, this species is now being introduced as a hedge plant for low country tea estates by the Tea Research Institute (Rajika Gamage pers. comm. 17.iv.2018), but whether these plants are exactly from the native population or a cultivar and whether the butterfly larvae are feeding on them, is yet to be discovered.

Out of the known details of 223 butterfly species, 47 of them are reported having a single LFP each. This includes nine endemic species and 20 endemic subspecies. Most of them appear to have a sole LFP, but there is a possibility to find more LFPs for some of these species. At the other extreme, *Neptis hylas varmona* Moore, 1872 is the most polygamous species in Sri Lanka. It uses 46 species of LFPs belongs to six families. *Euploea core asela* Moore, 1877 ranked for the second place by using 30 LFPs, but those plants belong only to two families. *Zesius chrysomallus* Hübner, 1821 seems to feed on any plant, where the Red Weaver Ants *Oecophylla smaragdina* Fabricius, 1775 are colonized. Butterflies that use the highest number of LFPs are listed in table 1. The exotic plant *Axonopus compressus* (Sw.) P. Beauv. has been reported to be used by 14 species of butterflies. It is interesting that many Poaceae species are shared by a high number of butterfly species (Table 2). Three-hundred-and-forty-four plant species from the whole LFPs list are not shared by two or more butterfly species. Most of the reported LFPs belong to the family Fabaceae (Table 3).

This information on LFPs of Sri Lankan butterflies can be used for habitat conservation-oriented management strategies, which will enhance the conservation of other flora and fauna as well. Further studies on the life history of targeted species are required for the unknown 23 species of butterflies which consist of very rare and / or endemic species. These studies should be aimed at revealing the reasons for their scarcity, which are required to ensure their future survival.

**Table 1. Butterfly species that are using highest number of LFP species.**

Butterfly species	No. of LFPs	No. of plant families
<i>Neptis hylas varmona</i> Moore, 1872	46	6
<i>Euploea core asela</i> Moore, 1877	30	2
<i>Jamides bochus bochus</i> (Stoll, [1782])	23	1
<i>Eurema hecabe hecabe</i> (Linnaeus, 1758)	22	1
<i>Graphium agamemnon menides</i> (Fruhstorfer, 1904)	22	3
<i>Prosotas nora ardates</i> (Moore, [1875])	17	5
<i>Lampides boeticus</i> (Linnaeus, 1767)	16	1
<i>Eurema blanda citrina</i> (Moore, 1881)	15	1
<i>Zesius chrysomallus</i> Hübner, 1821	15	8
<i>Papilio polytes romulus</i> Cramer, [1775]	14	1
<i>Jamides alecto meilichius</i> (Fruhstorfer, 1916)	14	1

**Table 2. LFPs used by highest number of butterfly species.**

LFP	Family	No. of butterflies using the plant
<i>Axonopus compressus</i> (Sw.) P. Beauv.	Poaceae	14
<i>Urochloa maxima</i> (Jacq.) R.D.Webster Jacq.	Poaceae	10
<i>Ischaemum timorensis</i> Kunth	Poaceae	10
<i>Oryza sativa</i> L.	Poaceae	9
<i>Dendrophthoe falcata</i> (L.f.) Ethingsh.	Loranthaceae	8
<i>Dalbergia rostrata</i> Hassk.	Fabaceae	7
<i>Lepisanthes tetraphylla</i> var. <i>tetraphylla</i> (Vahl) Radlk.	Sapindaceae	7
<i>Ochlandra stridula</i> Thwaites	Poaceae	7

**Table 3. Number of LFP species in highest ranked families.**

Family	No. of LFPs
Fabaceae	135
Apocynaceae	40
Poaceae	38
Acanthaceae	36
Rutaceae	26
Annonaceae	20
Arecaceae	20
Malvaceae	20
Zingiberaceae	20

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## Annexure 1. Newly recorded LFPs of Sri Lankan butterflies.

DS—Distribution status | Ex—Exotic | En—Endemic | In—Indigenous | l—leaves | il—immature leaves | ml—mature leaves | fl—flower | flb—flower buds | fr—fruit | st—stem, se—seeds | br—bracts | PC—personal communication | LA—Lasantha Aberathna | NC—Nuwan Chathuranga | KW—Kalana Wijesundara | ND—Narmadha Dangampola | SG—Sujeewa Gunasena | CU—Chathura Udayanga | GR—Gehan Rajiv.

Butterfly species	Plant species	DS	Plant Family / consumed parts of the plant	Remarks
<i>Papilio demoleus demoleus</i> Linnaeus, 1758	<i>Ruta chalepensis</i> L.	Ex	Rutaceae / l	PC: LA
<i>Graphium sarpedon teredon</i> (C. & R. Felder, 1865)	<i>Actinodaphne glauca</i> var. <i>glauca</i> Nees	En	Lauraceae / l	
	<i>Persea americana</i> Mill.	Ex		
<i>Graphium agamemnon menides</i> (Fruhstorfer, 1904)	<i>Goniothalamus gardneri</i> Hook.f. & Thomson	En	Annonaceae / l	
	<i>Uvaria zeylanica</i> L.	In		
<i>Leptosia nina nina</i> Fabricius, 1793	<i>Brassica juncea</i> (L.) Czern.	Ex	Brassicaceae / l	PC: SG
	<i>Brassica oleracea</i> L.	Ex		PC: ND
<i>Belenois aurota taprobana</i> (Moore, 1872)	<i>Capparis brevispina</i> DC.	In	Capparaceae / l	
<i>Cepora nerissa phryne</i> (Fabricius, 1775)	<i>Capparis tenera</i> Dalzell	In	Capparaceae / l	
<i>Appias libythea libythea</i> (Fabricius, 1775)	<i>Cleome aspera</i> J.Koenig ex DC.	In	Cleomaceae / l	
<i>Catopsilia pyranthe pyranthe</i> (Linnaeus, 1758)	<i>Senna sophera</i> (L.) Roxb.	In	Fabaceae / l	
<i>Catopsilia scylla</i> (Linnaeus, 1763)	<i>Senna sophera</i> (L.) Roxb.	In	Fabaceae / l	
<i>Eurema hecabe hecabe</i> (Linnaeus, 1758)	<i>Chamaecrista absus</i> (L.) H.S.Irwin & Barneby	In	Fabaceae / l	
	<i>Mimosa diplotricha</i> C.Wright	Ex		
<i>Eurema blanda citrina</i> (Moore, 1881)	<i>Archidendron clypearia</i> subsp. <i>subcoriaceum</i> (Thwaites) I.C.Nielsen	In	Fabaceae / il	
	<i>Entada zeylanica</i> Kosterm.	En		
<i>Ideopsis similis exprompta</i> Butler, 1874	<i>Vincetoxicum flexuosum</i> var. <i>tenuis</i> (Blume) Schneidt, Meve & Liede	In	Apocynaceae / l	
<i>Parantica aglea aglea</i> (Stoll, 1782)	<i>Ceropegia candelabrum</i> var. <i>biflora</i> (L.) Ansari	In	Apocynaceae / l	
<i>Euploea core asela</i> Moore, 1877	<i>Secamone emetica</i> (Retz.) R.Br. ex Sm.	In	Apocynaceae / l	
<i>Euploea klugii sinhala</i> Moore, 1877	<i>Streblus zeylanicus</i> (Thwaites) Kurz	In	Moraceae / l	
<i>Cupha erymanthis placida</i> Moore, [1881]	<i>Flacourtia inermis</i> Roxb.	Ex	Salicaceae / l	PC: CU
<i>Vindula erota asela</i> (Moore, 1872)	<i>Passiflora subpeltata</i> Ortega	Ex	Passifloraceae / l	PC: NC
<i>Cirrochroa thais lanka</i> Moore, 1872	<i>Hydnocarpus octandrus</i> Thwaites	En	Achariaceae / l	
<i>Vanessa cardui</i> (Linnaeus, 1758)	<i>Anaphalis sulphurea</i> (Trimen) Grierson	En	Asteraceae / l, st	
	<i>Artemisia indica</i> Willd.	In		
<i>Junonia orithya patenas</i> (Fruhstorfer, 1912)	<i>Rungia repens</i> (L.) Nees	In	Acanthaceae / l	
<i>Junonia hierta</i> (Linnaeus, 1798)	<i>Ruellia prostrata</i> Poir.	In	Acanthaceae / l	only in the lab
	<i>Dyschoriste madurensis</i> (Brum.f.) Kuntze	In		
<i>Junonia atlites atlites</i> (Linnaeus, 1763)	<i>Vandellia pusilla</i> (Willd.) Merr.	In	Linderniaceae / l	
	<i>Limnophila repens</i> (Benth.) Benth.	In	Plantaginaceae / l	
<i>Junonia almana almana</i> (Linnaeus, 1758)	<i>Vandellia pusilla</i> (Willd.) Merr.	In	Linderniaceae / l	
<i>Doleschallia bisaltide ceylonica</i> Fruhstorfer, 1903	<i>Pseuderanthemum carruthersii</i> (Seem.) Guillaumin	Ex	Acanthaceae / l	only in the lab
<i>Kallima philarchus</i> (Westwood, 1848)	<i>Strobilanthes exserta</i> C.B.Clarke	En	Acanthaceae / l	
<i>Pantoporia hordonia sinuata</i> (Moore, 1879)	<i>Albizia chinensis</i> (Osbeck) Merr.	In	Fabaceae / l	

Butterfly species	Plant species	DS	Plant Family / consumed parts of the plant	Remarks
<i>Neptis hylas varmona</i> Moore, 1872	<i>Calopogonium mucunoides</i> Desv.	Ex	Fabaceae / l	
	<i>Grona heterocarpa</i> var. <i>heterocarpa</i> (L.) H.Ohashi & K.Ohashi	In		
	<i>Grona heterophylla</i> (Willd.) H.Ohashi & K.Ohashi	In		PC: CU
	<i>Desmodium tortuosum</i> (Sw.) DC.	Ex		
	<i>Glycine max</i> (L.) Merr.	Ex		
	<i>Phyllodium pulchellum</i> (L.) Desv.	In		
	<i>Tadehagi triquetrum</i> (L.) H.Ohashi	In		
	<i>Vigna radiata</i> (L.) R.Wilczek	Ex		
	<i>Pityranthe verrucosa</i> Thwaites	En	Malvaceae / l	
	<i>Helicteres isora</i> L.	In		
	<i>Sterculia zeylanica</i> Kosterm.	En		
<i>Neptis jumbah nalanda</i> Fruhstorfer, 1908	<i>Mitragyna parvifolia</i> (Roxb.) Korth.	In	Rubiaceae / l	PC: KW
	<i>Bhesa nitidissima</i> Kosterm.	En	Centroplacaceae / l	
	<i>Pterasperrum suberifolium</i> (L.) Willd.	In	Malvaceae / l	
	<i>Campylospermum serratum</i> (Gaertn.) Bittrich & M.C.E.Amaral	In	Ochnaceae / l	
<i>Moduza procris calidasa</i> (Moore, 1858)	<i>Prunus walkeri</i> (Wight) Kalkman	En	Rosaceae / l	
	<i>Mitragyna tubulosa</i> (Arn.) Kuntze	In	Rubiaceae / l	
	<i>Mussaenda samana</i> Jayaw.	En		
<i>Charaxes athamas athamas</i> (Drury, [1773])	<i>Mitragyna parvifolia</i> (Roxb.) Korth.	In	Fabaceae / l	
	<i>Calliandra surinamensis</i> Benth.	Ex		
<i>Charaxes psaphon psaphon</i> Westwood, 1847	<i>Entada zeylanica</i> Kosterm.	En	Fabaceae / l	
<i>Melanitis leda leda</i> (Linnaeus, 1758)	<i>Arundo donax</i> L.	Ex	Poaceae / l	
	<i>Eleusine indica</i> (L.) Gaertn.	In		
<i>Melanitis phedima tambra</i> Moore, 1880	<i>Arundo donax</i> L.	Ex	Poaceae / l	
	<i>Cyrtococcum trigonum</i> (Retz.) A.Camus	In		PC:KW
<i>Lethe daretis</i> (Hewitson, 1863)	<i>Unidentified 5 (Galways)</i>		Poaceae / l	
<i>Lethe dynsate</i> (Hewitson, 1863)	<i>Ochlandra stridula</i> Thwaites	En	Poaceae / l	
<i>Mycalesis patnia patnia</i> Moore, 1857	<i>Ischaemum timorense</i> Kunth	In	Poaceae / l	
<i>Curetis thetis</i> (Drury, 1773)	<i>Derris parviflora</i> Benth.	En	Fabaceae / il	
<i>Arhopala amantes amantes</i> (Hewitson, 1862)	<i>Syzygium caryophyllatum</i> (L.) Alston	In	Myrtaceae / l	
<i>Zesius chrysomallus</i> Hübner, 1821	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	In	Combretaceae / l	PC: CU
	<i>Bridelia retusa</i> (L.) A.Juss.	In	Phyllanthaceae / l	
	<i>Canthium coromandelicum</i> (Burm.f.) Alston	In	Rubiaceae / l	
	<i>Symplocos acuminata</i> (Blume) Miq.	In	Symplocaceae / l	
<i>Amblypodia anita naradoides</i> Moore, 1879	<i>Olax imbricata</i> Roxb.	In	Olacaceae / l	
<i>Catapaecilma major myosotina</i> Fruhstorfer, 1912	<i>Lannea coromandelica</i> (Houtt.) Merr.	In	Anacardiaceae / l	
	<i>Albizia lebbeck</i> (L.) Benth.	In	Fabaceae / l	
	<i>Vitex altissima</i> L.f.	In	Lamiaceae / l	
	<i>Dendrophthoe falcata</i> (L.f.) Ethingsh.	In	Loranthaceae / l	
<i>Rathinda amor</i> (Fabricius, 1775)	<i>Mangifera indica</i> L.	Ex	Anacardiaceae / il	PC: NC
	<i>Scutia myrtina</i> (Burm.f.) Kurz	In	Rhamnaceae / il	
	<i>Dimocarpus longan</i> Lour.	In	Sapindaceae / il	



Butterfly species	Plant species	DS	Plant Family / consumed parts of the plant	Remarks
<i>Cheritra freja pseudojafra</i> Moore, [1881]	<i>Entada zeylanica</i> Kosterm.	En	Fabaceae / il	
	<i>Meliosma simplicifolia</i> subsp. <i>simplicifolia</i> (Roxb.) Walp.	In	Sabiaceae / il	
<i>Spindasis lohita lazularia</i> (Moore, 1881)	<i>Albizia lebbek</i> (L.) Benth.	In	Fabaceae / l	
	<i>Senna auriculata</i> (L.) Roxb.	In		PC: NC
<i>Pratapa deva deva</i> (Moore, [1858])	<i>Dendrophthoe falcata</i> (L.f.) Ethingsh.	In	Loranthaceae / il	
	<i>Dendrophthoe neelgherrensis</i> (Wight & Arn.) Tiegh.	In		
	<i>Scurrula parasitica</i> L.	In		
	<i>Taxillus incanus</i> (Trimen) Wiens	En		
<i>Hypolycaena nilgirica</i> Moore, [1884]	<i>Thrixspermum pulchellum</i> (Thwaites) Schltr.	In	Orchidaceae / fl	PC: GR
<i>Bindahara phocides moorei</i> Fruhstorfer, 1904	<i>Euonymus walkeri</i> Wight	En	Celastraceae / fr	
<i>Rapala manea schistacea</i> (Moore, 1879)	<i>Allophylus cobbe</i> (L.) Forsyth f.	In	Sapindaceae / fl	
<i>Anthene lycaenina lycaenina</i> (R. Felder, 1868)	<i>Senegalia caesia</i> (L.) Maslin, Seigler & Ebinger	In	Fabaceae / fl, flb	
<i>Nacaduba hermus sidoma</i> Fruhstorfer, 1916	<i>Connarus monocarpus</i> L.	In	Connaraceae / il	
<i>Nacaduba berenice ormistoni</i> Toxopeus, 1927	<i>Celtis philippensis</i> Blanco	In	Cannabaceae / fl, flb	
<i>Prosotas nora ardates</i> (Moore, [1875])	<i>Archidendron clypearia</i> subsp. <i>subcoriaceum</i> (Thwaites) I.C.Nielsen	In	Fabaceae / fl, flb	
	<i>Dalbergia rostrata</i> Hassk.	In		
<i>Prosotas dubiosa indica</i> (Evans, [1925])	<i>Senegalia caesia</i> (L.) Maslin, Seigler & Ebinger	In	Fabaceae / fl, flb	
	<i>Dalbergia rostrata</i> Hassk.	In		
	<i>Mimosa diplotricha</i> C.Wright	Ex		PC: KW
	<i>Mimosa pudica</i> L.	Ex		PC: CU
<i>Jamides bochus bochus</i> (Stoll, [1782])	<i>Centrosema plumieri</i> (Turpin ex Pers.) Benth.	Ex	Fabaceae / fl, flb	
	<i>Senna occidentalis</i> (L.) Link	Ex		
<i>Jamides alecto meilichius</i> (Fruhstorfer, 1916)	<i>Meistera benthamiana</i> (Trim.) Skornick. & M.F.Newman	En	Zingiberaceae / fl, se	
	<i>Zingiber officinale</i> Roscoe	Ex		PC: KW
<i>Jamides celeno tissama</i> (Fruhstorfer, 1916)	<i>Centrosema plumieri</i> (Turpin ex Pers.) Benth.	Ex	Fabaceae / fl, flb	
	<i>Entada zeylanica</i> Kosterm.	En	Fabaceae / il	
<i>Catochrysops strabo strabo</i> (Fabricius, 1793)	<i>Cajanus cajan</i> (L.) Huth	Ex	Fabaceae / flb	
	<i>Flemingia lineata</i> (L.) Roxb. ex W.T.Aiton	In		
<i>Lampides boeticus</i> (Linnaeus, 1767)	<i>Crotalaria albida</i> B.Heyne ex Roth	In	Fabaceae / fl, flb	
	<i>Crotalaria beddomeana</i> Thoth. & A.A.Ansari	Ex		
<i>Leptotes plinius plinius</i> (Fabricius, 1793)	<i>Ormocarpum sennooides</i> subsp. <i>hispidum</i> (Willd.) Brenan & Leonard.	In	Fabaceae / flb	
<i>Zizeeria karsandra</i> (Moore, 1865)	<i>Amaranthus blitum</i> L.	Ex	Amaranthaceae / il	
<i>Zizina otis indica</i> (Murray, 1874)	<i>Alysicarpus scariosus</i> (Rottler ex Spreng.) Graham	In	Fabaceae / flb	
	<i>Aphyllodium biarticulatum</i> (L.) Gagnep.	In		
<i>Zizula hylax hylax</i> (Fabricius, 1775)	<i>Hygrophila heinei</i> Sreem	In	Acanthaceae / flb	
	<i>Phaulopsis dorsiflora</i> (Retz.) Santapau	In	Acanthaceae / flb, br	
<i>Everes lacturnus lacturnus</i> (Godart, 1824)	<i>Grona heterophylla</i> (Willd.) H.Ohashi & K.Ohashi	In	Fabaceae / se	PC: CU
<i>Azanus ubaldus</i> (Stoll, [1782])	<i>Albizia amara</i> (Roxb.) Boivin	In	Fabaceae / flb	
<i>Megisba malaya thwaitesi</i> Moore, 1881	<i>Mallotus rhamnifolius</i> (Willd.) Müll.Arg.	In	Euphorbiaceae / flb	
<i>Abisara echerius prunosa</i> Moore, 1879	<i>Ardisia gardneri</i> C.B.Clarke	En	Primulaceae / il	
<i>Choaspes benjaminii benjaminii</i> (Guérin-Méneville, 1843)	<i>Meliosma simplicifolia</i> subsp. <i>simplicifolia</i> (Roxb.) Walp.	In	Sabiaceae / l	

Butterfly species	Plant species	DS	Plant Family / consumed parts of the plant	Remarks
<i>Celaenorrhinus spilothyrus</i> (R. Felder, 1868)	<i>Barleria arnottiana</i> Nees	In	Acanthaceae / l	
	<i>Barleria involucrata</i> Nees	In		
	<i>Strobilanthes adenophora</i> Nees	En		
	<i>Strobilanthes viscosa</i> var. <i>viscosa</i> (Arn. ex Nees) T.Anderson	En		
<i>Sarangesa dasahara albicilia</i> Moore, [1881]	<i>Lepidagathis ceylanica</i> Nees	En	Acanthaceae / l	
<i>Coladenia tissa</i> Moore, [1881]	<i>Pityranthe verrucosa</i> Thwaites	En	Malvaceae / l	
	<i>Grewia carpinifolia</i> Juss.	In		
	<i>Helicteres isora</i> L.	In		
<i>Tagiades japetus obscurus</i> Mabille, 1876	<i>Dioscorea trimenii</i> Prain & Bukill	En	Dioscoreaceae / l	
<i>Suastus gremius subgrisea</i> (Moore, 1878)	<i>Rhapis excelsa</i> (Thunb.) A.Henry	Ex	Arecaceae / l	
<i>Suastus minuta minuta</i> (Moore, 1877)	<i>Calamus digitatus</i> Becc.	En	Arecaceae / l	
	<i>Calamus metzianus</i> Schtdl.	In		
	<i>Calamus thwaitesii</i> Becc.	In		
<i>Notocrypta curvifascia curvifascia</i> (C. & R. Felder, 1862)	<i>Hellenia speciosa</i> (J.Koenig) S.R.Dutta	In	Costaceae / l	
	<i>Meistera trichostachya</i> (Alston) Skornick. & M.F.Newman	En	Zingiberaceae / l	
	<i>Zingiber officinale</i> Roscoe	Ex		PC: KW
<i>Matapa aria</i> (Moore, [1866])	<i>Schizostachyum brachycladum</i> (Kurz ex Munro) Kurz	Ex	Poaceae / l	
<i>Oriens goloides</i> (Moore, [1881])	<i>Cyrtococcum trigonum</i> (Retz.) A.Camus	In	Poaceae / l	PC: KW
	<i>Ischaemum timorense</i> Kunth	In		
<i>Potanthus pseudomaesa pseudomaesa</i> (Moore, [1881])	<i>Arundo donax</i> L.	Ex	Poaceae / l	
<i>Telicota bambusae lanka</i> Evans, 1932	<i>Schizostachyum brachycladum</i> (Kurz ex Munro) Kurz	Ex	Poaceae / l	
<i>Borbo cinnara</i> Wallace, 1866	<i>Arundo donax</i> L.	Ex	Poaceae / l	
<i>Pelopidas agna agna</i> (Moore, [1866])	<i>Arundo donax</i> L.	Ex	Poaceae / l	
<i>Pelopidas conjuncta narooa</i> Moore, 1878	<i>Ischaemum timorense</i> Kunth	In	Poaceae / l	
<i>Baoris penicillata</i> Moore, [1881]	<i>Bambusa vulgaris</i> Schrad. ex J.C.Wendl.	Ex	Poaceae / l	
	<i>Dendrocalamus giganteus</i> Munro	Ex		
<i>Caltoris philippina seriata</i> (Moore, 1878)	<i>Bambusa tuldooides</i> Munro	Ex	Poaceae / l	
	<i>Schizostachyum brachycladum</i> (Kurz ex Munro) Kurz	Ex		

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ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

February 2021 | Vol. 13 | No. 2 | Pages: 17611–17846

Date of Publication: 26 February 2021 (Online & Print)

DOI: 10.11609/jott.2021.13.2.17611-17846

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