




---

## A COMPILATION AND ANALYSIS OF FOOD PLANTS UTILIZATION OF SRI LANKAN BUTTERFLY LARVAE (PAPILIONOIDEA)

---

Section Editors: Jeffrey Miller & James L. Reveal

Submitted: 08 Dec. 2013, Accepted: 15 Mar. 2014

H. D. Jayasinghe<sup>1,2</sup>, S. S. Rajapaksha<sup>1</sup>, C. de Alwis<sup>1</sup>

<sup>1</sup>Butterfly Conservation Society of Sri Lanka, 762/A, Yatihena, Malwana, Sri Lanka

<sup>2</sup>E-mail: himesh.jayasinghe1@gmail.com

### Abstract

Larval food plants (LFPs) of Sri Lankan butterflies are poorly documented in the historical literature and there is a great need to identify LFPs in conservation perspectives. Therefore, the current study was designed and carried out during the past decade. A list of LFPs for 207 butterfly species (Super family Papilionoidea) of Sri Lanka is presented based on local studies and includes 785 plant-butterfly combinations and 480 plant species. Many of these combinations are reported for the first time in Sri Lanka. The impact of introducing new plants on the dynamics of abundance and distribution of butterflies, the possibility of butterflies being pests on crops, and observations of LFPs of rare butterfly species, are discussed. This information is crucial for the conservation management of the butterfly fauna in Sri Lanka.

**Key words:** conservation, crops, larval food plants (LFPs), pests, plant-butterfly combination.

### Introduction

Butterflies go through complete metamorphosis and have two stages of food consumption. In the adult stage butterfly mandibles are developed into a tube-like proboscis facilitating feeding on liquids. In the adult stage butterflies are not limited to specific plant species for food and many species also feed on non-herbaceous materials such as bird droppings. The larval stage has chewing appendages, so their food type, vegetation, is completely different from the adult stage (d'Abrera, 1998; Kunte, 2000). Very rarely some butterfly larvae are carnivorous i.e., *Spalgis epeus* (Woodhouse,

1949). As all herbivorous insects show some degree of host selectivity (Bernays & Chapman 1994), many butterfly larvae feed on a limited number of identical plant species (Wiklund, 1975), which is basically determined by the chemical composition of those plants (Kunte, 2000). Though they have a specialization on a set of closely related plants (Ehrlich & Murphy, 1988; Ward & Spalding, 1993), their preference of plants and different parts of plants could vary among genotypes and among individuals with different phenological and physiological conditions (Wiklund, 1984). The most common

plant component which is consumed by larvae is immature leaves while some prefer mature leaves, flowers, fruits, seeds and roots. Behaviors and body structure of larvae are compatible with the plant component that they feed on. Caterpillars ingest a majority of the nutrients required for growth and development into the adult stage, as well as chemicals required for the colors and defensive strategies in their adult stage (Boppré, 1984).

At present, Sri Lanka is inhabited by 245 butterfly species including 26 endemic species. (van der Pootern, 2012; Jayasinghe *et al.*, 2013). Two new arrivals from other countries have been added to the list - *Catopsilia scylla* (van der Pootern & van der Pootern, 2012a), *Cephrènes trichopepla* (van der Pootern & van der Pootern, 2012d) and the presence of *Spindasis greeni* was confirmed recently (van der Pootern & van der Pootern, 2012c). Moore (1880–1881) documented a small number of butterfly larval food plants (LFPs) in Sri Lanka, based on his local studies. Woodhouse (1949) enhanced this list based on the data given him by E. E. Green, Tunnard, Manders and Wiley. Although in his account early stages of 191 butterfly species have been documented, only 80 were based on Sri Lankan material while others were taken from Indian studies, which are not purely compatible to LFP preference and body color pattern of local butterfly larvae. Also, some plants were not identified to species and other plants have not been recorded in Sri Lanka. Recently van der Pootern & van der Pootern (2011–2013) published more work on early stages of selected species including their larval food plants along with a comparison with historical studies.

The flora of Sri Lanka consists of 4,143 flowering plant species which some 25% are exotics and 20% represent endemics; this information is based on the series of “Revised hand book to the flora of Ceylon - vol I–XIV” (Senarathna, 2001). More species remain to be added to the Sri Lanka plant list according to recent studies (de Vlaas & de Vlaas, 2008; Fernando & Ormerod, 2008). Food of butterflies makes a significant role in determining their distribution, abundance and movement (Kunte, 2000) and the availability of LFPs is of prime importance for having a breeding population in a certain habitat (Vane-Wright, 1978). Identification of LFPs is

valuable information for conservation management of butterflies. Some species are capable of adapting to novel LFPs to maintain a viable population even in manmade habitats, including certain species that turn out to be pests of crops. But highly food-specific butterfly caterpillars require the conservation of their special habitats including specific plants for their survival. The available data on LFPs of Sri Lankan butterflies is not sufficient for many butterfly species considered to be high among conservation priorities. The current study is focused on presenting an updated LFPs list of Sri Lankan butterflies based on both published and unpublished data on local material and eliminating Indian records published in local literature. Most of the plants in our revised-updated Sri Lanka list are recorded for the first time. It is our expectation that the publication of this list will stimulate further caterpillar foodplant studies, including preferences and geographic distributions.

#### Materials and Methods

This work is primarily based on ongoing studies initiated by the authors in 2002. Field studies were conducted throughout the island with limited access to northern and eastern regions. Observations on butterflies were carried out in all habitat types where butterflies are found, ranging from dense forests to urban home gardens. When female butterflies were observed searching for LFPs they were followed until they laid eggs. Also, suspected foodplants were searched thoroughly, especially when plants showed chewed leaves or the presence of caterpillar frass.

Eggs and larvae were collected and reared until maturity in captivity with repeated supplement of fresh plant materials on which they were found. Suitable materials such as sticks, leaves, bark, fruit shells, leaf litter and sand were provided for pupation. All the necessary data (e.g. color patterns of different instars; behaviours of larvae; durations of different instars and pupa; collected location, date and habitat; feeding materials) were recorded in field note books and if available, photographs were taken. The lab-rearing studies were carried out in Buththala (6.771N, 81.260E), Wellawaya (6.730N, 81.099E), Bandarawela (6.830N, 80.988E), Soragune (6.747N, 80.893E), Katubedda (6.797N, 79.901E) and Malwana (6.968N, 80.006E). These locations

covered the four main environmental conditions in which butterflies occur in Sri Lanka, namely low country wet zone, low country dry zone, intermediate zone, and hill country. The few butterfly species that are restricted to the northern region were reared at Wellawaya. Reared adults were released back into their original habitats.

Butterfly species were identified from the adult stage acquired either at the time of ovipositing or after eclosing following the lab-rearing study. Taxonomic authority followed that of d'Abrera (1998) and Woodhouse (1949). Nomenclature was used after van der Pootern, 2012 with a single correction (Kawahara, 2013). Detailed photographs of LFPs including leaves, flowers and fruits were taken with either Cannon 40 D, Cannon 60 D or Cannon 7 D fitted with Canon 100mm EF 2.8 Macro USM lens or Canon 100mm EF 2.8L Macro IS USM lens. The photographs were compared with the descriptions of "Revised hand book to the flora of Ceylon - vol I–XIV" and "Illustrated field guide to the flowers of Sri Lanka vol 1, vol 2 (unpublished) for identification.

All previously published data based on studies over the last ten years are also included in this compilation. Some published historical data have not been considered given that the relevance of those data had been discussed in great detail already (van der Pootern & van der Pootern, 2011–2013). Unpublished data by other investigators are also included but only if verified by detailed photographs. In such cases plant species were identified by the authors. Information of authorships may be found on The Plant List ([www.theplantlist.org](http://www.theplantlist.org)) or on GRIN ([www.ars-grin.gov](http://www.ars-grin.gov)). The families recognized here are based on the findings in APG-III (2009).

### Results and Discussion

LFPs of 207 butterfly species (84 % of total species in Sri Lanka) are listed in this study with 785 plant-butterfly combinations. *Spalgis epeus epeus* larvae are feeding on mealy bugs (Woodhouse, 1949) and *Spindasis greeni* is assumed to feed on ant brood (van der Pootern & van der Pootern, 2012c). LFPs of 36 Sri Lankan species are yet to be discovered including some common butterflies such as *Appias albina swinhoe* and *Nacaduba beroe minima*. Six endemic species are included in

this undiscovered list. The other butterfly species are either highly localized (e.g. *Graphium antiphates ceylonicus*, *Libythea celtis leptoides*, *Lethe rohria neelgheriensis*, *Mycalesis rama*, *Prosotas noreia noreia*) or very rare and have not been observed more than half a dozen within the past decade (e.g. *Cepora nadina cingala* (D. Podduwage pers. Comm.), *Appias indra narendra*, *Junonia hierta hierta*, *Horaga onyx cingalensis*, *Horaga albimaculata viola*, *Tajuria arida*, *Rapala lankana* (M. wickramasinghe pers. Comm.), *Nacaduba ollyetti*, *Gangara lebadea subfasciata*, *Caprona alida lanka* (S. de Silva pers. Comm.), *Potanthus pallida* (G. van der Pootern, pers. Comm.) and *Potanthus pseudomaesa pseudomaesa*). *Spindasis nubilus* and *Rapala iarbus sorya* have not been recorded in recent years.

A total of 480 plant species (more than 11% of total plant species present in Sri Lanka) representing 70 families are recorded as butterfly LFPs in the current study, 462 species are identified to the species level while the remaining 18 are identified only to the genus or family level. In Sri Lanka, 124 plant species (more than 25% of total LFPs) listed in this document are exotic, introduced as ornamentals, food crops, medicinal plants, symbolic plants, cover crops, or weeds with some introduced more than 2000 years ago. LFPs for 77 butterfly species include at least one exotic plant. Most of the Sri Lankan butterfly LFPs belong to the family Fabaceae, presently 104 species. The Poaceae take second place by having 31 species. Similarly, these two families are also reported in the top rank in the studies carried out at Andaman, Nicobar Islands and Nagpur city in India (Veenakumari *et al.*, 1997; Tiple *et al.*, 2010). *Axonopus compressus* (Poaceae) is used by nine butterfly species, the highest number of butterflies on a single foodplant.

Though the impact of exotic plant introductions on the distribution and population size of butterflies cannot be precisely determined without detailed historical data, the number of exotic LFPs and the number of butterflies that use exotic plants as LFPs implies that these plants have a significant impact on recent changes in Sri Lankan butterfly populations. The recent introduction of the exotic *Plumbago capensis* as an ornamental plant likely resulted

in an increase in the population of *Leptotes plinius plinius* around Colombo, historically known from the dry zone (Woodhouse, 1949). *Cycas revoluta* is another introduced ornamental plant that is host to *Chilades pandava lanka*, even in the heart of the city of Colombo and is the only butterfly species in Sri Lanka that feeds on gymnosperms. *Graphium sarpedon teredon* and *Lampides boeticus* feed on the alien invasive species *Annona glabra* and *Ulex europaeus*, respectively. *Everes lacturnus lacturnus* has shifted to the recently introduced plant, *Desmodium uncinatum* (de Vlas & de Vlas, 2008) and now the butterfly is common along railroads and abandoned lands around Haputale (6.768°N, 80.957°E) and Bandarawela (6.830°N, 80.988°E) where the plant is naturalized.

Since the initial identification of *Catopsilia scylla* in 2008, it appears the species has extended its range to the Mid Hills (Jayasinghe *et al.*, 2013) and a breeding population has been observed on another exotic ornamental plant, *Senna divaricata*, at Laxapana (6.9271°N, 80.4841°E) in the western Mid Hills. Now it is also found commonly in eastern Mid Hills and it was observed laying eggs at Bandarawela on *S. spectabilis*, which is another exotic plant. The latter plant has become naturalized and spread up to Wellawaya and the butterfly also can be seen in between these locations. Recently it has been collected on a native plant – *Senna tora* – and successfully reared to adulthood. Hence its further spreading is expected into the dry zone, where *S. tora* is common. In a different example *Cephenes trichopepla* has adapted to a native plant, *Phoenix pusilla*, in the dry zone after it was initially found in the western wet zone around Colombo. It is a worthwhile study to recognize the status of the *Talicauda nyseus nyseus*, which was a common butterfly even in 1950's (Woodhouse, 1949). It's only known LFP in Sri Lanka is *Kalanchoe pinnata*, a native plant to Africa that is a now pantropical weed. There are only two other plant species of this family in Sri Lanka; *K. laciniata* and *K. floribunda* which are exceptionally rare in the wild (Dassanayake, 1999). Perhaps this butterfly also has come here with the introduced plant and then become naturalized or it was very rare before the introduction of *K. pinnata* and then became abundant as the exotic plant spread.

To date only four butterfly species were recorded to use a single LFP, each feeding on an exotic plant. *Charaxes solon cerynthus* feeds on *Tamarindus indica*, which was introduced to the Indian region at least 3000 years ago (de Vlas & de Vlas, 2008). The much rarer *Catapaecilma major myosotina* is regularly found to feed on a *Psidium guajava* in a home garden at Etampitiya (6.9381°N, 80.9870°E). It has shown a symbiotic relationship with a *Crematogaster* ant, and there may be other plants that are used by this butterfly when the ants are present. Though *Notocrypta curvifascia curvifascia* is found only to feed on *Zingiber zerumbet*, it is most probable that it has other native plants hosts since many Zingiberaceae species are found in the butterfly's habitat. The endemic *Ypthima singala* has been successfully reared on *Axonopus compressus* in the lab after collecting eggs found on an unknown grass; at present no native LFP is known. This butterfly must have a native LFP and further studies should carry out to reveal it. The other endemic butterfly recorded feeding on exotic plants is *Mycalesis subdita*, however, only under lab conditions.

Many cases are known for when native plants that were restricted to a certain region were then planted into another region and then became host to a new breeding population of a butterfly. For example, *Crataeva adansonii* is naturally restricted to the low country dry zone (Dassanayake, 1996), especially in coastal areas but it is occasionally planted in the wet zone due to its medicinal and ornamental value. *Appias lycnida taprobana* uses this plant as its sole LFP and is also restricted to breed in dry lowlands, however, it also disperses all over the country in migratory flights. A continuous breeding population of *A. lycnida* was observed from 2003–2007 on *C. adansonii* planted in the wet zone at Katubedda. Apparently *Appias* adults populated a new point locality discovered as a result of their migrating behavior. *Tylophora pauciflora* is a rare plant in the dry zone (Dassanayake, 1983), which is now commonly planted in gardens in Colombo and vicinity, for its green leaves. *Parantica aglea aglea* readily use this plant as a LFP in these areas. There are 41 plant species which are endemic to Sri Lanka among the 342 native plants that are recorded as LFPs. Additional studies on butterfly LFPs are needed in protected areas where remnants of pristine

habitats and the endemic flora could reveal new foodplant records.

Few butterfly caterpillars feed on economically important crops, but the impact on these crops by larvae are yet to be studied thoroughly. The main crop in Sri Lanka is rice, *Oryza sativa*, with production of 3,975,000 tons and covering 740,000 ha of land area (11.8% of the total land area of the country) in year 2012 (Department of census and statistics, Sri Lanka, 2013). Rice is a crop that is used by eight species of butterflies, the highest number of butterfly species associated with a agricultural commodity. However, to date all of the records of these larvae feeding on rice were obtained from observations in a no-pesticide paddy field at Haldummulla. Only *Parnara bada bada* has been seen in high numbers while other species were found in very limited numbers. *Vigna unguiculata* and *Phaseolus vulgaris* are two other commercial crops which are suitable for *Jamides bochus bochus* and *Jamides celeno tissama* all over the country and for *Euchrysops cnejus cnejus* in the dry zone. In fact, these three species are pests and farmers rely on pesticides to overcome their larvae.

Some papilionids such as *Papilio demoleus demoleus*, *Papilio polytes romulus* and *Papilio polymnestor parinda* feed on various planted *Citrus* species, but do not cause severe damages. Though *Virachola isocrates* is a pest of many fruits in India (Woodhouse, 1949), it is restricted in Sri Lanka to the fruits of naturally growing *Limonia acidissima*. *Eurema hecabe hecabe* has some negative impact on *Sesbania grandiflora* saplings, but the impact ceases once the plant is grown up to a few feet high because female butterflies never fly above such a heights to lay eggs. Though the larvae of *Jamides alecto melichius* consume seeds and flowers of *Elettaria cardamomum* it has not been observed that they are causing any significant damage. There are many other LFPs of this butterfly, in the vicinity of these plantations. *Cheritra freja pseudojafra* is recently found on *Cinnamomum verum*, but it is very unlikely to become a pest due to its scarcity. *Papilio clytia lankeswara* also feeds on *C. verum*, but its first preference is *Litsea glutinosa*, which is a common wild plant.

It is evident that most butterflies are restricted to certain species of plants save for few

exceptions. Only 37 butterfly species are using LFPs of more than one plant family. Generalist-feeders are indeed the minority. *Neptis hylas varmona* is in the top rank for having greatest number of LFPs (30 species; six families), which is followed by *Euploea core asela* (29 species; two families), *Jamides bochus bochus* (20 species; one family) and *Graphium agamemnon menides* (20 species; two families). Having such a large number of LFPs contributes to the large populations and wide distribution of these butterflies. Among these 37 generalist-feeding species many use closely related plant families. *Arhopala amantes amantes*, *Arhopala centaurus pirama*, and *Zesius chrysomallus* feed on many plants irrespective of the family, but always where the ant, *Oecophylla smaragdina*, is colonized.

Sixty-seven species out of total 207 butterfly species listed here are recorded only with one LFP each. However, we suspect there must be more than one larval food plant for many of them and further studies should be carried out to discover additional relationships. Notably, only a few species seem to be limited to a single plant. Among the 67 single LFP species, nine are endemic to Sri Lanka and it is unlikely to have more than one LFP for many of these species. Also, LFPs of only eight species were identified up to now out of 21 critically endangered species (van der Pootern, 2012). Five of these species are reported only with a single LFP. The distribution of the critically endangered *Phalanta alcippe ceylonica* in Sri Lanka is highly localized, where it is known from wet zone slopes of Knuckles Mountain Range (approx. 7.381°N, 80.851°E). Its sole LFP, *Rinorea decora*, is endemic to this mountain range (Dassanayake, 1996) and is exceptionally rare, treated as an “Extinct” species in the Red Data List, 2012. Recently, *Phalanta alcippe* was recorded in a forest patch within the premises of University of Sabaragamuwa (6.710°N, 80.791°E) (S. Morawaka pers. Comm. 2013), where it was previously mentioned only as “It has been taken very rarely in Rathnapura District” by Woodhouse (1949), with no exact location and with some uncertainty. Two other probable LFPs that can occur in the Rathnapura District are *R. virgata* and *R. bengalensis* which are treated as “Vulnerable” and “Extinct” respectively in Red Data List, 2012. Immediate remedial actions have to be taken to propagate

the plants of this genus to ensure the conservation of this unique butterfly.

Recently, the critically endangered *Catochrysops panormus panormus* was found feeding on *Flemingia macrophylla*, previously treated as “possibly extinct” in Red Data list, 2012. This plant is quite common in that location, but we have only seen a single plant cluster beyond this location. Another six critically endangered butterfly species are using fairly common plants as their LFPs. Detailed studies on micro requirements are of prime importance to conserve both these endemic and critically endangered species.

The listing of LFPs for butterflies remains a work-in-progress. New records are yet to be discovered, including, the recording of LFPs for the remaining butterflies with no known food plants and additional LFPs for butterflies with already known LFPs and to determine micro requirements of those butterflies such as food preference, micro habitat requirements, symbiotic relationship with ants, parasitism, and the population dynamics of butterflies in relation to life cycle dynamics of their LFPs. There is a possibility of adding numerous Poaceae species to the list, since we did not pay much attention to this family due to difficulties in identification of species. Finally, it is recommended that government agencies and other interested parties use these research data in their conservation management of the butterfly fauna in Sri Lanka.

#### Acknowledgements

We thank van der Pootern for valuable advice, information both in the field and preparation the manuscript; van der Pootern, S. Karunaarachchi, A. Keshan, S. Gunasena, L. Aberathne, R. Samanmalee, T. Ranasinghe, S. Wellappuliarachchi, D. Danushka, H. Kularathne, I. Wijewardhane, M. Wickramasinghe, S. Morawaka, D. Podduwage, and S. de Silva for personal communications; J. de Vlas for generous help in identification of some plants; and S. Thrikawala for the help in writing the manuscript. We also thank the Department of Wildlife Conservation and the Department of Forest Conservation, Sri Lanka for giving permission to conduct this research.

#### Literature cited

APG III [Bremer, B., K. Bremer, M. W. Chase, M. F. Fay, J. L. Reveal, D. E. Soltis, P. S. Soltis, and P. F. Stevens (comp.)]. 2009. An update of the Angiosperm Phylogeny Group classification for the orders and families of flowering plants: APG III. *Botanical Journal of the Linnean Society*, 161: 105–121.

Bernays, E. and R. Chapman, 1994. *Host-Plant Selection by Phytophagous Insects*. Chapman and Hall Publication, London.

Boppré, M., 1984. Chemically mediated interactions between butterflies. Pp. 259–275. In: Vane-Wright, R. I., and P. R. Ackery (eds.). *The Biology of Butterflies*. Royal Entomological Society, London.

d’Abrera, B., 1998. *The Butterflies of Ceylon*. Wildlife Heritage Trust, Colombo, Sri Lanka.

Dassanayake, M. D. (ed.), 1980. *A Revised Handbook to the Flora of Ceylon*, Vol. 1. Amerind Publishing Co. Pvt. Ltd., New Delhi, India.

Dassanayake, M. D. (ed.), 1981a. *A Revised Handbook to the Flora of Ceylon*, Vol. 2. Oxford and IBH Publishing Co., New Delhi, India.

Dassanayake, M. D. (ed.), 1981b. *A Revised Handbook to the Flora of Ceylon*, Vol. 3. Oxford and IBH Publishing Co., New Delhi, India.

Dassanayake, M. D. (ed.), 1983. *A Revised Handbook to the Flora of Ceylon*, Vol. 4. Amerind Publishing Co. Pvt. Ltd., New Delhi, India.

Dassanayake, M. D. (ed.), 1985. *A Revised Handbook to the Flora of Ceylon*, Vol. 5. Oxford and IBH Publishing Co., New Delhi, India.

Dassanayake, M. D. (ed.), 1987. *A Revised Handbook to the Flora of Ceylon*, Vol. 6. Oxford and IBH Publishing Co., New Delhi, India.

Dassanayake, M. D. (ed.), 1991. *A Revised Handbook to the Flora of Ceylon*, Vol. 7. Amerind Publishing Co. Pvt. Ltd., New Delhi, India.

Dassanayake, M. D. (ed.), 1994. *A Revised Handbook to the Flora of Ceylon*, Vol. 8. Oxford and IBH Publishing Co., New Delhi, India.

- Dassanayake, M. D. (ed.), 1995. *A Revised Handbook to the Flora of Ceylon*, Vol. 9. Amerind Publishing Co. Pvt. Ltd., New Delhi, India.
- Dassanayake, M. D. (ed.), 1996. *A Revised handbook to the flora of Ceylon*, Vol. 10, Oxford and IBH Publishing Co., New Delhi, India.
- Dassanayake, M. D. (ed.), 1997. *A Revised Handbook to the Flora of Ceylon*, Vol. 11. Oxford and IBH Publishing Co., New Delhi, India.
- Dassanayake, M. D. (ed.), 1998. *A Revised Handbook to the Flora of Ceylon*, Vol. 12. Oxford & IBH Publishing Co., New Delhi, India.
- Dassanayake, M. D. (ed.) 1999. *A Revised Handbook to the Flora of Ceylon*, Vol. 13. Oxford & IBH Publishing Co., New Delhi, India.
- Dassanayake, M. D. (ed.), 2000. *A Revised Handbook to the Flora of Ceylon*, Vol. 14. Oxford and IBH Publishing Co., New Delhi, India.
- Department of Census and Statistics, Sri Lanka, 2013. <<http://www.statistics.gov.lk/agriculture/Paddy%20Statistics/PaddyStats.htm>>, accessed 12 October 2013.
- Dias, R. K. S., 2002. *Ants of Sri Lanka*. Vishva Lekah Publishers, Ratmalana, Sri Lanka.
- Ehrlich, P. R. and D. D. Murphy, 1988. Plant chemistry and host range in insect herbivores. *Ecology*, 69: 908–909.
- Fernando, S. S. and P. Ormerod, 2008. An annotated checklist of the orchids of Sri Lanka, *Rheedia*, 18: 1–28.
- Jayasinghe, H. D., C. de Alwis, and S. S. Rajapakshe, 2013. Sri Lankan butterflies, a website. <<http://www.slbutterflies.com>>, accessed 12 October 2013.
- Jayasinghe, H. D., C. de Alwis, and S. S. Rajapaksha, 2013. *A Pocket Guide to the Butterflies of Sri Lanka*. Butterfly Conservation Society of Sri Lanka, Colombo.
- Kawahara A. Y., 2013. Systematic revision and review of the extant and fossil snout butterflies (Lepidoptera: Nymphalidae: Libytheinae). *Zootaxa*, 3631: 01–74.
- Kunte, K., 2000. *Butterflies of Peninsular India*. Universities Press (India) Ltd., Hyderabad. India.
- Moore, F., 1880. *The Lepidoptera of Ceylon*. Vol. I. L. Reeve and Co., London.
- Moore, F., 1884–1887. *The Lepidoptera of Ceylon*. Vol. III. L. Reeve and Co., London.
- Ormiston, W., 1924. *The Butterflies of Ceylon*. H. W. Cave and Co., Colombo.
- Robinson, G. S., P. R. Ackery, I. J. Kitching, G. W. Beccaloni, and L. M. Hernández, 2010. HOSTS - A database of the world's Lepidopteran hostplants. Natural History Museum, London. <<http://www.nhm.ac.uk/hosts>>, accessed 29 September 2013.
- Senarathna, L. K., 2001. *A Check List of the Flowering Plants of Sri Lanka*. National Science Foundation, Colombo, Sri Lanka.
- Tiple, A. D., A. M. Khurad, and R. L. H. Dennis, 2010. Butterfly larval host plant use in a tropical urban context: Life history associations, herbivory, and landscape factors. *Journal of Insect Science*, 11: 1–21.
- van der Poorten, G., 2012. The taxonomy and conservation status of the butterflies of Sri Lanka. Pp. 26–41. In: D. K. Weerakoon and S. Wijesundara (eds.), *The National Red List 2012 of Sri Lanka; Conservation Status of the Fauna and Flora*. Ministry of Environment, Colombo.
- van der Poorten, G. and N. van der Poorten, 2011a. New and revised descriptions of the immature stages of some butterflies in Sri Lanka and their larval food plants (Lepidoptera: Nymphalidae). Part 1: Sub-family Danainae. *The Journal of Research on the Lepidoptera*, 44: 1–16.
- van der Poorten, G. and N. van der Poorten, 2011b. New and revised descriptions of the immature stages of some butterflies in Sri Lanka and their larval food plants (Lepidoptera: Papilionidae). *The Journal of Research on the Lepidoptera*, 44: 111–127.
- van der Poorten, G. and N. van der Poorten, 2012a. *Catopsilia scylla* (Linnaeus, 1763): A new record for Sri Lanka with notes on its biology, life history and distribution (Lepidoptera: Pieridae). *The Journal of Research on the Lepidoptera*, 45: 17–23.

- van der Poorten, G. and N. van der Poorten, 2012b. New and revised descriptions of the immature stages of some butterflies in Sri Lanka and their larval food plants (Lepidoptera: Nymphalidae). Part 2: Subfamily Satyrinae. *Tropical Lepidoptera*, 22: 80–92.
- van der Poorten, G. and N. van der Poorten, 2012c. The biology of *Spindasis greeni* Heron, 1896 and a review of the genus *Spindasis* in Sri Lanka (Lepidoptera: Lycaenidae). *The Journal of Research on the Lepidoptera*, 45: 119–133.
- van der Poorten, G. and N. van der Poorten, 2012d. *Cephrenes trichopepla* (Lower, 1908): A new record for Sri Lanka with notes on its biology, life history and distribution (Lepidoptera: Hesperidae). *Tijdschrift voor Entomologie*, 156: 95–101.
- van der Poorten, G. and N. van der Poorten, 2013a. New and revised descriptions of the immature stages of some butterflies in Sri Lanka and their larval food plants (Lepidoptera: Lycaenidae). Part 1: Polyommatainae and Theclinae, in part. *The Journal of Research on the Lepidoptera*, 46: 25–49.
- van der Poorten, G. and N. van der Poorten, 2013b. New and revised descriptions of the immature stages of some butterflies in Sri Lanka and their larval food plants (Lepidoptera : Pieridae). Part 1 : Subfamilies Pierini (in part) and Coliadinae. *Tropical Lepidoptera*, 23: 22–31.
- van Nieuwerkerken, E. K., L. Kaila, I. J. Kitching, N. P. Kristensen, D. C. Lees, J. Minet, C. Mitter, M. Mutanen, J. C. Regier, T. J. Simonsen, N. Wahlberg, S. H. Yen, R. Zahiri, D. Adamski, J. Baixeras, D. Bartsch, B. A. Bengtsson, J. W. S. R. Brown, D. R. Bucheli, J. Davis, W. De Prins, M. E. De Prins, P. Epstein, C. Gentili-Poole, P. Gielis, A. Hättenschwiler, J. D. Hausmann, A. Holloway, O. Kallies, A. Y. Karsholt, S. J. C. Kawahara, M. Koster, V. Kozlov, J. D. Lafontaine, G. Lamas, J. F. Landry, S. Lee, M. Nuss, K. T. Park, C. Penz, J. Rota, A. Schintlmeister, B. C. Schmidt, J. C. Sohn, M. A. Solis, G. M. Tarmann, A. D. Warren, S. Weller, R. V. Yakovlev, V. V. Zolotuhin, and A. Zwick, 2011. Order Lepidoptera Linnaeus, 1758. In: Zhang, Z.-Q. (ed.) Animal biodiversity: An outline of higher-level classification and survey of taxonomic richness. *Zootaxa*, 3148: 212–221.
- Vane-Wright, R. I., 1978. Ecological and behavioural origins of diversity in butterflies. Pp. 56–70. In: Mound, L. A., and N. Waloff (eds.). *Diversity of Insect faunas*. Oxford University press, Blackwell Publishers: 56–70.
- Veenakumari, K., P. Mohanraj, and P. V. Sreekumar, 1997. Host plant utilization by butterfly larvae in the Andaman and Nicobar Islands (Indian Ocean). *Journal of Insect Conservation*, 1: 235–46.
- Vlas, J. and J. Vlas, 2008. *Illustrated Field Guide to the Flowers of Sri Lanka*, Volume I. Mark Booksellers and Distributors (Pvt) Ltd, Kandy.
- Ward, L. K. and D. F. Spalding, 1993. Phytophagous British insects and mites and their food-plant families: Total numbers and polyphagy. *Biological Journal of the Linnean Society*, 49: 257–276.
- Woodhouse, L. G. O., 1949. *The butterfly fauna of Ceylon*. Second Complete Edition. The Colombo Apothecaries' Co. Ltd., Colombo.
- Wiklund, C., 1975. The evolutionary relationship between adult oviposition preferences and larval host plant range in *Papilio machaon* L. *Oecologia*, 18: 185–197.
- Wiklund, C., 1984. Egg-laying patterns in butterflies in relation to their phenology and the visual apparency and abundance of their host plants. *Oecologia*, 63: 23–29.



FOOD PLANTS UTILIZATION OF SRI LANKAN BUTTERFLY LARVAE

**Appendix 1:** Larval food plants of butterflies of Sri Lanka (\*see editor's end note below); \*\*, reported for the first time in Sri Lanka as a feeding plant; \*, conformations of previous studies during this study; L, leaves; S, green stem; F, flowers / flower pods; R, exposed or ariel roots; I, Inflorescence; Im, immature; Mt, mature; <sup>En</sup>, endemic; <sup>In</sup>: Indigenous, <sup>Ex</sup>: Exotic; PC, Personal Communication.

Butterfly species	Feeding plant species	Plant family	Feeding part	Note
<b>Papilionidae</b>				
<i>Troides darsius</i>	<i>Aristolochia indica</i> * <sup>In</sup>	Aristolochiaceae	L, S	
<i>Pachliopta hector</i>	<i>Aristolochia bracteolata</i> * <sup>In</sup>	Aristolochiaceae	L, S, F	
	<i>Aristolochia indica</i> * <sup>In</sup>			
	<i>Aristolochia ringens</i> * <sup>Ex</sup>			
<i>Pachliopta jophon</i>	<i>Thottea siliquosa</i> * <sup>In</sup>	Aristolochiaceae	L	
<i>Pachliopta aristolochiae ceylonica</i>	<i>Aristolochia bracteolata</i> * <sup>In</sup>	Aristolochiaceae	L, S	
	<i>Aristolochia indica</i> * <sup>In</sup>			
	<i>Aristolochia ringens</i> * <sup>Ex</sup>			
	<i>Thottea siliquosa</i> * <sup>In</sup>		L	
<i>Papilio crino</i>	<i>Chloroxylon swietenia</i> * <sup>In</sup>	Rutaceae	L	
	<i>Clausena indica</i> <sup>In</sup>			
	<i>Toddalia asiatica</i> <sup>In</sup>			
<i>Papilio demoleus demoleus</i>	<i>Cullen corylifolium</i> * <sup>In</sup>	Fabaceae	L	PC: S. Umesh
	<i>Aegle marmelos</i> * <sup>Ex</sup>	Rutaceae		
	<i>Atalantia ceylanica</i> ** <sup>In</sup>			
	<i>Chloroxylon swietenia</i> * <sup>In</sup>			
	<i>Citrus aurantiifolia</i> * <sup>Ex</sup>			
	<i>Citrus limon</i> * <sup>Ex</sup>			
	<i>Citrus sinensis</i> ** <sup>Ex</sup>			
	<i>Euodia suaveolens</i> ** <sup>Ex</sup>			
	<i>Glycosmis pentaphylla</i> * <sup>In</sup>			
	<i>Limonia acidissima</i> * <sup>In</sup>			
	<i>Pamburus missionis</i> ** <sup>In</sup>			
<i>Papilio helenus mooreanus</i>	<i>Citrus japonica</i> ** <sup>Ex</sup>	Rutaceae	L	
	<i>Toddalia asiatica</i> * <sup>In</sup>			
	<i>Zanthoxylum tetraspermum</i> ** <sup>In</sup>			
<i>Papilio polytes romulus</i>	<i>Atalantia ceylanica</i> * <sup>In</sup>	Rutaceae	L	
	<i>Citrus aurantiifolia</i> * <sup>Ex</sup>			
	<i>Citrus limon</i> * <sup>Ex</sup>			
	<i>Citrus maxima</i> ** <sup>Ex</sup>			
	<i>Citrus sinensis</i> * <sup>Ex</sup>			
	<i>Glycosmis angustifolia</i> ** <sup>In</sup>			
	<i>Glycosmis mauritiana</i> ** <sup>In</sup>			
	<i>Glycosmis pentaphylla</i> * <sup>In</sup>			
	<i>Limonia acidissima</i> ** <sup>In</sup>			
	<i>Micromelum minutum</i> * <sup>En</sup>			
	<i>Murraya koenigii</i> * <sup>In</sup>			
	<i>Murraya paniculata</i> ** <sup>In</sup>			
	<i>Pleiospermium alatum</i> * <sup>In</sup>			
<i>Toddalia asiatica</i> * <sup>In</sup>				
<i>Papilio polymnestor parinda</i>	<i>Atalantia ceylanica</i> * <sup>In</sup>	Rutaceae	L	
	<i>Atalantia monophylla</i> <sup>In</sup>			
	<i>Atalantia rotundifolia</i> ** <sup>In</sup>			
	<i>Citrus aurantiifolia</i> * <sup>Ex</sup>			
	<i>Citrus maxima</i> <sup>Ex</sup>			
	<i>Citrus reticulata</i> <sup>Ex</sup>			
	<i>Citrus sinensis</i> * <sup>Ex</sup>			
<i>Paramignya monophylla</i> * <sup>In</sup>				
<i>Papilio clytia lankeswara</i>	<i>Alseodaphne semecarpifolia</i> ** <sup>In</sup>	Lauraceae	L	
	<i>Cinnamomum verum</i> * <sup>In</sup>			
	<i>Litsea glutinosa</i> * <sup>In</sup>			

	<i>Litsea longifolia</i> **En			
	<i>Neolitsea cassia</i> **In			
<i>Graphium sarpedon teredon</i>	<i>Actinodaphne stenophylla</i> **En	Lauraceae	L	
	<i>Cinnamomum cappara-coronde</i> En			
	<i>Cinnamomum dubium</i> En			
	<i>Cinnamomum ovalifolium</i> **En			
	<i>Cinnamomum verum</i> *In			
	<i>Litsea gardneri</i> **En			
	<i>Neolitsea cassia</i> *In			
	<i>Neolitsea fuscata</i> *En			
<i>Graphium doson doson</i>	<i>Miliusa indica</i> In	Annonaceae	L	Only in the lab
	<i>Polyalthia korinti</i> *In			
	<i>Uvaria macropoda</i> *In			
<i>Graphium agamemnon menides</i>	<i>Annona cherimola</i> *Ex	Annonaceae	L	
	<i>Annona glabra</i> *Ex			
	<i>Annona muricata</i> *Ex			
	<i>Annona reticulata</i> *Ex			
	<i>Annona squamosa</i> *Ex			
	<i>Artabotrys hexapetalus</i> *In			
	<i>Artabotrys zeylanicus</i> **In			
	<i>Miliusa indica</i> *In			
	<i>Miliusa tomentosa</i> *In			
	<i>Persea americana</i> *Ex			
	<i>Polyalthia cerasoides</i> *In			
	<i>Polyalthia korinti</i> **In			
	<i>Polyalthia longifolia</i> **In			
	<i>Polyalthia suberosa</i> *In			
	<i>Uvaria macropoda</i> *In			
	<i>Uvaria narum</i> **In			
	<i>Uvaria semecarpifolia</i> **En			
	<i>Uvaria sphenocarpa</i> *En			
	<i>Xylopia championii</i> **En			
<i>Magnolia champaca</i> *In	Magnoliaceae			
<i>Graphium nomius nomius</i>	<i>Miliusa tomentosa</i> *In	Annonaceae	L	
<b>Pieridae</b>				
<i>Leptosia nina nina</i>	<i>Cardamine hirsuta</i> **In	Brassicaceae	L	
	<i>Nasturtium officinale</i> **Ex	Capparaceae		
	<i>Capparis zeylanica</i> **In			
	<i>Cleome gynandra</i> **In	Cleomaceae		
	<i>Cleome rutidosperma</i> **Ex			
	<i>Cleome viscosa</i> **In			
<i>Delias eucharis</i>	<i>Dendrophthoe falcata</i> **In	Loranthaceae	L	
	<i>Dendrophthoe ligulatus</i> **En			
	<i>Dendrophthoe neelgherrensis</i> **In			
	<i>Scurrula cordifolia</i> **En			
	<i>Scurrula parasitica</i> **In			
	<i>Taxillus tomentosus</i> **In			
<i>Prioneris sita</i>	<i>Capparis moonii</i> **In	Capparaceae	L	
<i>Belenois aurota taprobana</i>	<i>Cadaba trifoliata</i> **In	Capparaceae	L	PC: v. Pootern
	<i>Capparis grandis</i> **In			
	<i>Capparis sepiaria</i> **In			
	<i>Capparis zeylanica</i> **In			
	<i>Maerua arenaria</i> **In			
<i>Cepora nerissa phryne</i>	<i>Capparis brevispina</i> **In	Capparaceae	L	
	<i>Capparis grandis</i> **In			
	<i>Capparis moonii</i> **In			
	<i>Capparis roxburghii</i> **In			
	<i>Capparis sepiaria</i> **In			

FOOD PLANTS UTILIZATION OF SRI LANKAN BUTTERFLY LARVAE

	<i>Capparis zeylanica</i> <sup>** In</sup>			
	<i>Crateva adansonii</i> <sup>** In</sup>			
<i>Appias libythea libythea</i>	<i>Cadaba fruticosa</i> <sup>In</sup>	Capparaceae	L	
	<i>Capparis grandis</i> <sup>* In</sup>			
	<i>Capparis roxburghii</i> <sup>In</sup>			
	<i>Crateva adansonii</i> <sup>* In</sup>			
	<i>Crateva adansonii</i> <sup>* In</sup>			
<i>Appias lyncida taprobana</i>	<i>Crateva adansonii</i> <sup>* In</sup>	Capparaceae	L	
<i>Appias galene</i>	<i>Drypetes gardneri</i> <sup>** En</sup>	Putranjivaceae	Im L	found only ovipositing
	<i>Drypetes sepiaria</i> <sup>* In</sup>			
<i>Ixias marianne</i>	<i>Capparis brevispina</i> <sup>** In</sup>	Capparaceae	L	
	<i>Capparis grandis</i> <sup>** In</sup>			
	<i>Capparis sepiaria</i> <sup>** In</sup>			
<i>Ixias pyrene cingalensis</i>	<i>Capparis grandis</i> <sup>** In</sup>	Capparaceae	L	
	<i>Capparis sepiaria</i> <sup>** In</sup>			
<i>Hebomoia glaucippe ceylonica</i>	<i>Capparis moonii</i> <sup>** In</sup>	Capparaceae	L	
<i>Catopsilia pyranthe pyranthe</i>	<i>Cassia fistula</i> <sup>* Ex</sup>	Fabaceae	L	
	<i>Cassia roxburghii</i> <sup>** In</sup>			
	<i>Senna alata</i> <sup>* Ex</sup>			
	<i>Senna auriculata</i> <sup>* In</sup>			
	<i>Senna didymobotrya</i> <sup>** Ex</sup>			
	<i>Senna hirsuta</i> <sup>** In</sup>			
	<i>Senna occidentalis</i> <sup>* In</sup>			
	<i>Senna surattensis</i> <sup>Ex</sup>			
	<i>Senna tora</i> <sup>* In</sup>			
<i>Catopsilia pomona pomona</i>	<i>Cassia fistula</i> <sup>* Ex</sup>	Fabaceae	L	
	<i>Cassia grandis</i> <sup>* Ex</sup>			
	<i>Cassia javanica</i> <sup>* Ex</sup>			
	<i>Cassia roxburghii</i> <sup>* In</sup>			
	<i>Senna alata</i> <sup>* Ex</sup>			
	<i>Senna didymobotrya</i> <sup>* Ex</sup>			
	<i>Senna surattensis</i> <sup>Ex</sup>			
<i>Catopsilia scylla</i>	<i>Cassia auriculata</i> <sup>In</sup>	Fabaceae	L	found only ovipositing
	<i>Senna divaricata</i> <sup>** Ex</sup>			
	<i>Senna spectabilis</i> <sup>** Ex</sup>			found only ovipositing
	<i>Senna surattensis</i> <sup>* Ex</sup>			
	<i>Senna tora</i> <sup>** In</sup>			PC: N. Chaturanga
<i>Pareronia ceylanica ceylanica</i>	<i>Capparis zeylanica</i> <sup>** In</sup>	Capparaceae	Mt L	
<i>Colotis amata modesta</i>	<i>Azima tetraantha</i> <sup>** In</sup>	Salvadoraceae	L	
	<i>Salvadora persica</i> <sup>** In</sup>			
<i>Colotis fausta fulvia</i>	<i>Maerua arenaria</i> <sup>** In</sup>	Capparaceae	L	
<i>Colotis danae danae</i>	<i>Cadaba fruticosa</i> <sup>** In</sup>	Capparaceae	L	
<i>Colotis aurora</i>	<i>Cadaba fruticosa</i> <sup>** In</sup>	Capparaceae	L	
<i>Colotis etrida</i>	<i>Maerua arenaria</i> <sup>** In</sup>	Capparaceae	L	
<i>Eurema brigitta rubella</i>	<i>Chamaecrista auricoma</i> <sup>** In</sup>	Fabaceae	L	
	<i>Chamaecrista kleinii</i> <sup>* In</sup>			
	<i>Chamaecrista mimosoides</i> <sup>* In</sup>			
	<i>Chamaecrista nictitans</i> <sup>** In</sup>			
	<i>Chamaecrista</i> sp. <sup>**</sup>			
<i>Eurema laeta rama</i>	<i>Chamaecrista auricoma</i> <sup>** In</sup>	Fabaceae	L	
	<i>Chamaecrista kleinii</i> <sup>* In</sup>			
	<i>Chamaecrista mimosoides</i> <sup>* In</sup>			
	<i>Chamaecrista nictitans</i> <sup>** In</sup>			
<i>Eurema hecabe hecabe</i>	<i>Acacia eburnea</i> <sup>* In</sup>	Fabaceae	L	
	<i>Acacia leucophloea</i> <sup>In</sup>			
	<i>Aeschynomene americana</i> <sup>* Ex</sup>			
	<i>Aeschynomene aspera</i> <sup>* In</sup>			
	<i>Aeschynomene indica</i> <sup>** In</sup>			
	<i>Albizia chinensis</i> <sup>** Ex</sup>			

	<i>Albizia lebbeck</i> <sup>**In</sup>			
	<i>Albizia odoratissima</i> <sup>In</sup>			
	<i>Caesalpinia hymenocarpa</i> <sup>**In</sup>			
	<i>Caesalpinia pulcherrima</i> <sup>**Ex</sup>			
	<i>Cassia roxburghii</i> <sup>**In</sup>			
	<i>Pithecellobium dulce</i> <sup>*Ex</sup>			
	<i>Senna alata</i> <sup>**Ex</sup>			
	<i>Senna tora</i> <sup>*In</sup>			
	<i>Sesbania bispinosa</i> <sup>**In</sup>			
	<i>Sesbania grandiflora</i> <sup>*Ex</sup>			
	<i>Sesbania speciosa</i> <sup>**Ex</sup>			
	<i>Sesbania</i> sp. <sup>**</sup>			
	<i>Vachellia nilotica</i> <sup>Ex</sup>			
<i>Eurema blanda citrina</i>	<i>Albizia chinensis</i> <sup>**Ex</sup>	Fabaceae	L	
	<i>Albizia lebbeck</i> <sup>**In</sup>			
	<i>Albizia odoratissima</i> <sup>In</sup>			
	<i>Archidendron bigeminum</i> <sup>*En</sup>			
	<i>Caesalpinia bonduc</i> <sup>**In</sup>			
	<i>Caesalpinia hymenocarpa</i> <sup>**In</sup>			
	<i>Cassia fistula</i> <sup>*Ex</sup>			
	<i>Entada rheedii</i> <sup>*In</sup>			
	<i>Falcataria moluccana</i> <sup>*Ex</sup>			
	<i>Senna alata</i> <sup>**Ex</sup>			
	<i>Senna surattensis</i> <sup>*Ex</sup>			
	<i>Calliandra surinamensis</i> <sup>*Ex</sup>			
<i>Eurema ormistoni</i>	<i>Ventilago gamblei</i> <sup>*In</sup>	Rhamnaceae	Im L	
	<i>Ventilago maderaspatana</i> <sup>*In</sup>			
<b>Nymphalidae</b>				
<i>Idea iasonia</i>	<i>Parsonsia alboflavescens</i> <sup>*In</sup>	Apocynaceae	L	
<i>Ideopsis similis exprompta</i>	<i>Parsonsia alboflavescens</i> <sup>In</sup>	Apocynaceae	L	found only ovipositing
	<i>Tylophora indica</i> <sup>*In</sup>			
<i>Tirumala limniace exoticus</i>	<i>Dregea volubilis</i> <sup>*In</sup>	Apocynaceae	L	
<i>Tirumala septentrionis musikanos</i>	<i>Dregea volubilis</i> <sup>*In</sup>	Apocynaceae	L	only in the lab
	<i>Heterostemma tanjorensis</i> <sup>*In</sup>			
	Unidentified sp.			
<i>Parantica aglea aglea</i>	<i>Ceropegia candelabrum</i> <sup>**In</sup>	Apocynaceae	L	
	<i>Heterostemma tanjorensis</i> <sup>*In</sup>			
	<i>Tylophora indica</i> <sup>*In</sup>			
	<i>Tylophora flexuosa</i> <sup>*In</sup>			
	<i>Tylophora multiflora</i> <sup>**In</sup>			
	<i>Tylophora pauciflora</i> <sup>**In</sup>			
<i>Parantica taprobana</i>	<i>Ceropegia elegans</i> <sup>**In</sup>	Apocynaceae	L, F	
	<i>Cynanchum alatum</i> <sup>In</sup>		L	
	<i>Tylophora cordifolia</i> <sup>In</sup>			
	<i>Tylophora multiflora</i> <sup>**In</sup>			
	<i>Tylophora pauciflora</i> <sup>In</sup>			
	<i>Tylophora</i> sp.			
<i>Danaus chrysippus chrysippus</i>	<i>Asclepias curassavica</i> <sup>*Ex</sup>	Apocynaceae		L
	<i>Calotropis gigantea</i> <sup>*In</sup>		L, F	
	<i>Cynanchum tunicatum</i> <sup>**In</sup>		L	
	<i>Gomphocarpus physocarpus</i> <sup>*Ex</sup>			
	<i>Pentatropis capensis</i> <sup>*In</sup>			
	<i>Pergularia daemia</i> <sup>**In</sup>			
<i>Danaus genutia genutia</i>	<i>Cynanchum tunicatum</i> <sup>*In</sup>	Apocynaceae	L	
	<i>Holostemma ada-kodien</i> <sup>**In</sup>			
	<i>Oxystelma esculentum</i> <sup>*In</sup>			
	<i>Pentatropis capensis</i> <sup>**In</sup>			
	<i>Tylophora tenuissima</i> <sup>In</sup>			

FOOD PLANTS UTILIZATION OF SRI LANKAN BUTTERFLY LARVAE

<i>Euploea core asela</i>	<i>Adenium obesum</i> *Ex	Apocynaceae	Im L	PC: S.Gunasena																	
	<i>Aganosma cymosa</i> **In		L																		
	<i>Allamanda cathartica</i> Ex				L																
	<i>Anodendron paniculatum</i> **In					L															
	<i>Asclepias curassavica</i> **Ex						L														
	<i>Carissa spinarum</i> **In							L													
	<i>Cryptolepis dubia</i> *In								L												
	<i>Gomphocarpus physocarpus</i> Ex									L											
	<i>Hemidesmus indicus</i> *In										L										
	<i>Ichnocarpus frutescens</i> *In											L									
	<i>Leptadenia reticulata</i> **In												L								
	<i>Mandevilla boliviensis</i> **Ex													L							
	<i>Nerium oleander</i> *Ex														L						
	<i>Ochrosia oppositifolia</i> *In															L					
	<i>Parsonsia alboflavescens</i> *In																L				
	<i>Pentalinon luteum</i> **Ex																	L			
	<i>Pentatropis capensis</i> *In																		L		
	<i>Plumeria rubra</i> Ex																			L	
	<i>Ficus arnottiana</i> **In																				L
	<i>Ficus benghalensis</i> **In																				
<i>Ficus benjamina</i> *Ex	Moraceae	L	PC: L. Aberathne																		
<i>Ficus exasperata</i> **In																					
<i>Ficus microcarpa</i> **In																					
<i>Ficus nervosa</i> **In																					
<i>Ficus pumila</i> Ex																					
<i>Ficus racemosa</i> **In																					
<i>Ficus religiosa</i> *Ex																					
<i>Ficus tinctoria</i> **In																					
<i>Streblus asper</i> **In																					
<i>Euploea sylvester montana</i>				<i>Gymnema sylvestre</i> In	Apocynaceae	L															
<i>Euploea phaenareta corus</i>				<i>Cerbera odollam</i> *In	Apocynaceae	L															
<i>Euploea klugii sinhala</i>				<i>Streblus asper</i> *In	Moraceae	L															
<i>Ariadne ariadne minorata</i>				<i>Tragia hispida</i> **In	Euphorbiaceae	L															
				<i>Tragia involucrata</i> **In																	
	<i>Tragia plukenetii</i> **In																				
<i>Ariadne merione taprobana</i>	<i>Tragia hispida</i> **In	Euphorbiaceae	L																		
	<i>Tragia involucrata</i> **In																				
<i>Byblia ilithyia</i>	<i>Tragia plukenetii</i> **In	Euphorbiaceae	L																		
<i>Cupha erymanthis placida</i>	<i>Flacourtia indica</i> **In	Salicaceae	L																		
	<i>Homalium ceylanicum</i> **In		Im L																		
	<i>Scolopia acuminata</i> **In																				
<i>Phalanta phalantha phalantha</i>	<i>Hydnocarpus venenata</i> **En	Achariaceae	L																		
	<i>Dovyalis hebecarpa</i> **En	Salicaceae																			
	<i>Flacourtia indica</i> **In																				
	<i>Flacourtia jangomas</i> **Ex																				
	<i>Scolopia acuminata</i> **In				Im L																
<i>Phalanta alcippe ceylonica</i>	<i>Rinorea decora</i> **En	Violaceae	L	PC: v. Pootern																	
<i>Cirrochroa thais lanka</i>	<i>Hydnocarpus venenata</i> **En	Achariaceae	L																		
<i>Cethosia nietneri nietneri</i>	<i>Adenia hondala</i> **In	Passifloraceae	L																		
<i>Argynnis hyperbius taprobana</i>	<i>Viola betonicifolia</i> *In	Violaceae	L																		
	<i>Viola pilosa</i> **In																				
<i>Vanessa indica nubicola</i>	<i>Girardinia diversifolia</i> **In	Urticaceae	L																		
	<i>Urtica urens</i> **Ex																				
<i>Vanessa cardui</i>	<i>Anaphalis subdecurrens</i> *In	Asteraceae	L																		
<i>Kaniska canace haronica</i>	<i>Smilax perfoliata</i> **In	Smilacaceae	L																		
	<i>Smilax zeylanica</i> **In																				
<i>Junonia lemonias vaisya</i>	<i>Barleria prionitis</i> **In	Acanthaceae	L																		
	<i>Hygrophila auriculata</i> **In																				

	<i>Lindernia rotundifolia</i> ** In	Linderniaceae		
<i>Junonia orithya patenas</i>	<i>Justicia procumbens</i> * In	Acanthaceae	L	
	<i>Lindernia pusilla</i> ** In	Linderniaceae		
	<i>Centranthera indica</i> ** In	Orobanchaceae		only in the lab
<i>Junonia atlites</i>	<i>Hygrophila auriculata</i> ** In	Acanthaceae	L	
	<i>Lindernia anagallis</i> ** In	Linderniaceae		
	<i>Lindernia crustacea</i> ** In			
	<i>Lindernia pusilla</i> ** In			
	<i>Lindernia antipoda</i> ** In			
<i>Junonia iphita pluviatilis</i>	<i>Barleria prionitis</i> ** In	Acanthaceae	L	
	<i>Ruellia patula</i> ** In			
	<i>Ruellia prostrata</i> ** In			
	<i>Eranthemum capense</i> ** In			
	<i>Phaulopsis imbricata</i> ** In			
	<i>Strobilanthes diandra</i> ** En			
<i>Junonia almana almana</i>	<i>Hygrophila auriculata</i> ** In	Acanthaceae	L	
	<i>Ruellia tuberosa</i> ** Ex	Linderniaceae		
	<i>Lindernia anagallis</i> ** In			
	<i>Lindernia pusilla</i> ** In			
	<i>Phyla nodiflora</i> ** In			Verbenaceae
<i>Hypolimnas bolina bolina</i>	<i>Ageratum conyzoides</i> ** Ex	Asteraceae	L	
	<i>Synedrella nodiflora</i> ** Ex			
	<i>Sida cordata</i> ** In	Malvaceae		only in the lab
	<i>Sida rhombifolia</i> ** In			
	<i>Urena lobata</i> ** In			
<i>Hypolimnas misippus</i>	<i>Asystasia gangetica</i> ** In	Acanthaceae	L	
	<i>Blepharis integrifolia</i> ** In			
	<i>Blepharis maderaspatensis</i> ** In			
	<i>Dyschoriste litoralis</i> ** In			
	<i>Ruellia tuberosa</i> ** Ex			
	<i>Portulaca oleracea</i> ** In	Portulacaceae		
<i>Doleschallia bisaltide ceylonica</i>	<i>Asystasia chelonoides</i> In	Acanthaceae	L	
	<i>Pseuderanthemum latifolium</i> ** In			
<i>Kallima philarchus</i>	<i>Strobilanthes diandra</i> ** En	Acanthaceae	L	
	<i>Strobilanthes lupulina</i> ** In			
<i>Pantoporia hordonia sinuata</i>	<i>Acacia caesia</i> ** In	Fabaceae	L	
	<i>Acacia pennata</i> ** In			
<i>Neptis hylas varmona</i>	<i>Celtis philippensis</i> ** In	Cannabaceae	L	
	<i>Celtis timorensis</i> ** In			
	<i>Trema orientalis</i> ** In			
	<i>Aeschynomene americana</i> ** Ex	Fabaceae		
	<i>Arachis pintoii</i> ** Ex			
	<i>Bauhinia purpurea</i> ** Ex			
	<i>Cassia fistula</i> ** Ex			
	<i>Centrosema pubescens</i> ** Ex			
	<i>Clitoria ternatea</i> ** In			
	<i>Codariocalyx motorius</i> ** In			
	<i>Dalbergia pseudo-sissoo</i> ** In			
	<i>Desmodium pryonii</i> ** In			
	<i>Pseudarthria viscida</i> ** In			
	<i>Psophocarpus tetragonolobus</i> ** Ex			
	<i>Pueraria phaseoloides</i> ** Ex			
	<i>Senna alata</i> ** Ex			
	<i>Vigna hosei</i> ** Ex			
	<i>Vigna unguiculata</i> ** Ex			
	Unidentified sp.			
	<i>Nothapodytes nimmoniana</i> ** In			Icacinaceae
<i>Grewia bracteata</i> ** In	Malvaceae			
				PC: R. Samanmalee

FOOD PLANTS UTILIZATION OF SRI LANKAN BUTTERFLY LARVAE

	<i>Grewia damine</i> **In			
	<i>Grewia helicterifolia</i> **In			
	<i>Grewia orientalis</i> **In			
	<i>Triumfetta pentandra</i> **In			
	<i>Urena lobata</i> **In			
	<i>Urena sinuata</i> **In			
	<i>Gouania microcarpa</i> **In	Rhamnaceae		
	<i>Ventilago maderaspatana</i> **In			
	<i>Wendlandia bicuspidata</i> **En	Rubiaceae		
<i>Neptis jumbah nalanda</i>	<i>Celtis philippensis</i> **In	Cannabaceae	L	
	<i>Bhesa ceylanica</i> **En	Centroplacaceae		
	<i>Dalbergia pseudo-sissoo</i> **In	Fabaceae		
	<i>Nothapodytes nimmoniana</i> **In	Icacinaceae		
	Unidentified sp.			
<i>Moduza procris calidasa</i>	<i>Gaertnera vaginans</i> **In	Rubiaceae	L	found only ovipositing
	<i>Mitragyna parvifolia</i> **In			
	<i>Mussaenda frondosa</i> *In			
	<i>Timonius flavescens</i> **In			
	<i>Uncaria elliptica</i> **In			
	<i>Wendlandia bicuspidata</i> **En			
<i>Parthenos sylvia cyaneus</i>	<i>Zanonia indica</i> **In	Cucurbitaceae	L	
<i>Symphaedra nais</i>	<i>Diospyros melanoxylon</i> *In	Ebenaceae	Mt L	
<i>Dophla evelina evelina</i>	<i>Diospyros malabarica</i> **In	Ebenaceae	Mt L	found only ovipositing and larvae
<i>Euthalia lubentina psittacus</i>	<i>Dendrophthoe falcata</i> **In	Loranthaceae	Mt L	
	<i>Macrosolen capitellatus</i> **In			
	<i>Taxillus incanus</i> **En			
	<i>Taxillus tomentosus</i> **In			
	<i>Tolypanthus gardneri</i> **En			
<i>Euthalia aconthea vasanta</i>	<i>Anacardium occidentale</i> Ex	Anacardiaceae	Mt L	PC: v. Pootern
	<i>Mangifera indica</i> *Ex			
	<i>Nothopogia beddomei</i> **In			
<i>Rohana parisatis camiba</i>	<i>Celtis timorensis</i> **In	Cannabaceae	L	
<i>Polyura athamas athamas</i>	<i>Acacia caesia</i> *In	Fabaceae	L	
	<i>Acacia pennata</i> *In			
	<i>Ventilago maderaspatana</i> **In	Rhamnaceae		
<i>Charaxes solon cerynthus</i>	<i>Tamarindus indica</i> **Ex	Fabaceae	L	PC: v. Pootern
<i>Charaxes psaphon psaphon</i>	<i>Croton laccifer</i> **In	Euphorbiaceae	L	
	<i>Dalbergia pseudo-sissoo</i> **In	Fabaceae		
	<i>Entada rheedei</i> **In			
<i>Libythea myrrha rama</i>	<i>Celtis timorensis</i> **In	Cannabaceae	L	PC: v. Pootern
<i>Acraea violae</i>	<i>Ipomoea indica</i> **Ex	Convolvulaceae	L	PC: S. Umesh
	<i>Passiflora foetida</i> *Ex	Passifloraceae		
	<i>Passiflora suberosa</i> **Ex			
	<i>Hybanthus enneaspermus</i> **In	Viloaceae		L, F, S
<i>Discophora lepida ceylonica</i>	<i>Ochlandra stridula</i> **En	Poaceae	Mt L	
<i>Melanitis leda leda</i>	<i>Cenchrus ciliaris</i> Ex	Poaceae	L	
	<i>Imperata cylindrica</i> *In			
	<i>Ischaemum timorense</i> In			
	<i>Leersia hexandra</i> In			
	<i>Oryza sativa</i> *In			
	<i>Panicum maximum</i> *Ex			
	<i>Setaria barbata</i> *In			
<i>Melanitis phedima tambra</i>	<i>Axonopus compressus</i> *Ex	Poaceae	L	Only in the lab
	<i>Digitaria didactyla</i> Ex			
	<i>Ischaemum timorense</i> In			
	<i>Oryza sativa</i> **In			
	<i>Panicum maximum</i> **Ex			

	<i>Setaria barbata</i> *In			
<i>Lethe drypetis drypetis</i>	<i>Bambusa multiplex</i> *Ex	Poaceae	L	Only in the lab
	<i>Bambusa vulgaris</i> **In			
	<i>Davidsea attenuata</i> **En			
	<i>Dendrocalamus giganteus</i> *Ex			
<i>Lethe daretis</i>	<i>Sinarundinaria debilis</i> En	Poaceae	L	found only ovipositing
<i>Orsotriaena medus mandata</i>	<i>Axonopus compressus</i> *Ex	Poaceae	L	
	<i>Leersia hexandra</i> In			
	<i>Oryza sativa</i> *In			
	<i>Panicum maximum</i> Ex			
<i>Mycalesis subdita</i>	<i>Axonopus compressus</i> Ex	Poaceae	L	only in the lab
	<i>Panicum maximum</i> Ex			
<i>Mycalesis mineus polydecta</i>	<i>Axonopus compressus</i> *Ex	Poaceae	L	
	<i>Panicum maximum</i> *Ex			
<i>Mycalesis perseus typhlus</i>	<i>Axonopus compressus</i> *Ex	Poaceae	L	
	<i>Eleusine indica</i> **In			
	<i>Leersia hexandra</i> In			
	<i>Oryza sativa</i> *In			
<i>Mycalesis patnia patnia</i>	<i>Cyrtococcum trigonum</i> *In	Poaceae	L	
	<i>Isachne globosa</i> *In			
	Unidentified sp.			
<i>Ypthima ceylonica</i>	<i>Axonopus compressus</i> *Ex	Poaceae	L	
	<i>Cyrtococcum trigonum</i> In			
	Unidentified sp.			
<i>Ypthima singala</i>	<i>Axonopus compressus</i> *Ex	Poaceae	L	only in the lab
<i>Elymnias hypermnestra fraterna</i>	<i>Areca catechu</i> *In	Arecaceae	L	
	<i>Borassus flabellifer</i> **Ex			
	<i>Calamus rotang</i> **In			
	<i>Calamus thwaitesii</i> *In			
	<i>Caryota urens</i> *In			
	<i>Cocos nucifera</i> *In			
	<i>Cyrtostachys renda</i> Ex			
	<i>Dyopsis lutescens</i> *Ex			
	<i>Phoenix pusilla</i> *In			
	<i>Rhapis excelsa</i> **Ex			
	<i>Saribus rotundifolius</i> *Ex			
				PC: S. Mindika
<i>Elymnias singhala</i>	<i>Calamus ovoideus</i> **In	Arecaceae	L	
	<i>Caryota urens</i> *In			
	<i>Loxococcus rupicola</i> *In			
<b>Lycaenidae</b>				
<i>Curetis thetis</i>	<i>Entada rheedei</i> **In	Fabaceae	Im L	
	<i>Indigofera tinctoria</i> **In			
	<i>Pericopsis mooniana</i> **In			
	<i>Millettia pinnata</i> *In			
	<i>Pterocarpus indicus</i> **Ex			
	<i>Lepisanthes tetraphylla</i> **In			
<i>Arhopala abseus mackwoodi</i>	<i>Vateria copallifera</i> *En	Dipterocarpaceae	Im L	
<i>Arhopala amantes amantes</i>	<i>Terminalia arjuna</i> **In	Combretaceae	L	
	<i>Terminalia catappa</i> *Ex			
	<i>Terminalia chebula</i> In			
	<i>Syzygium cumini</i> In			
<i>Arhopala ormistoni</i>	<i>Vateria copallifera</i> *En	Dipterocarpaceae	Im L	
<i>Arhopala centaurus pirama</i>	<i>Terminalia arjuna</i> **In	Combretaceae	L	
	<i>Vateria copallifera</i> **En	Dipterocarpaceae	Im L	
	<i>Elaeocarpus serratus</i> *In	Elaeocarpaceae	L	
	<i>Psidium guajava</i> **Ex	Myrtaceae		
	<i>Syzygium cumini</i> *In			
	<i>Lepisanthes tetraphylla</i> In	Sapindaceae		
				PC: D. Danushka



FOOD PLANTS UTILIZATION OF SRI LANKAN BUTTERFLY LARVAE

<i>Surendra quercetorum discalis</i>	<i>Acacia caesia</i> *In	Fabaceae	L	
	<i>Acacia pennata</i> *In			
	<i>Albizia lebbeck</i> **In			
	<i>Falcataria moluccana</i> **Ex			
	<i>Calliandra surinamensis</i> *Ex			
<i>Zesius chrysomallus</i>	<i>Terminalia arjuna</i> **In	Combretaceae	L	PC: D. Danushka
	<i>Terminalia catappa</i> **Ex			
	<i>Cassia fistula</i> **Ex	Fabaceae		
	<i>Falcataria moluccana</i> **Ex	Myrtaceae		
	<i>Psidium guajava</i> *Ex			
<i>Amblypodia anita naradoides</i>	<i>Olex scandens</i> **In	Olacaceae	L	
<i>Iraota timoleon nicevillei</i>	<i>Ficus arnottiana</i> **In	Moraceae	F	
	<i>Ficus benghalensis</i> **In			
	<i>Ficus drupacea</i> **In			
	<i>Ficus microcarpa</i> **In			
	<i>Ficus racemosa</i> **In			
	<i>Ficus religiosa</i> *Ex			
	<i>Ficus tsjahela</i> **In			
<i>Catapaecilma major myosotina</i>	<i>Psidium guajava</i> **Ex	Myrtaceae	L	
<i>Loxura atymnus arcuata</i>	<i>Dioscorea alata</i> **Ex	Dioscoreaceae	Im L	PC: H. Kularathne
	<i>Smilax perfoliata</i> **In	Smilacaceae		
	<i>Smilax zeylanica</i> **In			
<i>Rathinda amor</i>	<i>Dimorphocalyx glabellus</i> **In	Euphorbiaceae	Im L	
	<i>Mischodon zeylanicus</i> **In			
	<i>Gomphia serrata</i> **In	Ochnaceae		
	<i>Ixora coccinea</i> **In	Rubiaceae	F	
	<i>Ixora macrothyrsa</i> **Ex		F	
	<i>Ixora pavetta</i> **In		Im L	
	<i>Lepisanthes tetraphylla</i> **In	Sapindaceae		
<i>Cheritra freja pseudojafra</i>	<i>Entada rheedei</i> **In	Fabaceae	Im L	PC: I. Harshajith
	<i>Cinnamomum verum</i> **In	Lauraceae		
<i>Spindasis vulcanus fusca</i>	<i>Senna auriculata</i> **In	Fabaceae	L	PC: v.Pootern
	<i>Cardiospermum halicacabum</i> *In	Sapindaceae		
<i>Spindasis ictis ceylonica</i>	<i>Acacia eburnea</i> *In	Fabaceae	L	only in the lab
	<i>Senna auriculata</i> **In			
	<i>Senna surattensis</i> **Ex			
<i>Spindasis elima fairliei</i>	<i>Acacia eburnea</i> In	Fabaceae	L	
<i>Tajuria cippus longinus</i>	<i>Dendrophthoe falcata</i> *In	Loranthaceae	Im L	
	<i>Dendrophthoe ligulata</i> **En			
	<i>Taxillus cuneatus</i> *In			
<i>Tajuria jehana ceylanica</i>	<i>Dendrophthoe falcata</i> *In	Loranthaceae	Im L	
	<i>Dendrophthoe ligulata</i> **En			
	<i>Scurrula parasitica</i> **In			
<i>Pratapa deva deva</i>	<i>Scurrula cordifolia</i> *En	Loranthaceae	Im L	
	<i>Taxillus tomentosus</i> *In			
<i>Hypolycaena nilgirica</i>	<i>Arachnis flos-aeris</i> Ex	Orchidaceae	R	Only in the lab
	<i>Arundina graminifolia</i> *Ex		F	
	<i>Cymbidium aloifolium</i> **In			
	<i>Luisia</i> sp. **		I	
	<i>Malaxis versicolor</i> *In			
	<i>Peristylus trimenii</i> *En			
	<i>Spathoglottis plicata</i> *Ex		F, R	
	<i>Vanda tessellata</i> *In		F, R	
<i>Vanda testacea</i> In				
<i>Bindahara phocides</i>	<i>Salacia chinensis</i> **In	Celastraceae	Fruit	only in the lab
	<i>Salacia reticulata</i> *In			
<i>Virachola perse ghela</i>	<i>Catunaregam spinosa</i> In	Rubiaceae	Fruit	
<i>Virachola isocrates</i>	<i>Catunaregam spinosa</i> **In	Rubiaceae	Fruit	

	<i>Limonia acidissima</i> <sup>*In</sup>	Rutaceae		
<i>Rapala manea schistacea</i>	<i>Cassia roxburghii</i> <sup>**In</sup>	Fabaceae	L	
	<i>Urena lobata</i> <sup>**In</sup>	Malvaceae	F	PC: v. Pootern
	<i>Ziziphus mauritiana</i> <sup>**In</sup>	Rhamnaceae	L	
	<i>Gnidia glauca</i> <sup>**In</sup>	Thymelaeaceae	Im L	found only ovipositing
<i>Rapala varuna lazulina</i>	<i>Ziziphus oenoplia</i> <sup>**In</sup>	Rhamnaceae	L	PC: T. Ranasinghe
<i>Deudorix epijarbas epijarbas</i>	<i>Cardiospermum halicacabum</i> <sup>**In</sup>	Sapindaceae	Seeds	
<i>Anthene lycaenina lycaenina</i>	<i>Lepisanthes tetraphylla</i> <sup>**In</sup>	Sapindaceae	Im L	
<i>Nacaduba hermus sidoma</i>	<i>Symplocos cochinchinensis</i> <sup>*In</sup>	Symplocaceae	Im L	
<i>Nacaduba berenice ormistoni</i>	<i>Lepisanthes tetraphylla</i> <sup>*In</sup>	Sapindaceae	Im L	
<i>Nacaduba sinhala</i>	<i>Dimocarpus longan</i> <sup>*In</sup>	Sapindaceae	Im L	
<i>Nacaduba kurava prominens</i>	<i>Ardisia missionis</i> <sup>**In</sup>	Primulaceae	F	found only ovipositing
<i>Nacaduba calauria evansi</i>	<i>Vateria copallifera</i> <sup>**En</sup>	Dipterocarpaceae	Im L	
<i>Prosotas nora ardates</i>	<i>Sambucus javanica</i> <sup>**Ex</sup>	Adoxaceae		found only ovipositing
	<i>Terminalia catappa</i> <sup>*Ex</sup>	Combretaceae		
	<i>Acacia caesia</i> <sup>In</sup>	Fabaceae	F	
	<i>Acacia pennata</i> <sup>In</sup>			
	<i>Bauhinia racemosa</i> <sup>**In</sup>			
	<i>Derris scandens</i> <sup>In</sup>			
	<i>Pithecellobium dulce</i> <sup>*Ex</sup>			
	<i>Croton aromaticus</i> <sup>*In</sup>	Euphorbiaceae		
	<i>Calliandra calothyrsus</i> <sup>**Ex</sup>	Fabaceae		
	<i>Calliandra surinamensis</i> <sup>**Ex</sup>			
	<i>Samanea saman</i> <sup>*Ex</sup>			
	<i>Murraya koenigii</i> <sup>**In</sup>	Rutaceae		
	<i>Allophylus cobbe</i> <sup>*In</sup>	Sapindaceae		
<i>Prosotas dubiosa indica</i>	<i>Albizia odoratissima</i> <sup>In</sup>	Fabaceae	F	
	<i>Pithecellobium dulce</i> <sup>**Ex</sup>			
	<i>Samanea saman</i> <sup>*Ex</sup>	Fabaceae		
<i>Jamides bochus bochus</i>	<i>Acacia auriculiformis</i> <sup>Ex</sup>	Fabaceae	F	
	<i>Cajanus cajan</i> <sup>Ex</sup>			
	<i>Canavalia cathartica</i> <sup>**In</sup>			
	<i>Clitoria ternatea</i> <sup>**In</sup>			
	<i>Crotalaria micans</i> <sup>**Ex</sup>			
	<i>Derris scandens</i> <sup>In</sup>			
	<i>Flemingia macrophylla</i> <sup>**In</sup>			
	<i>Gliricidia sepium</i> <sup>*Ex</sup>			
	<i>Lablab purpureus</i> <sup>**Ex</sup>			
	<i>Macrotyloma uniflorum</i> <sup>**In</sup>			
	<i>Paraderris elliptica</i> <sup>Ex</sup>			
	<i>Phaseolus vulgaris</i> <sup>**Ex</sup>			
	<i>Millettia pinnata</i> <sup>In</sup>			
	<i>Pterocarpus indicus</i> <sup>Ex</sup>			
	<i>Pueraria phaseoloides</i> <sup>*Ex</sup>			
	<i>Sesbania grandiflora</i> <sup>**Ex</sup>			
	<i>Tephrosia candida</i> <sup>Ex</sup>			
	<i>Tephrosia vogelii</i> <sup>Ex</sup>			
<i>Vigna radiata</i> <sup>Ex</sup>				
<i>Vigna unguiculata</i> <sup>*Ex</sup>				
<i>Jamides coruscans</i>	<i>Humboldtia laurifolia</i> <sup>*In</sup>	Fabaceae	Im L	
<i>Jamides lacteata</i>	<i>Lepisanthes erecta</i> <sup>*In</sup>	Sapindaceae	Im L	
	<i>Lepisanthes tetraphylla</i> var. <i>trichocarpa</i> <sup>**In</sup>			
<i>Jamides alecto meilichius</i>	<i>Alpinia calcarata</i> <sup>*Ex</sup>	Zingiberaceae	F, seeds	
	<i>Alpinia galanga</i> <sup>**Ex</sup>			
	<i>Alpinia purpurata</i> <sup>*Ex</sup>			
	<i>Alpinia zerumbet</i> <sup>**Ex</sup>			
	<i>Amomum fulviceps</i> <sup>*En</sup>			

FOOD PLANTS UTILIZATION OF SRI LANKAN BUTTERFLY LARVAE

	<i>Amomum trichostachyum</i> <sup>En</sup>				
	<i>Elettaria cardamomum</i> <sup>*In</sup>				
	<i>Hedychium flavescens</i> <sup>*Ex</sup>				
	<i>Zingiber cylindricum</i> <sup>*En</sup>				
	<i>Zingiber wightianum</i> <sup>*In</sup>				
	<i>Zingiber zerumbet</i> <sup>*Ex</sup>				
	<i>Zingiber</i> sp.				
<i>Jamides celeno tissama</i>	<i>Abrus precatorius</i> <sup>*In</sup>	Fabaceae	F		
	<i>Abrus pulchellus</i> <sup>**In</sup>		Im L		
	<i>Entada rheedei</i> <sup>**In</sup>		F		
	<i>Flemingia macrophylla</i> <sup>**In</sup>		Im L		
	<i>Millettia pinnata</i> <sup>*In</sup>		F		
	<i>Phaseolus vulgaris</i> <sup>**Ex</sup>				
	<i>Pueraria phaseoloides</i> <sup>*Ex</sup>				
	<i>Vigna hosei</i> <sup>**Ex</sup>				
	<i>Vigna unguiculata</i> <sup>*Ex</sup>				
<i>Catochrysops panormus panormus</i>	<i>Pueraria phaseoloides</i> <sup>**Ex</sup>	Fabaceae	F		
	<i>Flemingia macrophylla</i> <sup>**In</sup>				
<i>Catochrysops strabo strabo</i>	<i>Phyllodium pulchellum</i> <sup>**In</sup>	Fabaceae	F		
	<i>Rhynchosia cana</i> <sup>**In</sup>				
	<i>Tephrosia purpurea</i> <sup>**In</sup>				
	<i>Tephrosia villosa</i> <sup>**In</sup>				
<i>Lampides boeticus</i>	<i>Cajanus trinervius</i> <sup>**In</sup>	Fabaceae	F		
	<i>Crotalaria incana</i> <sup>**Ex</sup>				
	<i>Crotalaria laburnifolia</i> <sup>**In</sup>				
	<i>Crotalaria micans</i> <sup>**Ex</sup>				
	<i>Crotalaria pallida</i> <sup>**In</sup>		F, seeds		
	<i>Crotalaria verrucosa</i> <sup>**In</sup>				
	<i>Crotalaria trichotoma</i> <sup>**Ex</sup>				
	<i>Mundulea sericea</i> <sup>**In</sup>				
	<i>Ulex europaeus</i> <sup>**Ex</sup>		F		
<i>Leptotes plinius plinius</i>	<i>Aeschynomene americana</i> <sup>**Ex</sup>	Fabaceae	F		
	<i>Indigofera tinctoria</i> <sup>**In</sup>				
	<i>Rhynchosia minima</i> <sup>**In</sup>				
	<i>Plumbago auriculata</i> <sup>**Ex</sup>		Plumbaginaceae		
	<i>Plumbago zeylanica</i> <sup>In</sup>				
<i>Castalius rosimon rosimon</i>	<i>Gouania microcarpa</i> <sup>**In</sup>	Rhamnaceae	Im L		
	<i>Ziziphus jujuba</i> <sup>**Ex</sup>			PC: T. Ranasinghe	
	<i>Ziziphus napeca</i> <sup>**En</sup>				
	<i>Ziziphus mauritiana</i> <sup>**In</sup>				
	<i>Ziziphus xylopyrus</i> <sup>**Ex</sup>			found only ovipositing	
	<i>Ziziphus oenopolia</i> <sup>**In</sup>				
<i>Discolampa ethion ethion</i>	<i>Ziziphus oenopolia</i> <sup>**In</sup>	Rhamnaceae	Im L		
<i>Caleta decidia</i>	<i>Gouania microcarpa</i> <sup>**In</sup>	Rhamnaceae	Im L		
	<i>Ziziphus rugosa</i> <sup>**In</sup>				
<i>Tarucus callinara</i>	<i>Ziziphus mauritiana</i> <sup>*In</sup>	Rhamnaceae	Im L		
<i>Tarucus nara</i>	<i>Ziziphus mauritiana</i> <sup>*In</sup>	Rhamnaceae	Im L		
	<i>Ziziphus xylopyrus</i> <sup>**Ex</sup>			found only ovipositing	
<i>Freyeria putli</i>	<i>Indigofera linnaei</i> <sup>**In</sup>	Fabaceae	Im L		
	<i>Indigofera oblongifolia</i> <sup>**In</sup>				
	<i>Indigofera tinctoria</i> <sup>**In</sup>				
<i>Zizeeria karsandra</i>	<i>Amaranthus viridis</i> <sup>**In</sup>	Amaranthaceae	Im L		
	<i>Amaranthus spinosus</i> <sup>**In</sup>				
	<i>Coldenia procumbens</i> <sup>**In</sup>	Boraginaceae	L		
	<i>Sauropus bacciformis</i> <sup>**In</sup>	Euphorbiaceae			
	<i>Glinus oppositifolius</i> <sup>**In</sup>	Molluginaceae	F, L		
	<i>Tribulus terrestris</i> <sup>**Ex</sup>	Zygophyllaceae	L, fruits		
<i>Zizina otis indica</i>	<i>Desmodium heterophyllum</i> <sup>**In</sup>	Fabaceae	F, Im L		

	<i>Desmodium triflorum</i> **In			
<i>Zizula hylax hylax</i>	<i>Ruellia patula</i> **In	Acanthaceae	F	
	<i>Ruellia prostrata</i> **In			
	<i>Ruellia tuberosa</i> **Ex		F	
<i>Talicara nyseus nyseus</i>	<i>Kalanchoe pinnata</i> **Ex	Crassulaceae	L	
<i>Everes lacturnus lacturnus</i>	<i>Desmodium heterocarpon</i> **In	Fabaceae	Seeds	
	<i>Desmodium triflorum</i> **In			
	<i>Desmodium uncinatum</i> **Ex			
<i>Azanas ubaldus</i>	<i>Acacia eburnea</i> **In	Fabaceae	F	
<i>Azanas jesous gamra</i>	<i>Dichrostachys cinerea</i> **In	Fabaceae	Im L	
<i>Acytolepis puspa felderi</i>	<i>Peltophorum pterocarpum</i> **In	Fabaceae	Im L	PC: D. Danushka
	<i>Hiptage benghalensis</i> *In	Malpighiaceae		
	<i>Bridelia moonii</i> **En	Phyllanthaceae		
	<i>Bridelia retusa</i> **In			
	<i>Meliosma simplicifolia</i> **In	Sabiaceae		
	<i>Lepisanthes tetraphylla</i> **In	Sapindaceae		
	<i>Nephelium lappaceum</i> **Ex			
	<i>Sapindus emarginatus</i> **In			
	<i>Schleichera oleosa</i> **In	Sapotaceae		
<i>Udara lanka</i>	<i>Persicaria chinensis</i> **In	Polygonaceae	F	
<i>Neopithicops zalmora dharmia</i>	<i>Atalantia ceylanica</i> **In	Rutaceae	Im L	
	<i>Glycosmis angustifolia</i> **In			
	<i>Glycosmis pentaphylla</i> **In			
<i>Megisba malaya thwaitesi</i>	<i>Mallotus philippensis</i> **In	Euphorbiaceae	F	
	<i>Allophylus cobbe</i> **In	Sapindaceae		
<i>Euchrysops cnejus cnejus</i>	<i>Macroptilium lathyroides</i> **Ex	Fabaceae	Seeds	
	<i>Pueraria phaseoloides</i> **Ex		F	
	<i>Vigna marina</i> **In			
	<i>Vigna trilobata</i> **In			
	<i>Vigna unguiculata</i> *Ex			
<i>Chilades pandava lanka</i>	<i>Cycas nathorstii</i> *In	Cycadaceae	Im L	
	<i>Cycas revoluta</i> *Ex			
<i>Chilades lajus lajus</i>	<i>Atalantia ceylanica</i> *In	Rutaceae	Im L	
	<i>Atalantia monophylla</i> In			
	<i>Citrus aurantifolia</i> Ex			
	<i>Citrus sinensis</i> **Ex			
	<i>Limonia acidissima</i> *In			
<i>Chilades parrhasius nila</i>	<i>Acacia eburnea</i> *In	Fabaceae	Im L	
	<i>Acacia leucophloea</i> *In			
	<i>Acacia planifrons</i> **In			
<b>Riodinidae</b>				
<i>Abisara echerius prunosa</i>	<i>Embelia ribes</i> **In	Primulaceae	Im L	
	<i>Embelia tsjeriam-cottam</i> *In			
<b>Hesperiidae</b>				
<i>Burara oedipodea ataphus</i>	<i>Hiptage benghalensis</i> *In	Malpighiaceae	Im L	
<i>Bibasis sena sena</i>	<i>Hiptage benghalensis</i> **In	Malpighiaceae	Im L	
<i>Badamia exclamationis</i>	<i>Terminalia bellirica</i> **In	Combretaceae	Im L	PC: v. Pootern
	<i>Hiptage benghalensis</i> **In	Malpighiaceae		
<i>Choaspes benjaminii benjaminii</i>	<i>Meliosma pinnata</i> *In	Sabiaceae	L	
<i>Gangara thyrsis clothilda</i>	<i>Calamus ovoideus</i> **En	Arecaceae	L	
	<i>Calamus pseudotenuis</i> **In			
	<i>Calamus rotang</i> **In			
	<i>Calamus thwaitesii</i> **In			
<i>Hasora chromus chromus</i>	<i>Derris scandens</i> **In	Fabaceae	Im L	
	<i>Millettia pinnata</i> *In		L	
<i>Hasora taminatus taminatus</i>	<i>Derris parviflora</i> **En	Fabaceae	Im L	
<i>Celaenorrhinus spilothyrsus</i>	<i>Gymnostachyum sanguinolentum</i> **En	Acanthaceae	L	
	<i>Strobilanthes diandra</i> **En			

FOOD PLANTS UTILIZATION OF SRI LANKAN BUTTERFLY LARVAE

	<i>Strobilanthes lupulina</i> <sup>** In</sup>			
	<i>Strobilanthes rhamnifolia</i> <sup>** En</sup>			
	<i>Strobilanthes vestita</i> <sup>** En</sup>			
	<i>Strobilanthe</i> sp. 1			
	<i>Strobilanthes</i> sp. 2			
<i>Coladenia indrani tissa</i>	<i>Mallotus</i> sp.	Euphorbiaceae		
	Unidentified sp.			
	<i>Pterospermum suberifolium</i> <sup>** In</sup>	Malvaceae	L	
	<i>Berrya cordifolia</i> <sup>** In</sup>			
	<i>Grewia damine</i> <sup>** In</sup>			
	<i>Grewia helicterifolia</i> <sup>** In</sup>			
	<i>Grewia orientalis</i> <sup>** In</sup>			
	<i>Microcos paniculata</i> <sup>** In</sup>			
	<i>Streblus asper</i> <sup>** In</sup>			Moraceae
<i>Bridelia retusa</i> <sup>** In</sup>	Phyllanthaceae			
<i>Sarangesa dasahara albicilia</i>	<i>Lepidagathis fasciculata</i> <sup>** In</sup>	Acanthaceae	L	
	<i>Lepidagathis walkeriana</i> <sup>** En</sup>			PC: v. Pootern
<i>Tapena thwaitesi thwaitesi</i>	<i>Dalbergia pseudo-sissoo</i> <sup>** In</sup>	Fabaceae	Im L	
<i>Tagiades japedus obscurus</i>	<i>Dioscorea alata</i> <sup>** Ex</sup>	Dioscoreaceae	L	
	<i>Dioscorea bulbifera</i> <sup>** In</sup>			PC: R. Samanmalee
	<i>Dioscorea oppositifolia</i> <sup>** In</sup>			
	<i>Dioscorea pentaphylla</i> <sup>** In</sup>			
	<i>Dioscorea tomentosa</i> <sup>** In</sup>			
<i>Tagiades litigiosa ceylonica</i>	<i>Dioscorea alata</i> <sup>** Ex</sup>	Dioscoreaceae	L	
	<i>Dioscorea koyamae</i> <sup>** En</sup>		Im L	
	<i>Dioscorea oppositifolia</i> <sup>** In</sup>		L	
	<i>Dioscorea spicata</i> <sup>** In</sup>		Im L	
<i>Caprona ransonnettii ransonnettii</i>	<i>Grewia hirsuta</i> <sup>** In</sup>	Malvaceae	L	
	<i>Grewia damine</i> <sup>** In</sup>			
	<i>Urena lobata</i> <sup>** In</sup>			
<i>Gomalia elma albofasciata</i>	<i>Abutilon hirtum</i> <sup>** In</sup>	Malvaceae	L	
<i>Baracus vittatus</i>	<i>Garnotia exaristata</i> <sup>** In</sup>	Poaceae	L	
	Unidentified sp.			
<i>Ampittia dioscorides singa</i>	<i>Oryza sativa</i> <sup>** In</sup>	Poaceae	L	
<i>Halpe ceylonica</i>	<i>Bambusa vulgaris</i> <sup>** In</sup>	Poaceae	L	
<i>Suastus gremius subgrisea</i>	<i>Borassus flabellifer</i> <sup>** Ex</sup>	Arecaceae	L	
	<i>Caryota urens</i> <sup>** In</sup>			PC: S. Gunasena
	<i>Cocos nucifera</i> <sup>** In</sup>			
	<i>Corypha umbraculifera</i> <sup>** Ex</sup>			
	<i>Cyrtostachys renda</i> <sup>** Ex</sup>			PC: S. Gunasena
	<i>Phoenix pusilla</i> <sup>** In</sup>			
	<i>Saribus rotundifolius</i> <sup>** Ex</sup>			
<i>Suastus minuta minuta</i>	<i>Calamus pseudotenius</i> <sup>** In</sup>	Arecaceae	L	
	<i>Loxococcus rupicola</i> <sup>** En</sup>			
<i>Iambrix salsala luteipalpis</i>	<i>Axonopus compressus</i> <sup>** Ex</sup>	Poaceae	L	
	<i>Ochlandra stridula</i> <sup>** En</sup>			PC: R. Samanmalee
	<i>Oryza sativa</i> <sup>** In</sup>			
<i>Udaspes folus</i>	<i>Curcuma longa</i> <sup>** Ex</sup>	Zingiberaceae	L	
	<i>Curcuma oligantha</i> <sup>** En</sup>			
	<i>Curcuma zedoaria</i> <sup>** Ex</sup>			
	<i>Hedychium coronarium</i> <sup>** Ex</sup>			
	<i>Kaempferia galanga</i> <sup>** Ex</sup>			
	<i>Zingiber officinale</i> <sup>** Ex</sup>			
<i>Notocrypta paralysos alysia</i>	<i>Costus speciosus</i> <sup>** In</sup>	Costaceae		
	<i>Alpinia purpurata</i> <sup>** Ex</sup>	Zingiberaceae	L	
	<i>Alpinia zerumbet</i> <sup>** Ex</sup>			
	<i>Curcuma longa</i> <sup>** Ex</sup>			
	<i>Curcuma zedoaria</i> <sup>** Ex</sup>			

	<i>Hedychium coccineum</i> ** Ex			
	<i>Hedychium flavescens</i> ** Ex			
	<i>Zingiber cylindricum</i> ** En			
	<i>Zingiber officinale</i> ** Ex			
	<i>Zingiber wightianum</i> ** In			
	<i>Zingiber zerumbet</i> * Ex			
	Unidentified sp.			
<i>Notocrypta curvifascia curvifascia</i>	<i>Zingiber zerumbet</i> ** Ex	Zingiberaceae	L	
<i>Hyarotis adrastus adrastus</i>	<i>Calamus rotang</i> ** In	Arecaceae	L	
<i>Matapa aria</i>	<i>Bambusa vulgaris</i> ** In	Poaceae	L	
	<i>Dendrocalamus giganteus</i> ** Ex			
	<i>Ochlandra stridula</i> ** En			
<i>Spialia galba</i>	<i>Sida acuta</i> ** In	Malvaceae	Im L	
<i>Taractrocerma maevius</i>	<i>Axonopus compressus</i> ** Ex	Poaceae	L	
<i>Oriens goloides</i>	<i>Setaria barbata</i> ** In	Poaceae	L	
	Unidentified sp.			
<i>Potanthus confuscus satra</i>	Unidentified sp.	Poaceae	L	
	Unidentified sp.			
<i>Telicota colon kala</i>	Unidentified sp.	Poaceae	L	
<i>Telicota bambusae lanka</i>	<i>Bambusa multiplex</i> ** Ex	Poaceae	L	
	<i>Bambusa ventricosa</i> ** Ex			
	<i>Bambusa vulgaris</i> ** In			
	<i>Dendrocalamus giganteus</i> ** Ex			
	<i>Ochlandra stridula</i> ** En			
<i>Cephrenes trichopepla</i>	<i>Cocos nucifera</i> * In	Arecaceae	L	PC: v. Pootern
	<i>Phoenix pusilla</i> ** In		L	
	<i>Saribus rotundifolius</i> ** Ex			
<i>Baoris penicillata</i>	<i>Ochlandra stridula</i> ** En	Arecaceae	L	
<i>Borbo cinnara</i>	<i>Coix lacryma-jobi</i> ** In	Poaceae	L	
	<i>Panicum maximum</i> ** Ex			
	<i>Setaria barbata</i> ** In			
	<i>Zea mays</i> ** Ex			
<i>Pelopidas agna agna</i>	Unidentified sp.	Poaceae	L	
<i>Pelopidas mathias mathias</i>	<i>Oryza sativa</i> ** In	Poaceae	L	
<i>Pelopidas conjuncta narooa</i>	<i>Coix lacryma-jobi</i> ** In	Poaceae	L	
	<i>Panicum maximum</i> ** Ex			
	<i>Saccharum officinarum</i> ** Ex			
<i>Caltoris kumara lanka</i>	<i>Bambusa multiplex</i> ** Ex	Poaceae	L	only in the lab
	<i>Davidsea attenuata</i> ** En			
<i>Caltoris philippina seriata</i>	<i>Bambusa multiplex</i> ** Ex	Poaceae	L	
	<i>Bambusa vulgaris</i> ** In			
	<i>Dendrocalamus giganteus</i> ** Ex			
	<i>Ochlandra stridula</i> ** En			
<i>Parnara bada bada</i>	<i>Oryza sativa</i> ** In	Poaceae	L	
	Unidentified sp.			

**Note:** Plant parts cited in the plant column describe the components of the plant feed on by the larvae. If the larvae does not strictly adhere to a specific state of leaves it is broadly mentioned as “leaves”. However, all larvae, especially the early instars, prefer immature leaves. If it is not specifically mentioned, all the plants were recorded in the field. Plants were considered as confirmed LFPs, if the larvae were successfully reared up to the adult stage. If an observation was restricted to egg laying by an adult butterfly, it was mentioned specially. These types of plants were included only if the plant is closely related to a known LFPs for that specific butterfly or if the adult butterfly searched the same plant to lay eggs. Still, no attempts were made to rear larvae on these plants and their use can only be confirmed by future studies.

**\*Editor’s end note:** The above list of plant names is based primarily on publications dealing specifically with the flora of Sri Lanka and does not take into account recent taxonomic and nomenclatural changes proposed over the last decade or so; see GRIN and The PLANT LIST for more up-to-date information.

# PLATE 12



**Figure 1:** Sri Lankan bird wing (*Troides darsius*)



**Figure 2:** Sri Lankan rose (*Pachliopta jophon*)



**Figure 3:** Sri Lankan lesser albatross (*Appias galena*)



**Figure 4:** Sri Lankan one spot grass yellow (*Eurema ormistoni*)



**Figure 5:** Sri Lankan tree nymph (*Idea iasonia*)



**Figure 6:** Sri Lankan tiger (*Parantica taprobana*)



**Figure 7:** Sri Lankan blue oak leaf (*Kallima philarchus*)



**Figure 8:** Sri Lankan jewel four ring (*Ypthima singala*)



# PLATE 13



**Figure 9:** Sri Lankan palmfly (*Elymnias singhala*)



**Figure 10:** Sri Lankan pale six lineblue (*Nacaduba sinhala*)



**Figure 11:** Sri Lankan milky cerulean (*Jamides lacteata*)



**Figure 12:** Sri Lankan cerulean (*Jamides coruscans*)



**Figure 13:** Sri Lankan hedge blue (*Udara lanka*)



**Figure 14:** Sri Lankan black flat (*Celaenorrhinus spilothyrus*)



**Figure 15:** Sri Lankan hedge hopper (*Baracus vittatus*)



**Figure 16:** Sri Lankan paint brush swift (*Baoris penicillata*)