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# The Butterflies of Mauritius *

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**Abstract.** All species of butterfly recorded from the Indian Ocean island of Mauritius are listed, and known bionomic details are presented. Previous checklists, made in 1866, 1908 and 1938 are discussed, and taxonomic corrections to these publications are offered. The status of some species is updated and we add two recently introduced species, *Erionota thrax thrax* L., and *Virachola antalus* Hopffer, to the list to Mauritian species. In addition to documenting the turnover of species on this island over the past 120 years, we also hope to stimulate further investigation into the present status of several endangered or possibly extinct endemic species.

## Introduction

The island of Mauritius is situated at 57°30′ east, 20°10′ south, in the southern Indian Ocean. Its total land area is only 1858 km$^2$. The slightly larger (2502 km$^2$) French island of Reunion—formerly known as Bourbon—lies some 400 km to the south-west, and the Mauritian dependency of Rodrigues (103 km$^2$) lies some 1100 km to the east. The three islands and their lesser dependencies are sometimes referred to as the Mascarene archipelago. The nearest major land mass to Mauritius is Madagascar, some 1350 km to the west.

Mauritius has a tropical maritime climate. The months of December to May are hot and humid, and the months of June to November are cooler and dryer. The hotter months bring the threat of cyclones, which frequently devastate the island. The whole island is under intense cultivation pressure, the principal crop being sugar cane (*Saccharum officinarum* L.). Although dense cloud forest once covered the entire island, today only a small area survives, in the Black River Gorges in the south-west of the island. This area is stringently protected but appears to be ultimately doomed due to the encroachment of introduced competitor species such as Chinese Guava (*Psidium cattleianum* Sabine) and Privet (*Ligustrum walkeri* Decaisne) which strangle the understorey and prevent tree regeneration.

The present checklist of Mauritian butterflies recognises 35 species, of which only 25 are at all common—that is, likely to be seen by the

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Table 1. Distribution of the Mascarene butterfly species. Subspecies in parenthesis.

| | Mauritius | Rodrigues* | Reunion* | Madagascar | Africa | Orient |
|---|---|---|---|---|---|---|
| *Danaus chrysippus* | X | X | X | X | X | X |
| *Euploea euphon* | X | | | | | |
| *Euploea desjardinsi* | | X | | | | |
| *Euploea goudotii* | | | X | | | |
| *Amauris phaedon* | X | | | (X) | | |
| *Henotesia narcissus* | X(*narcissus*) | | X(*narcissus*) | X(*fraterna*) | | |
| *Melanitis leda* | X(*helena*) | X(*helena*) | X(*helena*) | X(*helena*) | X(*helena*) | X(*leda*) |
| *Neptis frobenia* | X | | | | | |
| *Neptis dumetorum* | | | X | | | |
| *Hypolimnas misippus* | X | X | X | X | X | X |
| *Hypolimnas bolina* | (X) | | (X) | X | | X |
| *Hypolimnas dubius* | X(*drucei*) | | | X(*drucei*) | X(*dubius*) | |
| *Junonia rhadama* | X | X | X | X | | |
| *Junonia goudotii* | (X) | | | X | | |
| *Vanessa cardui* | (X) | | (X) | X | X | X |
| *Antanartia borbonica* | X(*mauritiana*) | | X(*borbonica*) | X(*borbonica*) | | |
| *Phalanta phalantha* | X(*aethiopica*) | | X(*aethiopica*) | X(*aethiopica*) | X(*aethiopica*) | X(*phalantha*) |
| *Salamis angustina* | X(*vinsoni*) | | X(*angustina*) | X(*angustina*) | | |
| *Libythea cinyras* | (X) | | | | | |
| *Papilio manlius* | X | | | | | |
| *Papilio phorbanta* | | | X | | | |
| *Papilio demodocus* | X | | X | X | X | |
| *Catopsilia florella* | X | | X | X | X | X |
| *Catopsilia thauruma* | X | | | X | | |
| *Eurema brigitta* | X(*pulchella*) | | | X(*pulchella*) | X(*brigitta*) | |
| *Eurema floricola* | X(*ceres*) | | X(*ceres*) | X(*floricola*) | | |
| *Cacyreus darius* | X | | | X | | |
| *Leptotes pirithous* | X | X | X | X | X | X |
| *Lampides boeticus* | X | X | X | X | X | X |
| *Zizina antanossa* | X | | X | X | X | |
| *Zizula hylax* | X | | X | X | X | X |
| *Zizeeria knysna* | X | | X | X | X | X |
| *Cyclyrius mandersi* | X | | | | | |
| *Virachola antalus* | X | | | X | X | |
| *Coeliades forestan* | X(*forestan*) | X(*forestan*) | X(*forestan*) | X(*arbogastes*) | X(*forestan*) | |
| *Eagris sabadius* | X(*sabadius*) | | X(*sabadius*) | X(*andracne*) | X(*astoria* etc.) | |
| *Borbo borbonica* | X(*borbonica*) | X(*borbonica*) | X(*borbonica*) | X(*borbonica*) | X(*borbonica*) | |
| *Parnara naso* | X(*naso*) | | X(*bigutta*) | X(*potieri*) | X(*monasi* etc.) | |
| *Erionota thrax* | X(*thrax*) | | | | | X |

*N.B. Distribution data from Reunion and (particularly) Rodrigues are from old sources and may be unreliable.

ordinary visitor. The ten remaining species are either casuals, extinct or nearly extinct, or only recently established. There is a high incidence of endemism, with nine species or subspecies being confined to the island; and a further eight species found only on the island and in other parts of the Malagasy sub-region (Madagascar, the Mascarenes, the Comoro is., and the Seychelles).

For this reason alone the butterfly fauna is of great interest. Table 1 lists the known Mascarene butterflies in comparison with their occurrence in other regions. Subspecies are given. Although the comparative data are of biogeographical interest, we have strong reservations on the completeness of the data for Reunion and Rodrigues. The latter data were from lists of the last century. The first list of Mauritian butterflies

was produced by Trimen in 1866, who recognised 26 species. This list was updated by Manders in 1908, who added five species and deleted one, bringing the total to 30. The most recent checklist was produced by J. M. Vinson in 1938, who catalogued all known Mascarene lepidoptera and largely followed Manders in respect of the Mauritian butterflies. The present paper reviews our current knowledge of the Mauritian butterfly fauna, and attempts to correct some taxonomic errors and ambiguities present in existing literature. In addition, we add two newly introduced species to the Mauritian list and offer notes on recent changes in status of other species. The latter notes are based upon observations made by P. M. H. and J. P. L. Davis during their stay on the island between 1976 and 1980.

Further fieldwork on the butterfly fauna of this island is very desirable. Much of Mauritius consists of private sugar estates which include hills and scrubland, and to which access is restricted. It is possible that some of the rare or assumed extinct species may still be present in these areas, awaiting rediscovery.

To aid identification and to place the Mauritian species in the context of the African fauna, we have cross-referred the species in our checklist to their appropriate entries in both Carcasson's 1981 checklist of African butterflies (published in his 'Handguide to the Butterflies of Africa'), and d'Abrera's 1980 volume on the Afrotropical fauna. These works are abbreviated CC and DA respectively in the following.

## The Annotated Checklist

### DANAIDAE

**Danaus chrysippus** L. 1758 (CC No. 3185; DA p. 152) is common and widely distributed over the island. It seems to be monomorphic there, all specimens seen from 1976 to 1980 being of form *chrysippus*. Manders (1908) and Vinson (1938) both claim to have seen single specimens of this species with white hindwings, which may have been form *alcippus*; however, no further specimens of this form from Mauritius have been brought to our attention. Of the many hundreds of this species bred on the island a few had some whitening of the veins in the upperside hindwing, but not sufficiently so to be considered as form *alcippus*. Form *dorippus* has never been recorded—a surprising observation in the light of the occasional presence of its presumed mimic *Hypolimnas misippus* female-form *dorippoides ('inaria')* on the island. Like the following two species, adults of this species were often seen to congregate in the vicinity of the Boraginacean tree *Tournefortia argentea* L. for several days after emergence from the pupa, where they appeared to be imbibing exudations from the ends of broken branches on the ground. It is presumed that these exudations contained pyrrolizidine alkaloids which serve as pheromone precursors and may also be involved in boosting overall bodily toxicity.

**Euploea euphon** Fabricius 1798 (CC No. 3204; DA p. 158). The genus *Euploea* is of oriental origin, as it does not occur at all in mainland Africa. Nevertheless, several of the Indian Ocean islands support endemic species—for example, *E. goudotii* Boisduval, which is found only on Reunion; and *E. desjardinsi* Guerin, which is confined to Rodrigues. The endemic Mauritian species, *E. euphon*, is widely distributed throughout the island, although it is less common than *D. chrysippus* and appears to exhibit some preference for the forested areas of the Black River Gorges and certain coastal areas. The principal larval foodplant appears to be oleander (*Nerium oleander* L.) although Manders reports it as also feeding upon *Ficus repens* Rottboell.

**Amauris phaedon** Fabricius 1798 (CC No. 3201; DA p. 158) is confined to Mauritius, although there are doubtful reports of specimens from Madagascar. It is found occasionally in all parts of the island, but is especially common in the south-west, near the Le Morne peninsula. It is most plentiful in areas of coastal vegetation containing the tree *Tournefortia argentea*, in which the adults spend large parts of the day resting or imbibing juices. The early stages are, regrettably, not known although Vinson (1938) states that the larvae may feed upon various Asclepiadaceae, principally *Tylopha asthmatica* Wight.

## SATYRIDAE

**Henotesia narcissus** Fabricius 1798 (CC No. 3019; DA p. 186) ssp. **narcissus.** This subspecies is confined to Mauritius and Reunion, the other subspecies—ssp. *fraterna* Butler—being confined to Madagascar and Anjouan island in the Comoro group. it is common throughout the island, especially in shady areas in woods and gardens. Manders (1908) describes the early stages, giving the larval foodplant as various *Bambusa* species and other gramineae.

**Melanitis leda** L. 1758 (CC No. 2894; DA p. 162) ssp. **helena** Westwood. This species is widely distributed throughout the old world tropics, being represented in Mauritius by the African subspecies *helena*. It is common throughout the island, and particularly active at dawn and dusk. Manders collected a series of 155 specimens of this species from Mauritius between March 10 and December 31, 1905, exhibiting seasonal variation. The wet season forms (Dec.-June) have more prominent ocelli and lighter basal areas beneath than do the dry season forms (June-Nov.). The series is deposited in the Hope Collections, Oxford, U.K. Vinson (1938) gives the larval foodplants on the island as sugar cane and other gramineae, particularly *Thysanoloena maxima* Kuntze.

## NYMPHALIDAE

**Neptis frobenia** Fabricius 1798 (CC No. 2552; DA p. 248) is confined to Mauritius. It is found most commonly in the hills above the Black

River Gorges and in the Maccabee forest. Manders (1908) reports the larval foodplants to be various species of *Acalypha* and *Erythrospermum mauritiana* Baker.

**Hypolimnas misippus** L. 1764 (CC No. 2664; DA p. 214) is a widespread cosmopolitan species in the island, but can be very scarce in some years. During the years 1976-1980 occasional males were seen, especially on the east coast, but rarely inland. No females were seen at all during this period. After bad cyclones at the end of 1979 and in early 1980, accompanied by very heavy rainfall, the butterfly became much more common. Freshly emerged specimens were often seen inland, at Moka, and females were seen for the first time. Most females were of the form *H. misippus misippus*, which is the presumed mimic of *Danaus chrysippus chrysippus*. However, specimens of the form *dorippoides* (*'inaria'*) were also seen and captured. The presumed model of this mimetic form is *D. chrysippus dorippus*, which is not present on the island. If we are to believe the evidence of specimens in the Hope Collections at Oxford, both forms have persisted in the island since at least the 18th century. Manders (1908) reports a single specimen of form *alcippoides* from the Port Louis Museum in Mauritius.

**Hypolimnas bolina** L. 1758 (CC No. 2645; DA p. 214) is probably only an occasional visitor to the island, or possibly even a mistaken record. Early records are almost certainly attributable to misidentification of specimens of *H. misippus*. Manders (1908), however, mentions two authenticated Mauritian specimens known to him. No specimens were seen during the years 1976-1980.

**Hypolimnas dubius** Palisait de Beauvois 1806 (CC No. 2655; DA p. 222) ssp. **drucei** Butler is a subspecies of the African *H. dubius* confined to Madagascar, Mauritius and the Comoro islands. It must be regarded as extremely rare or extinct in Mauritius. There are two specimens in the british Museum (Natural History) taken by a J. T. Rawlins in November and December 1953. No locality is given. Vinson (1938) reports a specimen from La Mi Voie, Black River, taken in September 1915.

**Junonia rhadama** Boisduval 1833 (CC No. 2669; DA pp. 229) (= **Precis rhadama**) is found in Madagascar, Rodrigues, Reunion, the Comoro islands, and Astove island in the Seychelles, in addition to Mauritius. According to Trimen (1866) the species was introduced into Mauritius from Madagascar in 1857 or 1858, and spread rapidly throughout the island. It is found all over Mauritius, but is especially abundant at Flic-en-Flac on the east coast. During the day it is found in large numbers in the vegetation and on the rocks above the tide-line. Vinson (1938) reports the larval foodplant to be various species of *Barleria*.

**Junonia goudotii** Boisduval 1833 (CC No. 2673; DA p. 230) (= **Precis goudotii**) is confined to Madagascar and the Comoro islands. Only a single specimen—presumably a vagrant—is recorded by Vinson (1938) from Long Mountain.

**Vanessa cardui** L. 1758 (CC No. 2694; DA p. 238) is an almost cosmopolitan species which can be regarded only as exceedingly rare or accidental in Mauritius. Occasional specimens from the island can be found in collections, but between 1967 and 1980 only one or two unconfirmed sightings were made.

**Antanartia borbonica** Oberthur 1880 (CC No. 2697; DA p. 239) ssp. **mauritiana** Manders. The nomotypical subspecies of *A. borbonica* is confined to Reunion and the Tamatave region of E. Madagascar. The other subspecies, *mauritiana*, is restricted to Mauritius. It is considerably smaller than the nomotypical race. The two have previously been considered as subspecies of the African species *A. hippomene* Hübner 1823.

This species must be regarded as on the verge of extinction, if it is not already so. Manders (1908) reports that at the turn of the century the species was confined to the locality of Curepipe, at 1800 ft. (c. 550 m). Vinson additionally reports (1938) the presence of other specimens from Moka at 1200 ft. (c. 360 m). The larval foodplant is reported to be *Pilea urticefolia* Blume (family urticaceae) by Manders (1906) who gives a complete description of this species' early stages. The flight period is given as February to March, and sometimes as early as September or as late as May. During four years on the island (1976-1980) no specimens were seen.

**Phalanta phalantha** Drury 1773 (CC No. 2704; DA p. 210) ssp. **aethiopica** Rothschild & Jordan. The nomotypical subspecies of this species is oriental. Subspecies *aethiopica* is the African and Malagasy form, and is the one present in Mauritius. The species is common and widespread throughout the island, especially in sunny patches in gardens and near coastal vegetation. The larval foodplants are various *Flacourtia* species.

**Salamis angustina** Boisduval 1833 (CC No. 2662; DA p. 224) ssp. **vinsoni** Le Cerf (= **'Salamis augustina'** Auct.). The nomotypical subspecies of this insect is confined to Reunion and Madagascar. Subspecies *vinsoni* is found only on Mauritius. It may be distinguished from the former subspecies by the greater amount of purplish colouring on the upper side wing surfaces of *vinsoni* as compared with *angustina*. It must be regarded as a very rare species indeed in Mauritius, if not already extinct. As early as 1866, Trimen noted this species to be very uncommon, having seen only one or two preserved specimens. Vinson (1938) records that he captured specimens of this species between 1920 and 1923 from the months of April to September. This agrees with Manders' description (1908) of the habits of the Reunion subspecies,

whose flight time he gives as "April and May and again in September" (between 0900 hrs. and 1000 hrs.). The larval foodplant is given as sugar cane. Manders (1908) attributes the decline in numbers of this species to the introduction of Mynah birds from India. The last recorded specimen was taken by Dr. J. Bolton in August 1929. No locality is given. This species closely resembles the Danaid species *Euploea euphon*, of which it may be a mimic.

## LIBYTHEIDAE

**Libythea cinyras** Trimen 1866 (CC No. 2101; DA p. 409). Only the type specimen of this species is known. It was given to Trimen in 1865 by a Mr. Colville Barclay, who allegedly took it at Moka. The specimen is in the British Museum (Natural History), and is in exceedingly poor condition.

## PAPILIONIDAE

**Papilio manlius** Fabricius 1798 (CC No. 492; DA p. 22) is confined to Mauritius. It is closely related to the Reunion species *P. phorbanta* L. 1771 and the Malagasy species *P. epiphorbas* Boisduval 1833. All three are presumed to have evolved from the same line which produced the 'blue papilios' of the mainland such as *P. nireus* L. 1758 and related species. *P. manlius* is fortunately common throughout the island and in no danger of extinction, as it feeds upon various species of *Citrus*, which are widely cultivated, although not intensively sprayed with insecticides. The larvae may be found feeding together with the next species, *P. demodocus*. They may be distinguished from the latter as *P. manlius* larvae are bright green at all stages. A review of the conservation status of this species appears in the IUVN 'Papilionidae Red Data Book' (1985).

**Papilio demodocus** Esper 1798 (CC No. 505; DA p. 30) is the common citrus swallowtail of Africa It is found all over the island and is fairly common. Like the preceding species it is a *Citrus* feeder, and its population size appears to fluctuate with fluctuations in *Citrus* numbers due to disease. It was probably accidentally introduced into the island at some time between 1865 and the turn of the century, following its deliberate importation into Reunion from Madagascar in 1863.

## PIERIDAE

**Catopsilia florella** Fabricius 1775 (CC No. 557; DA p.53). The taxonomy of this species and others in the same genus has frequently been the source of much confusion. Although lists prepared of the island's *Catopsilia* species, and specimens in the collection of the Mauritius Institute Museum, indicate a plurality of forms, varieties and species, our own work on the island and in various collections shows to our satisfaction that only two basic species are present on Mauritius. The

first of these, the pan-African migrant *C. florella* is common and widespread throughout the island. Specimens in the Mauritius Institute labelled '*C pyranthe*' almost certainly result from early taxonomic confusion with this oriental species. The two species are separable on the basis of genitalia (Klots, 1929) and also by the dark forewing apical band, which is always continuous in *C. pyranthe* but frequently broken in the Africa *C. florella*. Both female forms of *C. florella*, the white form *pyrene* and the yellow form *florella* are present on the island, the white form being by far the more abundant. The male is always white. The larval foodplant is *Cassia fistula* L.

**Catopsilia thauruma** Reakirt 1866 (CC No. 558; DA p. 53). Specimens in the Mauritius Institute labelled as the oriental '*C. pomona*' are almost certainly misidentified specimens of this species, which is restricted to Madagascar and Mauritius. Although the two species have often been regarded as conspecific (see, for example, Corbet, 1948) the two are quite clearly distinguishable on the basis of genitalic differences (Klots, 1929).

Previously this species has been regarded as two separate species, *C. thauruma and C. grandidieri* Mabille 1877, or the latter as a subspecies of the former. The principal grounds for separation appear to be the smaller size of the male of *C. grandidieri*, and the extreme dimorphism of the two females. Whereas dimorphism of the females of this species is unquestionable—in common with the females of many pieridae, and most *Catopsilia* species—examination of long series of *C. thauruma* from Madagascar and Mauritius indicate that there is enormous variation in size of both males and females within and between populations. The notion of two separate species or subspecies cannot therefore be sustained on this basis. We hence suggest, in common with other *Catopsilia* species, that the females of the two taxa hitherto regarded as subspecies of *C. thauruma* should be relegated to the status of 'female forms', i.e. *C. thauruma* female-f. *thauruma* and *C. thauruma* female-f. *grandidieri*. Both are illustrated with their male, from Mauritius, in Figure 2. Both forms appear to occur in both Mauritius and Madagascar, the only appreciable difference between the two geographic subspecies being the consistently smaller size of males and females from Mauritius. This diminution is a phenomenon common to the fauna of many small islands.

The erection by Le Cerf (1916) of the taxon 'var. *mauritiana*' of *C. grandidieri* from Mauritius appears to have been based on too small a sample (3 specimens) and equivocal characteristics. It should therefore be ignored as an invalid infrasubspecific category.

The insect is common, although less so than the preceding species, all over the island—especially where its larval foodplant grows in abundance, e.g. Beau Bassin. The larval foodplant is *Cassia siamea* Lamarck.

**Eurema brigitta** Stoll 1780 (CC No. 566; DA p. 55) ssp. **pulchella** Boisduval. This species is distributed throughout the old world tropics in a confusing variety of subspecies and forms. Subspecies *pulchella* is restricted to Madagascar, Mauritius, the Comoro islands and Aldabra, and has often been regarded as a separate species from *E. brigitta*. The female is frequently dusted with black scales over its entire upperside wing surface, the overall effect being a dull green coloration. Only the wet season from, which is illustrated, appears to be at all common on the island. The dry season form is hardly ever seen. The butterfly is common, particularly in gardens where it flies with the next species. The larval foodplant is *Cassia mimosoides* L.

**Eurema floricola** Boisduval 1833 (CC No. 565; DA p. 55) ssp. **ceres** Butler. This species has been considered conspecific with *E. hecabe*— which it superficially resembles— for many years. However, genitalial examination shows the two should be regarded as separate species (Paulian & Bernardi, 1951). *Eurema floricola* is distributed throughout the Malagasy sub-region in a variety of subspecies, i.e. *floricola* (Madagascar); *aldabrensis* Bernardi (Aldabra); *anjuana* Bulter (Comoro islands); and *ceres*, which is confined to Mauritius and Reunion. The insect is common throughout Mauritius and found in the same sort of habitat as the preceding species. Vinson (1938) records the larvae as feeding upon *Desmanthus virgatus* Willdenow, *Caesalpinia bonducella* Fleming and *Leucaena glauca* Bentham, data which may indicate ecological separation from the above species.

## LYCAENIDAE

**Cacyreus darius** Mabille 1877 (CC No. 1845; DA p. 544) is confined to Madagascar, the Comor islands and Mauritius, and has frequently been regarded in the past as conspecific with the African *C. lingeus* Stoll 1782, from which it is superifically indistinguishable. However, as Stempffer (1943) shows, the two species are separable on the basis of consistent differences in the valves of the genitalia. *C. darius* is probably an import to Mauritius, having first been caught on the island only at the turn of the century. Manders suggests that it may have been imported into the island upon a species of *Coleus*, its larval foodplant, which was brought in from Madagascar and planted out in the Botanic Gardens at Curepipe. There is a small series of this species in the Hope Collections at Oxford, taken by Manders at the turn of the century in these same Botanic Gardens. By 1938 Vinson noted that the species was rather scarce, and no specimens at all were seen or taken during the years 1976-1980. Its status today is unclear. It may be extinct on the island.

**Leptotes pirithous** L. 1767 (CC No. 1868; DA p. 546) (= **Syntarucus telicanus** Lang 1789) is a very common 'blue', found all over the island. It prefers small bushes and trees and it can be seen flying around and settling on these, especially near the coast and in gardens. Its overseas distribution includes Africa, Madagascar, much of Asia and Europe. Its larval foodplants include many legumes such as *Cajanus cajan* Druce, and various other species including *Plumbago capensis* Willdenow, and even *Lantana camara* L.

**Lampides boeticus** L. 1767 (CC No. 1825; DA p. 541) is an almost cosmopolitan species. Trimen (1866) found it rather scarce on the island, being confined mostly to gardens where peas were grown. Since then the increase in population of the island, and the great increase in the growing of vegetables, especially peas, has led to this species becoming a common pest. This is a very fast flying 'blue' which can be found in any garden or field in which there are peas or other legumes.

**Zizina antanossa** Mabille 1877 (CC No. 1902; DA p. 550) (= **Z. perparva** Saalmuller 1884) is distributed over the entire continent of Africa, including Madagascar, and also occurs on Reunion. Manders (1908) believes it to be an introduction to the island at about the turn of the century. The species is common throughout Mauritius, and found frequently on garden lawns and flower beds, where it flies low and erratically. It is very similar to *Zizeeria knysna* Trimen. However, *Z. knysna* has a black spot in the centre of the cell on the underside of the forewing, which *Z. antanossa* lacks.

**Zizula hylax** Fabricius 1775 (CC No. 1906; DA p. 551) (= **Z. gaika** Trimen 1862) is distributed over the entire continent of Africa, including Madagascar and Reunion and is also present in the orient. It is very common on Mauritius, but can be overlooked due to its small size and dull coloration. It was first recorded in the island by Manders in 1907, but may of course have been present unnoticed for some time before. Mamet (1955) gives the larval foodplant as *Lantana camara* L.

**Zizeeria knysna** Trimen 1862 (CC No. 1901; DA p. 550) (= **Z. lysimon** Hübner 1803) is distributed throughout Africa, Madagascar and the Seychelles, and is also present in the orient. It is very common in Mauritius, and often flies with *Z. antanossa*. It may be distinguished however, as *Z. knysna* has a black spot in the centre of the cell on the underside of the forewing, which is lacking in *Z. antanossa*. Mamet (1955) gives the larval foodplants as *Cajanus cajan* Druce and *Pisum sativum* L.

**Cyclyrius mandersi** Drue 1907 (CC No. 1867; DA p. 546) (= **Nacaduba mandersi**) is confined to Mauritius and was described by Druce from specimens collected by Manders at the turn of the century. It is said to be restricted to the coast. Specimens taken by Manders in the collection of the British Museum (Natural History) and the Hope Collections at

Oxford indicate coastal localities as far apart as Blue Bay in the south-east of the island; Le Morne Brabant in the south-west; and Flacq on the north-east coast. The larval foodplant is given as *Caesalpinia bonducella* Fleming in Manders' account of the early stages. The insect is reported to be a high flyer, in contrast to the other Mauritian members of this family, which tend to fly close to the ground. It is somewhat surprising in the light of this information that no specimens of this species were seen or taken in the years 1967-1980 by P. M. H. and J. P. L. Davis. We cannot, therefore, comment on its current status and it would be of great interest to know if this endemic is still extant.

**Virachola antalus** Hopffer 1855 (CC No. 1662; DA p. 515) (= **Deudorix antalus**) is a species new to the island since the publication of Vinson's check list in 1938. David L. Hancock of the National Museum, Bulawayo, Zimbabwe, informs us that Dr. E. C. G. Pinhey, formerly of that museum, took one male and two females of this species in May of 1976 at Case Noyale, Relais de la mi Voie, and Riviere du Rempart. P. M. H. and J. P. L. Davis took further specimens at Moka in 1978 and later in the Black River Gorges and on the coast. The species would hence appear to be well established on the island. The flight patterns and other behaviour is similar to that of *L. boeticus*, and for this reason it may have been on the island for some time and been confused with this other species. The insect is present throughout Africa and in Madagascar and the Comoro islands.

## HESPERIIDAE

**Coeliades forestan** Stoll 1782 (CC No. 11) ssp. **forestan** is distributed throughout Africa, Reunion, Mauritius, Rodrigues, the Seychelles and the Comoro islands as the nomotypical subspecies. Subspecies *arbogastes* is present in Madagascar. The species is widely distributed in Mauritius, but is never very common. It appears to prefer open ground. The larval foodplants are *Canavalia ensiformis*. A. P. de Candolle, and *Terminalia catappa* L. There is no evidence that the closely related *C. ramanatek* Boisduval 1833 has ever occurred on the island, as has been suggested.

**Eagris sabadius** Boisduval 1833 (CC No. 54) ssp. **sabadius** is distributed throughout East and Southern Africa and the Indian Ocean islands in a number of subspecies. The Mauritian subspecies is the nomotypical one, also present in Reunion, and is not common on the island. The insect has a very rapid and erratic flight and rests with its wings spread flat. The larval foodplant is *Hibiscus rosasinensis* L.

**Borbo borbonica** Boisduval 1833 (CC No. 466) spp. **borbonica**. This species is found throughout the Afrotropical region and southern Europe. It is probably the commonest Hesperiid in Mauritius. The ground colour is fuscous, with a row of angular yellowish spots running

across the forewing. The sexes are similar. The larval foodplants are various gramineae, especially *Paniscum* species.

**Parnara naso** Fabricius 1793 (CC No. 470) ssp. **naso** (= **Parnara marchalli** Boisduval 1833) is widely distributed throughout Africa and the Orient in a variety of subspecies. The nomotypical form is confined to Mauritius. It is probably the second most common Hesperiid after the preceding species, and is superficially similar in shape and coloration. It may be distinguished by the reduced yellow forewing spotting in this species, which may not even be present in the male. There is some sexual dimorphism, the female having a larger forewing spot and being paler in coloration than the male, which is a rich chocolate brown. The larval foodplant is sugar cane.

**Erionota thrax** L. 1767 ssp. **thrax** is an extremely large 'skipper' with a forewing length of some 30 mm. The 'Banana Skipper' of the orient, it appears to be a very recent introduction. It was first seen in Mauritius in 1970, and by 1972 its larva was such a common pest on bananas that the Mauritius Ministry of Agriculture was forced to import three species of hymenopterous parasitoids against it, from Sabah. The species subsequently became uncommon. Three specimens were taken by J. P. L. Davis at the Black River Aviary on the west coast in 1979, but it was not seen elsewhere between the years 1976 and 1980. It current status is unclear. This species is a notorious coloniser of tropical island habitats, presumably being imported with agricultural produce.

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## Addendum

Since the submission of this manuscript for publication an important new record for the island has been brought to our attention. R. I. Vane-Wright, of the British Museum (Natural History), has informed us that Dr. J. R. Williams of the Sugar Industry Research Institute of Mauritius has taken two authenticated specimens of the species *Danaus plexippus* at Curepipe, in the central uplands of the island, in April of 1984. Furthermore, several specimens of this species are reported to have been reared from larvae taken on an unknown Asclepiad by a junior employee of the Ministry of Agriculture's Entomology Division, in November of 1983. It remains unknown as to whether or not the species is now firmly established on the island, but if such is the case it represents an important—and intriguing—extension to the range of this widespread species. The species has not been recorded from the mainland of Africa, the Indian Sub Continent, or, hitherto, and Indian Ocean Islands. Its likely source of introduction must therefore lie in the realms of conjecture.

**Further Addendum**

One more new Mauritian species has recently been reported to us by Dr. J. R. Williams. This is the Malagasy Hesperiid *Ceoliades ernesti* Grandidier 1867, which was introduced into Reunion in the 1950's. Dr. Williams has taken several specimens of this species in the Mondrain area of the Black River Gorges, and it appears to be well established. The most recent reports also indicate that *D. plexippus* is now well-established and fairly common throughout the island.


Fig. 1. **1** *Danaus chrysippus chrysippus,* **2.** *Henotesia narcissus narcissus,* **3.** *Amauris phaedon* female, **4.** *Euploea euphon* female, **5.** *Neptis frobenia,* **6.** *Hypolimnas dubius drucei* female, **7.** *Hypolimnas misippus* male, **8.** *Junonia rhadama,* **9.** *Vanessa cardui,* **10.** *Hypolimnas misippus* female form *misippus,* **11.** *Antanartia borbonica mauritiana,* **12.** *Junonia goudotii* (Madagascar specimen), **13.** *Hypolimnas misippus* female form *dorippoides,* **14.** *Phalanta phalantha aethiopica,* **15.** *Melanitis leda helena*


Fig. 2.. **1.** *Papilio demodocus,* **2.** *Papilio manlius female,* **3.** *Salamis angustina vinsoni* female, **4.** *Catopsilia florella* male, **5.** *Catopsilia florella* female form *pyrene,* **6.** *Catopsilia florella* female form *florella,* **7.** *Catopsilia thauruma* male, **8.** *Catopsilia thauruma* female form *thauruma,* **9.** *Catopsilia thauruma* female form *grandidieri,* **10.** *Eurema brigitta pulchella* male, **11.** *Eurema floricola ceres* male

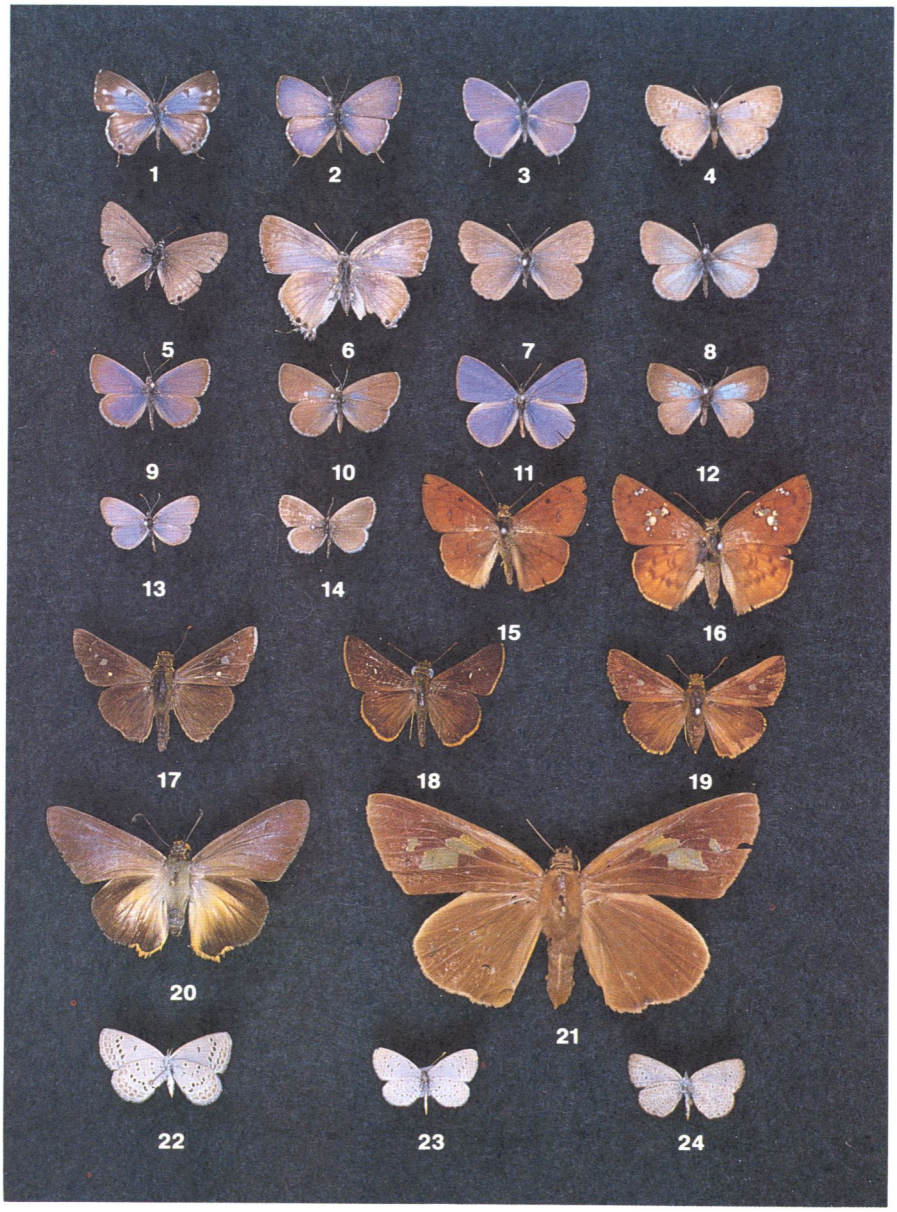


Fig. 3. **1.** *Cacyreus darius* female, **2.** *Cacyreus darius* male, **3.** *Leptotes pirithous* male, **4.** *Leptotes pirithous* female, **5.** *Lampides boeticus,* **6.** *Virachola antalus,* **7.** *Zizina antanossa* male, **8.** *Zizina antanossa* female, **9.** *Zizeeria knysna* male, **10.** *Zizeeria knysna* female, **11.** *Cyclyrius mandersi* male, **12,** *Cyclyrius mandersi* female, **13.** *Zizula hylax* male, **14.** *Zizula hylax* female, **15.** *Eagris sabadius sabadius* male, **16.** *Eagris sabadius sabadius* female, **17.** *Borbo borbonica borbonica,* **18.** *Parnara naso naso* male, **19.** *Parnara naso naso* female, **20.** *Coeliades forestan forestan,* **21.** *Erionota thrax thrax,* **22.** *Zizina antanossa* (underside), **23.** *Zizula hylax* (underside), **24.** *Zizeeria knysna* (underside)