Butterfly Conservation Action Plan of Sri Lanka



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Biodiversity Secretariat
Ministry of Environment & Renewable Energy

Butterfly Conservation Action Plan of Sri Lanka

2014

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Ministry of Environment & Renewable Energy

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First Publication 2014

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Publisher: Biodiversity Secretariat, Ministry of Environment & Renewable Energy

ISBN: 978-955-0033-66-9

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Cover photo: *Troides darsius* (Gray [1853]) – Sri Lankan Birdwing. Endemic. The National Butterfly of Sri Lanka. (Photograph by: George van der Poorten)

The Preparation of the National Butterfly Conservation Action Plan is coordinated by the Biodiversity Secretariat, Ministry of Environment and Renewable Energy

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Message of the Hon. Minister of Environment & Renewable Energy

The Biodiversity Secretariat of the Ministry of Environment & Renewable Energy is the focal point of the Convention on Biodiversity. One of its primary goals is the achievement of biodiversity conservation through sustainable development.

The Butterfly Conservation Action Plan is the first Action Plan prepared for a group of fauna in Sri Lanka. Since butterflies act as Flag Ship species, they have been utilized to conserve sensitive habitats as a whole ensuring the conservation of other fauna.

While preparing the Action Plan the Biodiversity Secretariat has been simultaneously implementing some of the proposed activities such as the declaration of National Butterfly and declaration of Provincial Butterflies.

According to the Mahinda Chinthana, 'a protected area network will be established to conserve fauna and flora and ensure the recovery of important threatened species'. This will be achieved through the implementation of the Action plan which will be preparing recovery plans for threatened species and encouraging the implementation of enrichment of habitats to harbor butterfly species.

With the government's vision to transform Sri Lankan tourism sector by 2020, Butterfly tourism can be a diversified form of tourism which can be promoted affiliated to nature tourism. By developing urban parks and home gardens with host plants and nectaring plants to attract butterflies we will be able to conserve butterflies and their environment and contributing to the growth of the nation's economy.

Pollinators are a critical component to the agriculture sector. Some butterflies are known as pollinators and their role in the ecosystem is essential to pollinate many plants.
Through the implementation of the Action Plan, we will be able to conserve the butterfly fauna both outside and within the protected area network enabling us to achieve the goals of Mahinda Chinthana and making Sri Lanka the emerging wonder of Asia.

Susil Prema Jayantha
Minister of Environment & Renewable Energy

Message from the Secretary

It is with great pleasure that the Ministry of Environment & Renewable Energy launches the National Butterfly Conservation Action Plan (BuCAP) targeting the conservation of a faunal group.

There are 245 species of butterflies in Sri Lanka. There is a high degree of endemism with 26 endemics. But, considering the level of threats 99 species are considered to be threatened. With the release of the National Red List 2012 and assessment of the threatened status of butterflies, the BuCAP is a timely management tool to conserve the butterflies of Sri Lanka.

The most significant threats to the butterfly fauna of Sri Lanka is the disappearance and degradation of forest, grassland and coastal habitats due to human activity. The disappearance of suitable habitats and larval food plants in all climatic zones is reflected in the reduced size of many populations of butterflies, particularly those that show seasonal mass movements. The traditional village home gardens including typical kandian home gardens house many host plants of butterflies. These therefore assisted to conserve butterflies. With urbanization the size of habitats are fast decreasing. The establishment of butterfly gardens in urban and non urban areas has encouraged butterfly species.

In accordance with the Haritha Lanka programme which outlines strategies and actions such as recovery plans, research, awareness and field programmes, these targets will be achieved through the implementation of the BuCAP.

I take this opportunity to commend the Biodiversity Secretariat, Dr George Van der Poorten and the technical reviewers who took the effort to study the issues when conserving the butterflies and outlining a plan of action to overcome these negative impacts.

Finally, I hope that the Ministry of Environment & Renewable Energy together with the stakeholders and the general public will be able to achieve the conservation of biodiversity for our future generations through the conservation of habitats for butterflies.

B.M.U.D.Basnayake
Secretary
Ministry of Environment & Renewable Energy

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Acronyms and Abbreviations

AP	Action plan
BDS	Biodiversity Secretariat
BuCAP	Butterfly Conservation Action Plan
CEA	Central Environmental Authority
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
Dept. of Agric.	Department of Agriculture
Dept. of Ayurveda	Department of Ayurveda
Dept. of Customs	Department of Customs
DWC	Department of Wildlife Conservation (now the Ministry of Wildlife Resources Conservation - MWRC)
FD	Forest Department
FFPO	Fauna and Flora Protection Ordinance
FO	Forest Ordinance
FR	Forest Reserve
GSMB	Geological Survey and Mines Bureau
IUCN	International Union for Conservation of Nature
INGO	International non-governmental organization
NEA	National Environmental Act
NHM	Natural History Museum
NHWAA	National Heritage Wilderness Areas Act
Min. of Agric.	Ministry of Agriculture
Min. of Defence	Ministry of Defence
Min. of Health	Ministry of Health
Min. of Plant. Ind.	Ministry of Plantation Industries
MoE&RE	Ministry of Environment and Renewable Energy
MOENR	Ministry of Environment and Natural Resources
MWRC	Ministry of Wildlife Resources Conservation
NBG	National Botanic Garden
NGO	Non-governmental organization
NSF	National Science Foundation
NZG	National Zoologic Garden
PA	Protected area
RDA	Road Development Authority
SLNM	Sri Lanka National Museum
UDA	Urban Development Authority

Executive Summary

The Butterfly Conservation Action Plan (BuCAP) is the outcome of the biodiversity conservation policy as enacted by the government of Sri Lanka in 1999. It discusses the current state of our knowledge of the butterfly fauna with special reference to taxonomy, distribution, legal and institutional aspects, and threats faced by butterflies.

BuCAP also identifies constraints to the conservation of butterflies in general and highlights the inadequate research on butterfly biology and taxonomy, due to legislative constraints and lack of resources and trained personnel for both research and dissemination of conservation awareness among the general public.

The major threats to the butterflies are discussed in great detail with specific references to those species that have narrow habitat requirements. The major threat to butterflies in Sri Lanka has been identified as the loss of habitat, in particular due to the fragmentation and loss of forests, thorn thickets, savannahs, grasslands and mangroves.

This document also details recommendations that need to be carried out for all butterfly species in general and specific recommendations to be followed for the conservation of threatened species as identified by The National Red List 2012 of Sri Lanka. Some of the short-comings of the IUCN Red List criteria for invertebrates such as butterflies are also noted and recommendations suggested for future evaluations.

The recommendations are detailed. Some require considerable time, effort and funds to fulfil, while some can be implemented immediately in the short-term. The tasks within the Action Plan have therefore been prioritized and timelines have been set so that the tasks are achievable.

This document emphasizes the need for an integrated approach of combining the conservation of butterflies with other taxa such as birds, mammals and plants. It also highlights the need for coordination and cooperation across government ministries and departments who share, have overlapping, or contingent areas of responsibility, and the importance of non-governmental organizations and private individuals to share in the work.

1. Introduction

Sri Lanka ratified the Convention on Biological Diversity in 1994 and has since produced several reports and action plans in support of this initiative (e.g. Biodiversity conservation in Sri Lanka: A framework for action (Ministry of Environment, 1999). Biodiversity work is further supported by government policy as outlined in the *Mahinda Chintana* (Department of National Planning, Sri Lanka, 2005, 2010), which states that a system to preserve biodiversity through respecting fauna and flora will be introduced and that a protected area network will be established to conserve fauna and flora and "ensure the recovery of important threatened species". The current plan has a timeframe of 2010–2020. This commitment is further elaborated in The National Action Plan for Haritha Lanka Programme (National Council for Sustainable Development, 2009). Mission #2: Saving the Fauna, Flora and Ecosystems lists several strategies including "Strengthen policy, legal and institutional framework for biodiversity conservation", "Establish optimum Protected Area network and ensure recovery of important threatened species"; "Conserve and sustainable use flora and fauna outside the protected area network" and "Integrate and promote research and development on biodiversity conservation in all sectors."

The importance of biodiversity conservation in Sri Lanka was first highlighted in the Biodiversity Conservation Action Plan (Ministry of Forestry and Environment, Sri Lanka, 1999) and subsequently in the Addendum to it (Ministry of Environment, Biodiversity Secretariat, Sri Lanka, 2007). Both publications documented the high degree of biodiversity in Sri Lanka in general and the need for conservation and action to achieve it. However, the need for Action Plans (AP) for specific groups of fauna was first identified by The 2007 Red List of Threatened Fauna and Flora of Sri Lanka (IUCN SL and MOENR, 2007). The National Red List 2012 of Sri Lanka (MOE, 2012) expanded on conservation concerns. The current document is a logical extension of the process of identifying conservation concerns and action for the Lepidoptera of Sri Lanka.

The action plan for Sri Lankan butterflies, henceforth referred to as the "Butterfly Conservation Action Plan" (BuCAP), is the first document to promote the conservation of an invertebrate group in Sri Lanka. Butterflies are attractive and are by far the best documented group of insects in Sri Lanka. They are therefore well-suited to pioneer conservation work and are often used as flagship species for fostering more general progress in invertebrate conservation. The recognition of this value is also reflected in the declaration of a National butterfly and Provincial butterflies (Appendix 1) by the Ministry of Environment in 2009. Compared to other groups of insects in Sri Lanka, the taxonomy of the butterfly fauna is relatively well-understood. However, the biology of several species is not known, and the distribution and flight periods of many species have not been adequately documented.

The first step for the conservation of butterflies in Sri Lanka was undertaken with the evaluation of the status of butterflies based on the IUCN Global Red List categories and criteria (version 3.1, IUCN 2001), adapted at a regional level. Most species were evaluated using criterion B (Geographic range - Extent of Occurrence (EOO) and Area of Occupancy (AOO)). In The 2007 Red List of Threatened Fauna and Flora of Sri Lanka, 66 species out of the 243 species known at the time were in the threatened category: 21 were listed as Critically Endangered (including 2 endemics); 29 were listed as Endangered (including 9 endemics) and 16 were listed as Vulnerable (including 2

endemics). Thirty-one species were categorised as Data Deficient. The IUCN Red List of 2007 also identified major threats for the loss of biodiversity and their impact on the survival of some taxa and recognized the need for conservation action.

Spurred by these results, the Biodiversity Secretariat of the Ministry of Environment sponsored several surveys and solicited data from amateur and professional lepidopterists and naturalists. The resulting database of over 25,000 records was the basis for the evaluations published in The National Red List 2012 of Sri Lanka (MOE, 2012). With this expanded dataset, the following results were obtained: of the 245 species recorded in Sri Lanka, 99 were in the threatened category: 21 were listed as Critically Endangered (including 5 endemics); 38 were listed as Endangered (including 10 endemics) and 40 were listed as Vulnerable (including 7 endemics). Only 6 species were now categorised as Data Deficient, an indication of the progress that had been made. Details are given in Appendix 2. This publication also detailed the threats to butterflies in general and to some species in particular.

Sri Lanka has a high degree of endemism in the butterfly fauna, especially at the subspecies level. Though there is still some controversy about the value of the concept of subspecies, in an island setting such as Sri Lanka, subspecific information is of particular relevance because of the isolation of populations and the possibility of incipient speciation. In addition, the identification of subspecies can contribute significantly to an understanding of the evolutionary history of families and genera elsewhere.

It is hoped that with the completion of this BuCAP document, enough attention would have been brought to bear on the issues of butterfly conservation to generate interest in the collection of data from planned systematic surveys for future national evaluation process. Synopses of individual species and the evaluation of the need for specific conservation action is useful in prioritising further research and taking timely action for recovery of species. Furthermore, where appropriate, species-specific Recovery Plans must be considered an integral part of conservation implementation strategy.

This document was prepared with expertise and knowledge from both scientists and naturalists in Sri Lanka as well as reference to New & Collins (1991), New (1997) and Sands & New (2002). It is accepted as an AP of National importance. A preliminary working document was discussed at a workshop of selected experts and stakeholders on the 10th of July 2009 at the Ministry of Environment and Natural Resources, which enabled the authors to obtain valuable comments and suggestions to prepare the draft BuCAP. Subsequently, the draft BuCAP was reviewed by a group of technical experts. The document was again revised in October 2012 and reviewed in November 2012. A final review was held on July 16, 2013.

2. Guiding Principles

1. Butterflies:

a) are living organisms that are an integral part of our ecosystems and have an intrinsic value and a right to exist in and of themselves

b) provide a valuable environmental service as pollinators

c) play a significant role in the food chain by being a source of food in all stages of their development to other organisms. The larval stages are particularly important food sources for birds including their young. The avifauna of Sri Lanka, in turn, is particularly important because it has significant economic value due to its value to ecotourism

d) can be used as indicators of environmental quality

e) are invaluable for their aesthetic appeal and have considerable economic value in ecotourism as there are increasing numbers of visitors from overseas who come to see them specifically

f) can become pests under monoculture systems of agriculture

2. Many larval food plants may be weeds but these plants should be conserved within a threshold level.

3. The use of agrochemicals to maximize crop production is harmful to biodiversity and alternative environment friendly farming practices must be promoted to sustain biodiversity in agricultural landscapes.

3. Objectives

3.1. Major objectives

The major objectives of BuCAP are

1. to assess the state of the current knowledge of the butterfly fauna of Sri Lanka
2. to review the conservation status and the problems faced by the butterflies of Sri Lanka
3. to propose recommendations towards the conservation of butterflies in Sri Lanka.

3.2. Major tasks

1. Review the taxonomy, distribution, flight periods, habitats and the legal and institutional aspects of the butterfly fauna

2. Identify the currently known threats to butterflies

3. Identify constraints to the conservation of butterflies in general

4. Evaluate the current conservation status of the butterflies (IUCN Red List)

5. Recommend conservation action for butterflies in general

6. Recommend conservation action for threatened taxa

7. Construct an Action Plan for conservation

8. Recommend priorities for future action.

4. Current state of knowledge of the butterfly fauna

4.1 Taxonomy of butterflies of Sri Lanka

Butterflies (order Lepidoptera) are currently classified under the Superfamily Papilionoidea, which includes the skippers (family Hesperiidae) and the moth-butterflies (family Hedylidae) (van Nieukerken *et al.*, 2011). This classification supercedes the work of Ackery *et al.* (1999) and Wahlberg *et al.* (2003). Based on this current classification, the butterfly fauna of Sri Lanka comprises 6 families: Papilionidae, Pieridae, Riodinidae, Lycaenidae, Hesperiidae and Nymphalidae (which includes the subfamilies Satyrinae, Danainae, Libytheinae, Limenitidinae, Apaturinae, Biblidinae, Charaxinae, Nymphalinae and Heliconiinae, some of which were previously considered as families).

The taxonomic framework within which the butterfly fauna of Sri Lanka is defined is relatively well-understood though there are some difficulties still to be resolved. The taxonomy has been reviewed over the past few years by Dr. G. van der Poorten and Dr. Krushnamegh Kunte by reference to the literature and to specimens, most notably at the NHM London England. Several revisions have taken place and the list presented in Appendix 2 may differ from those published earlier by Woodhouse (1949) and d'Abrera (1998).

The current document uses the arrangements given by Dr. K. Kunte (2014, in preparation & pers. comm.) with endemics enumerated in part by Dr. Harish Gaonkar (pers. comm.) and various references of Yata (1989, 1991, 1994, 2010). The status of endemic subspecies still needs to be reviewed in more detail and several species may prove to be endemic at the species level as well. Some of the problematic species include *Potanthus satra*, *Spindasis elima fairliei*, *Bindahara phocides moorei*, *Halpe [egena] ceylonica* and *Halpe [egena] egena*. For a full list, see Appendix 3.

A total of 245 butterfly species has been recorded from Sri Lanka at present (See Appendix 2 for the complete checklist). Of these, 26 are endemic species (with an additional one provisionally) while 86 are endemic subspecies (Table 1). This level of endemicity, particularly at the subspecies level, is quite high.

Table 1: Species Richness and Endemic Status of Butterflies in Sri Lanka

Family	Number of species	Number of endemic species	Number of endemic subspecies
Papilionidae	15	2	6
Pieridae	28*	2	9
Riodinidae	1	0	0
Nymphalidae	68	9	35
Lycaenidae	84	9 (1)	19
Hesperiidae	49**	4	17
Total	**245**	**26 (1)**	**86**

* *Catopsilia scylla* was recently recorded from the island for the first time and is established as a breeding resident (van der Poorten & van der Poorten, 2012).
** *Cephrenes trichopepla* was recently recorded from the island for the first time and is established as a breeding resident (van der Poorten & van der Poorten, 2013). ( ) in brackets, provisional

4.2 Distribution of butterflies in Sri Lanka

The distribution of butterflies in the island is governed principally by climate, topography and vegetation. Some species are distributed island-wide, with differences in their relative abundance related to bioclimatic zones and other biotic factors. Some occur in more than one bioclimatic / floristic zone, while others are restricted in their distribution. In general, a higher species richness of butterflies occurs at the confluence of climatic zones, particularly in the foothills. The population fluctuations of butterflies in the dry and arid zones are related to the monsoon rains—there is a major peak in October and November (during the pre-monsoonal period, with the first rains) and a smaller peak in January and February (in the post-monsoonal period, when the rains are waning). In the wet zone, the populations are more stable but peak during March, April and May (before the arrival of the southwest monsoon) and in October and November (the inter-monsoonal period). A bibliography of Sri Lankan butterflies is given in Appendix 4.

Table 2: Butterfly species with restricted distributions

Based on Perera & Bambaradeniya (2006) with modifications (only binomials used)

Bio-climatic zone	**Habitats / Vegetation types**	**Species**
Wet Zone Lowland	Tropical Rain Forests	*Jamides coruscans, Mycalesis rama, Arhopala ormistoni, Arhopala abseus, Rapala lankana, Nacaduba ollyetti, Nacaduba calauria, Parthenos sylvia, Horaga onyx, Horaga albimacula*
Wet Zone Montane	Montane & Lower Montane Forests	*Parantica taprobana, Vanessa indica, Vanessa cardui, Lethe daretis, Udara lanka, Udara akasa, Argynnis hyperbius*
	Wet Patana Grassland	*Baracus vittatus, Eurema laeta*
Dry & Intermediate Zone	Semi-evergreen deciduous forests and scrubland	*Graphium nomius, Charaxes solon*
	Grasslands	*Zizula hylax, Freyeria putli, Azanus jesous*
	Savannah and Dry & Intermediate Patana	*Symphaedra nais, Ypthima singala*
Arid Zone (North)	Scrubland, mangrove and other coastal vegetation	*Colotis danae, Colotis fausta, Azanus ubaldus, Tarucus nara, Spindasis elima, Tajuria jehana*
Arid Zone (South)	Scrubland, mangrove and other coastal vegetation	*Gomalia elma, Tarucus callinara*
Wet Coastal Zone	Mangrove and wetlands	*Euploea phaenareta, Ideopsis similis*



Dry zone, at Chundikulam, east coast. Though it looks barren, several species of butterfly thrive in this habitat.



Intermediate zone, mid-elevation habitat in the Knuckles

4.3 Legal and institutional aspects related to conservation of butterflies of Sri Lanka

All Lepidoptera (butterflies and moths) are protected under Schedule VII of the Fauna and Flora Protection (Amendment) Act, No. 22 of 2009 which is administered by the Ministry of Wildlife Resources Conservation. Habitats are given some protection under the Fauna and Flora Protection Ordinance (FFPO) and the Forest Ordinance (FO). The National Heritage and Wilderness Areas Act No. 3 of 1988 provides special protection to forest areas that harbor unique ecosystems, genetic resources, or outstanding natural features (e.g. Sinharaja Forest Reserve) and is administered by the Forest Department.

Under the Fauna and Flora Protection Ordinance, areas can be protected by designating them as Strict Natural Reserves, National Parks, Nature Reserves, Jungle Corridors, Intermediate zones or Sanctuaries. Similarly, under the Forest Ordinance, areas can be protected by designating them as Forest Reserves or Conservation Forests. The Protected Area (PA) system in Sri Lanka covers 17% of the total land area.

Butterfly species are also protected under CITES Appendix II which controls international trade of listed species that are not threatened with extinction but that need to be protected in order to avoid "utilization incompatible with their survival." In Sri Lanka, the Sri Lanka Rose, *Pachliopta jophon*, (listed as *Atrophaneura jophon* under CITES) and Sri Lanka Birdwing, *Troides darsius*, are listed in CITES Appendix II.

For the purposes of research and education, butterfly repositories are currently maintained at the Sri Lanka National Museum with smaller collections at the Ministry of Wildlife Resources Conservation and some National Universities.

4.4 Threats to butterflies

An important step in practical conservation is to identify the processes that threaten butterfly populations and to determine the severity and extent of these processes. In most documents dealing with conservation issues in Sri Lanka, specific threats to threatened taxa have not been identified though general statements are common.

The majority of the threatened butterflies in the island are restricted to the wet zone—the climatic zone that harbours nearly all of the endemic butterflies. Many of the wet zone forests, which are the principal residences of many of these endemics and threatened taxa, have been cleared for agriculture and only 3% of the original forest cover remains intact. These forests are fragmented and many are encroached and occupied by settlers or are degraded as a result of being used as economic resources. The continuous over-exploitation of these forests has a very significant impact on the residual populations of butterflies in these forests. A similar process is likely to occur in the northern areas where the rapid expansion of economic activities including the clearing of vast areas of forests for agriculture and urban development is taking place.

The following are currently identified threats to the butterfly fauna of Sri Lanka:

4.4.1. Habitat destruction

This is perhaps the most important process that threatens butterflies as for most other biota. The key effects of habitat destruction are 1) removal or diminishing of the resource base required for the survival of populations and 2) changes to the environment with its

associated impact on the behaviour of adult butterflies and other organisms such as predators, disease agents and parasitoids which have a direct bearing on the survival of butterflies. The impact of habitat destruction is particularly significant for species that are highly localized and ecologically specialized. Loss of a critical habitat or increased pressure on these ecosystems are of great concern as having effects beyond the harm to a single butterfly species.



Mannar (Arid zone): prime butterfly habitat that has been cleared for development

The following are the major reasons for habitat destruction:

4.4.1.a. Urbanization, development activities and establishment of infrastructure.

These activities are associated with rising populations and increased economic activity and contribute to substantial losses in native habitats and declines in butterfly populations. This is particularly evident in the north and the east of the island after the end of the war.

Note: Many of the habitats and their butterfly compositions in the northern and eastern areas are not well-documented and there is an urgent need to establish baseline surveys to obtain such data to determine areas of conservation concern.

4.4.1.b. Construction of hilltop telecommunication towers.

Many butterflies 'hilltop', a behaviour in which individuals arrive on isolated high points in a landscape from the surrounding area many kilometers away in an attempt to find mates. The high points are peaks of mountains or hills and places such as the top of Sigiriya Rock or the top of Etha Gala Rock in Kurunegala. Disturbance of hilltops by levelling of the landscape, removing of trees and other vegetation for construction of telecommunication towers may decrease the carrying capacity of the hilltops on which many species establish their mating territories. This needs further evaluation in Sri Lanka.

4.4.1.c. Reclamation of wetlands and mangroves

With the rapid urbanization and development activities in the past few years, critical areas of wetlands have been dredged or filled in for various purposes. This has had a major impact on several species of butterflies. This is particularly evident in the Western province where two species of butterflies, *Euploea phaenareta* and *Ideopsis similis*, have all but disappeared from many wetland habitats in Colombo. This trend is likely to continue with the rapid expansion of tourist hotels and other types of accommodation in mangrove habitats along the coastal areas of the southwest.

4.4.1.d. Fire

The impact of fire on butterfly populations is variable and depends largely on the extent of the fire and its intensity. Limited burns of low intensity fire may be beneficial to some populations of butterflies that depend on open meadows or savannah-type lands. Fires in such instances prevent successional plants from establishing themselves and replacing the existing vegetation with plants that are less desirable for some species of butterflies such as *Symphaedra nais, Ypthima singala, Eurema laeta, E. brigitta.*

On the other hand, extensive deliberate burning of grasslands and forests, as seen in the patana lands extending from the Uva plains to the highest elevations of the central hills, has lead to the disappearance or reduction of a large number of populations of the butterflies noted above. The setting of fire to forests of the Nilgala region is related to an economic activity—the manufacture of `Beedi` cigarettes. *Diospyros melanoxylon* is the tree from which Beedi leaves are harvested. These trees are fire-resistant and produce new flushes of leaves after a burn—it is this flush that is harvested for beedi manufacture. These new flushes are also the larval food plant of the Baronet butterfly, *Symphaedra nais*. Harvesting destroys eggs, larvae and pupae, and fire destroys all organisms confined to these savannah habitats. Deliberate setting of fires is also not uncommon in the wilder areas to promote new growth of grass and hence to allow hunting or easy access to the forests for collecting items of economic value such as timber, firewood and items of medicinal value.

4.4.1.e. Illicit felling of trees for firewood, timber and other uses

This is an economic activity that continues unabated in protected and unprotected areas of the island and poses a major threat to the diversity and populations of many species of butterflies. In the wet zone, the harvesting of saplings of various tree species from the understorey will have a profound influence on the integrity of the forests of the future, particularly the small remnant forest reserves such as those seen in Mitirigala, Bodinagala and many other forest reserves. It is very clear to naturalists and other field workers visiting these sites that much of the undergrowth has all but disappeared. In addition, when these saplings are removed, vines that grow on them are also removed. Many of these vines (e.g. *Aristolochia indica, Zanonia indica*) are used as larval food plants by many species of butterflies.

In the dry zone the most serious impact of illicit felling is seen on the swallowtail butterfly, *Papilio crino*, whose dominant larval food plant is *Chloroxylon swietenia*, a very high value timber used in the manufacture of fine furniture. The

populations of this butterfly have dropped very significantly compared to the recent past. Another recent trend that seems to be taking hold in the arid and dry zones is the lopping of branches of *Syzygium cumini* and *Drypetes sepiaria* (also *Manilkara hexandra* though not a butterfly related plant) for easy harvesting of their fruit. *Syzygium cumini* is an important larval food plant for several species of lycaenids; *Drypetes sepiaria* is used exclusively in the dry zone by the endemic Lesser Albatross, *Appias galene*. In the long term, such removal will cause a significant decline in these populations. A similar trend is clearly evident in the Eastern province, especially around Nilgala National Forest where whole branches of *Terminalia bellirica* and *T. chebula*, which are larval food plants of several butterflies, are lopped off in order to harvest the fruit.

4.4.1.f. Spread of invasive plants

Introduced invasive plants competitively displace native flora and are a major threat to all biota. Their proliferation in agriculture has lead to significant increases in the cost of production as well, and therefore has had a major economic impact. This process often involves considerable loss of critically important larval food plants and nectar sources, particularly for those taxa that utilize forest-edge habitats. In addition, such displacements may also lead to the loss of obligatory associations with many members of the Formicidae (ants) whose relationship with some Lycaenidae are well-known.

The following invasive plants have had, and continue to have, a significant impact on the populations of many species of butterflies, and in some cases, have led to local extirpation:

Panicum maximum: introduced in the late 1800s, this pasture grass has spread extensively in the mid-country and many parts of the dry and intermediate zones and has seriously impacted the populations of many butterflies by completely smothering and killing off native herbaceous plants that are used as larval food plants. While some Hesperiids and Satyrids use the grass sparingly as a larval food plant, the lack of flowering plants for adult nutrition in such habitats has not benefited these species.

Prosopis juliflora: a South American introduction with exceptionally sharp thorns, this shrub has become a major threat to the habitats of the arid zone—in Jaffna, north of Arippu, and now invading Venkali Bird Sanctuary, and also in Bundala National Park in the south. Many areas of the arid zone which once had a great diversity of plants are now monoculture stands of this species. The plant grows in dense stands and rapidly and effectively shades out native vegetation except for the native cactus *Opuntia dillenii*. All arid zone butterflies are displaced including *Spindasis elima*, *S. ictis*, *Colotis danae*, *C. aurora*, *C. fausta* and *Azanus ubaldus* because of the loss of larval food plants and nectar sources. *P. juliflora* is not used as a resource by any butterfly. Even more worrying, is its recent appearance in Thabbowa near Puttalam in the dry zone (H. D. Jayasinghe, pers. comm.)

Clidemia hirta: introduced from South America, this small shrub is a very rapid invader that has displaced the vast majority of the vegetation along edges of forests and roadways and footpaths in the lowland wet zone forests. This

displacement is plainly evident in the Sinharaja Forest Reserve. It is not used by any butterfly as a resource.

Wedelia trilobata: introduced from South America, this spreading herb rapidly colonizes edges of forests, roadways, tea plantations and any place with bright exposure to sun although it also tolerates shade. It has displaced the native vegetation, which includes nectar sources for butterflies and larval food plants such as *Anaphalis subdecurrens* and *Viola betonica*. *W. trilobata* is not used by any butterfly as a resource.

Austroeupatorium inulifolium: introduced from South America, this tall shrubby herb has invaded edges of forests, roadways and pathways, particularly in the central hills of the highlands and the eastern Knuckles Conservation Area (Riverston, Pitawela Patana etc.). Though it is infrequently used as a nectar source by some butterflies, it has displaced plants that are critical for the survival of many species of butterflies in this area (e.g. species of *Pseuderanthemum, Asystasia, Smilax* and *Strobilanthes* which are used as larval food plants).

Lantana camara: introduced from South America, this medium-sized shrub is a very rapid invader in certain habitats such as Uda Walawe. While it is an excellent nectar source for many species of butterflies, it aggressively displaces the native vegetation in many areas diminishing the supply of many larval food plants and nectar sources, particularly those of meadow species (e.g. *Zizina otis, Zizeeria karsandra,* and *Zizula hylax*).

Pinus caribaea: planted extensively in the mid-country hills and to a lesser extent in the lowland wet zone, *P. caribaea* has now become naturalized in many areas including the Knuckles Conservation Area. Its allelopathic effects and shading of undergrowth has been most damaging to native flora, particularly at the higher elevations. *P. caribaea* is not used by any butterfly either as a larval food plant or nectar source. The butterfly fauna and general biodiversity within *Pinus* plantations are exceptionally low.

Ageratina riparia: introduced from Mexico, this small herbaceous plant has spread far and wide, particularly along forest edges and roadways and footpaths at elevations above 1200 m where it forms dense mats of vegetation. It has displaced the native vegetation such as *Viola betonicifolia* used by *Argynnis hyperbius* larvae, *Anaphalis subdecurrens* used by the larvae of *Vanessa cardui* and *Cynanchum alatum* used by the larvae of *Parantica taprobana*. Despite its prolific flowering, it is very seldom used as a nectar source.

Chromolaena odorata: introduced from South America, this large herbaceous shrub is confined to the lower elevations. While it is a good source of nectar for butterflies, it displaces the native vegetation such as *Dipteracanthus prostratus* and *Justicia procumbens*, which are used as larval food plants.

Mikania cordata: introduced from the Philippines, this large vine grows in wetland habitats where it can take over large areas of land, smothering the native vegetation including species such as *Smilax perfoliata*, the larval food plant of

Loxura atymnus. Though an excellent source of nectar for butterflies, the plant is not used as a larval food plant.

Swietenia macrophylla: introduced from South America for its timber value, this large tree has made inroads into Sinharaja forest, particularly from the Deniyaya side along streams into the forest. If unchecked, it leads to a significant alteration of riparian habitats and loss of plants on which some butterflies depend (e.g. *Strobilanthes*).

Dillenia suffrutacosa and *Annona glabra*: these exotics are rapidly invading and occupying habitats in the wet zone, displacing the native plants and thus many species of butterflies.

4.4.1.g. Use of pesticides, weedicides and artificial fertilizers

Most chemicals used impact Lepidoptera directly and indirectly. Pesticides directly kill all populations while weedicides impact the populations indirectly by killing the larval food plants and thereby depriving sustenance to larvae, and killing nectar plants used by the adults for nutrition. Chemicals may also impact butterfly populations directly and indirectly by damaging soil in which plants used as larval food plants or nectar plants grow.

Excessive use of artificial fertilizers (particularly nitrogen-based fertilizers) promotes the rapid growth of nitrogen-responsive plants (e.g. grasses) that then smother native herbaceous dicots. This is particularly true in watersheds that are the ultimate reservoirs of the excess fertilizer.

The impact of agro-chemical usage is for the most part confined to the non-plantation agriculture sector that includes rice and field crop cultivation where its usage is extensive. The immediate impact is on the populations of edge species in agricultural lands such as species of *Junonia*, *Potanthus*, *Ampittia* and *Pelopidas*.

4.4.1.h. Establishment of monocrop agricultural plantations.

The principal effect of monocrop agricultural plantations on butterfly populations is through its impact on the native flora, which is diminished to varying extents depending on the monocrop. In the wet zone, Palm oil (*Elaeis guineensis*) plantations are particularly damaging in the lowland wet zone since the plant completely shades out all existing vegetation once the plants reach maturity. In the highlands, as well as in the low- and mid-lands, tea plantations totally displace the native vegetation. Rubber plantations have a similar effect, but some populations of lycaenids (e.g. *Jamides bochus* and *J. celeno*) have benefited due to the planting of leguminous cover crops (e.g. *Centrosema pubescens* and *Pueraria phaseoloides*), which are used as larval food plants by these butterflies.

4.4.1.i. Grazing

The impact of domesticated grazing herbivores is two-fold: 1) light grazing often improves habitats for meadow species by keeping more aggressive vegetation in check by removing competition for light and nutrients and allowing the vegetation on which the butterflies depend to survive and flourish; 2) however, over-grazing and the excessive trampling of vegetation by domesticated animals such as cattle and buffalo are very destructive to butterfly habitats since it completely eliminates

or diminishes all sources of larval food and adult nectar sources to an extent that makes butterfly populations non-sustainable. Such examples of over-grazing and physical damage by trampling are clearly seen in the grazed areas of the eastern province and the arid zones of the island. It is noteworthy that the problem of over-grazing has significantly impacted not only butterfly resources, but also the resource base of all wild herbivores in National Parks such as Yala and Udawalawe where the situation has become severe.

4.4.1.j. Fragmentation of habitats

The impact of the fragmentation of forests and its effects on the movement of butterflies between isolated patches of forests and its general influence on the meta-structure population has not been studied scientifically. Any assessments based on casual observations should therefore be considered tentative. Nevertheless, those taxa most affected are likely to be the strict forest dwellers that are averse to bright light. These species may skirt the edges of forests but do not fly too far from the forests due to lack of sufficient cover. They are therefore not likely to move from one forest patch to another if the distance between them is considerable. Perhaps more importantly, the impediment to free movement between populations is likely to lead to inbreeding depression and a genetic bottleneck making the remnant populations even more vulnerable.

4.4.1.k. Need for accessibility to riparian water resources in ecologically sensitive habitats.

Several species of Sri Lankan butterflies depend entirely on riparian habitats for their survival because their larval food plants grow almost exclusively along streams and rivers, particularly in the wet zone. The need for people to access the rivers and streams to obtain water for domestic consumption, irrigation, and sometimes for gem mining activities, invariably leads to soil disturbance and the removal of trees and other vegetation. These changes allow more aggressive grasses, sedges and other weedy plants to establish themselves very quickly and take over the original habitats. The altered landscape with its highly diminished diversity of plant species including larval food plants and nectar sources soon leads to the extirpation of the many riparian species of butterflies. Examples of species affected by loss of riparian habitats include *Kallima philarchus, Doleschallia bisaltide, Loxura atymnus, Kaniska canace, Phalanta alcippe* and *Celaenorrhinus spilothyrus.*

Note: In addition, many roads in the wet zone were built along rivers and streams and these habitats have already been damaged.

4.4.1.l. Removal of sand.

This activity, which has become very widespread with increasing economic activity, can adversely affect riparian habitats that were discussed above. In addition to the destruction of vegetation, the removal of sand also changes the hydrolics of the river system especially when sand is removed as far as the bedrock of the waterway.

4.4.2. Climate change

The long-term effects of climate change on butterflies are difficult to predict. There seems to be some evidence that those populations in the colder environments with no possibility

of movement to lower temperature gradients will be most affected (e.g. *Spindasis greeni*). In addition, climatic changes such as increased droughts, heavier than usual rains and changed rainfall patterns all impact butterfly populations.

4.4.3. Pollution

The impact of both air and ground pollution on butterfly populations has not been researched in Sri Lanka. Nevertheless, pollutants can affect all stages of butterflies through their effects on the environment and on their life stages. The suggestion that pollutants from cities of the southwest of the island influence tree die-back in the Horton Plains National Park should be of conservation concern. The impact of this tree die-back and the changes to the habitat and its influence on butterfly populations is not known.

4.4.4. Illegal collection of butterfly species from the wild.

Collection of butterflies such as the Papilionids for the ornamental trade can be of concern as indicated by the detections of the Department of Customs over the past decade (Appendix 5). An inventory of the species intercepted by the Department of Customs indicates that none of the endemics were involved in illegal trade; all the species detected are common and widespread in Sri Lanka and are of Least Concern (LC) from a conservation point of view except for one species, which is listed as VU (Vulnerable). Two species, *Pachliopta jophon* and *Troides darsius*, are included in the CITES appendices but neither of these have been recorded as being illegally collected. Statistics from the Ministry of Wildlife Resources Conservation would be helpful to further illustrate the extent of the problem.

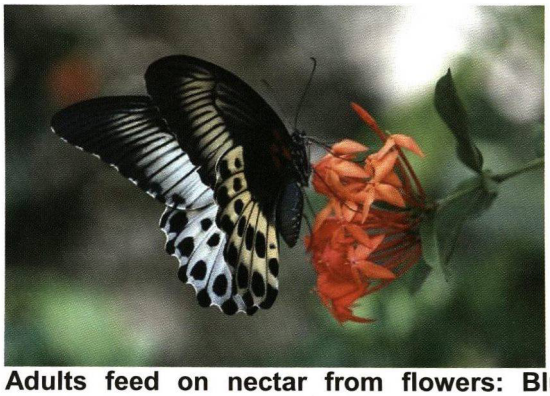
4.5 Biology of butterflies

The life-cycle of members of the Lepidoptera is one of complete metamorphosis—it comprises 4 stages: egg, larva (caterpillar), pupa and adult. The entire cycle may take from 3 weeks to several months. The resource needs of each stage of the life-cycle are different and must be considered when evaluating the status of a butterfly species and when preparing conservation plans. There tends to be more information available on the adult stage of life but the other stages are just as crucial for the survival of the species. Information that is necessary in order to prepare conservation plans includes oviposition site selection by females, larval food plants, microhabitat requirements for larvae and pupae, and mating and courtship strategies.

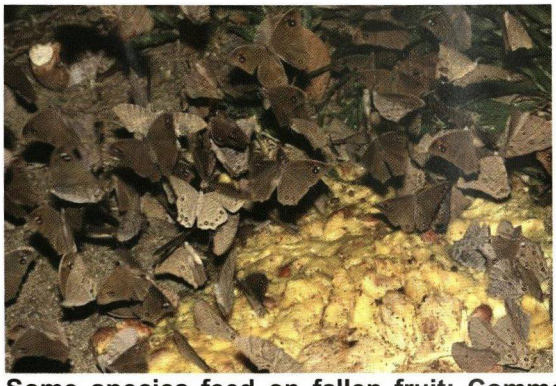
All butterfly larvae known in Sri Lanka feed on plants except for one species (*Spalgis epeus*) that feeds on mealybugs. Most larvae feed on leaves but some feed on flowers or fruits or seeds. Some species, particularly in the Lycaenidae, have an association with ants. The female must select the correct place to lay its eggs. Usually this is on the larval food plant at a specific site and on plant parts of a specific maturity. So information on oviposition site selection is crucial for conservation. Eggs usually hatch within 2–5 days. The larvae of most species are very selective and feed only on a very limited number of species of plants. Some species have only one larval food plant while others may have two or more. In addition, a given butterfly species may feed on different plants in different climatic zones: e.g. *Acraea violae* (Tawny Coster) feeds on *Hybanthus enneaspermus* in the dry zone in Wilpattu National Park in the Anuradhapura district but only on *Passiflora foetida* in the intermediate zone in the Kurunegala district. It is apparent that knowledge of such differences is crucial to conservation strategy. All larvae undergo several molts before pupation. The selection of sites for pupation is also highly

varied and the ability to find a suitable pupation site can be critical to the survival of some species. Most often the pupa is formed hanging from a stick or leaf of the larval food plant or one nearby, but some species pupate in holes bored into dead wood or within a dried up fruit or in the ground or among leaf litter. The pupal stage typically lasts one to two weeks though some species (e.g. *Pachliopta hector*) may remain in the pupal stage for several months. Adult butterflies typically feed on nectar from flowers but many Nymphalidae feed on rotting fruit, sweat, dung and dead crabs. In addition, males of many species mudsip to obtain additional nutrients not available in abundance elsewhere. Other resource requirements such as shade and appropriate roosting sites also influence the distribution and survival of many species of butterflies. Courtship and mating strategies of several species are influenced by the extent of forest cover or its absence. To obtain a sound understanding of the resource requirements for a particular species is therefore of paramount importance in conservation. Since even closely related species may have very different resource needs, knowledge of the requirements of a particular species may not be extrapolated to its sister species.

Because of this multistaged life history and the ability of a female butterfly to produce large numbers of eggs, butterflies are very different from vertebrates in their population structure. At any one time, a great many individuals may be hidden—adults are generally very visible but eggs, larvae and pupae are not. Butterflies are highly seasonal and their populations are cyclical. Some species produce only one brood a year while others produce two or more. Because of this, there may be thousands of adults one day and few the next. Given these observations, the conservation for butterflies must be evaluated in the context of the four stages of the life-cycle and not only that of the adult.



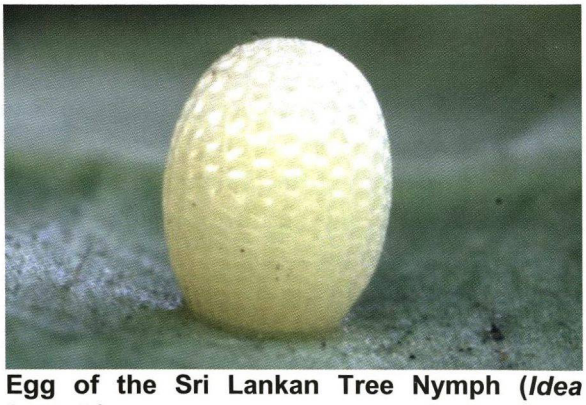
Adults feed on nectar from flowers: Blue Mormon (*Papilio polymnestor*) on *Ixora*



Some species feed on fallen fruit: Common Evening Brown (*Melanitis leda*) on jak



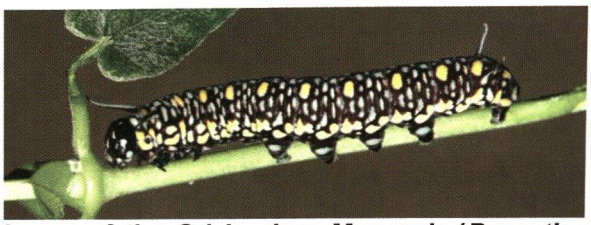
Some feed on bird droppings: Black Rajah (*Charaxes solon*) on peacock scat.



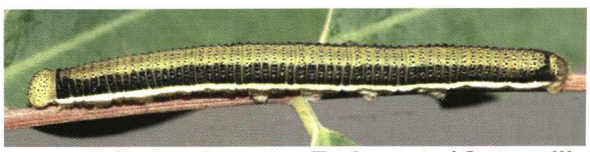
Egg of the Sri Lankan Tree Nymph (*Idea iasonia*)



Common Jezebel (*Delias eucharis*) female laying eggs



Larva of the Sri Lankan Monarch (*Parantica taprobana*)



Larva of the Lemon Emigrant (*Catopsilia pomona*)



Pupa of the Sri Lankan Tree Nymph (*Idea iasonia*)



Pupa of the Common Jezebel (*Delias eucharis*)



Pupa of Ceylon Palmfly (*Elymnias singhala*)

5. Conservation principles and constraints in Sri Lanka

5.1 General concepts of conservation

Conservation is not simply a process to preserve species but an active process that requires an integrated approach. The purpose of conservation is to provide the appropriate habitat and resources to maintain stable populations into the future. Feltwell (1995) expressed it as "the planned management of natural resources, the retention of natural balance, diversity and evolutionary change in the environment".

Conservation may be broadly divided into *ex situ* and *in situ* conservation. *In situ* conservation deals with the conservation of a species in the wild. *Ex situ* conservation deals with the conservation of a species in a controlled environment. Conservation strategy depends on the status of the species (e.g. whether or not it is rapidly declining), the types of threats it faces, and the characteristics of its habitat. Conservation strategies may range from simple monitoring to active recovery plans.

5.2. Genetic resource aspects & conservation

Broadly speaking, genetic resources refers to the genetic variation present in plant and animal species and encompasses the diversity between species and the diversity within species necessary for their continued survival. It generally refers to cultivated plants and domestic animals whose genetic diversity has been narrowed by breeding but can also be applied to plants and animals in general. The conservation of genetic resources may be undertaken either *in situ* or *ex situ*. *Ex situ* conservation of plants usually involves the long-term storage of seeds and clonal propagation of tissue. For Lepidoptera, captive rearing is the main approach to the conservation of genetic resources *ex situ*.

Captive rearing is recognized as an important conservation tool. A species that is threatened in its natural state can be reared in captivity and the adults can then be released into the original habitat of the population. They may also be re-introduced into areas from which the species has disappeared or into new areas. Captive rearing has been undertaken particularly successfully in Papua New Guinea (New, 1997). Selected species are reared in captivity by local communities and are then sold through a state-run agency to butterfly enthusiasts who are supplied with perfect specimens. This activity reduces the extraction of the butterfly from the wild, allowing its natural populations to thrive. The re-introduction of captive-reared butterflies is also a recognized as an important component of many conservation programs. Two well-known programs that use re-introduction as part of the conservation plan are that of the Karner Blue, *Lycaeides melissa* (Webb, 2010) and the Miami Blue, *Cyclargus thomasi* (Florida Fish and Wildlife Conservation Commission, 2010).

Butterfly farming to supply butterfly exhibits is a type of captive rearing though its aims are slightly different. Butterflies are raised for display in free-flying public exhibits to educate the public about butterflies and to raise awareness. Generally, people from the local community run the farms; they earn an income and then do not need to extract resources from local forests. Butterfly farming is successfully implemented in several countries such as the Philippines, Costa Rica, Uganda, Kenya and Tanzania.

5.3. Specific aspects of conservation for Sri Lanka

In Sri Lanka, it is important to specify conservation measures at the subspecies level as well as at the species level because of the high level of endemicity in the butterfly fauna. In addition, the country's island status keeps it somewhat isolated from external influences, with the possibility that new species might arise. For instance, *Appias indra indra* which occurs in the Indian subcontinent is rather common and extends all the way to south China and the Malay peninsula. However, the subspecies in Sri Lanka, *A. indra narendra*, is endemic and exceptionally rare and is listed as CR under the National Red List of 2012. Specifying conservation status at the species level (as *Appias indra*) will be misleading since it might be assumed that it is the same subspecies as in India. Therefore it is important to prepare recovery plans at the level of the subspecies.

5.4. Constraints for conservation of butterflies in Sri Lanka.

1. Inadequate research or knowledge on butterfly biology and taxonomy due to:
   a) lack of trained taxonomists on Lepidoptera
   b) inadequate funds for research projects
   c) difficulty in obtaining permits for conducting research both for professionals and non-professionals.

2. Lack of trained personnel, funds and educational material to disseminate conservation awareness among the general public.
   Most, if not all awareness programs are done by volunteers who are often not attached to government agencies. Nevertheless, considerable effort is made by the Ministry of Environment through the Biodiversity Secretariat to conduct workshops, awareness programs and lectures for the benefit of the public.

3. The lack of a fully updated National repository for specimens and a National Database. (Note: as of November 2012, the butterfly collections in the Sri Lanka National Museum have been databased)

4. Lack of sufficient communication between the central government and subordinate legislatures to coordinate conservation activities.

5. Legislative constraints. For example, all Lepidoptera (butterflies and moths) are legally protected under the FFPO no matter what their conservation status even though some are very common and some may be pests of agricultural crops.

6. Lack of knowledge of the butterflies found in undisturbed habitats and in protected areas.

7. Lack of communication among researchers (professional and non-professionals) in allied fields (e.g. plant studies, butterfly studies)

6. Conservation status evaluation and priorities

6.1. IUCN conservation status evaluation

The conservation status used in this document follows The National Red List 2012 of Sri Lanka (MOE, 2012), which is based on IUCN criteria. While these status evaluations are useful, the problem of using the IUCN categories for invertebrates has been noted by many (e.g. van Swaay & Warren, 1999 and references therein). Therefore, in the 2012 National Red List evaluations, not all IUCN categories were used but the spirit of the categories was retained and the procedure was modified to arrive at meaningful designations. The IUCN criterion A (rate and extent of population decline), C (population size and decline), D (very small and restricted population) were not used for evaluation because of the rigorous quantitative data that these criteria demand, which we do not have. Only criterion B (area of occurrence and extent of occurrence) was used in the evaluations. This criterion was further modified based on field observations, a comparison of current data with historical data and knowledge of life histories by experienced lepidopterists to arrive at meaningful designations of status. The

conservation status of the butterflies of Sri Lanka is given in Appendix 2 and a summary of the numbers in each category is given in Table 3.

A significant shortcoming of the evaluations of status was the lack of data from scientific surveys in the varied habits of National Parks. Since habitats in National Parks are the least disturbed by human activities, these protected areas offer the best chance to obtain reliable data on the occurrence and abundance of butterflies in an environment relatively devoid of anthropogenic activities. Even outside the protected areas, very few systematic surveys of butterflies have been done in Sri Lanka. The spotty nature of the distributions recorded in the data that were used in the IUCN evaluation is a reflection of inadequate sampling and the occurrence of isolated habitats for butterflies in an ocean of urbanized and agricultural areas. It is likely that the lack of information on flight seasons has also greatly influenced the true nature of the occurrence and distribution of the butterflies in these surveys. Also of particular significance are taxa found above 1500 meters elevation where the total area is small and the limit set for critically endangered species stipulated by the IUCN criteria distorts the true status of the butterflies in this zone.

Table 3: Summary of IUCN Red List 2012 status for the butterflies of Sri Lanka (number in parentheses indicates number of endemic species)

IUCN Status	CR	EN	VU	NT	LC	DD
Number of species	21 (5)	38 (10)	40 (7)	20 (0)	120 (3)	6 (1)
Number of endemic subspecies	7	17	15	11	36	1

Note: the IUCN status was evaluated at the species level

6.2 Priority for conservation

For conservation action, we recommend the following priority for threatened taxa:

Endemic taxa:

1. Endemic species (CR, EN and VU).

2. Endemic subspecies (CR, EN and VU)

Non-endemic taxa:

3. Critically endangered species or subspecies (CR) **that are not widely** distributed world-wide or that **are** categorized as CR outside Sri Lanka (globally or in a single country).

4. Critically endangered species or subspecies (CR) **that are widely distributed** world-wide or that are **not** categorized as CR outside Sri Lanka.

5. Endangered species or subspecies (EN) **that are not widely distributed** world-wide or that **are** categorized as EN outside Sri Lanka.

6. Endangered species or subspecies (EN) **that are widely distributed** world-wide or that are **not** categorized as EN outside Sri Lanka.

7. Vulnerable species or subspecies (VU) **that are not widely distributed** world-wide or that **are** categorized as VU outside Sri Lanka.

8. Vulnerable species or subspecies (VU) **that are widely distributed** world-wide or that are **not** categorized as VU outside Sri Lanka.

7. Recommendations – Actions to be taken for the conservation of threatened taxa and for butterflies in general

7.1. Review the conservation status of each butterfly species and determine the threatened taxa (CR, EN and VU of the IUCN categories) and prioritize conservation needs.

Note: the evaluation of the status of butterflies was based on whatever data was available. As indicated earlier, there are large gaps in our knowledge. The highest priority should be given to reassessing the status of the butterflies more rigorously.

7.2. Develop species-specific conservation recovery plans for threatened taxa
a) Document the biology of the species including critical habitats
b) Identify the processes that threaten the taxa
c) Reassess conservation status based on a) and b)
d) Review current management programs, if any
e) Prepare recovery plan
f) Implement recovery plan
g) Review progress annually

7.3. Promote breeding of butterflies (especially those in the Critically Endangered category) and larval food plants at the National Zoological gardens and release captive bred specimens in the appropriate habitats. This recommendation must be studied in further detail depending on the species before being adopted as a strategy for conservation.

See also Section 10: Criteria to evaluate the effectiveness of conservation measures

7.4. Address the already known conservation issues as enumerated in Section 4.4 - Threats to butterflies as follows:

7.4.1. Habitat destruction (Section 4.4.1):

7.4.1.a. Urbanization

A comprehensive evaluation of development activities associated with urbanization and infrastructure development by government and non-governmental institutions. The evaluation process must include a team of knowledgeable lepidopterists as well.

7.4.1.b. Construction of hilltop telecommunication towers. To restore locations where towers already exist will be impractical and counter-productive since the history of the location with respect to the hill-topping species of butterflies at the location is not known. The focus must therefore be towards those that will be constructed in the future. These future constructions must be thoroughly evaluated by a competent research

team to determine to what extent the intended the targeted locations are used by hill-topping species.

7.4.1.c. Reclamation of wetlands and mangroves. There is extensive legislation under different levels of government to prohibit the use of these lands without due process. The rules and regulations governing the use of these must be strictly implemented. Determine the butterfly fauna before reclamation of wetlands and mangroves are approved.

7.4.1.d & e. Fire. Illicit felling of trees for firewood, timber and other uses. Implement already existing laws to ensure minimal disturbance to butterfly resources. Direct Ministry of Wildlife Resources Conservation and Forestry Department and other local government agencies to seek additional solutions by working in close co-operation with settlers around protected areas and identifying the reasons for their destructive actions.

7.4.1.f. Spread of exotic plants.
For the future: Enforce stricter controls and quarantine measures for the prevention of importation of plant materials from overseas.
Currently well established invasive plants: Carry out an in-depth study of the biology of the species for the purpose of deciding on a course of action for its eradication.
Recently introduced invasive plants but local in extent: Take immediate action when an exotic plant is first identified as being invasive.

7.4.1.g. Use of pesticides and weedicides. Education and awareness programs through extension workers in the Department of Agriculture on the impact of the use of chemicals on all organisms and how to diminish their deleterious effects.

7.4.1.h. Establishment of monocrop agricultural plantations. Privately owned land in areas designated as Sanctuaries can be prevented from being replaced by monoculture plantations using existing laws. Those outside sanctuaries can only be prevented from coming under plantations, if they can be designated as `sensitive areas`` by law. Promote multi-crop agricultural plantations.

7.4.1.i. Grazing. Free grazing must be disallowed by law if the environment is to be maintained at a reasonable level of biodiversity, particularly in areas that are considered ecologically sensitive. These sensitive areas need to be identified in all climatic zones.

7.4.1.j. Fragmentation of habitat. Encroachment into state lands and the subsequent disruption of continuity with contiguous forests must be identified, assessed to its importance and appropriate action taken. This would include establishing corridors for butterflies and connecting existing but non-contiguous patches of habitat with natural vegetation.

7.4.1.k. Need for accessibility to riparian water resources in ecologically sensitive habitats. Identify sensitive riparian habitats that are being

destroyed and implement existing laws to prevent their destruction; rehabilitate. Create awareness in the local inhabitants of the importance of these habitats for biodiversity and sustainability of water resources.

7.4.1.l. Removal of sand. Implement the existing laws that disallow the removal of sand.

7.4.1.m. Possibility of exotic butterflies coming into the island e.g. when butterflies are imported for exhibits etc.

7.4.2. Climate change (Section 4.4.2)
No recommendations at this time

7.4.3. Pollution (Section 4.4.3)
7.4.3.1. Investigate the impact of the die-back of the trees on the butterfly fauna of Horton Plains including effects on larval food plant utilization and adult resource availability.
7.4.3.2. Mitigate the release of pollutants detrimental to butterflies

7.4.4. Illegal collection of butterfly species from the wild (Section 4.4.4)
7.4.4.1. Adequate safeguards are currently in place to prevent the illegal export of butterflies. However, examine ways to meet the demand for particular butterfly specimens in an ecologically sustainable way (e.g. butterfly farming) through appropriate legislation.
7.4.4.2. Monitor illegal exports of butterflies and provide records of the extent of the problem with a comprehensive inventory of attempted exports.

7.5. Address the constraints for conservation of butterflies in Sri Lanka.
The constraints identified in Section 5 are addressed in Section 7.6.

7.6. Research and development
7.6.1. Establish a national database to hold species-specific information on all aspects relevant to butterfly conservation and update taxonomic information on an ongoing basis (See Appendix 6 for information that should be included in such a database).
NOTE: as of June 2011, the BDS has established a national database that currently holds over 25,000 data elements

7.6.2. Document on an ongoing basis the processes that threaten the butterfly fauna in Sri Lanka in general

7.6.3. Document the biology of each species including larval food plants

7.6.4. Conduct surveys to obtain an inventory of the butterfly fauna of the National Parks.

7.6.5. Identify habitats and areas outside of the Protected Areas system that are important for butterfly conservation for the following reasons:
a. presence of rare taxa

b. existence of migratory routes
c. existence of corridors
d. existence of refuges
e. existence of roosting sites.

7.6.5.1. Implement site-specific conservation action plans for such areas (see Appendix 7 for a provisional list of butterfly conservation priority areas in Sri Lanka, and the uniqueness of the specific area related to butterflies).

7.6.5.2. Designate such areas as Sensitive Areas under the CEA.

7.6.6. Facilitate research on taxonomy, ecology and conservation of Sri Lankan butterflies including but not limited to the following topics:
Field studies:

Seasonal phenotypic variation
Migration and local movement
Habitat preferences
Mud-puddling behaviour
Nectar plant preferences
Distribution patterns (to find range extensions)
Seasonal variation of butterfly populations (flight times)
Larval food plants including the new use of a new food plant and regional differences in larval plant use
Life cycles (including estivation, dormancy, ant associations, parasitoids, etc.)

Laboratory studies:

Barcoding of all species
Genitalia studies for taxonomic work
Determination of characteristics for identification

7.6.7. Update the butterfly collection at the Sri Lanka National Museum on an ongoing basis to facilitate current and future research

7.6.7.1. Database the existing collection in order to facilitate the retrieval of information relating to the specimens
November 2012: in progress; all data entered but needs to be verified

7.6.7.2. Enhance the current collection by collecting new specimens, particularly of those taxa that are under-represented

7.6.8. Identify suitable areas and seasons for butterfly watching in parks and other areas

7.6.9. Funding
Encourage donor agencies (Government, INGO, NGO, private sector etc.) to allocate more funds for butterfly conservation work.

7.7. Policy

7.7.1. Designate a new category, named "Butterfly Conservation Priority Areas", under the FFPO, CEA & Forest Ordinance for refuges and sensitive areas identified under 7.3.5. (above) and in Protected Areas.

7.72. Create a mechanism within the FFPO to delist a species that does not need protection or that is an agricultural or forestry pest.

7.7.3. Expand the mandate of the Butterfly Expert Group to establish a National Advisory Group that would meet on a regular basis to review issues relating to the conservation of butterflies in Sri Lanka.

7.8. Establish an organization of amateur and professional lepidopterists for the procurement and sharing of data on a continuous basis on all aspects of butterfly biology

The study of Sri Lankan butterflies has historically relied heavily on the input of amateur lepidopterists. Progress in conservation management and recovery programs for butterflies depends very heavily on the participatory efforts of non-professionals. Much of the knowledge of butterflies held by amateur naturalists and others is seldom recorded in scientific publications. It is imperative that this information is recorded in the public sphere. It is noteworthy that amateur naturalists and others contributed an exceptionally large number of sightings records (over 20,000) that were used in the IUCN Red List assessment of 2012 that allowed more scientifically grounded evaluations. In addition, they expressed their concerns on butterfly conservation, and gave recommendations for the conservation status of all species, applying the information gathered from their fieldwork. Encouraging such an organization will be of immense benefit to the Ministry of Environment in future evaluations of conservation progress.

7.9. Awareness, training and education

7.9.1. Lectures and presentations

Technical and non-technical.

For the general public, school children, teachers, Forest Department and Ministry of Wildlife Resources Conservation officials, amateur naturalists, tour guides, hotel staff, university students in biological and non-biological programs, nature groups, other public officials (e.g. Pradheshiya Sabha and Urban Development Authority), other scientific staff, officials of the Security Forces and other relevant groups.

7.9.2. Workshops

Technical and non-technical.

As in 7.9.1. above but particularly for those involved directly in work with lepidoptera, conservation work and environmental protection.

7.9.3. Posters and awareness boards

Highlighting flagship species, locally relevant species or biological and conservation aspects (e.g. life history) and habitats.

For the general public (e.g. MWRC/DWC has posters available); at specific locations (e.g. National Parks, Forest Reserves, Botanical Gardens, museums, archaeological sites, hotels, and butterfly gardens).

7.9.4. Leaflets, calendars, mugs, key tags etc.
Highlighting flagship species or locally relevant species.
For the general public including tourists and at specific locations (e.g. National Parks, Forest Reserves, Botanical Gardens, museums, archaeological sites, hotels, and butterfly gardens)

7.9.5. Videos
Technical and non-technical.
For the general public and tourists as well as other audiences.

7.9.6. Books and magazine articles
Technical and non-technical.
For the general public and tourists as well as other audiences.

7.9.7. Promote student participation in conservation by conducting art and essay competitions on butterflies at schools

7.9.8. Establish a butterfly display and information section at the Natural History Museum in Colombo and other museums.

7.9.9. Encourage the development and maintenance of butterfly-friendly gardens in schools, homes, hotels, public spaces, hospitals and parks.

7.9.10. Promote butterfly watching in the park systems

7.9.11. Declare National and Provincial butterflies in order to promote awareness of conservation issues.
DONE: see Appendix 1.

7.10. Establish butterfly gardens for conservation (See Appendix 8 and 9 for a list of the larval food plants of common species and common nectar sources. See Appendix 10 for guidelines on how to establish a butterfly garden)
7.10.1. Establish butterfly gardens with locally appropriate larval food plants and nectar plants to encourage an increase in the populations of butterflies
7.10.1.1. in National Parks near the visitor centre
7.10.1.2. in other protected areas near the visitor centre (e.g. Sinharaja Forest Reserve, archaeological sites)
7.10.1.3. within National Botanic Gardens
7.10.1.4. within other government institutions including Medicinal Gardens, Ayurvedic Gardens, the National Museum and hospitals
7.10.1.5. at hotels and other public and private spaces
7.10.1.6. in areas under the control of the security forces. Note: these areas are well-managed and protected from stray cattle etc. and other human interference and so are suitable for a butterfly garden. In addition, they can be places where public education can take place.

Recommendation implemented: Butterfly garden established at the Sri Lanka National Museum in Colombo and the headquarters of the Ministry of Wildlife Resources Conservation in Battaramulla.

7.10.2. Promote the selling of larval food plants and nectar plants at plant nurseries including those run by the government (e.g. Royal Botanical Garden at Peradeniya, Ganewatte Medicinal Garden).

7.11. Butterfly farming

Butterfly farming is practised in other countries as a sustainable economic activity that gives a livelihood and supports ecotourism. It can be utilised as a conservation tool but is currently illegal except for the National Zoological Gardens, which has been granted permission to raise some species. This program could be expanded to more fully meet conservation needs for threatened taxa. Legislative changes will be needed to bring about this activity.

7.12. Conservation of rare plants used as larval food plants

7.13. Re-establish natural forests in degraded lands and *Pinus* plantations.

See also Section 10: Criteria to evaluate the effectiveness of conservation measures

8. Action Plan for the conservation of butterflies in Sri Lanka

A detailed plan of action is presented here which includes some of the main activities to be implemented within a period of five years in order to achieve the conservation of butterflies in Sri Lanka.

Table 4: Action Plan for the Conservation of Butterflies in Sri Lanka

Classified Action	Responsible Institution	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Budget (mil)
Identification & monitoring							
Review the conservation status of each butterfly species and determine the threatened taxa (CR, EN and VU of the IUCN categories) and prioritize conservation needs	MoE&RE, Universities, individuals, NGO's, FD, MWRC (DWC)	1	1.5	2	2	3	9.5
Develop species-specific conservation recovery plans for threatened taxa	MoE&RE,	2	4	4	5	6	21.0
Identify habitats and areas outside of the Protected Areas system that are important for butterfly conservation	FD, MWRC, Universities, NGO's, Individuals, MoE&RE	3	5	5	6	7	26.0
Create a mechanism within the FFPO to delist a species that does not need protection	MWRC	1	1.5	1.5	1.5	2	7.5
In-situ conservation							
Direct MWRC and FD and other local government agencies to seek additional solutions [fire wood and other resources] for prevention of fire outbreaks and the removal of firewood and vines and saplings	MWRC, FD	0.5	0.5	1	1.5	1.5	5.0
Carry out an in-depth study of the biology of the exotic plant species for the purpose of deciding on a course of action for its eradication	Dept. of Agric., Universities, NBG, MoE&RE	1	1.5	2	2	3	9.5

Classified Action	Responsible Institution	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Budget (mil)
Take immediate action when an exotic plant is first identified as being invasive	Dept. of Agric., MoE&RE	1	2	2	3	3	11.0
Establish corridors for butterflies	FD, MWRC, Universities	1	2	2	3	3	11.0
Connecting existing but non-contiguous patches of habitat with natural vegetation including re-forestation with native flora of degraded lands and *Pinus* plantations	FD, MWRC, Universities	1	2	2	3	3	11.0
Identify sensitive riparian habitats that are being destroyed and implement existing laws to prevent their destruction; rehabilitate.	MoE&RE, Universities, FD, MWRC	2	3	3	4	3	15.0
Implement the existing laws that disallow the removal of sand.	GSMB, FD, MWRC	0.5	1	1.5	1.5	1	5.5
Implement site-specific conservation action plans for butterfly sensitive areas including conservation of plants used as larval food plants	MoE&RE, FD, MWRC	2	3	3	4	5	17.0
Designate such areas as Sensitive Areas under the NEA	CEA	2	2	3	4	4	15.0
Designate a new category, "Butterfly Conservation Priority Areas"/ Important Butterfly Areas' under the FFPO, NEA & FO & NHWAA for refuges and sensitive areas identified in areas outside PA's and in Protected Areas.	FD, MWRC, CEA, MoE&RE	0.5	0.5	1.0	1.5	1.5	5.0
Encourage the development and maintenance of butterfly-friendly gardens in schools, homes, hotels, public spaces, hospitals and parks.	MoE&RE, MWRC, FD, CEA, Dept. of Agric., private sector, NGO's, NBG, NZG, Min. of Health	2	2.5	3.5	4	4	16.0
Ex –situ conservation							

Classified Action	Responsible Institution	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Budget (mil)
Enforce stricter controls and quarantine measures for the prevention of importation of plant materials from overseas.	Dept. of Customs, Dept. of Agric.	0.5	0.5	1.0	1.5	1.5	5.0
Examine ways to meet the demand for particular butterfly specimens in an ecologically sustainable way (e.g. butterfly farming) through appropriate legislation.	MWRC, Dept. of Customs	1	1.5	1.5	2	2	8.0
Promote breeding of butterflies (especially those in the Critically Endangered category) and the propagation of larval food plants	MWRC, NZG, Universities, FD, NBG, individuals	1	2	3	3	4	13.0
Sustainable use of components of biological diversity							
Promote multi-crop agricultural plantations	Dept. of Agric., Min. of Plant. Ind.	0.5	1.5	2.0	2.5	2.5	9.0
Policy and legal measures							
Monitor illegal exports of butterflies and provide records of the extent of the problem with a comprehensive inventory of attempted exports.	Dept. of Customs	0.3	0.4	0.3	0.5	0.5	2.0
Monitoring of possibility of exotic butterflies coming into the island e.g. when butterflies are imported for exhibits etc.	Dept. of Customs, MWRC	0.2	0.3	0.2	0.2	0.2	1.1
Implement the rules and regulations governing the use of wetlands and mangroves.	FD, MWRC, MoE&RE	1	2	2	3	4	12
Implement already existing laws to ensure minimal disturbance to butterfly resources	MWRC, Dept. of Agric., FD	0.5	0.5	1	1.5	1.5	5.0

Classified Action	Responsible Institution	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Budget (mil)
Use existing laws to prevent the establishment of plantations in Sanctuaries	FD, MWRC	0.5	0.5	0.3	0.4	0.4	2.1
Research & Training							
Facilitate issuance of research permits	MoE&RE, MWRC, FD						
Establish a national database	MoE&RE	1	1.5	2	2	3	9.5
Document on an ongoing basis the processes that threaten the butterfly fauna	MoE&RE, MWRC, NGO's, Universities, individuals	1	1	1	1	1	5
Document the biology of each species including larval food plants	MoE&RE, MWRC, NGO's, Universities, individuals	2	3	4	3	4	16
Conduct surveys to obtain an inventory of the butterfly fauna of the National Parks and those outside the Protected Area System	MoE&RE, MWRC, NGO's, Universities, individuals	3	4	5	5	6	23.0
Facilitate research on taxonomy, ecology and conservation of Sri Lankan butterflies	Universities, NSF, SLNM, MWRC, FD, MoE&RE, NGOs	3	4	5	5	6	23.0
Update the butterfly collection at the National Museum on an ongoing basis and enhance the current collection by collecting new specimens	SLNM	0.5	1.5	2.0	2.5	3.0	9.5
Database the existing collection	SLNM	0.5	0.5	1.0	1.5	1.5	5.0
Expand the mandate of the Butterfly Expert Group to establish a National Advisory Group & conduct regular meetings and site visits when necessary	MoE&RE	0.1	0.15	0.15	0.15	0.2	0.75

Classified Action	Responsible Institution	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Budget (mil)
Establish an organization of amateur and professional lepidopterists for the procurement and sharing of data on a continuous basis on all aspects of butterfly biology including screening of data	MoE&RE, NZG, Universities, NGO's, Individuals	0.5	0.4	0.7	0.7	1.0	3.3
Public education and awareness							
Education and awareness programs through extension workers in the Department of Agriculture on the impact of the use of chemicals on all organisms and how to diminish their deleterious effects	Dept. of Agric., Registrar of Pesticides	1.0	1.5	2.0	2.5	2.5	9.5
Create awareness in the local inhabitants of the importance of these habitats for biodiversity and sustainability of water resources.	Dept. of Agric.	1.0	1.5	2.0	2.5	2.5	9.5
Identify suitable areas and seasons for butterfly watching in parks and other areas	MWRC, FD, NGO's, private sector	0.5	1.5	1.5	2.0	2.5	8.0
Organize lectures, workshops and presentations (both technical and non-technical) for various audiences and prepare posters etc. and encourage donor agencies (Government, INGO, NGO, private sector, Chambers of commerce etc.) to allocate more funds for butterfly conservation work	MoE&RE, NZG, NBG, SLNM, Universities, NGO's, private sector	2	2.5	3	4	4	15.5

Classified Action	Responsible Institution	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Budget (mil)
Promote student participation in conservation by conducting art and essay competitions, field activities on butterflies at schools	MoE&RE, NZG, NBG, Universities, CEA, NGO's, private sector	0.5	1	2.5	3	3	10.0
Establish a butterfly display and information section at the Natural History Museum in Colombo and other museums.	SLNM	1	1.5	2	2	3	9.5
Promote butterfly watching in the park systems	MWRC, FD, NGO	0.5	1.5	1.5	2.0	2.5	8.0
Promote the selling of larval food plants and nectar plants at plant nurseries including those run by the government (e.g. Peradeniya Botanical Garden, Ganewatte Medicinal Garden)	MWRC, FD, SLNM, NZG, NBG, Dept of Agric., Dept. of Ayurveda, private sector	0.5	1.5	1.5	2.0	2.5	8.0
Declare National and Provincial butterflies and associated promotional activities	MoE&RE, CEA (see Appendix 1)	0.5	0.5	0.5	0.5	0.5	2.5
Impact assessment & minimising adverse impacts							
A comprehensive evaluation of development activities associated with urbanization and infrastructure development by government and non-governmental institutions.	UDA, MoE&RE, MWRC, FD, Min. of Agric., RDA, private sector, Min. of Defence	1.0	1.5	1.5	2.0	3.0	9.0
Evaluate future telecommunication tower construction proposals to determine to what extent the intended locations are used by hill-topping species.	Private sector, Universities, MoE&RE, CEA	1	1.5	2.5	3	3	11.0

Classified Action	Responsible Institution	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Budget (mil)
Determine the butterfly fauna before reclamation of wetlands and mangroves are approved.	UDA, MoE&RE, MWRC, FD, Min. of Agric., RDA, private sector, Min. of Defence	2	2.5	3	3	5	15.5
Encroachment into state lands and subsequent disruption of continuity with contiguous forests must be identified, assessed to its importance and appropriate action taken.	FD, MWRC, Universities, Min. of Agric.	0.5	1.0	1.0	1.5	1.5	5.5
Investigate the impact of the die-back of the trees on the butterfly fauna of Horton Plains	Universities, MWRC, FD, MoE&RE	1	1	1.5	1.5	2.0	7.0
Mitigate the release of pollutants detrimental to butterflies	CEA, Dept. of Agric.	2	2	3	4	4	15.0
Total		**25.6**	**37.05**	**47.85**	**54.35**	**64.2**	**480.75**

9. Criteria to evaluate the effectiveness of conservation measures

The following is a list of possible criteria that can be used on a regular basis to gauge the effectiveness of conservation measures for butterflies in Sri Lanka:

1. Number of butterfly parks and gardens established.
2. Number of butterfly awareness programs conducted.
3. Number of newspaper articles published.
4. Number of research projects initiated.
5. Number of research publications.
6. Number of detections of illegal butterfly collections prepared for export or smuggled out of Sri Lanka.
7. Improvement in the state of the collection of butterflies in the National Museum and other accessible localities such as universities and MWRC.
8. Number of species-specific conservation strategies prepared and implemented.
9. The extent of updates to the National database on butterflies.

10. The conservation status of butterflies assessed using modified IUCN Red List criteria.
11. Number of butterfly species bred in captivity and released into wild habitats.
12. Number of captive breeding programmes and monitoring of such programs
13. Number of tour companies and guides offering butterfly watching to tour groups
14. Number of species upgraded or downgraded from the 'threatened' status.

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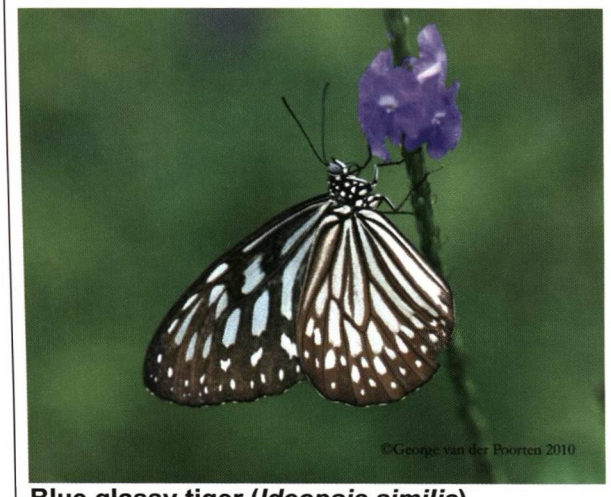
Appendix 1. Butterflies declared as National and Provincial Butterflies by the Ministry of Environment

National butterfly (declared March 25, 2010)
Sri Lanka Birdwing (*Troides darsius*) – see photo on front cover

Provincial Butterflies were declared on the 28.02.2014

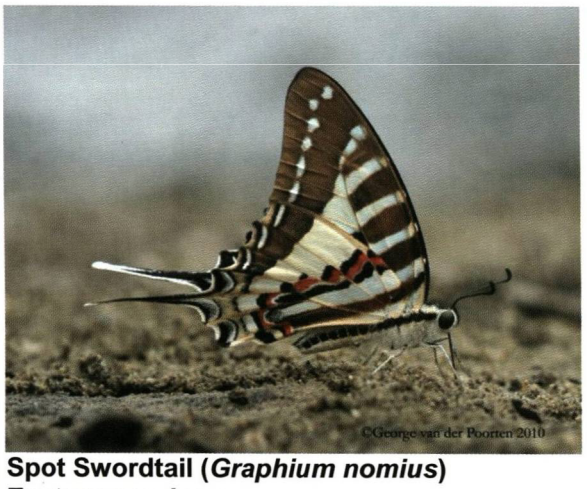
Provincial butterflies



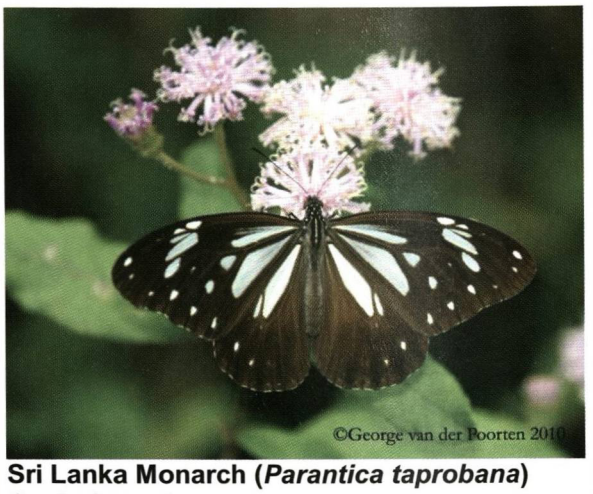
Blue glassy tiger (*Ideopsis similis*)
Western province -



Baronet (*Symphaedra nais*)
Uva province



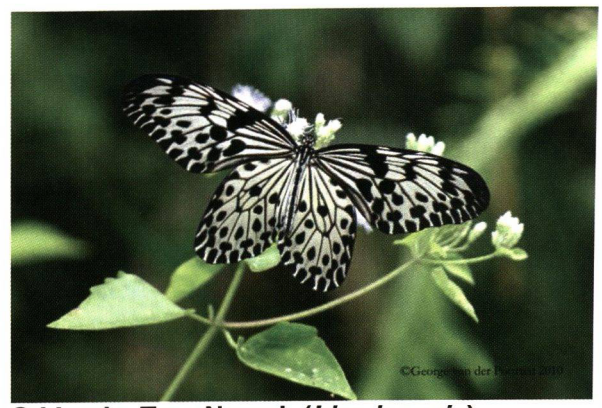
Spot Swordtail (*Graphium nomius*)
Eastern province



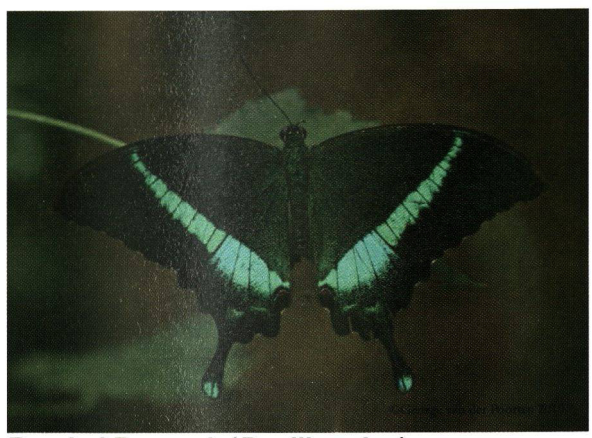
Sri Lanka Monarch (*Parantica taprobana*)
Central province



Sri Lanka Rose (*Pachliopta jophon*)
Sabaragamuwa province



Sri Lanka Tree Nymph (*Idea iasonia*)
Southern province



Banded Peacock (*Papilio crino*)
North-Central province



Sri Lanka Lesser Albatross (*Appias galene*)
North-Western province



Large Guava Blue (*Virachola perse*)
Northern province

Appendix 2. Conservation Status of the Butterflies of Sri Lanka

Note 1: Taxonomy is up-to-date as of December 15, 2013 and follows K. Kunte (2014 & pers. comm.). Since there have been several revisions and corrections, this list may differ from those published earlier by Woodhouse (1949) and d'Abrera (1998) and in the National Red List 2012.

Note 2: Though the National Red List uses only binomials, trinomials are listed here in order to indicate endemic subspecies since this information is important for conservation purposes.

Note 3: E = English name; S = Sinhalese name

Species name (trinomial)	**Species name (binomial)**	**Common name**	**National Red List Category 2012**	**Status**
Family: Papilionidae				
Graphium agamemnon menides (Fruhstorfer, 1904)	*Graphium agamemnon* (Linnaeus, 1758)	E: Tailed Jay S: Thudanga Pralapani	LC	Not endemic
Graphium antiphates ceylonicus (Eimer, 1889)	*Graphium antiphates* (Cramer, [1775])	E: Fivebar Swordtail S: Pancha iri kaga-waligaya	EN	Not endemic
Graphium doson doson (C. & R. Felder, 1864)	*Graphium doson* (C. & R. Felder, 1864)	E: Common Jay S: Pralapani	LC	Endemic subspecies
Graphium nomius nomius (Esper, 1785)	*Graphium nomius* (Esper, 1785)	E: Spot Swordtail S: Thith Kaga-waligaya	VU	Not endemic
Graphium sarpedon teredon (C. & R. Felder, 1865)	*Graphium sarpedon* (Linnaeus, 1758)	E: Common Bluebottle S: Neelabomi	LC	Endemic subspecies
Pachliopta aristolochiae ceylonica (Moore, 1881)	*Pachliopta aristolochiae* (Fabricius, 1775)	E: Common Rose S: Sewwandiya	LC	Endemic subspecies
Pachliopta hector (Linnaeus, 1758)	*Pachliopta hector* (Linnaeus, 1758)	E: Crimson Rose S: Arunu Sewwandiya	LC	Not endemic
Pachliopta jophon (Gray, [1853])	*Pachliopta jophon* (Gray, [1853])	E: Sri Lankan Rose S: Sri Lanka rosa papiliya	EN	Endemic

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Papilio clytia lankeswara Moore, 1879	*Papilio clytia* Linnaeus, 1758	E: Mime S: Rawana Papiliya	LC	Endemic subspecies
Papilio crino Fabricius, 1793	*Papilio crino* Fabricius, 1793	E: Banded Peacock S: Mayurabada	VU	Not endemic
Papilio demoleus demoleus Linnaeus, 1758	*Papilio demoleus* Linnaeus, 1758	E: Lime Butterfly S: Dehirisiya	LC	Not endemic
Papilio helenus mooreanus Rothschild, 1895	*Papilio helenus* Linnaeus, 1758	E: Red Helen S: Maha Kela Papiliya	VU	Endemic subspecies
Papilio polymnestor parinda (Moore, [1881])	*Papilio polymnestor* Cramer, [1775]	E: Blue Mormon S: Neela Parindaya	LC	Endemic subspecies
Papilio polytes romulus Cramer, [1775]	*Papilio polytes* Linnaeus, 1758	E: Common Mormon S: Wesgaththi	LC	Not endemic
Troides darsius (Gray, [1853])	*Troides darsius* (Gray, [1853])	E: Sri Lankan Birdwing S: Sri Lanka Maha Kurulu Piya Paliliya	LC	Endemic
Family: Pieridae				
Appias albina swinhoei (Moore, 1905)	*Appias albina* (Boisduval, 1836)	E: Common Albatross S: Dingupath Samanalaya	LC	Endemic subspecies
Appias galene (C. & R. Felder, 1865)	*Appias galene* (C. & R. Felder, 1865)	E: Sri Lankan Lesser Albatross S: Sri Lanka Thundu Dingupath Samanalaya	LC	Endemic
Appias indra narendra Moore, 1877	*Appias indra* (Moore, 1857)	E: Plain Puffin S: Dumbara-sudana	CR	Endemic subspecies
Appias libythea libythea (Fabricius, 1775)	*Appias libythea* (Fabricius, 1775)	E: Striped Albatross S: Iri Sudana	LC	Not endemic
Appias lyncida taprobana Moore, 1879	*Appias lyncida* (Cramer, [1777])	E: Chocolate Albatross S: Dumburuwan Sudana	LC	Endemic subspecies

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Belenois aurota taprobana (Moore, 1872)	*Belenois aurota* (Fabricius, 1793)	E: Pioneer S: Apsaravi	LC	Endemic subspecies
Catopsilia pomona pomona (Fabricius, 1775)	*Catopsilia pomona* (Fabricius, 1775)	E: Lemon Emigrant S: Dehi seriya	LC	Not endemic
Catopsilia pyranthe pyranthe (Linnaeus, 1758)	*Catopsilia pyranthe* (Linnaeus, 1758)	E: Mottled Emigrant S: Lapa seriya	LC	Not endemic
Catopsilia scylla (Linnaeus, 1763) [subspecies not identified]	*Catopsilia scylla* (Linnaeus, 1763)	E: Orange Migrant	LC	New arrival in Sri Lanka (2008); breeding resident
Cepora nadina cingala (Moore, [1858])	*Cepora nadina* (Lucas, 1852)	E: Lesser Gull S: Heen Panduru-sudana	CR	Endemic subspecies
Cepora nerissa phryne (Fabricius, 1775)	*Cepora nerissa* (Fabricius, 1775)	E: Common Gull S: Lihini Samanalaya	LC	Not endemic
Colotis amata modesta (Butler, 1876)	*Colotis amata* (Fabricius, 1775)	E: Small Salmon Arab S: Punchi Rosa Sudana	LC	Not endemic
Colotis aurora (Cramer, 1780)	*Colotis aurora* (Cramer, 1780)	E: Plain Orange Tip S: Podu Tembiliwan Sudana	VU	Not endemic
Colotis danae danae (Fabricius, 1775)	*Colotis danae* (Fabricius, 1775)	E: Crimson Tip S: Rathu-thudu Sudda	VU	Not endemic
Colotis etrida limbata (Butler, 1876)	*Colotis etrida* (Boisduval, 1836)	E: Little Orange Tip S: Heen Sudana	VU	Endemic subspecies
Colotis fausta fulvia (Wallace, 1867)	*Colotis fausta* (Olivier, 1804)	E: Large Salmon Arab S: Maha Rosa Sudana	VU	Not endemic
Delias eucharis Drury, 1773	*Delias eucharis* Drury, 1773	E: Jezebel S: Pilila Risiya	LC	Not endemic

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Eurema ormistoni (Watkins, 1925)	*Eurema ormistoni* (Watkins, 1925)	E: One-spot Grass Yellow S: Sri Lanka Kela kahakolaya	VU	Endemic
Eurema blanda citrina (Moore, 1881)	*Eurema blanda* (Boisduval, 1836)	E: Three-spot Grass Yellow S: Thun pulli Thruna Pithaya	LC	Endemic subspecies
Eurema brigitta rubella (Wallace, 1867)	*Eurema brigitta* (Stoll, [1780])	E: Small Grass Yellow S: Rubella Thruna pithaya	LC	Not endemic
Eurema hecabe hecabe (Linnaeus, 1758)	*Eurema hecabe* (Linnaeus, 1758)	E: Common Grass Yellow S: Thruna Pithaya	LC	Not endemic
Eurema laeta rama (Moore, 1872)	*Eurema laeta* (Boisduval, 1836)	E: Spotless Grass Yellow S: Nothith Thruna Pithaya	VU	Endemic subspecies
Hebomoia glaucippe ceylonica Fruhstorfer, 1907	*Hebomoia glaucippe* (Linnaeus, 1758)	E: Great Orange Tip S: Maha Ramba Thuduwa	LC	Endemic subspecies
Ixias marianne (Cramer, 1779)	*Ixias marianne* (Cramer, 1779)	E: White Orange Tip S: Ela Ramba Thuduwa	LC	Not endemic
Ixias pyrene cingalensis Moore, [1881]	*Ixias pyrene* (Linnaeus, 1764)	E: Yellow Orange Tip S: Padu Ramba Thuduwa	LC	Endemic subspecies
Leptosia nina nina Fabricius, 1793	*Leptosia nina* Fabricius, 1793	E: Psyche S: Manahari	LC	Not endemic
Pareronia ceylanica ceylanica (C. & R. Felder, 1865)	*Pareronia ceylanica* (C. & R. Felder, 1865)	E: Dark Wanderer S: Anduru seriya	LC	Not endemic
Prioneris sita (C. & R. Felder, [1865])	*Prioneris sita* (C. & R. Felder, [1865])	E: Painted Saw-tooth S: Vichitra Maha-sudda	EN	Not endemic
Family: Nymphalidae				

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Acraea violae (Fabricius, 1793)	*Acraea violae* (Fabricius, 1793)	E: Tawny Coster S: Viyola	LC	Not endemic
Argynnis hyperbius taprobana (Moore, 1900)	*Argynnis hyperbius* (Linnaeus, 1763)	E: Indian Fritillary S: Indiyanu Alankarikaya	EN	Endemic subspecies
Ariadne ariadne minorata (Moore, [1881])	*Ariadne ariadne* (Linnaeus, 1763)	E: Angled Castor S: Naw-Risiya	LC	Endemic subspecies
Ariadne merione taprobana (Westwood, 1851)	*Ariadne merione* (Cramer, 1777)	E: Common Castor S: Podu Pathan-sariya	VU	Endemic subspecies
Byblia ilithyia (Drury, 1773)	*Byblia ilithyia* (Drury, 1773)	E: Joker S: Kawataya	VU	Not endemic
Cethosia nietneri nietneri C. & R. Felder, [1867]	*Cethosia nietneri* C. & R. Felder, [1867]	E: Ceylon Lace Wing S: Lanka Seda-piyapatha	LC	Endemic subspecies
Charaxes athamas athamas (Drury, [1773])	In Red List as *Polyura athamas* (Drury, [1773])	E: Nawab S: Kaha Kumaraya	LC	Not endemic
Charaxes psaphon psaphon Westwood, 1847	*Charaxes psaphon* Westwood, 1847	E: Tawny Rajah S: Maha Kumaraya	NT	Endemic subspecies
Charaxes solon cerynthus Fruhstorfer, 1914	*Charaxes solon* (Fabricius, 1793)	E: Black Rajah S: Kalu Raja-kumaraya	NT	Endemic subspecies
Cirrochroa thais lanka Moore, 1872	*Cirrochroa thais* (Fabricius, 1787)	E: Tamil Yeoman/ Yeoman S: Kela Raththiya	LC	Endemic subspecies
Cupha erymanthis placida Moore, [1881]	*Cupha erymanthis* (Drury, 1773)	E: Rustic S: Raththiya	LC	Endemic subspecies
Danaus chrysippus chrysippus (Linnaeus, 1758)	*Danaus chrysippus* (Linnaeus, 1758)	E: Plain Tiger S: Pahan Gomara	LC	Not endemic

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Danaus genutia genutia (Cramer, [1779])	*Danaus genutia* (Cramer, [1779])	E: Common Tiger S: Agni Gomara	LC	Not endemic
Discophora lepida ceylonica Fruhstorfer, 1911	*Discophora lepida* (Moore, 1857)	E: Southern Duffer S: Dumburu Kewattaya	VU	Endemic subspecies
Doleschallia bisaltide ceylonica Fruhstorfer, 1903	*Doleschallia bisaltide* (Cramer, 1777)	E: Autumn Leaf S: Yoda kela-kolaya	EN	Endemic subspecies
Dophla evelina evelina (Stoll, 1790)	*Dophla evelina* (Stoll, 1790)	E: Redspot Duke S: Rath-ne	LC	Endemic subspecies
Elymnias hypermnestra fraterna Butler, 1871	*Elymnias hypermnestra* (Linnaeus, 1763)	E: Common Palmfly S: Ramba-thaliya	LC	Endemic subspecies
Elymnias singhala Moore, [1875]	*Elymnias singhala* Moore [1875]	E: Sri Lankan Palmfly S: Sri Lanka Thal-dumburuwa	EN	Endemic
Euploea core asela Moore, 1877	*Euploea core* (Cramer, 1780)	E: Common Indian Crow S: Indu Kakaya	LC	Endemic subspecies
Euploea klugii sinhala Moore, 1877	*Euploea klugii* Moore, [1858]	E: Brown King Crow S: Raja Kaka-kotithiya	LC	Endemic subspecies
Euploea phaenareta corus (Fabricius, 1793)	*Euploea phaenareta* (Schaller, 1785)	E: Great Crow S: Yoda Kaka-kotithiya	EN	Endemic subspecies
Euploea sylvester montana C. & R. Felder, 1865	*Euploea sylvester* (Fabricius, 1793)	E: Double-branded Black Crow S: De-iri Kaka-kotithiya	NT	Endemic subspecies
Euthalia aconthea vasanta (Moore, 1858)	*Euthalia aconthea* (Cramer, 1777)	E: Baron S: Sitano	LC	Endemic subspecies
Euthalia lubentina psittacus Fruhstorfer, 1906	*Euthalia lubentina* (Cramer, 1777)	E: Gaudy Baron S: Kela Achchilaya	VU	Endemic subspecies

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Hypolimnas bolina bolina (Linnaeus, 1758)	*Hypolimnas bolina* (Linnaeus, 1758)	E: Great Eggfly S: Maha-siwwa	LC	Not endemic
Hypolimnas misippus (Linnaeus, 1764)	*Hypolimnas misippus* (Linnaeus, 1764)	E: Danaid Eggfly S: Punchi-siwwa	LC	Not endemic
Idea iasonia (Westwood, 1848)	*Idea iasonia* (Westwood, 1848)	E: Sri Lankan Tree Nymph S: Sri Lanka Pawenna	VU	Endemic
Ideopsis similis exprompta Butler, 1874	*Ideopsis similis* (Linnaeus, 1758)	E: Blue Glassy Tiger S: Maha Nil-kotithiya	VU	Not endemic
Junonia almana almana (Linnaeus, 1758)	*Junonia almana* (Linnaeus, 1758)	E: Peacock Pansy S: Mayura Pansaya	LC	Not endemic
Junonia atlites atlites (Linnaeus, 1763)	*Junonia atlites* (Linnaeus, 1763)	E: Grey Pansy S: Alu Pansaya	LC	Not endemic
Junonia hierta hierta (Fabricius, 1798)	*Junonia hierta* (Fabricius, 1798)	E: Yellow Pansy S: Peetha Pansaya	CR	Not endemic
Junonia iphita pluviatilis (Fruhstorfer, 1900)	*Junonia iphita* (Cramer, 1779)	E: Chocolate Soldier S: Miyuru-Hewa	LC	Not endemic
Junonia lemonias vaisya (Fruhstorfer, 1912)	*Junonia lemonias* (Linnaeus, 1758)	E: Lemon Pansy S: Pangiri Pansaya	LC	Endemic subspecies
Junonia orithya patenas (Fruhstorfer, 1912)	*Junonia orithya* (Linnaeus, 1758)	E: Blue Pansy S: Nil Alankarikaya	EN	Endemic subspecies
Kallima philarchus (Westwood, 1848)	*Kallima philarchus* (Westwood, 1848)	E: Sri Lankan Blue Oakleaf S: Sri Lanka Nil Kela-kolaya	EN	Endemic
Kaniska canace haronica (Moore, 1879)	*Kaniska canace* (Linnaeus, 1763)	E: Blue Admiral S: Nil Seneviya	LC	Endemic subspecies

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Lethe daretis (Hewitson, 1863)	*Lethe daretis* (Hewitson, 1863)	E: Sri Lankan Treebrown S: Sri Lanka Gas-dumburuwa	LC	Endemic
Lethe drypetis drypetis (Hewitson, 1863)	*Lethe drypetis* (Hewitson, 1863)	E: Tamil Treebrown S: Maha- Gas-dumburuwa	EN	Endemic subspecies
Lethe dynsate (Hewitson, 1863)	*Lethe dynsate* (Hewitson, 1863)	E: Sri Lankan Forester S: Sri Lanka Kela Gas-dumburuwa	EN	Endemic
Lethe rohria neelgheriensis Guérin, 1843	*Lethe rohria* (Fabricius, 1787)	E: Common Tree Brown S: Podu Gas-dumburuwa	EN	Not endemic
Libythea laius lepitoides Moore, 1901	*Libythea laius* Trimen, 1879 In Red List as *L. celtis*	E: Beak S: Dumburu-thuduwa	EN	Not endemic
Libythea myrrha rama Moore, 1872	*Libythea myrrha* Godart, 1819	E: Club Beak S: Dandu Dumburu-thuduwa	VU	Endemic subspecies
Melanitis leda leda (Linnaeus, 1758)	*Melanitis leda* (Linnaeus, 1758)	E: Common Evening Brown S: Gomman-guruwa	LC	Not endemic
Melanitis phedima tambra Moore, 1880	*Melanitis phedima* (Cramer, [1780])	E: Dark Evening Brown S: Anduru Gomman-guruwa	NT	Endemic subspecies
Moduza procris calidasa (Moore, 1858)	*Moduza procris* (Cramer, 1777)	E: Commander S: Maha Selaruwa	LC	Endemic subspecies
Mycalesis mineus polydecta (Cramer, 1777)	*Mycalesis mineus* (Linnaeus, 1758)	E: Dark-brand Bushbrown S: Anduru-lapa panduru Guruwa	LC	Not endemic

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Mycalesis patnia patnia Moore, 1857	*Mycalesis patnia* Moore, 1857	E: Gladeye Bushbrown S: Min-neth panduru Guruwa	LC	Endemic subspecies
Mycalesis perseus typhlus Fruhstorfer, 1908	*Mycalesis perseus* (Fabricius, 1775)	E: Common Bushbrown S: Panduru Guruwa	LC	Not endemic
Mycalesis rama (Moore, 1892)	*Mycalesis rama* (Moore, 1892)	E: Sri Lankan Cingalese Bushbrown S: Sri Lanka Panduru-dumburuwa	EN	Endemic
Mycalesis subdita (Moore, 1892)	*Mycalesis subdita* (Moore, 1892)	E: Sri Lankan Tamil Bushbrown S: Sri Lanka Damila Panduru-dumburuwa	LC	Endemic
Neptis hylas varmona Moore, 1872	*Neptis hylas* (Linnaeus, 1758)	E: Common Sailor S: Selaruwa	LC	Not endemic
Neptis jumbah nalanda Fruhstorfer, 1908	*Neptis jumbah* Moore, [1858]	E: Chestnut-streaked Sailor S: Wairan Selaruwa	LC	Not endemic
Orsotriaena medus mandata (Moore, 1857)	*Orsotriaena medus* (Fabricius, 1775)	E: Medus Brown S: Iri Siw-mudda	LC	Not endemic
Pantoporia hordonia sinuata (Moore, 1879)	*Pantoporia hordonia* (Stoll, 1790)	E: Common Lascar S: Kaha Selaruwa	NT	Endemic subspecies
Parantica aglea aglea (Stoll, 1782)	*Parantica aglea* (Stoll, 1782)	E: Glassy Tiger S: Palingu Gomara	LC	Not endemic
Parantica taprobana (C. & R. Felder, [1865])	*Parantica taprobana* (C. & R. Felder, [1865])	E: Sri Lankan Tiger/Monarch S: Sri Lanka Nil-kotithiya	EN	Endemic
Parthenos sylvia cyaneus Moore, 1877	*Parthenos sylvia* (Cramer, [1776])	E: Clipper S: Yoda Kela Selaruwa	LC	Endemic subspecies

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Phalanta alcippe ceylonica (Manders, 1903)	*Phalanta alcippe* (Stoll, 1782)	E: Small Leopard S: Punchi Thith-thambiliya	CR	Endemic subspecies
Phalanta phalantha phalantha (Drury, 1773)	*Phalanta phalantha* (Drury, 1773)	E: Leopard S: Maha Diwi-Pulliya	LC	Not endemic
Rohana parisatis camiba Moore, [1880]	*Rohana parisatis* (Westwood, 1850)	E: Black Prince S: Kalu Kumaraya	VU	Endemic subspecies
Symphaedra nais (Forster, 1771) [=*Euthalia nais*]	*Symphaedra nais* (Forster, 1771)	E: Baronet S: Punchi Achchilaya	EN	Not endemic
Tirumala limniace exoticus (Gmelin, 1790)	*Tirumala limniace* (Cramer, 1775)	E: Blue Tiger S: Neela Gomara	LC	Not endemic
Tirumala septentrionis musikanos (Fruhstorfer, 1910)	*Tirumala septentrionis* (Butler, 1874)	E: Dark Blue Tiger S: Anduruwan Nil-kotithiya	NT	Endemic subspecies
Vanessa cardui (Linnaeus, 1758)	*Vanessa cardui* (Linnaeus, 1758)	E: Painted Lady S: Vichithra Alnkarikaya	VU	Not endemic
Vanessa indica nubicola (Fruhstorfer, 1898)	*Vanessa indica* (Herbst, 1794)	E: Indian Red Admiral S: Rathu seneviya	EN	Endemic subspecies
Vindula erota asela (Moore, 1872)	*Vindula erota* (Fabricius, 1793)	E: Cruiser S: Yoda Thambiliya	NT	Endemic subspecies
Ypthima ceylonica Hewitson, 1864	*Ypthima ceylonica* Hewitson, 1864	E: White Four-ring S: Sithiri Siwwa	LC	Not endemic
Ypthima singala R. Felder, 1868	*Ypthima singala* R. Felder, 1868	E: Sri Lankan Jewel Four-ring S: Sri Lanka Ran Heen-dumburuwa	EN	Endemic
Family: Riodinidae				
Abisara echerius prunosa Moore, 1879	*Abisara echerius* (Stoll, 1790)	E: Plum Judy S: Dan-samanalaya	LC	Not endemic
Family: Lycaenidae				

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Acytolepis lilacea moorei (Toxopeus, 1926)	*Acytolepis lilacea* (Hampson, 1889)	E: Hampson's Hedge Blue S: Hampson Gomu Neelaya	EN	Endemic subspecies
Acytolepis puspa felderi Toxopeus, 1927	*Acytolepis puspa* (Horsfield, 1828)	E: Common Hedge Blue S: Gomu Neelaya	LC	Not endemic
Amblypodia anita naradoides Moore, 1879	*Amblypodia anita* Hewitson, 1862	E: Purple Leafblue S: Dam-path Neelaya	NT	Endemic subspecies
Anthene lycaenina lycaenina (R. Felder, 1868)	*Anthene lycaenina* (R. Felder, 1868)	E: Pointed Ciliate Blue S: Ul Kirana-neelaya	LC	Not endemic
Arhopala abseus mackwoodi (Riley, 1923)	*Arhopala abseus* (Hewitson, 1862)	E: Aberrant Bushblue S: Kela Gas-neelaya	EN	Endemic subspecies
Arhopala amantes amantes (Hewitson, 1862)	*Arhopala amantes* (Hewitson, 1862)	E: Large Oakblue S: Maha-siduru Neelaya	LC	Not endemic
Arhopala centaurus pirama (Moore, 1881)	*Arhopala centaurus* (Fabricius, 1775)	E: Centaur Oakblue S: Samila Neelaya	LC	Not endemic
Arhopala ormistoni Riley, 1920	*Arhopala ormistoni* Riley, 1920	E: Sri Lankan Ormiston's Oakblue S: Sri Lanka Siduru Neelaya	CR	Endemic
Azanus jesous gamra (Lederer, 1855)	*Azanus jesous* (Guérin-Méneville, 1849)	E: African Babul Blue S: Rata Neelaya	LC	Not endemic
Azanus ubaldus (Stoll, [1782])	*Azanus ubaldus* (Stoll, [1782])	E: Bright Babul Blue S: Punchi neelaya	CR	Not endemic
Bindahara phocides moorei Fruhstorfer, 1904	*Bindahara phocides* (Fabricius, 1793)	E: Plane S: Visithuru Digu-penda Neelaya	EN	Not endemic

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Caleta decidia (Hewitson, 1876)	*Caleta decidia* (Hewitson, 1876)	E: Angled Pierrot S: Mulu Konangiya	LC	Not endemic
Castalius rosimon rosimon (Fabricius, 1775)	*Castalius rosimon* (Fabricius, 1775)	E: Common Pierrot S: Konangiya	LC	Not endemic
Catapaecilma major myosotina Fruhstorfer, 1912	*Catapaecilma major* Druce, 1895	E: Common Tinsel S: Visithuru Gas-neelaya	EN	Endemic subspecies
Catochrysops panormus panormus (C. Felder, 1860)	*Catochrysops panormus* (C. Felder, 1860)	E: Silver Forget-me-not S: Rajatha Sadasiya	CR	Not endemic
Catochrysops strabo strabo (Fabricius, 1793)	*Catochrysops strabo* (Fabricius, 1793)	E: Forget-me-not S: Sadasiya	LC	Not endemic
Celastrina lavendularis lavendularis (Moore, 1877)	*Celastrina lavendularis* (Moore, 1877)	E: Plain Hedge Blue S: Sarala Gomu Neelaya	CR	Not endemic
Cheritra freja pseudojafra Moore, [1881]	*Cheritra freja* (Fabricius, 1793)	E: Common Imperial S: Digu-penda Gas-neelaya	VU	Endemic subspecies
Chilades lajus lajus (Stoll, 1780)	*Chilades lajus* (Stoll, 1780)	E: Lime Blue S: Dehi-neelaya	LC	Not endemic
Chilades pandava lanka (Evans, 1925)	*Chilades pandava* (Horsfield, 1829)	E: Plains Cupid S: Meewana-sara	LC	Endemic subspecies
Chilades parrhasius nila Evans, 1925	*Chilades parrhasius* (Fabricius, 1793)	E: Small Cupid S: Punchi Panu-neelaya	LC	Endemic subspecies
Curetis thetis (Drury, 1773)	*Curetis thetis* (Drury, 1773)	E: Indian Sunbeam S: Wismi-keeta	LC	Not endemic
Deudorix epijarbas epijarbus (Moore, 1857)	*Deudorix epijarbus* (Moore, 1857)	E: Cornelian S: Podu Kirana-neelaya	VU	Not endemic

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Discolampa ethion ethion (Westwood, 1851)	*Discolampa ethion* (Westwood, 1851)	E: Banded Blue Pierrot S: Nil Konangiya	LC	Not endemic
Euchrysops cnejus cnejus (Fabricius, 1798)	*Euchrysops cnejus* (Fabricius, 1798)	E: Gram Blue S: Mun-risiya	LC	Not endemic
Everes lacturnus lacturnus (Godart, 1824)	*Everes lacturnus* (Godart, 1824)	E: Indian Cupid S: Malavi Parasiya	LC	Not endemic
Freyeria putli (Kollar, [1844])	*Freyeria putli* (Kollar, [1844])	E: Grass Jewel S: Palamini	LC	Not endemic
Horaga albimacula viola Moore, 1882	*Horaga albimacula* Wood-Mason & de Nicéville, 1881	E: Brown Onyx S: Guru Agasthiya	CR	Not endemic
Horaga onyx cingalensis Moore, [1884]	*Horaga onyx* (Moore, [1858])	E: Blue Onyx S: Nil Agasthiya	CR	Not endemic
Hypolycaena nilgirica Moore, [1884]	*Hypolycaena nilgirica* Moore, [1884]	E: Nilgiri Tit S: Niilgiri neelaya	LC	Not endemic
Ionolyce helicon viola (Moore, 1877)	*Ionolyce helicon* (C. Felder, 1860)	E: Pointed Lineblue S: Thuduri Neelaya	CR	Not endemic
Iraota timoleon nicevillei Butler, 1901	*Iraota timoleon* (Stoll, 1790)	E: Silverstreak Blue S: Redee Gas-neelaya	EN	Endemic subspecies
Jamides alecto meilichius (Fruhstorfer, 1916)	*Jamides alecto* (C. Felder, 1860)	E: Metallic Cerulean S: Dili Seruliya	LC	Endemic subspecies
Jamides bochus bochus (Stoll, [1782])	*Jamides bochus* (Stoll, [1782])	E: Dark Cerulean S: Anduru Seruliya	LC	Not endemic
Jamides celeno tissama (Fruhstorfer, 1916)	*Jamides celeno* (Cramer, [1775])	E: Common Cerulean S: Seruliya	LC	Endemic subspecies

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Jamides coruscans (Moore, 1877)	*Jamides coruscans* (Moore, 1877)	E: Sri Lankan Cerulean S: Sri Lanka Seru-nilaya	VU	Endemic
Jamides lacteata (de Nicéville, 1895)	*Jamides lacteata* (de Nicéville, 1895)	E: Sri Lankan Milky Cerulean S: Sri Lanka Ela Seruliya	VU	Endemic
Lampides boeticus (Linnaeus, 1767)	*Lampides boeticus* (Linnaeus, 1767)	E: Pea Blue S: Mun-neelaya	LC	Not endemic
Leptotes plinius plinius (Fabricius, 1793)	*Leptotes plinius* (Fabricius, 1793)	E: Zebra Blue S: Sabaru Neelaya	LC	Not endemic
Loxura atymnus arcuata Moore, [1881]	*Loxura atymnus* (Stoll, 1780)	E: Yamfly S: Kadala Samanalaya	LC	Endemic subspecies
Megisba malaya thwaitesi Moore, 1881	*Megisba malaya* (Horsfield, [1828])	E: Malayan S: Malalini	LC	Not endemic
Nacaduba berenice ormistoni Toxopeus, 1927	*Nacaduba berenice* (Herrich-Schäffer, 1869)	E: Rounded Six Lineblue S: Wata Iri Neelaya	DD	Not endemic
Nacaduba beroe minima Toxopeus, 1927	*Nacaduba beroe* (C. & R. Felder, [1865])	E: Opaque Six Lineblue S: Adisi-Iri Neelaya	EN	Endemic subspecies
Nacaduba calauria evansi Toxopeus, 1927	*Nacaduba calauria* (C. Felder, 1860)	E: Dark Ceylon Six Lineblue S: Anduru Iri Neelaya	DD	Not endemic
Nacaduba hermus sidoma Fruhstorfer, 1916	*Nacaduba hermus* (C. Felder, 1860)	E: Pale Four Lineblue S: Sawri-neela	NT	Not endemic
Nacaduba kurava prominens (Moore, 1877)	*Nacaduba kurava* (Moore, [1858])	E: Transparent Six Lineblue S: Disi-Iri Neelaya	VU	Endemic subspecies

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Nacaduba ollyetti Corbet, 1947	*Nacaduba ollyetti* Corbet, 1947	E: Sri Lankan Woodhouse's Four Lineblue S: Sri Lanka Wanasi-neelaya	CR	Endemic
Nacaduba pactolus ceylonica Fruhstorfer, 1916	*Nacaduba pactolus* (C. Felder, 1860)	E: Large Four Lineblue S: Maha Nil-Iriya	NT	Endemic subspecies
Nacaduba sinhala Ormiston, 1924	*Nacaduba sinhala* Ormiston, 1924	E: Sri Lankan Pale Ceylon Six Lineblue S: Sri Lanka Hela Iri Neelaya	VU	Endemic
Neopithecops zalmora dharma (Moore, [1881])	*Neopithecops zalmora* (Butler, [1870])	E: Quaker S: Samlani	LC	Not endemic
Petrelaea dana (de Nicéville, [1884])	*Petrelaea dana* (de Nicéville, [1884])	E: Dingy Lineblue S: Dingi Nil-Iriya	EN	Not endemic
Pratapa deva deva (Moore, [1858])	*Pratapa deva* (Moore, [1858])	E: White Royal S: Sudu Raja-nilaya	EN	Not endemic
Prosotas dubiosa indica (Evans, [1925])	*Prosotas dubiosa* (Semper, [1879])	E: Tailless Lineblue S: Apus Iri Neelaya	LC	Not endemic
Prosotas nora ardates (Moore, [1875])	*Prosotas nora* (C. Felder, 1860)	E: Common Lineblue S: Iri Neelaya	LC	Not endemic
Prosotas noreia noreia (R. Felder, 1868)	*Prosotas noreia* (R. Felder, 1868)	E: White-tipped Lineblue S: Sudu Nil-iriya	EN	Endemic subspecies
Rapala iarbus sorya (Kollar, 1848)	*Rapala iarbus* (Fabricius, 1787)	E: Indian Red Flash S: Rathu Debati	DD	Not endemic
Rapala lankana Moore, 1879	*Rapala lankana* Moore, 1879	E: Malabar Flash S: Kala Kiranaya	CR	Not endemic
Rapala manea schistacea (Moore, 1879)	*Rapala manea* (Hewitson, 1863)	E: Slate Flash S: Anduru Kiranaya	LC	Not endemic

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Rapala varuna lazulina Moore, 1879	*Rapala varuna* (Horsfield, [1829])	E: Indigo Flash S: Nil Debati	VU	Not endemic
Rathinda amor (Fabricius, 1775)	*Rathinda amor* (Fabricius, 1775)	E: Monkey-puzzle S: Rathinda	LC	Not endemic
Spalgis epeus epeus (Westwood, 1851)	*Spalgis epeus* (Westwood, 1851)	E: Apefly S: Hanuman Samanalaya	LC	Not endemic
Spindasis elima fairliei Ormiston, 1924	*Spindasis elima* (Moore, 1877)	E: Scarce Shot Silverline S: Hiru Raja-thariya	DD	Endemic subspecies
Spindasis greeni Heron, 1896	*Spindasis greeni* Heron, 1896	E: Green's Silverline	CR	Endemic
Spindasis ictis ceylonica R. Felder, 1868	*Spindasis ictis* (Hewitson, 1865)	E: Ceylon Silverline S: Hela Raja-thariya	LC	Endemic subspecies
Spindasis lohita lazularia (Moore, 1881)	*Spindasis lohita* (Horsfield, [1829])	E: Long -banded Silverline S: Digu-iri Ridee-neelaya	VU	Not endemic
Spindasis nubilus (Moore, [1887])	*Spindasis nubilus* (Moore, [1887])	E: Sri Lankan Clouded Silverline S: Sri Lanka Wala Raja-thariya	DD	Endemic
Spindasis schistacea (Moore, 1881)	*Spindasis schistacea* (Moore, 1881)	E: Plumbeous Silverline S: Lamba Raja-thariya	VU	Not endemic
Spindasis vulcanus fusca (Moore, 1881)	*Spindasis vulcanus* (Fabricius, 1775)	E: Common Silverline S: Raja-thariy	LC	Endemic subspecies

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Surendra quercetorum discalis Moore, 1857 See Note 5.	*Surendra quercetorum* (Moore, [1858]) In Red List as *S. vivarna* (Horsfield, [1829])	E: Common Acacia Blue S: Andara Neelaya	LC	Not endemic
Tajuria arida Riley, 1923	*Tajuria arida* Riley, 1923	E: Sri Lankan Indigo Royal S: Sri Lanka Raja-neelaya	CR	Endemic
Tajuria cippus longinus (Fabricius, 1798)	*Tajuria cippus* (Fabricius, 1798)	E: Peacock Royal S: Mayura Paramaya	LC	Endemic subspecies
Tajuria jehana ceylanica Riley, 1921	*Tajuria jehana* Moore, [1884]	E: Plains Blue Royal S: Podu Raja-neelaya	CR	Endemic subspecies
Talicada nyseus nyseus (Guérin-Méneville, 1843)	*Talicada nyseus* (Guérin-Méneville, 1843)	E: Red Pierrot S: Rathu Konangiya	LC	Not endemic
Tarucus callinara Butler, 1886	*Tarucus callinara* Butler, 1886	E: Butler's Spotted Pierrot S: Thith Konangiya	EN	Not endemic
Tarucus nara (Kollar, 1848)	*Tarucus nara* (Kollar, 1848)	E: Striped Pierrot S: Thith-iri Mal-neelaya	LC	Not endemic
Udara akasa mavisa Fruhstorfer, 1917	*Udara akasa* (Horsfield, [1828])	E: White Hedge Blue S: Ela Gomu Neelaya	EN	Not endemic
Udara lanka (Moore, 1877)	*Udara lanka* (Moore, 1877)	E: Sri Lankan Hedge Blue S: Sri Lanka Udara-neelaya	EN	Endemic

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Udara singalensis (R. Felder, 1868)	*Udara singalensis* (R. Felder, 1868)	E: Singalese Hedge Blue S: Singha Udara-neelaya	EN	Provisionally endemic
Virachola isocrates (Fabricius, 1793)	*Virachola isocrates* (Fabricius, 1793)	E: Common Guava Blue S: Diwletha	LC	Not endemic
Virachola perse ghela Fruhstorfer, 1912	*Virachola perse* (Hewitson, 1863)	E: Large Guava Blue S: Maha Pera-neelaya	VU	Not endemic
Zesius chrysomallus Hübner, 1821	*Zesius chrysomallus* Hübner, 1821	E: Redspot S: Rathu pulliya	LC	Not endemic
Zizeeria karsandra (Moore, 1865)	*Zizeeria karsandra* (Moore, 1865)	E: Dark Grass Blue S: Neela Kasandra	LC	Not endemic
Zizina otis indica (Murray, 1874)	*Zizina otis* (Fabricius, 1787)	E: Lesser Grass Blue S: Thuru-thana Neelaya	LC	Not endemic
Zizula hylax hylax (Fabricius, 1775)	*Zizula hylax* (Fabricius, 1775)	E: Tiny Grass Blue S: Heen-thana Neelaya	LC	Not endemic
Family: Hesperiidae				
Ampittia dioscorides singa Evans, 1949	*Ampittia dioscorides* Fabricius, 1793	E: Bush Hopper S: Panduru Pimma	LC	Endemic subspecies
Badamia exclamationis (Fabricius, 1775)	*Badamia exclamationis* (Fabricius, 1775)	E: Brown Awl S: Guruleesa	LC	Not endemic
Baoris penicillata Moore, [1881]	*Baoris penicillata* Moore, [1881]	E: Sri Lankan Paintbrush Swift S: Sri Lanka Thudu-sara	CR	Endemic
Baracus vittatus (C. Felder, 1862)	*Baracus vittatus* (C. Felder, 1862)	E: Sri Lankan Hedge Hopper S: Sri Lanka Gomu Pimma	VU	Endemic

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Bibasis sena sena (Moore, [1865])	*Bibasis sena* (Moore, [1865])	E: Orange-tailed Awl S: Ramba Thudu Leesa	EN	Not endemic
Borbo cinnara (Wallace, 1866)	*Borbo cinnara* (Wallace, 1866)	E: Wallace's Swift S: Wolas-sariya	LC	Not endemic
Burara oedipodea ataphus (Watson, 1893)	*Burara oedipodea* (Swainson, [1820])	E: Banded Orange Awlet S: Rambaleesa	EN	Endemic subspecies
Caltoris kumara lanka Evans, 1926	*Caltoris kumara* (Moore, 1878)	E: Blank Swift S: Kalu Paha Sariya	VU	Endemic subspecies
Caltoris philippina seriata (Moore, 1878)	*Caltoris philippina* (Herrich-Schäffer, 1869)	E: Philippine Swift S: Rata Sariya	CR	Endemic subspecies
Caprona alida lanka Evans, 1932	*Caprona alida* (de Nicéville, 1891)	E: Ceylon Golden Angle S: Lak-ran Mulla	CR	Endemic subspecies
Caprona ransonnettii ransonnettii (R. Felder, 1868)	*Caprona ransonnettii* (R. Felder, 1868)	E: Golden Angle S: Ran Mulla	LC	Endemic subspecies
Celaenorrhinus spilothyrus (R. Felder, 1868)	*Celaenorrhinus spilothyrus* (R. Felder, 1868)	E: Sri Lankan Black Flat S: Sri Lanka Kala Kunchika	VU	Endemic
Cephrenes trichopepla (Lower, 1908)	*Cephrenes trichopepla* (Lower, 1908)	E: Yellow Palm Dart	LC	New arrival in SL 2008; breeding resident
Choaspes benjaminii benjaminii (Guérin-Méneville, 1843)	*Choaspes benjaminii* (Guérin-Méneville, 1843)	E: Indian Awl King S: Raja-leesa	VU	Not endemic
Coladenia indrani tissa Moore, [1881]	*Coladenia indrani* (Moore, [1866])	E: Tricolour Pied Flat S: Triwarana Kunchika	NT	Endemic subspecies

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Gangara lebadea subfasciata (Moore, 1878)	*Gangara lebadea* (Hewitson, 1868)	E: Banded Redeye S: Irira-thasiya	CR	Endemic subspecies
Gangara thyrsis clothilda (Herrich-Schäffer, 1869)	*Gangara thyrsis* (Fabricius, 1775)	E: Giant Redeye S: Mara-thasiya	VU	Endemic subspecies
Gomalia elma albofasciata Moore, 1879	*Gomalia elma* (Trimen, 1862)	E: African Marbled Skipper S: Mabal Pimma	CR	Not endemic
Halpe egena egena (R. Felder, 1868)] See Note 1.	*Halpe egena* (R. Felder, 1868)]	E: Rare Ace S: Dulabasiya	EN	Endemic subspecies
Halpe [egena] ceylonica See Note 1.	*Halpe ceylonica* Moore, 1878	E: Ceylon Ace S: Lanka-siya	EN	Endemic subspecies
Hasora badra lanka Evans, 1926	*Hasora badra* (Moore, [1858])	E: Ceylon Awl / Common Awl S: Hela Leesa	EN	Endemic subspecies
Hasora chromus chromus (Cramer, [1780])	*Hasora chromus* (Cramer, [1780])	E: Common Banded Awl S: Iri-leesa	LC	Not endemic
Hasora taminatus taminatus (Hübner, [1818])	*Hasora taminatus* (Hübner, [1818])	E: White-banded Awl S: Sudu iri-leesa	NT	Not endemic
Hyarotis adrastus adrastus (Stoll, [1780])	*Hyarotis adrastus* (Stoll, [1780])	E: Tree Flitter S: Ruk-sariya	LC	Not endemic
Iambrix salsala luteipalpis Plötz, 1886	*Iambrix salsala* (Moore, [1866])	E: Chestnut Bob S: Guru Bobaya	LC	Not endemic
Matapa aria (Moore, [1866])	*Matapa aria* (Moore, [1866])	E: Common Redeye S: Rathasiya	VU	Not endemic
Notocrypta curvifascia curvifascia (C. & R. Felder, 1862)	*Notocrypta curvifascia* (C. & R. Felder, 1862)	E: Restricted Demon S: Nethu Dassa	VU	Not endemic

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Notocrypta paralysos alysia Evans, 1926	*Notocrypta paralysos* (Wood-Mason & de Nicéville, 1881)	E: Common Banded Demon S: Iri Dassa	VU	Endemic subspecies
Oriens goloides (Moore, [1881])	*Oriens goloides* (Moore, [1881])	E: Common Dartlet S: Sariththa	NT	Not endemic
Parnara bada bada (Moore, 1878)	*Parnara bada* (Moore, 1878)	E: Smallest Swift S: Tikiri sariya	NT	Not endemic
Pelopidas agna agna (Moore, [1866])	*Pelopidas agna* (Moore, [1866])	E: Little Branded Swift S: Podi Iri-sariya	NT	Not endemic
Pelopidas conjuncta narooa Moore, 1878	*Pelopidas conjuncta* (Herrich-Schäffer, 1869)	E: Conjoined Swift S: Wihanga sariya	VU	Not endemic
Pelopidas mathias mathias (Fabricius, 1798)	*Pelopidas mathias* (Fabricius, 1798)	E: Small Branded Swift S: Thudu Iri-sariya	NT	Not endemic
Pelopidas subochracea subochracea Moore, 1878 See Note 2.	*Pelopidas subochracea* Moore, 1878	E: Large Branded Swift S: Maha Iri-sariya	VU	Not endemic
Potanthus pallida (Evans, 1932)	*Potanthus pallida* (Evans, 1932)	E: Indian Dart/Pallid Dart S: Indu-sara	DD	Not endemic
Potanthus pseudomaesa pseudomaesa (Moore, [1881])	*Potanthus pseudomaesa* (Moore, [1881])	E: Common Dart S: Hela-sara	VU	Not endemic
Potanthus satra Fruhstorfer, 1911 See Note 3.	In Red List as *Potanthus confuscius* (C. & R. Felder, 1862)	E: Tropic Dart S: Gim-sara	LC	Possibly endemic
Sarangesa dasahara albicilia Moore, [1881]	*Sarangesa dasahara* Moore, 1886	E: Common Small Flat S: Kuda Kunchika	NT	Endemic subspecies

Species name (trinomial)	Species name (binomial)	Common name	National Red List Category 2012	Status
Spialia galba (Fabricius, 1793)	*Spialia galba* (Fabricius, 1793)	E: Indian Skipper S: Indu-pimma	LC	Not endemic
Suastus gremius subgrisea (Moore, 1878)	*Suastus gremius* (Fabricius, 1798)	E: Indian Palm Bob S: Indu-thala Bobaya	LC	Endemic subspecies
Suastus minuta minuta (Moore, 1877)	*Suastus minuta* (Moore, 1877)	E: Ceylon Palm Bob S: Hela-thala Bobaya	EN	Endemic subspecies
Tagiades japetus obscurus Mabille, 1876	*Tagiades japetus* (Stoll, [1781])	E: Ceylon Snow Flat S: Hima Kunchika	LC	Not endemic
Tagiades litigiosa ceylonica Evans, 1932	*Tagiades litigiosa* Möschler, 1878	E: Water Snow Flat S: Diya Kunchika	VU	Endemic subspecies
Tapena thwaitesi Moore, [1881]	*Tapena thwaitesi* Moore, [1881]	E: Black Angle S: Kalu Mulla	EN	Not endemic
Taractrocera maevius (Fabricius, 1793)	*Taractrocera maevius* (Fabricius, 1793)	E: Common Grass Dart S: Thana-sara	LC	Not endemic
Telicota bambusae lanka Evans, 1932 See Note 4.	*Telicota bambusae* (Moore, 1878)	E: Dark Palmdart S: Anduru Thala-sara	VU	Endemic subspecies
Telicota colon kala Evans, 1934	*Telicota colon* (Fabricius, 1775)	E: Pale Palmdart S: Thala-sara	NT	Not endemic
Thoressa decorata (Moore, 1881)	*Thoressa decorata* (Moore, 1881)	E: Sri Lankan Decorated Ace S: Sri Lanka Sithirasiya	EN	Endemic
Udaspes folus (Cramer, [1775])	*Udaspes folus* (Cramer, [1775])	E: Grass Demon S: Thanapath Dassa	LC	Not endemic

Note 1: The status of *Halpe [egena] ceylonica* and *H. [e.] egena* is not clear. They may prove to be subspecies of *H. egena*, valid species or seasonal forms. The genitalia show that they are not subspecies of *H. homolea* as previously described.

Note 2: *Pelopidas subochracea* was previously listed erroneously as *P. thrax subochracea.*

Note 3: *Potanthus satra* was previously listed erroneously as *P. confuscius.*

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

Note 5: There is no consensus yet on whether or not it is *Surendra quercetorum* or *S. vivarna.*

Appendix 3. Taxonomic issues

Research is needed to confirm the correct subspecies (and endemic status) for the following taxa: *Euploea sylvester montana, Ariadne ariadne minorata, Polyura athamas athamas, Junonia iphita pluviatilis, Mycalesis perseus typhlus, Catochrysops panormus panormus, Spindasis elima fairliei, Everes lacturnus lacturnus, Iraota timoleon nicevillei, Burara oedipodea ataphus, Hasora badra lanka, Ampittia dioscorides singa, Gangara thyrsis clothilda, Caltoris philippina seriata, Caprona alida lanka, Telicota colon kala.*

Need to determine species status of

1. *Halpe egena ceylonica* and *Halpe egena egena:* are they subspecies or species?
2. *Megisba malaya thwaitesi* or is it *Megisba thwaitesi*
3. *Udara singalensis*: is it endemic?
4. *Bindahara phocides moorei* or is it *Bindahara moorei*
5. *Pelopidas subochracea*: is it endemic?
6. *Potanthus satra*: is it endemic?
7. *Coladenia indrani tissa* or *Coladenia tissa*
8. *Mycalesis perseus typhlus* or *M. typhlus*?

Appendix 4. Selected Bibliography of Butterflies in Sri Lanka

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Appendix 5: Statistics of illegal butterfly trade from the Department of Customs (as of October 2012)

Customs export detections - Butterflies and Moths

Date of detection	Quantity	Species	To	PLACE	LAW
1993.12.21	Preserved butterflies 349	Red Helen,Blue Mormon,Common Jasebel.etc;	Japan	Air Cargo Exports	C.O F.F.O
1994.01.19	Moth Cocoons 82	Atlas Moth	England	Air Cargo Exports	C.O F.F.O
1994.05.25	Butterfly Cocoons 423	Common mormon, Blue mormon, Crimson rose	England	Air Cargo Exports	C.O F.F.O
1995.07.29	Butterflies 89	Blue mormon, Moon moth, Common emigrant, Common sailor, The grey pancy, Common grass yellow, Small grain yellow	Belgium	BIA Departure	C.O F.F.O
2008.03.13	Butterfly Cocons 79	Common Mormon Blue mormon Common mimic Crimson rose ,	United Kingdom	Parcel Post Colombo	C.O F.F.O

C.O Customs Ordinance
F.F.O Fauna & Flora Protection Ordinance

Prepared by: DLWS Pushpakumara
Checked by: Samanthi Gunasekara

Appendix 6. Data to be included in the National Database for butterflies

1. Taxonomic and related data elements
    a) family
    b) genus
    c) species
    d) subspecies
    e) status (endemic, endemic subspecies)
    f) distribution (i.e. wet zone, arid zone, intermediate zone, dry zone)
    g) elevation (meters)
    h) habitat

2. Conservation related information from field observation data
    a) identification
        i) species name
        ii) relative abundance (0-5, 5-10, 10-15, >15)
        iii) form (dry season or wet season)
        iv) time of day
    b) location data
        i) name of place
        ii) gps reading
        iii) habitat
        iv) date (month-day-year)
        v) district
        vi) province
        vii) weather (sun, cloud, wind)
        viii) elevation (m)
    c) behaviour
        i) height of flight (ground, < 2m, 2–5 m, >5 m, canopy)
        ii) oviposition
        iii) nutrition (nectar source, other nutriment)
    d) immature stages
        i) number of larvae
        ii) number of pupae
        iii) number of egg
        iv) larval food plant
        v) part of plant eaten
    e) miscellaneous
        i) observer information

Appendix 7. Provisional List of Butterfly Conservation Priority Areas

The areas below are listed based on the following criteria:

1. Places where butterfly species whose populations are naturally low can be found
2. Places where threatened butterfly species can be found
3. Places with a high diversity of butterfly species

Province/District	Location	Uniqueness for butterflies
Central/Kandy, Matale	Knuckles FR	Criteria 1, 2 & 3. *Doleschallia bisaltide, Appias indra, Cepora nadina, Phalanta alcippe, Lethe dynsate, Libythea myrrha, Caltoris philippina*
Central/Kandy	Urakande Hill Area in Hantane	Criteria 1 & 2. *Elymnias singhala, Prioneris sita, Papilio helenus, Bindahara phocides*
Central/Nuwara Eliya	Horton Plains	Criteria 1 & 2. *Spindasis greeni*
Eastern	Kalmunai, Trincomalee, Batticaloa, Ampara, Kudumbigala, Toppigala	These areas have not yet been properly surveyed
North Central	Polonnaruwa; Medawachchiya; Minneriya; Habarana; Giritale, Sigiriya	These areas have not yet been properly surveyed
Northern/Jaffna	Jaffna	Criteria 1 & 2. *Tajuria jehana, Junonia hierta*
Northern/Kilinochchi	Elephant Pass	Criteria 1 & 2. *Spindasis nubilus, Azanus ubaldus, Tajuria jehana, Spindasis elima*
Northern/Mannar	Arippu, the Doric, Maru Aru	Criteria 1, 2 & 3. High diversity; arid zone; threatened species; almost all the arid zone butterflies found here including *Junonia hierta, Azanus ubaldus*
Northern/Mannar	Giant's Tank	Criteria 1, 2 & 3. High diversity; arid zone; threatened species; almost all the arid zone butterflies found here including *Junonia hierta, Azanus ubaldus*
North Western/Puttalam	Anavilundawa Ramsar	Criteria 2 & 3.

	wetland	Large numbers of intermediate and dry zone butterflies including *Byblia ilithyia*, *Amblypodia anita*, *Spindasis elima*, and several species of *Colotis*.
Sabaragamuwa/Ratnapura	Adam's Peak	Criteria 1, 2 & 3. High diversity; montane; wet zone. *Appias indra*, *Cepora nadina*
Sabaragamuwa/Ratnapura	Gilimale	Criteria 1, 2 & 3. High diversity; montane; wet zone. *Appias indra*, *Cepora nadina*
Sabaragamuwa/Ratnapura	Sinharaja	Criteria 1, 2 & 3. High diversity; wet zone. *Rapala lankana*, *Pachliopta jophon*, *Horaga onyx*, *H. albimacula*, *Arhopala abseus*, *Arhopala ormistoni*, *Gangara lebadea*
Southern/Galle	Kanneliya	Criteria 1, 2 & 3. High diversity; wet zone. *Arhopala ormistoni*, *Graphium antiphates*, *Mycalesis rama*
Southern/Galle	Haycock Hill	Criteria 1. *Horaga onyx*, *H. albimacula*
Western/Colombo	Talangama Wetlands	Criteria 3. High diversity; wet zone
Western/Colombo	Bellanwila-Attidiya Marsh	Criteria 3. High diversity; wet zone
Western/Gampaha	Mitirigala	Criteria 1 & 2. *Nacaduba ollyetti*, *Baoris penicillata*, *Caltoris philippina*, *Mycalesis rama*, *Arhopala abseus*
Uva/Moneragala	Nilgala	Criteria 1 & 2. *Arhopala ormistoni*, *Symphaedra nais*, *Ypthima singala*, *Prosotas noreia*, *Acytolepis lilacea*
Uva/Moneragala	Rahatangala FR	Criteria 1 & 2. *Catapaecilma major*, *Symphaedra nais*

Appendix 8. Larval food plants of common butterflies

The following list is not exhaustive but lists commonly available plants that can be used in a butterfly garden or for rehabilitation of disturbed landscapes to attract butterflies by supplying the plants upon which the larvae feed. It is based on the author's personal research which is partly documented in the following publications (van der Poorten & van der Poorten, 2011, 2012, 2013 in the References and Bibliography) and the research of Himesh D. Jayasinghe, Sarath Sanjeeva and Chamitha de Alwis. Note, however, that there may be regional differences in larval food plants and a particular species may feed on one species in one area but on another species in another area.

Plant Scientific Name	**Plant Common Name**	**Butterfly species**	**Plant type**	**Suitable Zone**	**Other uses**	**Remarks**
Acacia caesia	Hinguru-wel	Common Acacia Blue, Common Lascar	Liana	Dry, Wet and Intermediate		Spines present on the stem and branches
Allophylus cobbe	Kobbe	Common Lineblue, Malayan	Shrub	Dry and Intermediate		Native
Alpinia calcarata	Heen araththa	Grass Demon		Dry and Intermediate		Naturalized
Anacardium occidentale	Cashew	Baron	Large tree	Dry and Intermediate	Nuts edible	Cultivated
Annona cherimola	Annoda	Tailed Jay	Small tree	Wet, Dry and Intermediate	Edible	Introduced
Annona muricata	Annoda, Katu Atta	Tailed Jay	Small tree	Wet, Dry and Intermediate	Edible	Introduced
Aristolochia indica	Sap sanda	Crimson Rose, Common Rose, Common Birdwing	Liana	Dry, Wet and Intermediate	Ornamental	Native
Atalantia ceylanica	Yakinaran	Common Mormon, Lime Blue, Blue Mormon	Tree	Dry and Intermediate		Native
Azima tetracantha	Balankatu	Small Salmon Arab	Thorny shrub	Arid and Dry		Native

Bamboo (various species)		Dark Palm Dart, Paintbrush Swift, Southern Duffer		Wet and Intermediate		Native and introduced
Barleria prionitis	Katu-karanda	Lemon Pansy, Chocolate Soldier	Small shrub	Wet and Intermediate	Used as a hedge	Introduced
Calotropis gigantea	Wara	Plain Tiger	Bush	Dry, Wet and Arid		Native
Capparis mooni	Welangiri-ya	Great Orange Tip, Painted Sawtooth	Liana	Submontane wet	Medicinal	Native
Capparis roxburghii	Welangiri-ya	As above	Thorny vine	Arid, Dry and Intermediate	Medicinal	Native
Capparis sepiaria	Welangiri-ya	Common Gull, Yellow Orange Tip, White Orange Tip	Thorny vine	Arid, Dry and Intermediate	Medicinal	Native
Cassia auriculata	Ranawara	Mottled Emigrant	Small tree	Wet, Dry, Arid and Intermediate	Medicinal	Native
Cassia didymobotrya	Eth thora	Mottled Emigrant	Bush	Intermediate and Wet	Medicinal	Native
Cassia fistula	Ehela	Lemon Emigrant, Mottled Emigrant	Medium tree	Wet, Dry and Intermediate	Ornamental	Native
Cinnamomum verum	Kurundu	Common Mime, Common Bluebottle	Medium sized tree	Wet and Intermediate	Edible	Native
Citrus aurantiifolia	Lime	Common Mormon, Blue Mormon, Lime Blue	Small tree	Dry, Wet and Intermediate	Edible	Spines present on the stem

Crateva adansonii	Lunu-warana	Striped Albatross, Chocolate Albatross, Great Orange Tip	Small to medium-sized tree	Arid, Dry and Intermediate	Medicinal	Native
Curcuma longa	Turmeric	Grass Demon		Wet and Intermediate		Introduced
Cycas nathorstii	Madu	Plains Cupid	Small tree	Dry, Wet and Intermediate	Ornamental and Edible	Native
Dendrophthoe falcata	Pillila	Common Jezebel, Peacock Royal, Gaudy Baron		Dry, Intermediate and Wet		Native
Dioscorea pentaphylla	Katu-ala	Ceylon Snow Flat	Vine	Dry and Intermediate	Medicinal	Native
Embelia tsjeriam-cottam	Welangasol	Plum Judy	Shrub	Intermediate and Wet		Native
Ficus bengalensis	Nuga	Common Indian Crow	Large tree	Dry and Intermediate	Birds eat the fruit	Native
Flacourtia indica; F. jangomas	Uguressa (cultivated and wild)	Common Leopard	Medium tree	Wet and Intermediate	Edible	Spines present on the stem
Ginger (various species)		Grass Demon		Wet and Intermediate		Native and introduced
Hemidesmus indicus	Heen-iramusu	Common Indian Crow	Vine	Dry, Intermediate and Wet		Native
Hiptage bengalensis	Puwak-gediya-wel	Orange-tailed Awl, Brown Awl	Vine	Dry and Intermediate		Native
Ichnocarpus frutiscens	Kiriwel	Common Indian Crow	Vine	Dry, Intermediate and Wet	Medicinal	Native
Indigofera tinctoria	Nil-awari	Grass Jewel	Herb	Intermediate and Wet		Native
Ixora coccinea	Ixora (native variety)	Monkey Puzzle	Bush	Dry, Wet and Intermediate	Ornamental	Native

Kalanchoe pinnata	Akkapana	Red pierrot	Herb	Wet, Dry and Intermediate	Medicinal	Introduced
Limonia acidissima	Divul	Common Guava Blue (on the fruit); Lime Butterfly, Lime Blue (on leaves)	Medium to large tree	Dry and Intermediate	Edible	Native
Litsea glutinosa	Bomi	Common Mime	Large tree	Dry, Intermediate and Wet	Can be kept cut short	Native
Mangifera indica	Mango	Baron	Large tree	Dry, Wet and Intermediate	Edible fruit	Introduced
Murraya koenigii	Karapincha	Common Mormon	Small tree	Dry and Intermediate	Edible (leaves)	Native
Nerium oleander	Kaneru	Common Indian Crow	Small tree	Dry, Intermediate and Wet	Ornamental	Introduced
Orchids e.g. *Vanda tessellata, Spathoglottis plicata*		Nilgiri Tit		Wet and Intermediate		Native and introduced
Polyalthia korinti	Ul-kenda	Tailed Jay	Small tree	Wet, Dry and Intermediate		Native
Pongamia pinnata	Karanda	Dark Cerulean, White-banded Awl, Common Awl, Indian Sunbeam	Large tree	Dry, Intermediate and Wet	Medicinal	Native
Salvadora persica	Malatthan	Small Salmon Arab	Large tree	Arid		Native
Senna surattensis	Wel-ehala	Three spot Grass Yellow, Orange Migrant	Small tree	Wet and Intermediate		Native

Senna tora	Pethi thora	Mottled Emigrant, Common Grass Yellow	Herb	Dry, Intermediate and Arid	Edible	Native
Sesbania grandiflora	Katuru murunga	Common Grass Yellow	Small tree	Dry, Wet, Arid and Intermediate	Edible	Native
Smilax sp.	Kabaressa	Yamfly, Blue Admiral	Vine	Intermediate and Wet		Native
Syzygium cumini	Ma dan	Large Oakblue	Tree	Wet, Dry and Intermediate	Edible fruits	Native
Tamarindus indica	Siyambala	Black Rajah	Large tree	Arid, Dry and Intermediate	Culinary (fruits)	Introduced
Terminalia chebula	Aralu	Large Oakblue	Tree	Wet, Dry and Intermediate	Medicinal	Native
Tragia involucrata	Kahambilia	Angled Castor, Common Castor	Prickly vine	Dry and Intermediate		Native
Tylophora indica	Bin-nuga	Blue Glassy Tiger, Glassy Tiger	Vine	Dry, Intermediate and wet		Native
Wattakaka volubilis	Kiri Anguna	Blue tiger	Vine	Dry and Intermediate	Edible leaves	Native
Zanonia indica	Wel-rasa-kinda	Clipper	Vine	Wet and Intermediate		Native



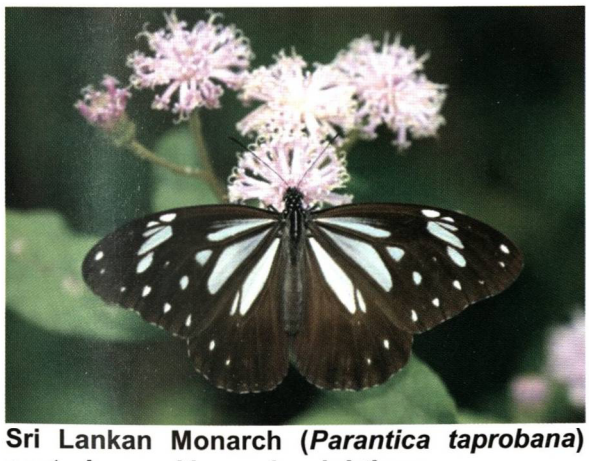
Monkey puzzle (*Rathinda amor*) larva on *Ixora coccinea* flowers

Appendix 9. Common nectar plants

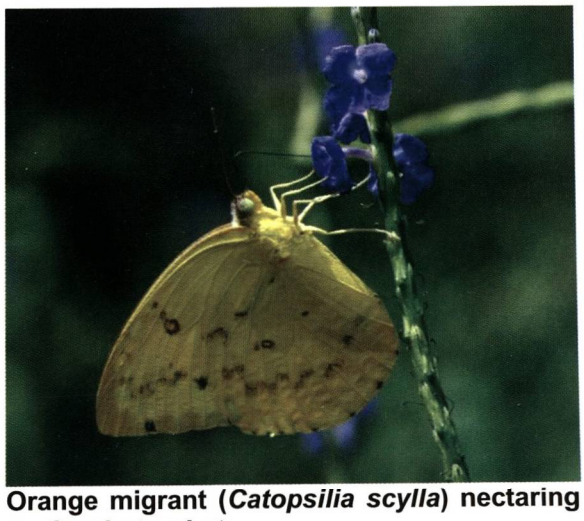
Note: Not all butterflies will nectar on these plants. Some butterflies have a short proboscis (tongue) and so require flowers with a short tube; others can use flowers with longer tubes. A variety of flowers will provide nectar for most butterflies.

Plant species	Common Name	Butterfly species	Plant type	Suitable Zone	Other uses	Remarks
Lantana camara	Gandapana	Several	Bush	Wet, Dry and Intermediate		Introduced; can be invasive
Murraya koenigii	Karapincha	Several	Small tree	Dry and Intermediate	Edible leaves	Native
Heliotropium indicum	Eth honda	Common Crow, Tigers etc.	Herb	Wet, Dry and Intermediate		Native
Stachytarpheta jamaicensis	Balu Nakuta	Tigers, Crows, Skippers, etc.	Herb	Dry and Intermediate		Exotic, but many species use this
Stachytarpheta urticaefolia	Balu Nakuta	Tigers, Crows, Skippers, etc.	Herb	Wet and Intermediate		Exotic, but many species use this
Ixora coccinea	Ixora (native variety)	Several	Bush	Wet, Dry and Intermediate	Ornamental	Native variety only
Clerodendrum paniculatum	Pinna	Many butterfly species including Sri Lanka Birdwing	Bush	Wet and Intermediate	Ornamental	Introduced
Duranta repens		Several	Shrub	Wet and Intermediate	Ornamental	Exotic but many species use this
Cordia curassavica		Several	Large shrub	Wet and Intermediate		Exotic but many species use this; can be invasive
Jatropha integerrima		Several	Large shrub	Wet and Intermediate	Ornamental	Exotic but many species use this

Plant species	Common Name	Butterfly species	Plant type	Suitable Zone	Other uses	Remarks
Leea indica	Burulla	Several	Large shrub	Wet and Intermediate		Native
Tridax procumbens		Several	Annual	Wet, Dry and Intermediate		Cultivated
Zinnia sp.		Several	Annual	Wet, Dry and Intermediate	Ornamental	Cultivated
Catharanthus roseus		Several		Wet, Dry and Intermediate	Ornamental	Cultivated
Crotalaria retusa and other species	Andanahiriya	Several		Wet, Dry and Intermediate		Native; plant from seeds
Cuphea hyssopifolia		Several		Wet, Dry and Intermediate	Ornamental	Cultivated
Pentas		Several		Wet and Intermediate	Ornamental	Cultivated



Sri Lankan Monarch (*Parantica taprobana*) nectaring on *Vernonia wightiana*



Orange migrant (*Catopsilia scylla*) nectaring on *Stachytarpheta*

Appendix 10. Guidelines to establish an open-air butterfly garden

You can successfully establish an open-air butterfly garden by providing the appropriate nectar and larval food plants that will attract butterflies.

1. Identify butterflies that are commonly found in the area in which the garden is to be located. Such information may be obtained from observations of existing natural areas or expert sources, books and other publications

2. Study the characteristics of the location of the butterfly garden. This should include the extent of land, the amount of shade, water retention in soil, depth of soil, and extent of rocks.

3. Depending on the characteristics determined in step 2, select the larval food plants and nectar food plants appropriate to the butterflies identified in step 1 for the area

4. Draw up a general plan for the garden. Include pathways so that people can move around the site and observe the butterflies. Winding paths (rather than straight ones) will add more interest and allow for better viewing. Put a few places to sit and benches so that people can observe the butterflies comfortably.

5. Make sure the plants are not planted too close to the pathways so that branches (of shrubs in particular) do not overshadow the pathways

6. The tallest trees and shrubs are best planted along the perimeter of the garden, followed by shorter shrubs. The shortest plants should be nearest the pathways, although shrubs may be planted near the pathways with due allowance for their eventual size at maturity

7. Vines are an important component of any butterfly garden and they must be planted so that they can grow onto a trellis. A simple trellis may be made by putting up posts with wires drawn across. Alternately the plants may be trained onto existing trees and bushes.

8. Establish a patch of bare land, depending on the size of the garden, and keep it damp and weed- free for butterflies that take part in mudsipping.

9. If sufficient land is available, keep an area in which the native vegetation is allowed to grow by tilling the land, removing all the grasses and allowing the herbaceous plants that grow naturally to grow.

10. Do not use artificial fertilizer to promote growth of the plants unless the soil is very deficient in nutrients. Compost is better. Too much nutrition encourages the growth of grasses and excessive growth of plants. Use fertilizer only to boost the early stages of growth.

11. The beds of herbaceous plants should be kept free of aggressive grasses but mulch them with dry leaves to allow places for some butterflies to pupate.

12. Don't clean too much; many butterfly species pupate near the ground and excessive cleaning will destroy the pupae.

13. The garden must be maintained on a regular basis: weeded, watered, pruned etc. as necessary.

14. All larvae must be removed when the plants are small until they become established. Otherwise the larvae will eat the plants fully.

15. If you plant plants with thorns or irritating hairs, be sure to plant them in a location where children or adults may not have easy access.

Reference: van der Poorten & van der Poorten, 2008



Butterfly Garden at Lady Ridgeway Hospital in Colombo



Butterfly garden at the Sri Lanka National Museum that includes a pond for dragonflies with a wet area for butterflies in the upper right

Appendix 11. Distribution of butterflies by district

√ indicated 'recorded'; -- indicates 'not recorded'
As of the date of this data, there are no records from the Mullaitivu district.

Family & Species/District	Ampara	Anuradhapura	Badulla	Batticaloa	Colombo	Galle	Gampaha	Hambantota	Jaffna	Kalutara	Kandy	Kegalle	Kilinochchi	Kurunegala	Mannar	Matale	Matara	Moneragala	Mullaitivu	Nuwara Eliya	Polonnaruwa	Puttalam	Ratnapura	Trincomalee	Vavuniya
Papilionidae																									
Graphium agamemnon menides	--	√	√	√	√	√	√	√	√	√	√	√	--	√	--	√	√	√	--	√	√	√	√	√	√
Graphium antiphates ceylonicus	--	--	--	--	--	√	--	--	--	√	√	--	--	--	--	√	√	√	--	--	√	--	√	--	--
Graphium doson doson	--	√	√	--	--	√	√	√	--	√	√	√	--	√	--	√	√	√	--	--	√	√	√	√	√
Graphium nomius nomius	--	√	√	--	--	--	--	--	--	--	√	--	--	--	--	√	--	√	--	√	√	--	--	√	--
Graphium sarpedon teredon	√	√	√	--	√	√	√	--	--	√	√	√	--	√	--	√	√	√	--	√	√	--	√	--	--
Pachliopta aristolochiae ceylonica	√	√	√	√	√	√	√	√	√	√	√	√	--	√	√	√	√	√	--	√	√	√	√	--	--
Pachliopta hector	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	--	√	√	√	√	√	√
Pachliopta jophon	--	--	--	--	--	√	√	√	--	√	√	√	--	--	--	--	√	--	--	√	--	--	√	--	--

Family & Species/District	Ampara	Anuradhapura	Badulla	Batticaloa	Colombo	Galle	Gampaha	Hambantota	Jaffna	Kalutara	Kandy	Kegalle	Kilinochchi	Kurunegala	Mannar	Matale	Matara	Moneragala	Mullaitivu	Nuwara Eliya	Polonnaruwa	Puttalam	Ratnapura	Trincomalee	Vavuniya
Papilio clytia lankeswara	--	--	√	--	√	√	√	√	--	√	√	√	--	√	--	√	√	√	--	--	--	√	√	--	--
Papilio crino	√	√	√	√	√	√	√	√	--	√	√	√	--	√	--	√	√	√	--	--	√	√	√	√	--
Papilio demoleus demoleus	√	√	√	√	√	√	√	√	√	√	√	√	--	√	√	√	√	√	--	--	√	√	√	√	--
Papilio helenus mooreanus	--	--	√	--	--	√	--	--	--	√	√	√	--	--	--	√	√	--	--	√	--	--	√	--	--
Papilio polymnestor parinda	√	√	√	--	√	√	√	√	√	√	√	√	--	√	√	√	√	√	--	√	√	√	√	√	√
Papilio polytes romulus	√	√	√	√	√	√	√	√	√	√	√	√	--	√	√	√	√	√	--	√	√	√	√	√	√
Troides darsius	√	√	√	√	√	√	√	√	--	√	√	√	--	√	--	√	√	√	--	√	√	√	√	--	--
Pieridae																									
Appias albina swinhoei	--	√	√	--	√	√	√	√	--	√	√	√	--	√	--	√	√	√	--	√	√	√	√	--	√
Appias galene	√	√	√	--	√	√	√	√	--	√	√	√	--	√	--	√	√	√	--	√	√	√	√	√	√
Appias indra narendra	--	--	--	--	--	--	--	--	--	--	√	√	--	--	--	--	--	--	--	--	--	--	√	--	--
Appias libythea libythea	--	√	√	--	--	√	√	√	√	--	--	--	--	√	√	--	--	√	--	--	--	√	--	√	--
Appias lyncida taprobana	--	√	--	--	√	√	√	√	--	√	√	√	--	√	--	√	--	--	--	--	--	√	√	--	--

Family & Species/District	Ampara	Anuradhapura	Badulla	Batticaloa	Colombo	Galle	Gampaha	Hambantota	Jaffna	Kalutara	Kandy	Kegalle	Kilinochchi	Kurunegala	Mannar	Matale	Matara	Moneragala	Mullaitivu	Nuwara Eliya	Polonnaruwa	Puttalam	Ratnapura	Trincomalee	Vavuniya
Belenois aurota taprobana	√	√	√	--	√	√	--	√	√	--	√	√	--	√	√	--	--	√	--	--	--	√	√	--	--
Catopsilia pomona pomona	√	√	√	√	√	√	√	√	√	√	√	√	--	√	√	√	√	√	--	√	√	√	√	√	√
Catopsilia pyranthe pyranthe	√	√	√	√	√	√	√	√	√	√	√	√	--	√	√	√	√	√	--	√	√	√	√	√	--
Catopsilia scylla	--	--	--	--	√	√	--	--	--	--	√	--	--	√	--	--	√	--	--	--	--	--	√	--	--
Cepora nadina cingala	--	--	√	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	√	--	--	√	--	--
Cepora nerissa phryne	√	√	√	√	√	√	√	√	√	--	√	√	--	√	√	√	√	√	--	√	√	√	√	√	--
Colotis amata modesta	--	√	√	√	--	--	--	√	√	--	--	--	--	√	√	√	--	√	--	--	√	√	√	√	--
Colotis aurora	--	√	--	--	--	--	--	--	√	--	--	--	--	--	√	--	--	--	--	--	--	√	√	--	--
Colotis danae danae	--	√	--	--	--	--	--	--	√	--	--	--	--	--	√	--	--	--	--	--	--	√	--	√	--
Colotis etrida limbata	--	√	√	--	--	--	--	√	--	--	--	--	--	--	√	--	--	--	--	--	--	√	--	--	--
Colotis fausta fulvia	--	√	--	--	--	--	--	--	√	--	--	--	--	--	√	--	--	--	--	--	--	√	--	√	--
Delias eucharis	√	√	√	√	√	√	√	√	√	√	√	√	--	√	√	√	--	√	--	--	√	√	√	√	--
Eurema blanda citrina	√	√	√	--	√	√	√	√	--	√	√	√	--	√	--	√	√	√	--	√	--	√	√	--	--

Family & Species/District	Ampara	Anuradhapura	Badulla	Batticaloa	Colombo	Galle	Gampaha	Hambantota	Jaffna	Kalutara	Kandy	Kegalle	Kilinochchi	Kurunegala	Mannar	Matale	Matara	Moneragala	Mullaitivu	Nuwara Eliya	Polonnaruwa	Puttalam	Ratnapura	Trincomalee	Vavuniya
Eurema brigitta rubella	--	√	√	--	√	√	√	--	--	--	√	√	--	√	√	√	--	√	--	√	--	√	√	--	--
Eurema hecabe hecabe	√	√	√	√	√	√	√	√	√	√	√	√	--	√	√	√	√	√	--	√	√	√	√	√	√
Eurema laeta rama	--	--	√	--	--	--	--	--	--	√	√	--	--	--	--	√	--	√	--	√	--	--	--	--	--
Eurema ormistoni	--	--	√	--	--	√	--	--	--	√	√	√	--	--	--	--	--	√	--	--	--	--	√	--	--
Hebomoia glaucippe ceylonica	--	√	√	--	--	√	√	√	--	√	√	√	--	√	√	√	--	√	--	--	√	√	√	√	--
Ixias marianne	√	√	√	√	--	--	--	√	√	--	--	√	--	√	√	√	--	√	--	--	--	√	√	--	--
Ixias pyrene cingalensis	--	√	√	--	--	√	--	√	--	--	√	--	--	√	√	√	--	√	--	--	√	√	√	--	--
Leptosia nina nina	√	√	√	√	√	√	√	√	√	√	√	√	--	√	√	√	√	√	--	--	√	√	√	√	√
Pareronia ceylanica ceylanica	√	√	√	--	√	√	--	√	√	--	--	--	--	√	√	√	--	√	--	√	√	√	√	√	--
Prioneris sita	--	--	√	--	--	--	--	--	--	--	√	√	--	--	--	√	--	--	--	√	--	--	--	--	--
Nymphalidae																									
Acraea violae	√	√	√	--	√	√	√	√	√	√	√	√	--	√	√	√	√	√	--	√	√	√	√	√	--
Argynnis hyperbius taprobana	--	--	√	--	--	--	--	--	--	--	√	--	--	--	--	√	--	--	--	√	--	--	√	--	--

Family & Species/District	*Ariadne ariadne minorata*	*Ariadne merione taprobana*	*Byblia ilithyia*	*Cethosia nietmeri nietmeri*	*Charaxes athamas athamas*	*Charaxes psaphon psaphon*	*Charaxes solon cerynthus*	*Cirrochroa thais lanka*	*Cupha erymanthis placida*	*Danaus chrysippus chrysippus*	*Danaus genutia genutia*	*Discophora lepida ceylonica*
Ampara	✓	✗	✓	✓	✓	✗	✓	✓	✓	✗	✗	✓
Anuradhapura	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓
Badulla	✗	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗	✓
Batticaloa	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓
Colombo	✗	✓	✓	✗	✗	✓	✗	✓	✗	✗	✗	✗
Galle	✗	✓	✓	✗	✗	✗	✓	✓	✗	✗	✗	✗
Gampaha	✓	✓	✓	✗	✓	✗	✗	✗	✗	✗	✗	✓
Hambantota	✗	✓	✗	✗	✓	✗	✗	✓	✓	✗	✗	✓
Jaffna	✗	✓	✓	✓	✓	✓	✗	✓	✓	✗	✗	✓
Kalutara	✗	✓	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗
Kandy	✓	✓	✗	✗	✗	✗	✓	✗	✗	✗	✓	✓
Kegalle	✓	✗	✗	✗	✗	✗	✓	✗	✗	✗	✗	✓
Kilinochchi	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kurunegala	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓
Mannar	✓	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗	✓
Matale	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓
Matara	✗	✗	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗
Moneragala	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓
Mullaitivu	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nuwara Eliya	✓	✗	✗	✓	✓	✓	✗	✓	✓	✗	✗	✓
Polonnaruwa	✓	✗	✗	✗	✗	✗	✓	✗	✗	✗	✗	✓
Puttalam	✓	✗	✗	✓	✓	✓	✗	✓	✓	✗	✗	✓
Ratnapura	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Trincomalee	✓	✗	✗	✓	✗	✓	✗	✗	✓	✗	✗	✓
Vavuniya	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓

Family & Species/District	*Doleschallia bisaltide ceylonica*	*Dophla evelina evelina*	*Elymnias hypermnestra fraterna*	*Elymnias singhala*	*Euploea core asela*	*Euploea klugii sinhala*	*Euploea phaenareta corus*	*Euploea sylvester montana*	*Euthalia aconthea vasanta*	*Euthalia lubentina psittacus*	*Hypolimnas bolina bolina*
Ampara	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Anuradhapura	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Badulla	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Batticaloa	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Colombo	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Galle	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Gampaha	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hambantota	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Jaffna	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kalutara	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kandy	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kegalle	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kilinochchi	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kurunegala	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mannar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Matale	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Matara	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Moneragala	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mullaitivu	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nuwara Eliya	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Polonnaruwa	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Puttalam	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ratnapura	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Trincomalee	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Vavuniya	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Family & Species/District	*Hypolimnas misippus*	*Idea iasonia*	*Ideopsis similis expromota*	*Junonia almana almana*	*Junonia atlites atlites*	*Junonia hierta hierta*	*Junonia iphita pluviatilis*	*Junonia lemonias vaisya*	*Junonia orithya patenas*	*Kallima philarchus*	*Kaniska canace haronica*	*Lethe daretis*	*Lethe drypetis drypetis*
Ampara	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Anuradhapura	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Badulla	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Batticaloa	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Colombo	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Galle	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Gampaha	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hambantota	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Jaffna	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kalutara	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kandy	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kegalle	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kilinochchi	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kurunegala	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mannar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Matale	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Matara	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Moneragala	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mullaitivu	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nuwara Eliya	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Polonnaruwa	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Puttalam	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ratnapura	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Trincomalee	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Vavuniya	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Family & Species/District	*Lethe dynsate*	*Lethe rohria neelgheriensis*	*Libythea laius lepitoides*	*Libythea myrrha rama*	*Melanitis leda leda*	*Melanitis phedima tambra*	*Moduza procris calidasa*	*Mycalesis mineus polydecta*	*Mycalesis patnia patnia*	*Mycalesis perseus typhlus*	*Mycalesis rama*	*Mycalesis subdita*	*Neptis hylas varmona*
Ampara	✗	✗	✗	✗	✗	✗	✓	✗	✓	✓	✗	✓	✓
Anuradhapura	✗	✗	✗	✗	✓	✗	✗	✓	✓	✓	✗	✓	✓
Badulla	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓
Batticaloa	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Colombo	✗	✗	✗	✗	✓	✗	✗	✓	✓	✓	✓	✗	✓
Galle	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Gampaha	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✗	✓
Hambantota	✗	✗	✗	✗	✓	✓	✗	✓	✓	✓	✗	✗	✓
Jaffna	✗	✗	✗	✗	✓	✗	✗	✗	✗	✓	✗	✓	✓
Kalutara	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✗	✓
Kandy	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗	✓	✓
Kegalle	✗	✗	✗	✓	✓	✓	✓	✗	✓	✓	✗	✗	✓
Kilinochchi	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Kurunegala	✗	✗	✗	✓	✓	✗	✓	✓	✓	✓	✗	✓	✓
Mannar	✗	✗	✗	✗	✓	✗	✗	✓	✗	✗	✗	✗	✓
Matale	✓	✗	✓	✓	✗	✗	✓	✗	✓	✓	✗	✗	✓
Matara	✓	✗	✗	✗	✓	✓	✓	✓	✓	✓	✗	✗	✓
Moneragala	✓	✗	✗	✓	✓	✗	✓	✓	✓	✓	✗	✓	✓
Mullaitivu	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Nuwara Eliya	✓	✗	✗	✓	✓	✓	✓	✗	✓	✓	✗	✗	✓
Polonnaruwa	✓	✓	✗	✗	✓	✓	✗	✓	✓	✗	✗	✓	✓
Puttalam	✓	✗	✗	✓	✗	✗	✗	✗	✓	✗	✗	✗	✓
Ratnapura	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Trincomalee	✓	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✓
Vavuniya	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓

Family & Species/District	*Neptis jumbah nalanda*	*Orsotriaena medus mandata*	*Pantoporia hordonia simuata*	*Parantica aglea aglea*	*Paranitica taprobana*	*Parthenos sylvia cyaneus*	*Phalanta alcippe ceylonica*	*Phalanta phalantha phalantha*	*Rohana parisatis camiba*	*Symphaedra nais*	*Tirumala limniace exoticus*
Ampara	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Anuradhapura	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Badulla	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Batticaloa	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Colombo	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Galle	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Gampaha	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hambantota	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Jaffna	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kalutara	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kandy	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kegalle	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kilinochchi	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kurunegala	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mannar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Matale	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Matara	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Moneragala	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mullaitivu	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nuwara Eliya	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Polonnaruwa	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Puttalam	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ratnapura	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Trincomalee	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Vavuniya	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Family & Species/District	*Tirumala septentrionis musikanos*	*Vanessa cardui*	*Vanessa indica nubicola*	*Vindula erota asela*	*Ypthima ceylonica*	*Ypthima singala*	**Riodinidae**	*Abisara echerius prunosa*	**Lycaenidae**	*Acytolepis lilacea moorei*	*Acytolepis puspa felderi*	*Amblypodia anita naradoides*	*Anthene lycaenina lycaenina*	*Arhopala abseus mackwoodi*
Ampara	-	-	-	-	✓	-		-		-	-	-	-	-
Anuradhapura	✓	-	-	-	✓	-		✓		-	-	✓	-	-
Badulla	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	-
Batticaloa	-	-	-	-	✓	-		-		-	-	-	-	-
Colombo	-	✓	-	-	✓	-		-		-	✓	-	-	✓
Galle	-	✓	-	✓	✓	✓		✓		-	✓	✓	✓	✓
Gampaha	-	-	-	✓	✓	-		✓		-	✓	-	✓	-
Hambantota	✓	-	-	-	✓	-		✓		-	-	✓	✓	-
Jaffna	-	✓	-	-	✓	-		✓		-	-	-	-	-
Kalutara	-	-	-	✓	✓	-		✓		-	✓	✓	✓	✓
Kandy	✓	✓	-	✓	✓	✓		✓		✓	✓	✓	✓	-
Kegalle	-	-	-	✓	✓	-		✓		-	✓	-	✓	-
Kilinochchi	-	-	-	-	-	-		-		-	-	-	-	-
Kurunegala	✓	-	-	✓	✓	-		✓		-	✓	✓	✓	-
Mannar	✓	-	-	-	✓	-		-		-	-	-	-	-
Matale	✓	✓	-	✓	✓	✓		✓		✓	✓	✓	✓	-
Matara	-	-	-	✓	✓	-		✓		-	✓	-	-	-
Moneragala	✓	-	-	✓	✓	✓		✓		✓	✓	✓	✓	-
Mullaitivu	-	-	-	-	-	-		-		-	-	-	-	-
Nuwara Eliya	✓	✓	-	✓	✓	-		-		-	-	-	-	-
Polonnaruwa	✓	-	-	✓	✓	-		✓		-	-	✓	-	-
Puttalam	✓	✓	-	✓	✓	-		-		-	-	✓	✓	-
Ratnapura	-	✓	-	✓	✓	✓		✓		✓	✓	✓	✓	✓
Trincomalee	-	-	-	-	✓	-		✓		-	-	-	-	-
Vavuniya	✓	-	-	-	✓	-		-		-	-	-	✓	-

Family & Species/District	Ampara	Anuradhapura	Badulla	Batticaloa	Colombo	Galle	Gampaha	Hambantota	Jaffna	Kalutara	Kandy	Kegalle	Kilinochchi	Kurunegala	Mannar	Matale	Matara	Moneragala	Mullaitivu	Nuwara Eliya	Polonnaruwa	Puttalam	Ratnapura	Trincomalee	Vavuniya
Arhopala amantes amantes	--	√	√	--	√	√	√	--	--	√	√	--	--	√	--	√	√	√	--	--	--	√	√	--	--
Arhopala centaurus pirama	--	--	√	--	--	√	--	√	--	--	√	--	--	√	--	--	√	√	--	--	--	√	√	√	--
Arhopala ormistoni	--	--	--	--	--	√	--	--	--	--	--	--	--	--	--	--	--	√	--	--	--	--	√	--	--
Azanus jesous gamra	--	√	√	--	--	--	--	√	√	--	√	--	--	√	√	√	--	√	--	--	√	√	√	√	--
Azanus ubaldus	--	--	--	--	--	--	--	--	√	--	--	--	--	--	√	--	--	--	--	--	--	√	--	√	--
Bindahara phocides moorei	--	--	√	--	--	√	--	√	--	--	√	√	--	--	--	--	√	--	--	--	--	--	√	√	--
Caleta decidia	--	--	√	--	--	√	√	--	--	√	√	√	--	√	--	√	√	√	--	√	√	--	√	--	--
Castalius rosimon rosimon	√	√	√	√	√	√	√	√	√	√	--	√	--	√	√	√	√	√	--	--	√	√	√	√	--
Catapaecilma major myosotina	--	√	√	--	--	--	--	--	--	--	√	--	--	--	--	--	--	√	--	--	--	--	--	--	--
Catochrysops panormus panormus	√	--	√	--	--	--	--	--	--	√	--	--	--	--	--	--	--	--	--	√	--	--	--	--	--
Catochrysops strabo strabo	√	√	--	--	√	√	--	√	√	--	√	√	--	√	√	√	--	√	--	--	--	√	√	--	--
Celastrina lavendularis lavendularis	--	--	√	--	--	--	--	--	--	--	√	--	--	--	--	--	--	--	--	--	--	--	√	--	--

Family & Species/District	Ampara	Anuradhapura	Badulla	Batticaloa	Colombo	Galle	Gampaha	Hambantota	Jaffna	Kalutara	Kandy	Kegalle	Kilinochchi	Kurunegala	Mannar	Matale	Matara	Moneragala	Mullaitivu	Nuwara Eliya	Polonnaruwa	Puttalam	Ratnapura	Trincomalee	Vavuniya
Cheritra freja pseudojafra	--	--	√	--	--	√	--	--	--	√	--	--	--	--	--	--	√	√	--	--	--	--	√	--	--
Chilades lajus lajus	√	√	√	--	√	√	√	√	√	√	√	√	--	√	√	√	--	√	--	√	√	√	√	√	--
Chilades pandava lanka	--	√	√	--	√	√	√	--	--	√	√	√	--	√	--	√	√	√	--	--	√	√	√	√	--
Chilades parrhasius nila	--	--	√	--	--	--	--	√	√	--	--	--	--	--	√	--	√	--	--	--	--	√	--	√	--
Curetis thetis	--	√	√	√	--	√	√	√	√	--	√	--	--	√	√	√	--	√	--	--	√	√	√	√	--
Deudorix epijarbas epijarbus	√	√	√	--	--	√	--	√	√	--	√	--	--	√	√	√	--	√	--	--	--	√	√	--	--
Discolampa ethion ethion	√	√	√	--	√	√	√	√	--	√	√	√	--	√	--	√	√	√	--	--	√	√	√	--	--
Euchrysops cnejus cnejus	--	√	√	√	--	√	--	√	√	--	--	--	--	√	√	--	--	√	--	--	√	√	√	√	--
Everes lacturnus lacturnus	--	√	√	--	√	√	√	√	√	√	√	√	--	√	--	√	√	√	--	√	√	√	√	--	--
Freyeria putli	--	√	√	--	√	--	--	√	√	--	--	--	--	√	√	--	--	√	--	--	√	√	√	√	--
Horaga albimacula viola	--	--	--	--	--	√	--	--	--	--	√	--	--	--	--	--	√	--	--	--	--	--	√	--	--
Horaga onyx cingalensis	--	--	--	--	--	√	--	--	--	--	√	--	--	--	--	--	√	--	--	--	--	--	√	--	--

Family & Species/District	Ampara	Anuradhapura	Badulla	Batticaloa	Colombo	Galle	Gampaha	Hambantota	Jaffna	Kalutara	Kandy	Kegalle	Kilinochchi	Kurunegala	Mannar	Matale	Matara	Moneragala	Mullaitivu	Nuwara Eliya	Polonnaruwa	Puttalam	Ratnapura	Trincomalee	Vavuniya
Hypolycaena nilgirica	√	--	√	--	√	√	√	--	√	√	√	--	--	√	--	√	√	√	--	--	--	--	√	--	--
Ionolyce helicon viola	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	√	--	--
Iraota timoleon nicevillei	--	--	√	--	√	√	--	--	--	--	--	--	--	√	--	√	--	√	--	--	--	--	√	--	--
Jamides alecto meilichius	--	--	√	--	--	√	√	--	--	√	√	√	--	√	--	--	√	√	--	--	--	--	√	--	--
Jamides bochus bochus	√	√	√	--	√	√	√	√	--	√	√	√	--	√	√	√	√	√	--	√	√	√	√	--	--
Jamides celeno tissama	√	√	√	--	√	√	√	√	√	√	√	√	--	√	√	√	√	√	--	√	√	√	√	--	--
Jamides coruscans	--	--	√	--	--	√	√	--	--	√	--	√	--	--	--	--	√	--	--	--	--	--	√	--	--
Jamides lacteata	--	--	√	--	--	--	√	--	--	√	√	√	--	--	--	√	√	√	--	--	--	--	√	--	--
Lampides boeticus	√	√	√	√	√	√	√	√	√	--	√	--	--	√	√	√	--	√	--	√	√	√	√	--	--
Leptotes plinius plinius	√	√	√	--	--	--	--	√	√	--	√	--	--	√	√	√	--	√	--	√	√	√	√	--	√
Loxura atymnus arcuata	--	--	√	--	√	√	√	--	--	√	√	√	--	√	--	√	√	√	--	√	√	--	√	--	--
Megisba malaya thwaitesi	--	√	√	--	--	√	√	√	√	√	√	√	--	√	--	√	√	√	--	--	√	√	√	√	--

Family & Species/District	*Nacaduba berenice ormistoni*	*Nacaduba beroe minima*	*Nacaduba calauria evansi*	*Nacaduba hermus sidoma*	*Nacaduba kurava prominens*	*Nacaduba ollyetti*	*Nacaduba pactolus ceylonica*	*Nacaduba sinhala*	*Neopithecops zalmora dharma*	*Petrelaea dana*	*Pratapa deva deva*	*Prosotas dubiosa indica*	*Prosotas nora ardates*
Ampara	-	-	-	-	-	-	-	-	-	-	-	-	✓
Anuradhapura	-	-	-	-	-	-	-	-	✓	-	-	-	✓
Badulla	✓	-	-	✓	✓	-	✓	-	✓	✓	✓	-	✓
Batticaloa	-	-	-	-	-	-	-	-	-	-	-	-	-
Colombo	-	-	-	-	-	-	-	-	✓	-	-	-	-
Galle	✓	-	-	✓	-	-	-	-	✓	-	-	-	✓
Gampaha	-	-	✓	✓	-	✓	-	-	-	-	-	✓	✓
Hambantota	-	-	-	-	-	-	-	-	-	-	-	-	✓
Jaffna	-	-	-	-	-	-	-	-	-	-	-	-	-
Kalutara	-	-	-	-	-	-	-	✓	✓	-	-	✓	-
Kandy	✓	-	-	✓	-	-	✓	-	✓	✓	-	✓	✓
Kegalle	✓	-	-	✓	-	-	✓	✓	✓	-	-	-	✓
Kilinochchi	-	-	-	-	-	-	-	-	-	-	-	-	-
Kurunegala	✓	-	-	✓	-	-	-	-	✓	-	-	✓	✓
Mannar	-	-	-	-	-	-	-	-	-	-	-	-	-
Matale	✓	-	-	✓	-	-	-	-	✓	-	-	✓	✓
Matara	✓	-	-	✓	-	-	-	-	-	-	-	-	✓
Moneragala	✓	✓	✓	✓	✓	-	✓	-	✓	✓	✓	✓	✓
Mullaitivu	-	-	-	-	-	-	-	-	-	-	-	-	-
Nuwara Eliya	✓	-	-	-	-	-	-	-	-	-	-	-	✓
Polonnaruwa	✓	-	-	-	✓	-	-	-	✓	-	-	-	✓
Puttalam	✓	✓	-	-	✓	-	-	-	✓	-	-	✓	✓
Ratnapura	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Trincomalee	✓	-	-	-	-	-	-	-	-	-	-	-	✓
Vavuniya	-	-	-	-	-	-	-	-	-	-	-	-	-

Family & Species/District	*Prosotas noreia noreia*	*Rapala iarbus sorya*	*Rapala lankana*	*Rapala manea schistacea*	*Rapala varuna lazulina*	*Rathinda amor*	*Spalgis epeus epeus*	*Spindasis elima fairliei*	*Spindasis greeni*	*Spindasis ictis ceylonica*	*Spindasis lohita lazularia*	*Spindasis nubilus*	*Spindasis schistacea*	*Spindasis vulcanus fusca*
Ampara	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣
Anuradhapura	⊣	⊣	⊣	⊢	⊢	⊢	⊢	⊣	⊣	⊢	⊣	⊣	⊢	⊣
Badulla	⊢	⊣	⊣	⊢	⊢	⊢	⊢	⊣	⊣	⊢	⊢	⊣	⊢	⊢
Batticaloa	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣
Colombo	⊣	⊣	⊣	⊣	⊢	⊢	⊢	⊣	⊣	⊣	⊣	⊣	⊣	⊢
Galle	⊣	⊣	⊣	⊣	⊢	⊢	⊢	⊣	⊣	⊣	⊢	⊣	⊢	⊣
Gampaha	⊣	⊣	⊣	⊣	⊢	⊢	⊢	⊣	⊣	⊣	⊣	⊣	⊣	⊣
Hambantota	⊢	⊣	⊣	⊢	⊣	⊢	⊢	⊣	⊣	⊢	⊢	⊣	⊢	⊢
Jaffna	⊣	⊢	⊣	⊢	⊣	⊢	⊢	⊢	⊣	⊢	⊣	⊢	⊢	⊢
Kalutara	⊣	⊣	⊢	⊣	⊣	⊢	⊢	⊣	⊣	⊣	⊢	⊣	⊣	⊣
Kandy	⊢	⊣	⊣	⊢	⊢	⊢	⊢	⊣	⊣	⊣	⊣	⊣	⊢	⊢
Kegalle	⊣	⊣	⊣	⊣	⊣	⊣	⊢	⊣	⊣	⊣	⊣	⊣	⊣	⊣
Kilinochchi	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣
Kurunegala	⊢	⊣	⊣	⊢	⊢	⊢	⊢	⊣	⊣	⊣	⊣	⊣	⊢	⊢
Mannar	⊢	⊣	⊣	⊣	⊣	⊣	⊣	⊢	⊣	⊢	⊣	⊢	⊣	⊢
Matale	⊣	⊣	⊣	⊢	⊢	⊢	⊢	⊣	⊣	⊣	⊢	⊣	⊢	⊣
Matara	⊣	⊣	⊢	⊣	⊢	⊢	⊢	⊣	⊣	⊣	⊣	⊣	⊣	⊣
Moneragala	⊢	⊣	⊣	⊢	⊢	⊢	⊢	⊣	⊣	⊢	⊢	⊣	⊣	⊢
Mullaitivu	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣
Nuwara Eliya	⊢	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊢	⊣	⊣	⊣	⊣	⊣
Polonnaruwa	⊣	⊣	⊣	⊢	⊣	⊢	⊢	⊣	⊣	⊣	⊣	⊣	⊢	⊢
Puttalam	⊢	⊣	⊣	⊢	⊣	⊢	⊢	⊢	⊣	⊢	⊢	⊣	⊢	⊢
Ratnapura	⊣	⊣	⊢	⊢	⊢	⊢	⊢	⊣	⊣	⊣	⊢	⊣	⊣	⊢
Trincomalee	⊣	⊣	⊣	⊢	⊣	⊢	⊣	⊣	⊣	⊣	⊣	⊣	⊢	⊣
Vavuniya	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣

Family & Species/District	*Surendra quercetorum discalis*	*Tajuria arida*	*Tajuria cippus longinus*	*Tajuria jehana ceylanica*	*Talicada nyseus nyseus*	*Tarucus callinara*	*Tarucus nara*	*Udara akasa mavisa*	*Udara lanka*	*Udara singalensis*	*Virachola isocrates*	*Virachola perse ghela*	*Zesius chrysomallus*	*Zizeeria karsandra*
Ampara	-	-	-	-	✓	-	-	-	-	-	-	-	-	✓
Anuradhapura	✓	-	✓	-	✓	-	-	-	-	-	-	-	✓	✓
Badulla	✓	✓	✓	-	✓	-	-	✓	✓	✓	✓	✓	✓	✓
Batticaloa	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colombo	✓	-	✓	-	-	-	-	-	-	-	-	-	✓	✓
Galle	✓	-	✓	-	✓	-	-	-	-	-	-	-	✓	✓
Gampaha	✓	-	✓	-	✓	-	-	-	-	-	-	-	-	✓
Hambantota	✓	-	✓	-	✓	✓	-	-	-	-	-	✓	✓	✓
Jaffna	✓	-	✓	✓	-	-	✓	-	-	-	✓	-	✓	✓
Kalutara	-	-	-	-	✓	-	-	-	-	-	-	-	-	-
Kandy	✓	-	✓	-	✓	-	-	-	✓	✓	-	-	-	✓
Kegalle	✓	-	-	-	✓	-	-	-	-	-	-	-	✓	✓
Kilinochchi	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kurunegala	✓	-	✓	-	✓	-	-	-	-	-	✓	-	✓	✓
Mannar	✓	-	-	-	-	-	✓	-	-	-	✓	-	✓	✓
Matale	✓	-	-	-	-	-	-	-	✓	-	-	-	-	-
Matara	✓	-	✓	-	-	-	-	-	-	-	-	-	✓	-
Moneragala	✓	-	✓	-	✓	✓	-	-	-	-	✓	✓	✓	✓
Mullaitivu	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nuwara Eliya	-	-	-	-	✓	-	-	✓	✓	✓	-	-	-	-
Polonnaruwa	-	-	-	-	-	-	-	-	-	-	-	✓	✓	-
Puttalam	✓	-	✓	-	✓	-	✓	-	-	-	✓	✓	✓	✓
Ratnapura	✓	-	✓	-	✓	-	-	✓	✓	✓	✓	-	✓	✓
Trincomalee	✓	-	✓	-	-	-	✓	-	-	-	-	✓	✓	✓
Vavuniya	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Family & Species/District	*Zizina otis indica*	*Zizula hylax hylax*	**Hesperiidae**	*Ampittia dioscorides singa*	*Badamia exclamationis*	*Baoris penicillata*	*Baracus vittatus*	*Bibasis sena sena*	*Borbo cinnara*	*Burara oedipodea ataphus*	*Caltoris kumara lanka*	*Caltoris philippina seriata*	*Caprona alida lanka*	*Caprona ransonnettii ransonnettii*	*Celaenorrhinus spilothyrus*
Ampara	-	✓		-	-	-	-	-	-	✓	-	-	-	-	-
Anuradhapura	✓	✓		✓	-	-	-	-	-	-	-	-	-	✓	-
Badulla	✓	✓		✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓
Batticaloa	✓	-		-	-	-	-	-	-	-	-	-	-	-	-
Colombo	✓	✓		✓	-	✓	-	-	-	-	-	-	-	✓	-
Galle	✓	✓		✓	✓	✓	-	-	✓	-	✓	✓	-	-	✓
Gampaha	✓	✓		✓	✓	✓	-	-	-	-	✓	-	-	✓	-
Hambantota	✓	✓		✓	-	-	-	-	-	-	-	-	-	-	-
Jaffna	✓	✓		-	-	-	-	-	✓	-	-	-	-	-	-
Kalutara	-	-		✓	✓	-	-	-	-	-	✓	-	-	✓	✓
Kandy	✓	✓		✓	✓	-	✓	✓	-	✓	✓	✓	✓	✓	✓
Kegalle	✓	-		✓	-	-	✓	-	-	-	-	-	-	✓	✓
Kilinochchi	-	-		-	-	-	-	-	-	-	-	-	-	-	-
Kurunegala	✓	✓		✓	✓	-	-	-	✓	-	-	-	-	✓	-
Mannar	✓	✓		✓	✓	-	-	-	✓	-	-	-	-	-	-
Matale	✓	✓		✓	✓	✓	✓	✓	-	✓	✓	-	-	✓	✓
Matara	✓	✓		✓	-	✓	✓	-	✓	-	-	-	-	-	-
Moneragala	✓	✓		✓	✓	-	-	✓	✓	✓	-	✓	✓	✓	-
Mullaitivu	-	-		-	-	-	-	-	-	-	-	-	-	-	-
Nuwara Eliya	✓	✓		-	-	✓	✓	-	✓	-	-	-	-	-	✓
Polonnaruwa	✓	✓		✓	-	-	-	-	-	-	-	-	-	-	-
Puttalam	✓	✓		✓	✓	-	-	-	✓	-	-	-	-	✓	-
Ratnapura	✓	✓		✓	✓	✓	✓	-	✓	✓	✓	✓	-	✓	✓
Trincomalee	✓	✓		✓	-	-	-	-	-	-	-	-	-	✓	-
Vavuniya	-	-		-	✓	-	-	-	-	-	-	-	-	✓	-

Family & Species/District	*Cephrenes trichopepla*	*Choaspes benjaminii benjaminii*	*Coladenia indrani tissa*	*Gangara lebadea subfasciata*	*Gangara thyrsis clothilda*	*Gomalia elma albofasciata*	*Halpe egena egena*	*Halpe [egena] ceylonica*	*Hasora badra lanka*	*Hasora chromus chromus*	*Hasora taminatus taminatus*
Ampara	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣
Anuradhapura	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	✓
Badulla	⊣	✓	✓	⊣	✓	⊣	✓	✓	⊣	✓	✓
Batticaloa	⊣	⊣	⊣	⊣	⊣	✓	⊣	⊣	⊣	⊣	⊣
Colombo	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	✓
Galle	⊣	⊣	✓	⊣	⊣	⊣	⊣	⊣	✓	⊣	✓
Gampaha	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	✓	⊣
Hambantota	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣
Jaffna	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	✓	⊣
Kalutara	⊣	⊣	⊣	⊣	✓	⊣	⊣	✓	✓	⊣	⊣
Kandy	✓	⊣	✓	✓	✓	⊣	✓	✓	✓	✓	✓
Kegalle	⊣	⊣	✓	⊣	✓	⊣	⊣	⊣	⊣	✓	⊣
Kilinochchi	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣
Kurunegala	✓	⊣	✓	⊣	✓	⊣	⊣	⊣	⊣	✓	✓
Mannar	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	✓	⊣
Matale	⊣	✓	⊣	⊣	⊣	⊣	⊣	⊣	⊣	✓	✓
Matara	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	✓	✓	⊣
Moneragala	⊣	⊣	✓	⊣	✓	⊣	⊣	⊣	⊣	✓	✓
Mullaitivu	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣
Nuwara Eliya	⊣	✓	⊣	⊣	⊣	⊣	⊣	✓	✓	⊣	⊣
Polonnaruwa	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	✓	✓
Puttalam	⊣	⊣	✓	⊣	⊣	⊣	⊣	⊣	⊣	✓	✓
Ratnapura	⊣	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Trincomalee	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣
Vavuniya	⊣	⊣	✓	⊣	⊣	⊣	⊣	⊣	⊣	⊣	⊣

Family & Species/District	Ampara	Anuradhapura	Badulla	Batticaloa	Colombo	Galle	Gampaha	Hambantota	Jaffna	Kalutara	Kandy	Kegalle	Kilinochchi	Kurunegala	Mannar	Matale	Matara	Moneragala	Mullaitivu	Nuwara Eliya	Polonnaruwa	Puttalam	Ratnapura	Trincomalee	Vavuniya
Hyarotis adrastus adrastus	--	--	√	--	--	√	--	--	--	--	√	--	--	√	--	--	--	√	--	--	--	√	--	--	--
Iambrix salsala luteipalpis	√	√	√	--	√	√	√	√	--	√	√	√	--	√	√	√	√	√	--	--	--	√	√	√	√
Matapa aria	--	--	√	--	√	√	√	--	--	√	√	√	--	√	--	--	--	√	--	--	--	--	√	--	--
Notocrypta curvifascia curvifascia	--	--	√	--	--	--	√	--	--	√	√	√	--	--	--	√	√	--	--	--	--	--	√	--	--
Notocrypta paralysos alysia	--	--	√	--	--	√	√	--	--	√	√	√	--	--	--	√	√	--	--	--	--	--	√	--	--
Oriens goloides	--	--	√	--	--	√	√	--	--	√	√	--	--	√	--	--	√	√	--	--	--	√	√	--	√
Parnara bada bada	--	--	√	--	√	√	--	√	√	√	√	--	--	√	√	--	--	√	--	√	--	--	√	--	√
Pelopidas agna agna	--	--	--	--	√	--	--	--	--	--	--	√	--	√	--	--	--	√	--	√	--	--	--	--	--
Pelopidas conjuncta narooa	--	--	√	--	--	√	--	--	--	--	--	√	--	√	--	--	--	√	--	--	--	√	√	--	--
Pelopidas mathias mathias	--	--	--	--	--	--	√	√	--	√	--	--	--	√	--	--	--	√	--	--	--	--	√	--	--
Pelopidas subochracea subochracea	--	--	√	--	--	√	√	--	--	√	--	--	--	√	--	√	--	--	--	--	√	√	--	--	--
Potanthus pallida	--	--	--	--	--	--	--	--	--	√	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Family & Species/District	Ampara	Anuradhapura	Badulla	Batticaloa	Colombo	Galle	Gampaha	Hambantota	Jaffna	Kalutara	Kandy	Kegalle	Kilinochchi	Kurunegala	Mannar	Matale	Matara	Moneragala	Mullaitivu	Nuwara Eliya	Polonnaruwa	Puttalam	Ratnapura	Trincomalee	Vavuniya
Potanthus pseudomaesa pseudomaesa	--	--	√	--	--	√	--	--	--	--	√	√	--	√	--	--	√	--	--	--	--	--	--	--	--
Potanthus satra	--	√	√	--	√	--	√	--	--	√	√	√	--	√	√	√	--	√	--	√	--	√	√	--	--
Sarangesa dasahara albicilia	--	--	√	--	--	--	--	--	--	--	√	√	--	--	--	√	--	√	--	--	--	√	√	√	--
Spialia galba	--	√	√	--	√	√	√	√	√	√	√	√	--	√	√	--	√	√	--	--	--	√	√	√	--
Suastus gremius subgrisea	--	--	√	--	--	√	√	√	√	√	--	--	--	√	√	√	--	√	--	--	--	√	√	--	--
Suastus minuta minuta	--	--	--	--	--	√	--	--	--	√	√	--	--	√	--	√	--	--	--	--	--	--	√	--	--
Tagiades japetus obscurus	--	√	√	--	√	√	√	--	--	√	√	√	--	√	--	√	√	√	--	--	√	--	√	--	--
Tagiades litigiosa ceylonica	--	--	√	--	--	√	--	--	--	√	√	√	--	√	--	√	√	√	--	√	--	--	√	√	--
Tapena thwaitesi	--	--	√	--	--	√	--	--	--	√	√	--	--	--	--	--	√	--	--	--	--	--	√	--	--
Taractrocera maevius	--	√	√	--	√	√	√	--	--	√	√	--	--	√	√	√	√	√	--	--	√	√	√	--	√
Telicota bambusae lanka	--	--	√	--	√	√	√	√	--	--	√	--	--	√	--	√	--	--	--	--	--	--	--	--	--
Telicota colon kala	--	--	√	--	√	√	√	--	--	--	--	--	--	√	--	--	--	√	--	--	--	√	√	√	--
Thoressa decorata	--	--	--	--	√	√	--	--	--	√	--	√	--	--	--	--	--	--	--	--	--	--	√	--	--
Udaspes folus	--	--	√	--	√	--	√	√	--	--	--	√	--	√	--	--	--	√	--	--	--	--	√	--	--

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