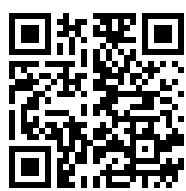

BUTTERFLIES OF BANGLADESH

-an annotated checklist

Torben B. Larsen

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IUCN The World Conservation Union
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FOREWORD

The study of butterflies and moths in their natural environment has always been rewarding. The first close-up view of a live butterfly through a magnifying glass is an amazing experience that can never be matched by looking at preserved specimens.

Of all the insects, butterflies and moths are the most celebrated. Butterflies are probably the most popular because they are active by day and are renowned for their beautiful colours and graceful flight. Butterflies and moths belong to the largest group of animals, that is, the one with the greatest number of species, namely insects. Within this group, theirs is the fourth largest order, the Lepidoptera, meaning scaly wings covered with thousands of tiny, coloured scales overlapping each other like the tiles of a roof. It is estimated that there are approximately 200 000 species of butterflies and moths on the earth, but only about 170 000 may be described as known. Of these again, one-tenth are butterflies and the rest are moths. Butterflies have a fossil record that goes back 40 million years. Lepidoptera originated when flowering plants were beginning to proliferate. Their habitats range from Arctic tundra to Alpine mountain summits, as well as the warmer tropical rainforests and coastal mangrove swamps.

Butterflies and moths have always been depicted as fragile creatures; as such, these objects of great beauty have to survive in a hostile world. Most butterflies defend themselves by camouflage, but those species that are poisonous advertise their defense mechanism with bright colours.

Butterflies and moths can be both allies and enemies of man. Butterflies are valuable pollinators when they move from plant to plant, gathering nectar for their survival. Some caterpillars feed on weeds and are agents of control. Other species have been cultivated for centuries for their silk. But when we plant vast fields with wheat and rice, we create the ideal conditions for certain Lepidoptera species to build up huge populations and become pests. In some cases, an insect accidentally introduced to another country might become a pest because its natural predators and competition are absent.

Tropical rainforests, with their variety of plants and wonderful fauna, are the richest habitats for butterflies, providing homes for some of the most spectacular species. Their continued destruction for growing crops and the logging industry threatens these species today. Much has yet to be learned about the complex communities of insects that live in our tropical forests. Butterflies and moths are now an integral part of such research, because they are relatively easy to recognise, and are already well-documented.

In many parts of the world, butterfly and moth numbers have decreased alarmingly in recent times, and many species have become extinct. There is little that can be done to save these fascinating creatures for our future generations if their habitats are destroyed, so it is important that we manage our environment and avoid further damaging the already fragile balance of nature.

Though it may sound outlandish and quaint, I would rather prefix this quite matter-of-fact and mundane foreword to Torben B Larsen's 'Butterflies of Bangladesh: an annotated checklist', which constitutes, to my estimation, a milestone in the tradition set by such trailblazers as Marshall & de Niceville and Evans.

Finally, I express my sincere gratitude to Torben B. Larsen for giving us the privilege to publish the annotated checklist of butterflies of Bangladesh.

I also acknowledge the hard work done by S. M. Munjurul Hannan Khan, Mir Waliuzzaman and Sheikh Asaduzzaman for putting things together and publishing this book.

Dhaka
June 2004

Ainun Nishat
Country Representative
IUCN Bangladesh Country Office

Gazetter

Arakan–the northern part of the Myanmar coast adjoining the Teknaf area of the Chittagong Division.

Bandarban–township in the northern parts of the Chittagong Hill Tracts

Baridhara–garden suburb of Dhaka City

Bhairab–township between Dhaka and Srimangal on the Meghna River

Bhawal National Park–a sal forest just north of Dhaka Airport (ZIA), which contains a number of interesting butterflies despite being quite monotonous

Cachar–town in Assam near the northeastern corner of Bangladesh

Cheringa–town on the Chittagong Division coastal strip which was the site of an allied airport during World War 2

Chittagong City–main port city of Bangladesh

Chittagong Division–the administrative area covering the entire Chittagong area, south to Teknaf on the Myanmar border

Chittagong Hill Tracts–the hilly and mountainous parts of the Chittagong division where numerous butterflies await discovery

Cox's Bazaar–main town on the Chittagong coast

Dinajpur–town near the Indian border in northwestern Bangladesh

Dowki–currently on the Indian border between Sylhet and Meghalaya

Gulshan–garden suburb of Dhaka City

Khasi Hills–the main mountains of Indian Meghalaya

Inani–village south of Cox's Bazaar with some scattered forest

Jahangirnagar University–a large university campus with varied vegetation about 40km northwest of Dhaka

Khotka Plains–a large non-flooded plain in the southern part of the Sunderbans mangroves which has permanent populations of certain interesting butterflies

Kaptai–town in the central Chittagong Hills tracts

Khulna–major town 150km northwest of Dhaka

Lowacherra Forest–forest just east of Srimangal which deserves better protection and development than it currently has

Madhabkundo Falls–a waterfall northeast of Srimangal with some forest in poor condition

Madhopur National Park–a sal forest some 140 km north of Dhaka which I somehow never managed to visit though it is potentially more interesting than Bhawal

Malumghat–a degraded forest area between Chittagong and Cox's Bazaar which includes the much better habitat in the Dulahazara Safari Park

Meghalaya–the Indian state bordering northern Bangladesh with high mountains (the Khasi and Jaintea Hills) where the butterflies are well researched

Noakhali–town in southeastern Bangladesh, northwest of Chittagong

Rajshahi–town in northwestern Bangladesh

Rangamatti–town in the central Chittagong Hills tracts

Rema-Kalenga Forest–forest near Srimangal that would merit more intensive research that I was able to do

Silhet–alternative spelling for Sylhet

Srimangal–town in eastern Bangladesh, 120km south of Sylhet; several patches of forest surround Srimangal and where species have been caught in three of these, the term 'Srimangal forests' is used.

Sundarbans–mangroves in southern Bangladesh, mostly a national park

Sylhet–major town in northeastern Bangladesh, the imprecise type locality of many species

Teknaf–township and peninsula in the south of the Chittagong coast, facing the Arakan coast in Myanmar

Teliapara Forest–forest 45km south of Srimangal which is rapidly deteriorating

Tripura–Indian state adjacent to eastern Bangladesh the fauna of which is probably still in tenuous contact with the Srimangal forests through patches of forests acting as stepping-stones.

CONTENTS

Introduction

This is the first attempt at a checklist of the butterflies of Bangladesh, a country of 140 million people. Such an annotated checklist should, I hope, be useful for future research into the butterflies of Bangladesh, which are very poorly known, for reasons discussed below.

When my wife was posted to Bangladesh in March 2001 we had expected to stay for four years, but she was transferred to Hanoi in March 2003. I had hoped to develop a book on the butterflies of Bangladesh, but now this checklist appears the best compromise in order not to lose the information that I did manage to gather.

The checklist is clearly incomplete but it must be the most detailed inventory of any large invertebrate group in the country, and it updates the taxonomy and nomenclature which in some Indian and local publications still largely revolve around that in the excellent book by Evans (1932), which is now very dated.

Objectives

The objectives of the study are:

- To list of all butterflies known to occur in Bangladesh.
- To add to this list those species that on ecological and biogeographical grounds must be-or at least have been-in Bangladesh.
- To update the taxonomy and nomenclature of the Bangladesh butterflies, including the authorship, date, and type locality for all species and subspecies.
- To place the Bangladesh butterfly fauna in regional perspective.

Each species is placed in the systematic framework of Family, Subfamily, Tribe, Genus, Species, Subspecies, Author, Date of description, Vernacular name, and Type Locality. Very brief notes are given on its habitats, distribution, and frequency in Bangladesh. In the case of those not yet recorded but certain to occur, a justification for their inclusion is given. Also included are synonyms that have been in widespread and/or recent use, including those that have been changed since Evans (1932) whose nomenclature was largely followed by Wynther-Blyth (1957).

Collecting in Bangladesh

Bangladesh gained nationhood following the war of independence in 1971, after having been known as East Pakistan since India and Pakistan gained independence from Great Britain in 1947. During colonial times it was part of Bengal, an entity that varied in extent over time. Mostly the Chittagong Hill Tracts were under special administration as tribal areas. For a period what is roughly the current Bangladesh was administered separately as East Bengal. Most of Bangladesh, even a hundred years ago, was not promising country for butterfly collecting and nothing was specifically published from within the borders of current Bangladesh.

The exception was the forests of the Khasi Hills and of the Cachar District in Assam which were contiguous with those now in the Sylhet Division. As will be discussed later many butterflies have Sylhet as their type locality. Most of these would have been collected in the Khasi Hills that is now in Indian Meghalaya, but others doubtless were from within the present Bangladesh borders. But it is not possible to be sure of which.

Since 1947 very little research into butterflies has been conducted. Among the few papers that have provided some useful information are those of Alam (1962), Chaudery, Chaudery, & Malik (1966), and Ameen & Choudery (1968). Alam (1974) recorded one species not seen before or stet. Since independence the most useful sources have been two MSc theses (Jahangirnagar University (1998) and (Dhaka University (2000); both provided interesting information on seasonal and geographical distribution and a few additional species records. Finally, Abdul Razzak from Jahangirnagar University began a survey of the butterflies on the campus and as of writing had already found a few species not previously recorded from the country and a few surprising records for the Dhaka area.

There are two recent butterfly collections, at Dhaka University and at Chittagong University; anecdotal information indicates that each contained more than 100 species and that some of the data were from the Chittagong Hill Tracts. They would certainly each have contained some interesting records, but I was not given permission to inspect them. I was able to see

parts of a collection by IUCN teams from the Sunderbans, which contained several species that I did not personally see there and two species 'new' to Bangladesh.

In 2004 I was asked to referee a paper on Bangladesh butterflies, the authors of which were kept anonymous. It was probably based on one of the collections mentioned above. Though including many records that were obviously misidentifications, it seems that it included validations of several species here recorded only as 'probably in Bangladesh', as well as a number of definite records for the Chittagong Division. I had asked the authors to contact me. They did not do so and I obviously cannot comment on the content of a paper that I have seen only as a referee.

The Kyushu University in Japan arranged an expedition to Bangladesh just after independence. A considerable number of butterflies were collected but have never been published. It is clear, however, from the distribution maps of species found on the South-East Asian islands (Tsukada 1982-1991) that the material has been studied and these maps were used to judge whether a species might occur in Bangladesh.

During colonial times there must have been intermittent collecting in Bangladesh and doubtless close inspection of the collections in the Natural History Museum, London and, especially, those of the Zoological Survey of India, Kolkata would yield some additional data. Most such material, however, is probably labelled simply as 'Bengal' or as 'Sylhet'. My attempts in London at finding specific Bangladesh material were largely unsuccessful; the probable results of a full search, taking many weeks, were not likely to be worth the time. I was unable to visit Kolkata.

A major contribution to the casual collecting was the setting up of professional butterfly collecting companies in Shillong, one of which still seems to exist and to run a butterfly museum. They sold specimens both to collectors and specialists in India and abroad. Partly because of this, the Khasi Hills is one of the most intensely researched areas in India; the total number of species recorded must be around 700. Because of this, a

disproportionate number of species have the Khasi Hills and Sylhet (Silhet) as their type localities, beginning as early as the 1840s with descriptions by Westwood, Doubleday, and Hewitson (for problems on deciding whether Sylhet means Bangladesh or India, see the section on material below).

General literature records

I have been through the main literature on Indian butterflies with a toothcomb in an attempt to get data from Bangladesh or supporting information for this checklist:

Marshall & de Nicéville (1882) and de Nicéville (1886, 1890) produced in three volumes a complete review of the butterfly fauna of India and Burma. The book is enhanced by the fact that de Nicéville had extensive personal field experience not only in India but elsewhere in the Oriental Region. The treatment was comprehensive and accurate; every slight aberration that had ever been described was included. At least one reviewer thought that the detail quite overwhelmed the whole; another marvelled that its production in Calcutta was a tribute to 'modern' India. The classification and nomenclature is not easily understood by today's reader. At least a hundred genera are now synonymized, as are hundreds of 'species'.

Moore (ten vols. 1890-1907, the three last finalised by Swinhoe (1909-1913)), updated the total fauna with amazing colour paintings of most taxano less than 835 hand-coloured plates are included, with some 4,000 individual illustrations, many including species never figured before or since. Virtually all published data on Indian butterflies are summarized, but Moore has no personal field experience from India. Anyone with an interest in the natural history of the area owes it to themselves to see this incredible publication, of which only 250 were ever printed.

Bingham (1905, 1907) began a rival publication to Moore's series which was not really an improvement thereon. He only produced two volumes before his untimely death. Antram (1924) also died after just one volume

of a popular description of all Indian butterflies, illustrated acceptably in black and white.

Evans (1932) published his famous 'Identification of Indian Butterflies', covering Ceylon, India, and Burma, following a small draft edition of 200 copies in 1927. It contains keys to all the species in the space of 450 pages of laconic, very dense text. The 31 black and white plates illustrating one member of each genus must rank as some of the most unattractive ever to see publication. But, with a bit of effort and experience, anyone could now identify at least 95% of any butterfly material from India without recourse to museums or other books. The book was the first fully to use the concept of subspecies and reduced the number of recognized species considerably. It gave rise to renewed collecting efforts and the publication of numerous local butterfly lists from all over India. Of the habits and the habitats of butterflies there is not a word, despite Evans having collected extensively all over India and Burma for more than 30 years-and that is a great shame.

Talbot (1939, 1947) began writing the butterfly volumes of 'Fauna of British India', greatly updating and improving the taxonomy and nomenclature of de Nicéville and Moore. He did not incorporate much of the increased knowledge of the distribution and ecology. He died after completing only two of six or seven volumes.

Evans (1949) published his book with keys to the Hesperiidae of Europe, Asia, and Australia which included all Indian species. This remains an invaluable tool-and its taxonomy and nomenclature has largely stood the test of time. It is frustrating that none of Evans' publications reflects his intimate knowledge of Indian butterflies in the field during thirty years.

Wynther-Blyth (1957) published a very useful book, a mixture of full description and keys, covering most of the Indian butterflies and with many plates. The book was evidently written about 12-20 years earlier and the taxonomy and nomenclature is quite confused in places. It was published when I was 13 (Rs 28-!) and had just started serious butterfly studies. It certainly filled an important gap, Evans (1932) being quite

unobtainable. Even today very poor Indian reproductions of Wynther-Blyth's book sell well.

Finally the three volumes of D'Abrera's Butterflies of the Oriental Region (1982, 1984, 1986) illustrate in fine colour practically all butterflies listed in this paper (excluding the Hesperiidae).

A number of monographs and reviews of genera or tribes included references to butterflies from Bangladesh. These have all been credited to source and are listed under 'References'.

Literature on neighbouring countries in the region has helped in deciding which species to include as certain to occur in Bangladesh. The most useful were those on Nepal (Smith 1994), Sikkim (Haribal 1992), Thailand (Pinratana *et al.* 1981-1996), and Malaysia (Eliot 1994).

References to the papers that are most directly relevant to Bangladesh are given in the section on material below.

Material specific to Bangladesh:

Personal records–these are species that I, my field assistant Jamal, Abdul Razzak, and occasionally other collaborators collected in Bangladesh, and that I have personally identified. More detail of my personal collecting activities is given below. The scientific names of my personal captures, totalling 236 species, are preceded in the list by a #.

* **Additional literature and collection records**–there are a number of literature records of butterflies specifically from Bangladesh, especially from the Chittagong Division, of species that I did not collect. A few were also found in collections and some were contributed by colleagues. They have been the subject of evaluation in the light of new taxonomic developments. Most of these have survived scrutiny to be included in the checklist and are credited to source (see section on collecting in Bangladesh above). As discussed below all species collected in Calcutta

and at Dowki (now the frontier between Bangladesh and the Indian state of Meghalaya) are automatically accepted as members of the Bangladesh fauna. A total of 75 species fall into this category; their scientific names are preceded in the list by a *.

~ **Species certain to occur**–species that have been found immediately adjacent to Bangladesh under similar ecological conditions are considered almost certain to occur-or at least almost certain to have occurred as so much habitat degradation has taken place since they were recorded in the literature. Listed below are the criteria for inclusion of species in this category. The fact that the bulk of species from the areas listed below are already known from Bangladesh (75% or more) lends credence to their inclusion. A total of 116 species fall into this category; their scientific names are preceded in the list by a ~.

Kolkata–any butterfly recorded from Calcutta (de Nicéville 1885, Sanders 1944, Sevastopulo 1944) and from Barrackpore (Rothney 1882) is assumed also to be in Bangladesh; the distance from the border is just 50km or so. With few exceptions all Kolkata butterflies have in fact already been found in Bangladesh.

Sylhet–many butterflies were recorded from Sylhet during the 1840-1910 period and many have Sylhet (Silhet) as their type locality. It is, however, clear that Sylhet was used for a wider area than it is today, including parts of what is now Indian Meghalaya. Many of the records are of species that do not occur at the low levels of the present Sylhet division. De Rhé-Philipe (1910) writes, speaking of the altitudinal distribution of butterflies: 'It is true that other species such as *L. chandica* and *L. latiaris* have been recorded from Sylhet, but it is almost certain that the species on which these records were based came from the lower Khasi hill country below Cherrapunji, which abuts the Sylhet plains. This is a favourite hunting ground for native collectors who often speak of it as Sylhet [800-1,600m]'. I have written 'Sylhet' or 'Silhet' unless I feel certain the provenance is from what is now Bangladesh, but the records were used as evidence to decide which species to include to include and which not to. Species

listed from Sylhet in the various publications are included in appendix 1. Conversely, at various times much of northeastern Bangladesh is shown as part of Assam.

Dowki–Parsons & Cantlie (1948) and Cantlie (1952) gave precise localities for many of the butterflies of the Khasi Hills. One of these was Dowki, now the Indian border town with Bangladesh on the main road between Sylhet and Shillong, separated by the river on which Dowki butterflies were collected. Butterflies from here are automatically assumed also to be (have been) in Bangladesh-many probably were since the river was not then a frontier and collecting doubtless took place on both banks. Unfortunately the Hesperiidae on the Khasi Hills' list are listed without locality data. Most Dowki butterflies have already been found in Bangladesh.

Khasi Hills–covers altitudes from 150m to 3,000m or so and in total must have more than 700 species. It is occasionally stated that butterflies have been collected at 'low levels' or 'where the rivers drain into the plains'. A few such species are included in the checklist. Most Khasi Hills records are not included unless they are specifically from Dowki (see above).

Cachar–is a district in India adjacent to the northeast corner of Bangladesh and was then mainly clad in lowland forest of the same type as in the Srimangal forests today. Any species on the meticulous list of Wood-Mason & de Nicéville (1887) is therefore accepted for the Bangladesh checklist but only as 'certain to occur'. A few taken only at Nemotha at 1,000m, the only high point visited, and that farthest from Bangladesh, are excluded. A few other Cachar records in the literature were evaluated more carefully before inclusion (Butler 1879), but Cachar generally refers to records in the above paper. Most Cachar butterflies have already been found in Bangladesh. Somewhere there is a reference to a paper that Manders (1887) wrote paper on Cachar butterflies, but this is a mistake of authorship for the one cited above.

North Arakan–in the middle of the World War II Gladman (1947) and Emmet (1948), both majors participating in the Burma campaign, collected in the Chittagong lowlands and in the northern Arakan.

Some of their Arakan localities are very close to Teknaf in Bangladesh and are automatically included in the checklist 'certain to occur'; others from further south (up to 150km) are used in a general evaluation of a species and may be included as probable for the Chittagong Division, especially if they are also found in the Khasi Hills or known from the Chittagong side of the Chin-Lushai mountains in Myanmar (Watson 1891). Adamson (1905/1908) provided a few additional leads.

Bengal–many species have 'Bengal' as type locality, but this is a poor indicator of whether or not a species might be in Bangladesh. The term is sometimes stretched to the point where it includes all of Sikkim and parts or even all of the Khasi Hills. Some Bengal records resulted in research to find more information on the species in question, usually without a positive result. One collector (W.H. Irvine) sent material from Bholahat in Malda District to de Nicéville; this locality is not far from Rajshahi and the records are included in the list of species 'certain to occur'.

General–a few species whose global distribution stretches on all sides of Bangladesh and that are sometimes migratory are included on the list (a typical example is *Leptotes plinius*). Nearly all such species are already known from Bangladesh.

The inclusion of butterflies into the category of 'species certain to occur' will thus be seen to be quite rigorous. I would be surprised if more than a handful of these species did not occur in Bangladesh-or at least had not occurred in the past. Including butterflies from even slightly further afield (Bengal, middle levels of the Khasi Hills, lowland Assam, Valleys of the Chin-Lushai Hills, southern Arakan, etc) would have augmented the list considerably. But it would be difficult to decide which species to include in such a category ('possibly in Bangladesh') and the predictive value would be much lower. I therefore decided in favour of the stringent approach described above.

The total number of butterfly species in Bangladesh may be estimated as follows based on the above categories:

Table 1 Estimate of the total Bangladesh butterfly fauna

Category	Number
Collected by Larsen	236
Other firm records	75
Certain to occur	116
Minimum total fauna	**427**
Guess at additional	60-100
Likely total fauna	**500-550**

Personal collecting in Bangladesh

My own collecting activities were throughout assisted by our driver and field assistant Jamaluddin (from here on Jamal) and concentrated initially on the **Dhaka area**. The best localities were Dhaka Botanical Gardens, Bhawal National Park, and Jahangirnagar University campus, but Gulshan/Baridhara, garden suburbs of Dhaka itself, were quite productive. A surprising number of species were found even in more crowded parts of Dhaka. Outside of Dhaka in 2002 I concentrated on the **Srimangal forests**, with personal visits to Teliapara Forest, Lowacherra Forest, Rema-Kalenga Forest, the DFID Guest House compound in Srimangal itself, and the Madhabkundo Falls. Butterflies caught in at least three of these are listed as being from the Srimangal forests generally. I undertook one expedition to the **Chittagong Division**, collecting at Malumghat, Inani, and Teknaf in February 2003, when butterflies were not yet out in force; after brief collecting around Bandarban our trip was halted due to misunderstanding about the need for visitor permits. Additionally, my assistant, Jamal collected extensively around Kaptai in December 2001

which was evidently a very poor time of the year. In December 2002 I went on a cruise in the **Sunderbans**; some interesting species were found on the Khotka Plain, but few were seen elsewhere. At various points Jamal or I made brief observations or collections for a few hours at Sylhet, Noakhali, Bhairab, Rajshahi, Barisal, and Comilla; a few species of interest were found.

I was in Dhaka for two weeks in July 1977 and was able to spend some hours in Balda Gardens in the city; my field notes show that I found two or three species not seen during 2001/2003. Between 1995 and 1999 I visited Bangladesh seven or eight times on other business but had no time for butterflies; a few modestly interesting observations were made at the time.

Most of my past ten years were spent collecting in African forests. In Bangladesh I was struck by the relatively low number of species and individuals on the wing in the forest habitats as well as by the importance of seasonality. Even on fine days in good forests few species were abundant and most were quite scarce. Many of the species captured were seen only once and quite a few were taken only in single specimens. I am used to much higher butterfly densities in Thailand, Malaysia, and Sumatra. Whether or not this is significant will need several years of observation.

In terms of season March is by far the best month; once in Lowacherra we recorded 100 species during two days. April is also good but the monsoon months are distinctly poorer, even when the sun is out, which it hardly was during 2002. There is a resurgence of activity in September to mid-November till the onset of winter reduces the number of species. December, January, and part of February are very poor (Jamal had a frustrating week in Kaptai in December 2001, and the winter of 2002/03 was extremely cold). At this time most of the tropical species seem to be found only as larvae with a much reduced metabolism so that as many as 130 days can be spent in the larval stage. Others may lie dormant in the pupal stage for several months.

Taxonomy

The taxonomy at subfamily and tribe level used largely follows that of the 'GloBIS' (Global Butterfly Information System), a web-based attempt at producing a universally accepted taxonomic framework for butterflies worldwide (www.ento.csiro.au/globis/). This rather ambitious project is underwritten by a group of eminent lepidopterists who have consulted widely. I have had especial help from N. Wahlberg (pers. comm.) with the classification of Nymphalidae s.l.

The classification of butterflies has undergone a see-saw of changes over time. The heyday of description of Asian butterflies (1830-1900) was a time for splitting. The concept of subspecies was not recognized and virtually any population that differed was described as a species. The genera that we recognize to-day were sometimes split into half a dozen or more (*Euploea*, *Mycalesis*, and *Lethe* are prime examples) that today are considered at best species-groups, and many genera were used without taking into account its true type species; this is especially true for those described by the early proponents of generic names (Fabricius, Hübner, etc). Numerous subfamilies were described that today may not even be dignified as tribes. The number of full families was much higher than today. As a result, interpreting a checklist written 100 years ago is quite difficult for anyone not having a good grounding in, and the availability of, the original literature.

During the heyday of description of Indian butterflies the current concept of species, as actual or potentially interfertile populations, was not yet on the horizon. A strict morphological approach was adopted; every population that differed visibly from populations of similar species was considered a distinct species. There was little understanding of polymorphism, seasonal variation, and variation within a species. Wet and dry season forms were often described as different species. Very similar species were described from the same area, e.g. one from Sikkim, another from Bhutan, one more from Cachar, finally one from the Khasi Hills, and yet one from Manipur. This began to pose a direct hindrance to the use of butterflies in the discussions on evolution and biogeography. It became impossible to see the forest for trees.

Gradually, the concept of subspecies was introduced during the 20th century and consolidation began to take place. The numbers of recognized species decreased strongly as previous species were rearranged as subspecies. However, the description of subspecies now proliferated, their description being less 'risky' than proposing new species. The fact that so many of the small islands in Indonesia and the Philippines do have quite strongly differentiated subspecies probably provided inspiration. Many widely distributed species received separate subspecies names, one for the western Himalayas, one for Sikkim, one for Assam, one for the Khasi Hills, one for western Burma, one for northern Indo-China, and yet one for southern China. There are probably still more subspecies in current use than needed or useful. Some of those on the present checklist should probably be pruned away, but it is not possible to do so in the absence of adequate material from the entire region for comparison.

Ecological and biogeographical sketch

Based on the species-mix, Bangladesh can be divided into four main ecological areas which correlate with biogeographical patterns. Most of Bangladesh consists of an alluvial floodplain without hills, much of which is flooded during the monsoon. The original vegetation was probably Sal forests as currently seen in Bhawal National Park and in Madhopur Forest or swamplands, now converted to rice cultivation. Not unexpectedly it is poor in butterflies, most of which are very common species that are widespread in most habitats. The more specialized butterflies are biogeographically associated with the fauna of the Deccan in India, several species only just reaching Bangladesh and not found in Assam, Meghalaya, Tripura, or Burma.

The hilly areas around Sylhet and Srimangal were covered in broadleaf deciduous tropical forests related to those of the eastern Himalayas and Assam, which spilled over from the Khasi, Jaintea, and Garo hill country to the north. This is reflected in the butterfly fauna in which the lowland Sino-Himalayan elements are well represented. Much of the tropical fauna of Hong Kong and Guandong, southern China, and northern Indochina is also present in the Srimangal forests. The richness of the butterfly fauna in

eastern India is due partly to altitudinal segmentation of the total fauna. Many species are effectively limited to the middle level forests (1,000-2,000m); these are nearly all absent from Bangladesh. A hundred years ago the tropical forests probably extended quite far southwards like fingers along the main river systems, but these and most tropical forest cover in the country have long since disappeared, with remnants mainly in the extreme northeast.

The Chittagong Division was also covered in tropical broadleaf forests and the climate was generally more tropical than that of the rest of Bangladesh. The country is also more hilly, though still essentially lowland; hilly country, however, is much better at conserving biodiversity since there are usually river beds and steep slopes that provide some permanent shelter for the original vegetation. Most, but not all, of the butterflies of the Srimangal forests will be found here as well. However, a number of species have been recorded only from the Chittagong area and are probably absent from the rest of the country. Many of these belong to the southern Indochina and Sundaland fauna (southern Myanmar and Thailand, Malaya, Borneo, Sumatra). It may well be that subspecies in some cases differ between northeastern Bangladesh and Chittagong. The Chittagong Hill Tracts will certainly contain a number of additional species that are not included in the checklist; there are hardly any data from neighbouring areas on which to judge their inclusion. Again the forest cover has been largely been destroyed.

The largest remaining forests in Bangladesh are the Sunderbans mangroves. Plant diversity in mangroves is relatively low and few butterflies have permanent populations. However, some seem to be largely limited to this habitat, of which *Curetis cf saronis*, *Idea agamarschana*, and *Euploea crameri nicevillei* are found in Bangladesh, together with a handful of common and ubiquitous species.

The positioning of Bangladesh is thus quite interesting since it stands as a crossroads between several biogeographical zones. This is a strong reason for documenting the total fauna while this is still possible; the forest cover

has already been depleted to the extent that extinctions have probably already taken place.

Conservation and extinction

As already mentioned the natural forest cover of Bangladesh has shrunk dramatically during the twentieth century. It is said that some 15% of Bangladesh is under forest. Much of this is the Sunderbans mangrove forests whose limited fauna is very specialized (ironically, it is the non-specialist tiger that attracts attention to the area). Most of the remaining forests are very small and in poor condition; many areas designated as forest do not qualify as such by any criteria other than that they are managed by the Forestry Department. Relatively intact forests are also very fragmented so that contact with other forests is hardly possible; they are also small, probably mostly too small to have maintained all their original biodiversity.

Plantation forests are no substitute for natural forest. Well-managed teak forests (such as those just north of Teknaf) are ecological deserts which are penetrated only by the hardiest butterfly species along streams. Severely damaged forests where the canopy has disappeared immediately lose the bulk of their butterflies. This is well illustrated at Malumghat north of Cox's Bazaar. A day in the main forests covering many kilometres yielded much fewer and less interesting species than that of the protected Dulahazara Safari Park which is effectively part of it.

This raises the question of extinction, a question that is difficult to answer in the absence of any firm baseline. The present paper is the closest we come to a baseline on butterflies, but it is still anything but firm.

Local extinction is, of course, obvious. When a forest disappears, so do most of its butterflies. A few species of more open country that were not there previously will invade. Small, isolated forests are most at risk. Among the Srimangal forests, Lowacherra is undoubtedly the richest; many butterflies are present that were never found at Teliapara or anywhere else, though we visited Teliapara each time we went to

Srimangal. However, we did find butterflies at Teliapara that could hardly have been overlooked at Lowacherra; a good example is *Graphium sarpedon*. We saw *Athyma asura* only in Rema-Kalenga despite concentrating on the genus in Lowacherra. If we had stayed longer in Bangladesh it has been my intention to do a full comparison between these forests but the available data do seem to indicate extinctions in each of the forests visited.

As discussed above the 120 or so species that are certain to have occurred in Bangladesh were selected on very strict criteria. Most have been recorded virtually on the Bangladesh border. Are they still in the country? I doubt they are all in Lowacherra or Teliapara. During each of our three last visits there we were finding only three or four species not recorded from Bangladesh (only one of which not on my then list of species certain to occur). This rate does not indicate that a large number of additional species would be found there. Doubtless species that we never saw exist in some of the more remote forests of the area which we did not visit. And the Chittagong Hill Tracts remain grievously under-researched.

The overall impression is that at least some Bangladesh butterflies have become extinct during the past century. The extinction of a butterfly is an indicator of extinction of other organisms, including its specific parasites and their hyperparasites. Extinction of a single species is supportable, even a natural event. Many extinctions begin to add up to a gradual unravelling of the entire web of life, with unpredictable results.

The forests of Bangladesh are now so small and so battered that all forests in reasonable condition are deserving of strict conservation. This is especially important since they are at the very edge of several different ecological and biogeographical zones. The fact that these species will all continue to exist outside the borders of Bangladesh, in Meghalaya and Myanmar, is small comfort from this point of view.

There would be no point in trying to conserve the butterfly fauna *per se* or to protect individual species. Even many butterfly collectors can make no

dent in a typical butterfly population, be the species common or rare. In fact, the presence of butterfly collectors and the fees they might be paying actually assist habitat conservation. Countries with excellent records in nature conservation are mostly liberal in granting collecting permits even in national parks (e.g. USA, South Africa, Kenya) and permits are not needed elsewhere. It is ironic to see countries whose few remaining forests are being ravaged with government complicity being those that have such stringent regulations concerning insect collecting that even serious academic researchers give up. The full irony of this was once brought home in the Philippines. A team of three researchers came to Palawan to get DNA samples of potentially dangerous mosquitoes. After three years of fruitless correspondence with the authorities they decided just to do it, so that their global project would not get delayed. They were duly arrested and spent a week in jail till diplomatic representations freed them-minus one hundred test tubes with one pickled mosquito in each. At this very time my wife and I were walking like zombies about our Manila house with dengue fever while all of the 15 million people in Metro-Manila were trying to kill as many mosquitoes as possible!

Glass cases with butterflies are on sale in certain Dhaka shops. They all seem to come from Thailand. It is not a large industry but could well be established as a cottage industry in Bangladesh. It would give the villagers involved a very real stake in nature conservation. Any environmental impact would be very small. Most of the species are common butterflies. Nearly all are males since these are readily caught when they come to damp sand or baits. Since any male butterfly would like nothing more than fertilizing several females, even the extraction of a sizeable proportion of males from a population is unlikely to have much long-term impact. But generally humans cannot have much impact on any insect population-think of cockroaches-except through destruction of the habitats (see Larsen (1996) for a more detailed discussion).

From an economic point of view the remaining forests in good condition probably have more potential for ecotourism than for other purposes. Bangladesh is a birdwatchers' paradise; good, easily accessible forests

would bring many more than those who already come. The Dulahazara Safari Park is still almost unknown. When the eminent Bangladeshi ornithologist Enam ul Haq went there at my insistence he found the first Great Slaty Woodpeckers (*Mulleripicus pulverulentus*) in the country since independence. It must be possible to open up a few forests in good condition in the Chittagong Hill Tracts proper. Why Lowacherra has not been turned into a well-managed national park is a mystery to me. Where else can one see gibbon family life close up within walking distance of an excellent guest house?

Acknowledgements

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Enam ul Haq, renowned ornithologist, assisted me with practical advice and contacts, and we had many pleasant conversations which influenced this book. He even caught a few butterflies in obscure places. Sadly we never managed to get to the forest together; bird watching and butterfly collecting have different hours and different working methods.

Harish Gaonkar, who is working on the Indian butterfly fauna, assisted me with Bangladesh records, literature, and many queries about the status and nomenclature of butterflies on this checklist, both face-to-face and by e-mail.

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I am grateful to IUCN for agreeing to publish this little book. I am especially pleased that the book could be published entirely in Bangladesh, where books on natural history are not all that plentiful.

Finally, as always, thanks to my wife, Nancy Fee.

Hanoi
June 2004

Torben B. Larsen

WHAT IS GOING ON HERE?

The common tiger (*Danaus chrysippus* left) is a highly toxic butterfly that is both distasteful and dangerous to eat for predators. The death of young girl in South Africa was diagnosed as being due to swallowing a single specimen. The female diadem (*Hypolimnas misippus* right) is sweet-tasting and good to eat. She is an uncanny mimic of the common tiger and thus gains protection against the attack of some predators. The male diadem is completely different from the female, though in some *Hypolimnas* both sexes are mimics. In this case there are two likely reasons for the male pattern: 1) the male pattern is needed to impress rival males, or 2) females prefer males to look like 'real' males.

SYSTEMATIC CHECKLIST

SUPERFAMILY **PAPILIONOIDEA** Latreille, 1802

FAMILY **PAPILIONIDAE** Latreille, 1802

Subfamily ***Papilioninae*** Latreille, 1802
Tribe **Troidini** Talbot, 1939

Genus **TROIDES** Hübner, 1819

 # *Troides helena cerberus* Felder & Felder, 1865 **PLATE 1**
The *Common Birdwing*, the largest butterfly in Bangladesh, is not rare in the tropical Srimangal forests and the Chittagong Division. There is an old specimen labelled 'Dacca' in London. Though I never saw it in Dhaka, the record is not unlikely. Both in Manila and in South India one species of *Troides* has permanent city populations, despite their being essentially forest butterflies. *T. helena* Linné, 1758 was described from America meridionali, but generally accepted to be Java; ssp. *cerberus* is from the Khasi Hills [India septentrionalis: Assam, Bengalia].

*** *Troides aeacus aeacus*** Felder & Felder, 1860
The *Golden Birdwing* has been recorded from the Chittagong Division (H. Gaonkar pers. comm). The two *Troides* often fly together. I never caught it in the Srimangal forests, and it was not found at Dowki. It seems not quite to descend from hilly country. The type locality is the Khasi Hills [India septentrionalis], but apparently from the northern slopes.

Genus **PACHLIOPTA** Reakirt, 1865
This genus was known under the names *Tros* Kirby, 1896 or *Polydorus* Swainson, 1833 in older literature.

 # *Pachliopta aristolochiae aristolochiae* Fabricius, 1775
The *Common Rose* is a fairly common butterfly that is found throughout Bangladesh, also the Sunderbans, including the gardens of Dhaka. It is migratory and probably fluctuates in numbers. The type locality is Tranquebar, S India. The Bangladesh population is transitional to ssp. *goniopeltus* Rothschild, 1908; some authors would not accept more than the nominate subspecies for continental Asia (Page & Treadaway 1995) in such a migratory species.

 # *Pachliopta hector* Linné, 1758 **PLATE 1**
The *Crimson Rose* is an irregular migrant into Bangladesh that may be absent for many years. Between November 1986 and October 1987 it was widespread throughout the country (as far as Chittagong Town) and present practically all months on the Jahangirnagar University Campus (Jahangirnagar University 1998). Between at least October and December, 2002 it was common on the Khotka Plain in the Sunderbans; I saw females laying eggs on *Aristolochia indica*. But between March 2001 and March 2003, none was seen elsewhere. It seems that a large migration from southern India made landfall at Khotka, but did not expand from there; huge migrations together with *P. aristolochiae* are known from South India (Larsen 1978). The type locality is Kerala, India.

Genus **LOSARIA** Moore, 1901
The genus could be considered a subgenus of *Pachliopta* Reakirt, 1865.

~ *Losaria coon cacharensis* Butler, 1885
The *Common Clubtail* is found in Cachar and should be in Bangladesh. It tends to be decidedly rare in Assam. The flight is usually a rather curious hover, much lighter than that of *P. aristolochiae*. *L. coon* Fabricius, 1793 is from Java, Indonesia; ssp. *cacharensis* is from Cachar, and this population does seem isolated from ssp. *doubledayi* Wallace, 1865 (Moulmein, Burma) and to be morphologically distinctive (smaller and with much less white hindwing markings).

Genus **ATROPHANEURA** Reakirt, 1865
The genus could be considered a subgenus of *Pachliopta* Reakirt, 1865.

 # *Atrophaneura varuna astorion* Westwood, 1842 **PLATE 1**
The *Common Batwing* is found in the Sylhet area. I found it sparingly in Lowacherra, Teliapara, and at Madhabkundo Falls, apparently the first records from Bangladesh. *A. varuna* White, 1868 is from Penang, Malaya; ssp. *astorion* is from the Kumaon, C. Himalayas.

Genus **BYASA** Moore, 1882
This genus is often subsumed into *Atrophaneura* but is increasingly in use.
~ ***Atrophaneura nevilli*** Wood-Mason, 1882

Nevill's Windmill is included since three were collected at Silchar in Cachar and is likely also from the Srimangal forests. It is a rare butterfly with a limited distribution in Assam and northwestern Myanmar. The type locality is Silchar, Cachar, Assam.

Tribe **Papilionini** Latreille, 1802

Genus **PAPILIO** Linné, 1758
The genus has representatives worldwide.

Subgenus ***Princeps*** Linné, 1758
The Afrotropical *Papilio* are all in this subgenus, with *P. demoleus* as the only Oriental representative.

 # *Papilio demoleus demoleus* Linné, 1758 **PLATE 1**
The *Citrus Butterfly* occurs throughout Bangladesh, including the Sunderbans. It is the most common Swallowtail in Bangladesh, closely followed by *P. polytes*. It has shifted almost entirely from wild Rutaceae to cultivated *Citrus* and is perhaps most common in major cities. *P. demoleus* is from Canton, China. Some specimens from the Chittagong Hill Tracts and Srimangal tend towards broader bands as in ssp. *malayanus* Wallace, 1865. *P. demodocus* Esper, 1798 is the Afrotropical vicariant; the two are poised to meet in Arabia and it will be interesting to see if segregation is maintained.

Subgenus ***Menelaides*** Hübner, 1819

 # *Papilio helenus helenus* Linné, 1758
The *Red Helen* is sometimes common in the Srimangal forests and occurs also at Teknaf in the Chittagong Division (Emmet 1948). There is also a record from Jessore (Alam 1962 [as *daksha*]), but it is primarily a forest butterfly. The type locality is Canton, China.

 # *Papilio chaon* Westwood, 1845 **PLATE 1, 2**
The *Yellow Helen* is often common in the Srimangal forests, sometimes more so than *P. helenus*. There are no records from the Chittagong area. It was considered a subspecies of *P. nephelus* Boisduval, 1836 is from Java, Indonesia. *P. chaon* (TL Assam) is now considered a distinct species.

 # *Papilio polytes romulus* Cramer, 1775 **PLATE 1**
The *Common Mormon* is common throughout Bangladesh. It has shifted host plants mainly to cultivated *Citrus* and can be found in the middle of major towns, indeed being most common there. *P. polytes* Linné, 1758 is from southern China; ssp. *romulus* is from the Coromandel Coast, S. India.

~ *Papilio alcmenor alcmenor* Felder & Felder, 1864
The *Redbreast* was found in Cachar and at Dowki and is likely to be in the Srimangal forests. The type locality is the Khasi Hills [India septentrionalis].

*** *Papilio castor castor*** Westwood, 1842
The *Common Raven* was reported by Alam (1962) from Sylhet and from the Chittagong Division (Malumghat (Dhaka University 2000) and Cheringa (Emmet 1948)). I never saw it. The type locality is Assam [probably Khasi Hills].

*** *Papilio protenor euprotenor*** Fruhstorfer, 1908
The *Spangle* was mentioned from Bangladesh by Collins & Morris (1985); it is quite likely in the Srimangal forests since it occurs in the Khasi Hills at low levels. In flight the male can hardly be distinguished from *P. memnon*. *P. protenor*, Cramer 1775 is from China; ssp. *euprotenor* is from Sikkim.

 # *Papilio memnon agenor* Linné, 1758 **PLATE 2**
The *Great Mormon* is quite common in the Srimangal forests and in the Chittagong area. There are old records from Dhaka and strays might be found anywhere. The only female form met with was f. *distantius*, a mimic of tailed Red-Bodied Swallowtails, but other forms have been recorded. *P.*

memnon Linné, 1758 is from Asia (?Java); ssp. *agenor* is from Canton, China.

**** Papilio polymnestor polymnestor*** Cramer, 1775
The *Blue Mormon* is essentially a South Indian butterfly which occurs somewhat sporadically in Bengal and Bangladesh. It may not be a permanent resident. I saw it only a couple of times in Dhaka Botanical Gardens. One year it was found in most months on the Jahangirnagar University campus (Jahangirnagar University 1998). It was seen at Sylhet (Hamid pers. comm.) and found at Khulna (Alam 1962). It may be common in Calcutta, but is usually rare or absent. The type locality is [Cochin], Kerala, India.

Subgenus ***Achillides*** Hübner, 1819

~ Papilio elephenor Doubleday, 1845
The *Yellow-Crested Spangle* was collected once at Cachar. It is a very rare butterfly. With records from both 'Sylhet' and Cachar, it should be somewhere in the Srimangal forests. The type locality is 'Sylhet'.

**** Papilio paris paris*** Linné, 1758
The *Paris Peacock* is recorded from Bangladesh by Collins & Morris (1985), was found rarely at Cachar and frequently at Dowki. It should be somewhere in the Srimangal forests, though it is difficult to see how I could have missed it. The type locality is Canton, China.

**** Papilio palinurus palinurus*** Fabricius, 1787
The *Banded Peacock* was reported from the Chittagong area by a group of Danish birdwatchers who showed wings to H. Gaonkar. I was a bit puzzled by this since it would be by far the most northwestern record of the species, but it seems that it has actually been found much further north, including the Arakan, than recorded in print (H. Gaonkar pers. comm.). The type locality is West Malaysia.

~ Papilio crino Fabricius, 1793
The *Indian Banded Peacock* is chiefly a South Indian butterfly that

extends irregularly from Orissa to Calcutta, near where it was seen as late as 1996 by H. Gaonkar (pers. com.). It should reach western Bangladesh in good years. The type locality is Madras, India.

Genus **CHILASA** Moore, 1880
The genus is sometimes lumped with *Papilio*, but recent dna-studies show them to be quite distinct from that genus and its subgenera.

~ ***Chilasa slateri slateri*** Hewitson, 1857
The *Blue-Striped Mime* is included since it was collected at Dowki on several occasions, though it is rare. It is a fine mimic of blue *Euploea*. The type locality is Sikkim.

 # *Chilasa clytia clytia* Linné, 1758 **PLATE 2**
The *Common Mime* is widely distributed in Bangladesh (Dhaka, Bhairab, Chittagong) but seems to be scarce. Jamal collected one in the Parjatan garden at Farmgate and there is a resident population in the Azimpur Cemetery. The two different forms of both sexes mimic *Euploea core* and *Tirumala limniace* respectively. The type locality is 'Indiis' [India].

~ ***Chilasa paradoxa telearchus*** Hewitson, 1852
The *Great Blue Mime* was recorded from Bangladesh by Collins & Morris (1985) and was found at Dowki in some numbers, so it is likely in the Srimangal forests. It has two forms-in one they mimic the respective sexes of *E. mulciber*, in the other *E. radamanthus*. *C. paradoxa* Zinken, 1831 is from Java, Indonesia; ssp. *telearchus* is from the Khasi Hills.

Tribe **Leptocircini** Kirby, 1896

Genus **GRAPHIUM** Scopoli, 1777
The following genera, *Paranticopsis* and *Pathysa*, are often placed as subgenera of *Graphium*. However, they are practical, and current usage is finely balanced. The genus *Graphium* is well represented also in the Afrotropical Region. Very similar genera are found in the Neotropics.

 # *Graphium doson axion* Felder & Felder, 1864
The *Common Jay* is widely distributed in Bangladesh though not usually common. It was a regular visitor to flowers on our first floor veranda in Gulshan, Dhaka. We saw it occasional on damp sand and excrement at Lowacherra. *G. doson* Felder & Felder, 1864 is from Ceylon; ssp. *axion* is from 'Silhet'.

*** *Graphium eurypylus cheronus*** Jordan, 1909
The *Great Jay* is recorded from Bangladesh by Collins & Morris (1985). It was found at Dowki and in Cachar so this is probably correct. *G. eurypilus* Linné, 1758 is from Ambon, Indonesia; ssp. *cheronus* is from 'Siam'. The name *cheronus* was first used by Fruhstorfer (1902) as infrasubspecific.

~ *Graphium chironides chironides* Honrath, 1884
The *Veined Jay* was recorded from Dowki and should be in the Chittagong Division as well. It is normally much rarer than *G. doson*. It has a complex recent nomenclatural history. It used to be known as *G. bathycles chiron* Wallace, 1865. Eliot then found that *chiron* was a distinct species and not a subspecies of *G. bathycles* Zinken, 1831 from Java. The name *chiron*, however, is a twice over a junior synonym and the oldest valid name is *chironides* (TL Darjeeling, Sikkim). Eliot (1983) summarizes the complex case.

 # *Graphium agamemnon agamemnon* Linné, 1758 **PLATE 2**
The *Tailed Jay* is widely distributed in Bangladesh and may be found even in towns, including Dhaka where there are resident populations. Sevastopulo (1946) emphasized that it was never found in Calcutta. We never saw it in the Chittagong Division where it is certain to occur since it is common in the Arakan. The type locality is Canton, China.

 # *Graphium sarpedon sarpedon* Linné, 1758
The *Common Bluebottle* was found in Cachar and we collected a few in Teliapara Forest on three occasions, but never in Lowacherra. There are no records from the Chittagong area or neighbouring Arakan. We found all ours at damp patches, but it is also fond of flowers. The type locality is Canton, China.

Genus **PARANTICOPSIS** Wood-Mason & de Nicéville, 1887
This genus is often considered a subgenus of *Graphium*, but is a practical category.

~ ***Paranticopsis macareus indicus*** Rothschild, 1895
The *Small Zebra* was recorded from both Cachar and Dowki and should be in the Srimangal forests and maybe Chittagong. *P. macareus* Godart, 1819 is from Java, Indonesia; ssp. *indicus* is from Sikkim. Ssp. *lioneli* Fruhstorfer, 1902 was described from the Khasi Hills but does not seem to differ enough to constitute a distinct subspecies.

~ ***Paranticopsis xenocles xenocles*** Doubleday, 1842
The *Large Zebra* was also recorded from both Cachar and Dowki and should be in the Srimangal forests, and perhaps in the Chittagong Hill Tracts. It is generally quite rare. The type locality is 'Sylhet'.

Genus **PATHYSA** Reakirt, 1865
This genus is often considered a subgenus of *Graphium*.

* ***Pathysa nomius swinhoei*** Moore, 1878
The *Spot Swordtail* was found occasionally during a one year survey on the Jahangirnagar University campus (2000) and reported from Bangladesh by Collins & Morris (1985). It seems to be a migrant that may occasionally establish temporary populations. This seemed to happen occasionally in Delhi (Larsen 2002). *P. nomius* Esper, 1785 is from is from ?India; ssp. *swinhoei* is from Hainan, China.

~ ***Pathysa aristeus anticrates*** Doubleday, 1846
The *Chain Swordtail* is included since it was taken at Dowki and should occur in the Srimangal forests. *P. aristaeus* Cramer, 1775 is from the Moluccas, Indonesia; ssp. *anticrates* is from 'Sylhet'.

 # *Pathysa antipathes pompilius* Fabricius, 1787 **PLATE 2**
The *Five-Bar Swordtail* was taken at Dowki and I found it in both Teliapara and Lowacherra forests. It might also be in the Chittagong area

since it is in the Arakan. We usually saw one or two at water, but never the huge agglomerations that may be seen when the species is common. *P. antipathes* Cramer, 1775 is from southern China; ssp. *pompilius* is from 'Asia' [perhaps Thailand].

~ ***Pathysa agetes agetes*** Westwood, 1843
The *Four-Bar Swordtail* was seen at Dowki in varying numbers over several years and should be in the Srimangal forests. It often moves long distances up and down streams. The type locality is 'Sylhet'.

Genus **LAMPROPTERA** Gray, 1832
In older literature the genus is often placed in *Leptocircus* Swainson, 1833, which has left its mark in the name of the tribe, but Gray's genus name has priority.

* ***Lamproptera curius curius*** Fabricius, 1787
The *White Dragontail* was recorded from Mymensingh by Alam (1962) and seen regularly at Dowki; its presence in the Srimangal forests is likely. In flight it can hardly be recognized as a butterfly; when circling low looking for a drinking spot they look like dragonflies. The type locality is Siam [Thailand].

FAMILY **PIERIDAE** Swainson, 1820

Subfamily ***Coliadinae*** Swainson, 1821

Genus **GANDACA** Moore, 1896

 # *Gandaca harina assamica* Moore, 1906
The *Tree Yellow* has only been recorded in the Teliapara and Lowacherra forests. It should also occur in the Chittagong area. We rarely saw more than one or two in a day. *G. harina* Horsfield, 1829 is from Java, Indonesia; ssp. *assamica* is from Assam.

Genus **CATOPSILIA** Hübner, 1819

 # *Catopsilia pomona pomona* Fabricius, 1775
The *Lemon Emigrant* is a common butterfly throughout Bangladesh and is a well-known migrant, doubtless even in the Sunderbans. The wet season form *crocale* Cramer, 1775, with its unmarked underside, used to be considered a distinct species (Yata & Tanaka 1979). The type locality is 'India'.

 # *Catopsilia pyranthe pyranthe* Linné, 1758
The *Mottled Emigrant* is a common butterfly throughout Bangladesh, even in the Sunderbans. It is a well-known migrant-1.5 billion were seen during a huge migration of the African vicariant in Botswana (Larsen 1992). Its dry season form (*gnoma* Fabricius, 1776) has been mistaken for the African *C. florella* Fabricius, 1775, which does not occur in Asia. The type locality is Canton, China.

Genus **EUREMA** Hübner, 1819
The genus is one of the few that are Pantropical. It was revised in great detail by Yata (1989/1995). The whole genus was often known under the name *Terias* Swainson, 1821, now considered a subgenus of *Eurema*. Most of the species are quite variable. The wet season form of *E. hecabe* lacks the heavy brown underside markings of the dry. The seasonal forms in *E. laeta* differ in wing shape; the forewing of the dry season form is falcate and the hindwing angular which, coupled with a mottled brown underside,

affords better camouflage. This is a fine example of parallel evolution with species such as *Melanitis leda*, *Bicyclus visala*, and *Junonia almana*. The starting date of dry season forms of all three is usually sudden and synchronized.

Subgenus ***Terias*** Swainson, 1821

 # *Eurema blanda silhetana* Wallace, 1867
The *Three-Spot Grass Yellow* is widely distributed in Bangladesh, including Dhaka, but not the Sunderbans. It can be enormously common where *Cassia* is grown as shade trees in tea gardens since this is a primary host plant. *E. blanda* Boisduval, 1836 is from Java, Indonesia; ssp. *silhetana* is from Sylhet, Bangladesh.

 # *Eurema hecabe hecabe* Linné, 1758 **PLATE 3**
The *Common Grass Yellow* is very common throughout Bangladesh, including city gardens and the Sunderbans. It is one of the most widely distributed butterflies in the world. The type locality is Canton, China. The species is also very common in Arabia and Africa.

 # *Eurema andersoni jordani* Corbet & Pendlebury, 1932
The *One-Spot Grass Yellow* is a rare butterfly that I collected very occasionally in both Teliapara and Lowacherra forests. There are no other records. *E. andersoni* Moore, 1886 is from Mergui, Myanmar; ssp. *jordani* is from Sikkim.

Subgenus ***Eurema*** Hübner, 1819

 # *Eurema brigitta rubella* Wallace, 1867
The *Small Grass Yellow* seems surprisingly rare in Bangladesh, the only record being one that I caught in Balda Gardens, Dhaka in 1977. It is a dry zone butterfly that should be at least in the west and in the Dinajpur area, though it is not very common in Calcutta. *E. brigitta* Stoll, 1780 is from Guinea, West Africa; ssp. *rubella* is from Calcutta. The name *libythea* Fabricius, 1798 has been applied, but this is an invalid homonym.

~ ***Eurema laeta sikkima*** Moore, 1906
The *Spotless Grass Yellow* should be in Bangladesh since it is known from Calcutta and 'from all levels' in the Khasi Hills. *E. laeta* Boisduval, 1836 was described from Bengal; ssp. *sikkima* is from Sikkim.

Subfamily **Pierinae** Swainson, 1820

Tribe **Pierini** Swainson, 1820

Genus **IXIAS** Hübner, 1819

~ ***Ixias marianne*** Cramer, 1779
The *White Orange-Tip* is found in Calcutta, though rare, and should just penetrate western Bangladesh. The habitat is open scrubland with *Capparis*. The type locality is Coromandel, S. India.

Ixias pyrene latifasciata Butler, 1871. The Yellow Orange-Tip is found in Calcutta, though not very common, as well as in the Malda District. I saw it in tea gardens near Sylhet in 1997. It is also in the Arakan and thus likely to be in the Chittagong area. The habitat is open scrubland. *I. pyrene* Linné, 1764 is from Canton, China; ssp. *latifasciata* is from Moulmein, Myanmar.

Genus **HEBOMOIA** Hübner, 1819

Hebomoia glaucippe glaucippe Linné, 1758
The *Giant Orange Tip* was occasionally seen in Dhaka Botanical Gardens, and one was collected on the Jahangirnagar University campus. These are not typical localities for this butterfly of wetter forests. Jamal saw several at Kaptai in the Chittagong Hill Tracts. I am surprised we never found it in the Srimangal forests, especially since it occurred near Dowki. The type locality is Canton, China.

Genus **CEPORA** Billberg, 1820
In older literature the genus was usually given as *Huphina* Moore, 1881, a junior name.

 # *Cepora nerissa nerissa* Fabricius, 1775
The *Common Gull* is widely distributed in Bangladesh, but never seems to be as common as it may be elsewhere. It is quite rare in Dhaka. The type locality is China. There is a plethora of names for sexual, individual, and seasonal forms.

*** *Cepora nadina nadina*** Lucas, 1852
The *Lesser Gull* is mentioned from Sylhet by Alam (1962) and by Talbot (1939). It is found in the Arakan and should occur in the Chittagong area. I failed to find it. The type locality is Khasi Hills, Meghalaya, India.

Genus **PIERIS** Schrank, 1801
The genus is essentially Palaearctic, with an interesting species in highland Ethiopia.

*** *Pieris brassicae brassicae*** Linné, 1758
The *Large Cabbage White* is montane and very common high up in the Khasi Hills, from where it sometimes migrates down to breed in large numbers, even in Sylhet town (Parsons & Cantlie 1948). I did not see it. The type locality is Sweden. The Indian populations are often referred to as ssp. *nepalensis* Doubleday, 1846 is often used, but seems superfluous. It has recently colonized South Africa and Chile, probably introduced with cultivated cabbages.

Genus **ARTOGEIA** Verity, 1947
Some authors place the species in the genus *Pieris*. I still believe that genus should be limited to *P. brassicae* Linné, 1758 and a few related species with low chromosome numbers (n=15/16). The genus is chiefly Palaearctic and has established itself in Australia.

 # *Artogeia canidia indica* Evans, 1926 **PLATE 3**
The *Indian Cabbage White* is mainly a montane species that migrates to the plains in winter, where it can be very common in Sylhet town. We found it also at the Madhabkundo Falls and in Lowacherra. It wanders far and I have seen many in Dhaka and Jamal found it at Noakhali. There is

also a record from Cheringa (Emmet 1948). *A. canidia* Linné, 1768 [not Sparrman] is from southern China; ssp. *indica* is from Chitral, NW Himalayas.

Genus **BELENOIS** Hübner, 1819
B. aurota is often placed in the separate genus *Anaphaeis* Hübner, 1819; at most this should be considered a subgenus. The genus is well represented in Africa.

**** Belenois aurota*** Fabricius, 1793
The *Pioneer* or *Caper White* occurs in very varying numbers in Calcutta and there is a single record from Dhaka (Ameen & Chowdhury 1968). It is strongly migratory and might occur anywhere in Bangladesh. The type locality is Tranquebar, S. India. The species is found throughout Arabia and Africa.

Genus **APPIAS** Hübner, 1819
The various species have been placed in several other genera from time to time, under the present specific names. The genus is Pantropical. Many are migratory, some strongly so in southern India.

**** Appias indra indra*** Moore, 1857
The *Plain Puffin* is recorded from Khulna by Alam (1962). It has been captured at Cachar and at Dowki as well, and may be common in the Arakan. The type locality is North India.

~ Appias lalage lalage Doubleday, 1842
The *Spot Puffin* was found commonly at Dowki and should occur in the Srimangal forests, though normally preferring higher altitudes. The type locality is Khasi Hills.

 # Appias lyncida eleonora Boisduval, 1836 **PLATE 3**
The *Chocolate Albatross* is common in Teliapara, less so in Lowacherra. It flies in thin forest with open undergrowth together with *Junonia atlites*. Jamal took a good series at Kaptai. I once found it common on yellow

Lantana in Gulshan, Dhaka (July 2001), indicating that the species may migrate as other *Appias* do. *A. lyncida* Cramer, 1777 is from Java, Indonesia; ssp. *eleonora* is from 'Amboina' [probably mistake for Assam or Burma]. The species was known as *A. hippoides* Moore, 1881.

 # *Appias olferna olferna* Swinhoe, 1890
The *Striped Albatross* is widely distributed in Bangladesh and sometimes common in Dhaka. I did not find in the Srimangal forests. Emmet (1948) found it at Cheringa in the Chittagong Division. The type locality is 'Upper Bengal, Malda'. The species has been known as *A. zelmira* Cramer, 1782. It has also been linked with *A. libythea*

*** *Appias albina darada*** Felder & Felder, 1865
The *Common Albatross* does not seem to be very common in Bangladesh. I found it very irregularly in the Dhaka area and once at Teliapara. It was sometimes numerous at Dowki. It is not common in the Arakan, so probably occurs rarely also in the Chittagong area. *A. albina* Boisduval, 1836 is from Ambon, Indonesia; ssp. *darada* is from India sept., perhaps 'Sylhet'.

~ *Appias paulina adamsoni* Moore, 1905
The *Lesser Albatross* seems likely to occur in the Srimangal forests; it was common in Cachar, but normally seems scarce, and is known from the Arakan. *A. leis* Hübner, 1832 is from Java; ssp. *adamsoni* is from Tenasserim, Burma. The species is traditionally known as *A. paulina* Cramer, 1779 and there is still some uncertainty as to the correct name in Bangladesh.

~ *Appias galba galba* Wallace, 1867
The *Orange Albatross* is rare in Assam but was recorded from both Cachar and Dowki and should be in Bangladesh. It is a very strong flier that is greatly attracted to damp sand. The type locality of ssp. *galba* is NE India. *A. nero* Fabricius, 1793 from Sundaland is now considered a distinct species.

Genus **PRIONERIS** Wallace, 1867

~ ***Prioneris philonome clemanthe*** Doubleday, 1842
The *Redspot Sawtooth* was found rarely at Dowki and probably occurs in the Srimangal forests. Males are very fond of puddling. *P. philonome* Boisduval, 1836 is from Java, Indonesia; ssp. *clemanthe* is from N. India.

~ ***Prioneris thestylis thestylis*** Doubleday, 1842
The *Spotted Sawtooth* was found commonly at Dowki and probably occurs in the Srimangal forests. Males are fond of puddling. The type locality is N. India.

Genus **PARERONIA** Bingham, 1907
Older literature often places this species in the genus *Valeria* Horsfield, 1829, an unavailable name that is a junior homonym.

Pareronia hippia hippia Fabricius, 1787
The *Common Wanderer* is not common in Bangladesh. I have collected it in the Dhaka area, near Sylhet, and just one at Teliapara. I have seen a photo of one from Rangamatti in the Chittagong Hill Tracts on the internet. The specific name *V. valeria* Cramer, 1776 was often used in the past, but this is now considered a distinct species. It is also known as *P. anais* Lesson, 1837, but this is a junior synonym of *hippia*.

Genus **LEPTOSIA** Hübner, 1818
The genus is better represented in the Afrotropical Region than in Asia. The suggestion was made (Eliot 1978) that *L. nina* is conspecific with the Afrotropical *L. alcesta* Stoll, 1784 but their chromosome numbers differ significantly. The generic name *Nina* Horsfield, 1928 is used in older literature.

Leptosia nina nina Fabricius, 1793 **PLATE 3**
The *Psyche* or *Spirit* is common in the Dhaka area. I caught just a few at Lowacherra on my last visit there. Jamal caught it in Kaptai in the Chittagong Hill Tracts. 1 am surprised that it is not more widespread in

forest areas. The type locality is S. India. The species was known as *L. xiphia* Fabricius, 1781 which is invalid.

Genus **DELIAS** Hübner, 1819

 # *Delias eucharis* Drury, 1773
The *Common Jezebel* is widely distributed in the Bangladesh floodplains area, but not in the Sylhet forests or the Chittagong Division, where it is replaced by the next species. Rothney (1882) thought it the most common butterfly in Barrackpore, near Calcutta. The type locality is Bombay, India ['Hindostan'].

 # *Delias hyparete indica* Wallace, 1867 **PLATE 3**
The *Painted Jezebel* is not rare in the Srimangal forests and in the Chittagong Division (Malumghat, Kaptai, Teknaf). It occurs sparingly in the Dhaka area; I have seen it on the same day as *D. eucharis* in Bhawal National Park and even found it in Gulshan. *D. hyparete* Linné, 1758 is from Java, Indonesia; ssp. *indica* is from Burma.

 # *Delias descombesi descombesi* Boisduval, 1836
The *Red-Spot Jezebel* is not rare in the Srimangal forests and sometimes common in the Chittagong area (very numerous once at Kaptai). I was very surprised to find it in the Dhaka Botanical Gardens and in Bhawal National Park. The type locality is Cochin-China, Vietnam.

 # *Delias pasithoe pasithoe* Linné, 1767 **PLATE 3**
The *Red-Base Jezebel* is mainly a forest butterfly from the Srimangal forests and in the Chittagong Hill Tracts, but to my surprise I found it also in Bhairab and in Bhawal National Park. We usually saw only a few on any given day. The type locality is 'Asia' [but not Canton, China]. The name *D. aglaja* Linné, 1758 is seen in older literature, but is invalid (Linné described a Palaearctic Argynnid with the same name which remains valid).

WHAT IS GOING ON HERE?

During courtship male Danaid butterflies need to powder their females with a special pheromone if it is to have any chancing of mating. A better name for the substance might be 'love dust'. Rape as performed by some Heliconiinae of the nature of the *Cethosia* would be quite impossible. The female cannot be coerced. The love dust is dispensed with a set of usually bright yellow brushes that are extruded from the abdomen. The smells are universally considered pleasant to the human nose-violets, vanilla, heliotrope and are amongst those mentioned. The pheromone(s) are complex. Some are metabolized from the larval host plants but these do not contain one essential ingredient-pyrrolizidine alkaloids. So the first act of a male Danaid after hatching and going in quest of reproductive success is to fly off in search of plants containing these substances. These are few and widely scattered among different plant families and may be difficult to find, so males often find them because of the presence of males of other Danaids I have seen up to thirty at one such 'pyrrolizi-diner'. What is happening in the photo is that a male *Euploea core* Linné has found the corpse of a *Tirumala aglea* Stoll and is ingesting the alkaloids from it. During the day at least seven other Danaids found it as well then the ants took over. Now ... that's recycling. The picture is from Lowacherra Forest.

FAMILY **LYCAENIDAE** Leech, 1815

Subfamily ***Miletinae*** Reuter, 1896
Tribe **Miletini** Reuter, 1896

Genus **MILETUS** Hübner, 1819
The genus name *Gerydus* Boisduval, 1836 is used in older literature. It was reviewed by Eliot (1961). Like other members of the Miletinae the larvae are carnivorous on insect plant pests such as coccids, membracids, and aphids.

 # Miletus chinensis assamensis Doherty, 1891
The *Common Brownie* was first collected in Bhawal National Park in September 2001 and never again seen there; it is not really the habitat for such a rainforest butterfly. We took four on various dates in Lowacherra. It was also recorded from Chittagong by de Nicéville 1890 (as *M. boisduvali*). *M. chinensis* C. Felder, 1862 is from Hong Kong. In older works it is often listed as *M. boisduvali* Moore, 1857, a species limited to Sundaland. *Gerydus irroratus assamensis* is from the Naga Hills.

Genus **ALLOTINUS** Felder & Felder, 1865
The genus was reviewed by Eliot (1986).

Subgenus ***Paragerydus*** Distant, 1884

**** Allotinus unicolor continentalis*** Fruhstorfer, 1913
The *Common Darkie* was recorded under the name *A. horsfieldi* from the Chittagong Hill Tracts by de Nicéville (1090) and from Cheringa by Emmet (1948). *A. unicolor* Felder & Felder, 1865 is from Singapore; ssp. *continentalis* is from Bhamo, Burma. It is often listed under the name *A. horsfieldi* Moore, 1857, a Sundaland species.

**** Allotinus drumila drumila*** Moore, 1866
The *Crenulate Darkie* was recorded as *A. multistrigatus* from Chittagong by de Nicéville (1890). It is also in the Khasi Hills and in Cachar. Seasonal variation is very strong. The type locality is Sikkim. *A. multistrigatus* de Nicéville, 1886 is a junior synonym.

Subgenus ***Fabitaras*** Eliot, 1986

* ***Allotinus taras*** Doherty, 1889
The *Brown-Tipped Brownie* was recorded from the Chittagong Hill Tracts by de Nicéville (1890), but Eliot (1986) says the range is from the Karen Hills to Mergui only. However, the specimens are in the Zoological Survey of India, Calcutta [ex Doherty] (*teste* H. Gaonkar) and were not seen by Eliot. The type locality is Burma.

Genus **LOGANIA** Distant, 1884
The genus was reviewed by Eliot (1967).

~ ***Logania distanti massalia*** Doherty, 1891
The *Dark Mottle* was caught on the lower slopes of the Khasi Hills and as a lowland species should be in the Srimangal forests. It is both rare and unobtrusive and thus easily overlooked. *L. distanti* Semper, 1889 is from the Philippines; ssp. *massalia* is from Assam, India.

Tribe **Tarakini** Eliot, 1973

Genus **TARAKA** Doherty, 1889

* ***Taraka hamada mendesia*** Fruhstorfer, 1918
The *Forest Pierrot* was recorded from the Chittagong Hill Tracts by de Nicéville (1890). It is known from Cachar as well. There are no other records. *T. hamada* Druce, 1875 is from Japan; ssp. *mendesia* is from Cachar, Assam.

Tribe **Spalgini** Toxopeus, 1929

Genus **SPALGIS** Moore, 1879
There is just one Oriental species and a few in the Afrotropical Region.

\# ***Spalgis epeus epeus*** Westwood, 1851
The *Apefly* was collected by Jamal in short grass at Noakhali, while I

caught one on open ground near Lowacherra. There are no other Bangladesh records and it is scarce in Calcutta. The type locality is N. India.

Subfamily **Poritiinae** Doherty, 1886

Genus **PORITIA** Moore, 1866
The compact subfamily Poritiinae is closely related to the Afrotropical Lipteninae, sometimes considered a tribe of the Poritiinae.

**** Poritia hewitsoni hewitsoni*** Moore, 1866
The *Common Gem* was recorded from Chittagong by de Nicéville (1890) and in the Arakan by Emmet (1948). It was also caught at Dowki and should occur in the Srimangal forests. The type locality is Nepal.

Subfamily **Curetinae** Distant, 1884

Genus **CURETIS** Hübner, 1819
This is the only genus in a quite distinctive subfamily. It is usually no problem to determine how many species exist in a given area but assigning scattered populations to their respective species is not easy; hence species and subspecies nomenclature has often changed and been combined in different ways. The problem is not aided by some degree of seasonal variation in the width of the black margins. The genus was reviewed by Evans (1954); a follow-up study by Eliot (1990) largely supported Evans's conclusions.

Species-group ***C. thetis***

 # Curetis thetis thetis Drury, 1773
The *Indian Sunbeam* is known from a few females that we collected in the Dhaka Botanical Gardens. It is the only white female in the *C. thetis*-group in Bangladesh. The male has very narrow black margins, that of the hindwing just a narrow line, never more than one mm. It is rare in Calcutta and seems to be replaced by the next species in the east of Bangladesh. The type locality is 'India' [Bombay according to Gaonkar].

**** Curetis saronis gloriosa*** Moore, 1883
The *Assam Sunbeam* was recorded from Sylhet by Alam (1962), though this may be the repeat of an old record. I accept the record as from Bangladesh since it was found at Dowki, Cachar, 'Silhet', and the northern Arakan. *C. saronis* Moore, 1877 (TL Andamans) is conventionally considered a subspecies of *C. thetis*, but the females have orange discal patches and the genitalia differ considerably. The name *gloriosa* Moore, 1883 (TL Assam) is usually used for the population of eastern India and southern Myanmar (Eliot 1990). The taxon *aesopus* Fabricius, 1781 was described from Thailand and, if it should be resurrected, would be a senior name for *C. saronis indosinica* Fruhstorfer, 1908.

**** Curetis cf saronis*** Moore, 1877
A team from IUCN collected a small series of both sexes of a *Curetis* of smaller size and with wider black margins than those of *C. saronis gloriosa* in the Sunderbans. Without having had the opportunity of examining the genitalia of either from Bangladesh, I am not sure what to think of this taxon.

Species-group ***C. bulis***

**** Curetis bulis bulis*** Westwood, 1851
The *Bright Sunbeam* was recorded from Sylhet and has been collected at Dowki. The type locality is Simla, India.

 # Curetis acuta dentata Moore, 1879
The *Angled Sunbeam* was found at Dowki and we collected a few males on excrement and foul matter on the railway running through Lowacherra Forest. *C. acuta* Moore, 1877 is from China. The type locality of ssp. *dentata* is Dehra Dun, India. The two are often considered specifically distinct.

Subfamily ***Theclinae*** Swainson, 1830
Tribe **Arhopalini** Bingham, 1907

Genus **ARHOPALA** Boisduval, 1831
In older literature the genus was often listed as *Amblypodia* Horsfield, 1829, but the type species of this genus is a very different butterfly (see *Amblypodia anita* below). Evans (1957), in his monograph of the genus, split the *Arhopala* into *Arhopala*, *Narathura* Moore, 1879, *Panchala* Moore, 1882, and *Aurea* Evans, 1957, but this is generally agreed to be excessive splitting, and they are here considered species-groups under the genus headings. All known Bangladesh species were in *Narathura*.

Species-group ***Narathura*** Moore, 1879

* ***Arhopala camdeo*** Moore, 1857
The *Lilac Oakblue* is a fine butterfly that was recorded from the Chittagong Hill Tracts by de Nicéville (1890). It was obviously locally common in Cachar since no less than 25 were listed and it should be in the Srimangal forests as well. The type locality is 'North India'.

\# ***Arhopala athada apha*** de Nicéville, 1895
The *Vinous Oakblue* was first recorded by Jamal from Lowacherra Forest, where Jamal caught a perfect female in May 2002. *A. athada* Staudinger, 1889 is from Malaysia; ssp. *apha* is from Martaban, Burma.

* ***Arhopala silhetensis silhetensis*** Hewitson, 1862
The *Sylhet Oakblue* was described from Sylhet and was also recorded from Cachar and so should be in the Srimangal area. The type locality is from 'Silhet'.

\# ***Arhopala oenea*** Hewitson, 1869
The *Hewitson's Dull Oakblue* was found in Lowacherra forest in March 2002 when I caught a male and Jamal a female. There are no other records. The type locality is Sikkim.

Arhopala khamti Doherty, 1891
The *Khamti Oakblue* was recorded from the Chittagong Hill Tracts by Evans (1957) and from Cox's Bazaar by Gladman (1947). It is a more 'southern' species than *A. oenea*. The type locality is Assam.

Arhopala atrax Hewitson, 1867
The *Indian Oakblue* was found at Teknaf by Emmet 1948). The type locality is 'Bengal'.

 # Arhopala bazaloides bazaloides Hewitson, 1878
The *Tamil Oakblue* was new to Bangladesh when I caught a perfect male in Lowacherra Forest in March 2002. The type locality is N. Kanara, S. India [*teste* H. Gaonkar].

 # Arhopala amantes apella Swinhoe, 1886
The *Large Oakblue* was found sparingly in Calcutta. The first Bangladesh records are small series from Bhawal National Park collected by Jamal and myself. It was usually with large numbers of *A. centaurus*. It seems to be centered on sal forests and not to occur much east of Bangladesh. *A. amantes* Hewitson, 1862 is from Ceylon; ssp. *apella* is from Mhow, India. The Bangladesh population is probably transitional to ssp. *amatrix* de Nicéville, 1890 from Myanmar.

~ Arhopala singla de Nicéville, 1885
The *Yellow-Disk Oakblue* is widespread in Assam and Myanmar and must be in the Srimangal forests. The type locality is Sikkim.

~ Arhopala bazalus teesta de Nicéville, 1886
The *Powdered Oakblue* is a widespread butterfly that has been found in Cachar and should occur in the Srimangal forests. *A. bazalus* Hewitson, 1862 is from Java, Indonesia; ssp. *teesta* is from Sikkim.

 # Arhopala eumolphus eumolphus Cramer, 1780
The *Green Oakblue* is a beautiful butterfly that we found occasionally in Lowacherra and once at Malumghat. There are records also from Chittagong (de Nicéville 1890) and from Cheringa and Teknaf (Emmet 1948). The type locality is the 'Bengal Coast'.

**** Arhopala hellenore hellenore*** Doherty, 1889
The *Doherty's Green Oakblue* is mentioned from Chittagong by Evans (1957). There are many also from Assam. The type locality is Mergui, Myanmar.

 # Arhopala centaurus pirithous Moore, 1883
The *Centaur Oakblue* is known from the Srimangal forests, from various points in the Chittagong Division, from Bhawal National Park, and from the Sunderbans. It can be quite common and is certainly the *Arhopala* most frequently met with. *A. centaurus* Fabricius, 1775 is from Java, Indonesia [*teste* H. Gaonkar]; ssp. *pirithous* is from NE Bengal. The name *pseudocentaurus* Doubleday, 1847 has been used in the past.

~ Arhopala agaba agaba Hewitson, 1862
The *Purple-Glazed Oakblue* has been found in the northern Arakan near the Chittagong Division. The type locality is 'India' [in error for Cochin-China].

 # Arhopala perimuta perimuta Moore, 1858
The *Yellowdisc Tailless Oakblue* was recorded from Chittagong by de Nicéville (1890) and from Cheringa by Emmet (1948). I took it three times at Lowacherra. The type locality is 'Sylhet'.

 # Arhopala species indet.
Male from Lowacherra.

 # Arhopala species indet.
Male from Malumghat, Chittagong Division.

Genus **FLOS** Doherty, 1889

~ Flos diardi diardi Hewitson, 1862
The *Bifid Plushblue* has been found in the northern Arakan and at Dowki and should occur in Bangladesh. The type locality is 'India'.

* ***Flos apidanus ahamus*** Doherty, 1891
The *Plain Plushblue* was recorded from Chittagong by Evans (1957) and there are many records from Assam so it is probably also in the Srimangal area. *F. apidanus* Cramer, 1777 is from 'Sumatra' [probably Java]; ssp. *ahamus* is from Assam.

Genus **MAHATHALA** Moore, 1878

\# ***Mahathala ameria ameria*** Hewitson, 1862
The *Falcate Oakblue* was recorded from the Chittagong Hill Tracts by de Nicéville (1890) and there is also a record from near Comilla. I took one in deep forest at Lowacherra in May 2002, quite fresh and sitting on a leaf low down in deep forest. Since it was found in Calcutta, it might be more widely distributed in Bangladesh. The type locality is Khasi Hills.

Genus **SURENDRA** Moore, 1879

\# ***Surendra quercetorum*** Moore, 1857
The *Common Acacia Blue* was found at the DFID Guest House in Srimangal in March and May 2002. There are no other records. The species is local but common where it occurs, usually in association with the host-plant and specific ants that tend it. The species is local but common where it occurs, usually in association with the host plant, thorny climbing *Acacia*. The type locality is Kangra, Himachal Pradesh, India.

Tribe **Amblypodiini** Doherty, 1886

Genus **AMBLYPODIA** Horsfield, 1829
The name *Horsfieldia* Riley, 1922 was used till the 1960s and is still occasionally met with.

* ***Amblypodia anita anita*** Hewitson, 1862 **PLATE 4**
The *Purple Leaf Blue* was found at Teknaf by Emmet (1948) as ssp. *arracana* Grose-Smith, 1887. It inhabits drier forests and is known from Calcutta (as ssp. *dina*) and might be elsewhere in Bangladesh. *A. anita* Hewitson, 1862 is from Thailand. Ssp. *arracana* is from the 'Arracan' and

should be considered a synonym of *A. anita*. Ssp. *dina* Fruhstorfer, 1907 is from S. India to Bengal, but is only doubtfully valid.

Genus **IRAOTA** Moore, 1881

**** Iraota timoleon timoleon*** Stoll, 1790
The *Silverstreak Blue* is recorded from 'Dinapur' (de Nicéville 1890)-presumably an error for Dinajpur-which is not surprising since it is known from Malda District, Calcutta, Cachar, and the northern Arakan as well. Both sexes spend much of their time high up in large figs, not necessarily in or near forest-figs are the larval host plant. The type locality is China.

Tribe **Zesiusini** Swinhoe, 1912

Genus **ZEZIUS** Hübner, 1819
This is one of the few genera endemic to the lowland Indian subcontinent and it is the only species in its tribe.

~ Zezius chrysomallus Hübner, 1823
The *Redspot* is a rare and enigmatic butterfly of the drier forests that has been found in Calcutta and at Bholahat in Malda District, just across from Rajshahi, and should occur in Bangladesh. The type locality is 'India'.

Tribe **Catapaecilmatini** Eliot, 1973

Genus **CATAPAECILMA** Butler, 1877

~ Catapaecilma major major Druce, 1895
The *Common Tinsel* was found at both Dowki and Cachar and should be in the Srimangal forests, and perhaps elsewhere. It is generally an elusive butterfly. The type locality is Sikkim. The name *elegans* Druce, 1873 was previously used.

Tribe **Loxurini** Swinhoe, 1910

Genus **LOXURA** Horsfield, 1829

 # *Loxura atymnus continentalis* Fruhstorfer, 1911 **PLATE 4**
The *Yamfly* was not known from Bangladesh before a team found it at Karerhat and Mirshari (Dhaka University 2000). I found it commonly in Bhawal National Park, as well as a few at Lowacherra and Malumghat. *L. atymnus* Stoll, 1780 is from South India [Coromandel]; ssp. *continentalis* is from 'Himalaya, Burma Siam'.

Genus **YASODA** Doherty, 1889

~ *Yasoda tripunctata* Hewitson, 1869
The *Branded Yamfly* was recorded from both Dowki and Cachar and should be in the Lowacherra forests and in the Chittagong Hill Tracts. The type locality is 'Sylhet'.

Genus **DRINA** de Nicéville 1890

*** *Drina donina donina*** Hewitson, 1865
The *Brown Yamfly* was recorded from Chittagong by (de Nicéville 1890) and from Cheringa by (Emmet 1948). The type locality is Burma.

Genus **EOOXYLIDES** Doherty, 1889

*** *Eooxylides tharis tharis*** Hübner, 1837
The Branded Imperial was recorded from Chittagong by de Nicéville (1890) who says that this was seconded by Doherty. It is difficult to see how a mistake could have been made, but the species is normally considered to have its northern limit at Dawnas in Myanmar. The type locality is Java.

Tribe **Horagini** Swinhoe, 1910

Genus **RATHINDA** Moore, 1881

**** Rathinda amor*** Fabricius, 1775
The *Monkey Puzzle* was common in Calcutta and is recorded from East Pakistan by Cowan (1966). It is a species of more open forests than the *Horaga* and usually flutters about low bushes with a very weak flight for a Thecline. The type locality is Tranquebar, S. India.

Genus **HORAGA** Moore, 1881
The genus was revised by Cowan (1966).

**** Horaga onyx onyx*** Moore, 1858
The *Common Onyx* was recorded from Teknaf, Chittagong Division by Emmet (1948) and should be in the Srimangal forests since it is known from the Khasi Hills. The type locality is the western Himalayas [not Moulmein, Burma, *teste* Gaonkar].

**** Horaga syrinx sikkima*** Moore, 1883
The *Ambon Onyx* was recorded from East Pakistan by (Cowan 1966) and is known from the Khasi Hills. *H. syrinx* C. Felder, 1860 is from Amboina, Indonesia; ssp. *sikkima* is from Darjeeling.

**** Horaga albimacula viola*** Moore, 1882
The *Violet Onyx* was recorded from East Pakistan by Cowan (1966), and is a lowland species in Assam and Sikkim. *H. albimacula* Wood-Mason & de Nicéville, 1881 is from the Andamans; ssp. *viola* is from Dharmsala, W. Himalayas.

Tribe **Cheritrini** Swinhoe, 1910

Genus **CHERITRA** Moore, 1881
The genus was revised by Cowan (1967).

**** Cheritra freja evansi*** Cowan, 1965
The *Common Imperial* is known from Chittagong (de Nicéville 1890), as well as from Cox's Bazaar (Gladman 1947) and Cheringa (Emmet 1948). It has also been found at low levels in the Khasi Hills. *C. freja* Fabricius, 1793 is from the Nagari Hills, Andhra Pradesh by Fabricius' student Daldorff (Gaonkar, pers. comm.) despite the statement that by Cowan (1967) that it is from Mergui, Burma; the nominate subspecies is thus the one of peninsular India. Ssp. *evansi* is from Assam.

Genus **TICHERRA** de Nicéville, 1887

 # Ticherra acte acte Moore, 1858
The *Blue Imperial* was found regularly in deep forest in small numbers at Lowacherra. There are no other Bangladesh records. The type locality is N. India.

Genus **DRUPADIA** Moore, 1884
Members of the genus have been placed in *Rachana* Distant, 1884 and in *Marmessus* auct.

**** Drupadia ravindra boisduvalii*** Moore, 1884
The *Common Posy* was recorded from Chittagong by de Nicéville (1890) (as *Marmessus lisias* from Calcutta probably due to some misinterpretation) It is a forest species. *D. ravindra* Horsfield, 1829 is from Java, Indonesia; ssp. *boisduvalii* is from Moulmein.

Tribe **Aphnaeini** Distant, 1884

Genus **SPINDASIS** Wallengren, 1857
The genus is even better represented in the Afrotropical Region.

 # Spindasis lohita himalayanus Moore, 1884 **PLATE 4**
The *Long-Banded Silverline* was taken regularly in Lowacherra, Teliapara, and Rema-Kalenga forests, by Jamal at Kaptai in the Chittagong, and in Dhaka Botanical Gardens and Bhawal National Park, but never in

numbers. *S. lohita* Horsfield, 1829 is from Java, Indonesia; ssp. *himalayanus* is from Nepal & Darjeeling.

~ ***Spindasis vulcanus vulcanus*** Fabricius, 1775
The *Common Silverline* was not uncommon in Calcutta and must be in western Bangladesh, e.g. Dinajpur, but is probably local and uncommon. The type locality is S. India.

Spindasis syama peguanus Moore, 1884
The *Club Silverline* has been found in low Khasi Hills, at Cachar, and in the Arakan. However, the first substantiated record from Bangladesh was one taken by Abdul Razzak on the Jahangirnagar University campus. *S. syama* Horsfield, 1829 is from Java, Indonesia; ssp. *peguanus* is from Pegu, Burma.

~ ***Spindasis ictis*** Hewitson, 1865
The *Common Shot Silverline* was found regularly in Calcutta and should occur in neighbouring parts of Bangladesh. The type locality is North India.

Spindasis elima elima Moore, 1877
The *Scarce Shot Silverline* was found in a garden inside Bhawal National Park in March 2002 feeding on *Tagetes* flowers in great numbers (100+). There are no other records. The type locality is Kangra, Himachal Pradesh.

Tribe **Iolaini** Riley, 1958

Genus **PRATAPA** Moore, 1881

* ***Pratapa deva lila*** Moore, 1883
The *White Royal* is known from Calcutta and should be in Bangladesh. *P. deva* Moore, 1858 is from Kanara in S. India; ssp. *lila* is from Silhet, 'Silhet', E. Bengal.

Genus **DACALANA** Moore, 1884

 # *Dacalana penicilligera* de Nicéville, 1890
The *Double-Tufted Royal* is known from Lowacherra and Teliapara, in both location from single males. There are no other records. The type locality is the Khasi Hills.

Genus **TAJURIA** Moore, 1881

~ *Tajuria jehana jehana* Moore, 1883
The *Plains Blue Royal* is known from Calcutta and the plains of India (including Malda District near Rajshahi), the habitat being drier forests. It is probably in Bangladesh. The type locality is Lucknow, Uttar Pradesh, India.

 # *Tajuria cippus cippus* Fabricius, 1798
The *Peacock Royal* was found in Bhawal National Park, where I took a single female in March 2002. It is a species of the drier forest formations. The type locality is Tranquebar, S. India.

~ *Tajuria melastigma* de Nicéville, 1887
The *Branded Royal* was found close to Bangladesh in northern Arakan by Gladman (1947). The type locality is Sikkim.

Genus **CHARANA** de Nicéville, 1890

~ *Charana cepheis* de Nicéville, 1894
The *Cachar Mandarin Blue* was described from Cachar and should be in the Srimangal forests. It is very rare. The type locality is Cachar.

Genus **RACHANA** Eliot, 1978
E. jalindra was usually placed in the genus *Charana* de Nicéville, 1890. It was then placed in the new genus *Eliotia* Hayashi, 1978. The need for a new genus was recognized at the same time also by Eliot, who created *Rachana* a few months later and accepted the priority of Hayashi. It was then found that the name *Eliotia* was an invalid homonym of a species of Mollusca.

 # Rachana jalindra indra Moore, 1883
The *Banded Royal* was known from Calcutta and I collected a pair in Bhawal National Park in March 2002. *E. jalindra* Horsfield, 1829 is from Java, Indonesia; ssp. *indra* is from Bengal and H. Gaonkar believes it deserves specific status.

Genus **CREON** de Nicéville, 1896

**** Creon cleobis cleobis*** Godart, 1823
The *Broad-Tail Royal* was recorded from Dinajpur by de Nicéville (1890). It flies in drier forests and should be elsewhere in Bangladesh. There are also records from the low Khasi Hills and Calcutta. The type locality is [West] Bengal.

Tribe **Remelanini** Eliot, 1973

Genus **REMELANA** Moore, 1884

 # Remelana jangala ravata Moore, 1865
The *Chocolate Royal* was first recorded when I found it in Dhaka Botanical Garden and Bhawal National Park, where it may be quite common. I also found a few in Lowacherra. Both sexes come down to flowers, in Bhawal especially to blooming *Zizyphus*. *R. jangala* Horsfield, 1829 is from Java, Indonesia; ssp. *ravata* is from Bengal.

Tribe **Hypolycaenini** Swinhoe, 1910

Genus **CHLIARIA** Moore, 1884
This genus is very close to *Hypolycaena* and could be subsumed therein. However, the larval host plants are orchids, which is most unusual for butterflies.

 # Chliaria othona othona Hewitson, 1865
The *Orchid Tit* is usually scarce. I found two males at Lowacherra and one at Teliapara. De Nicéville (1890) recorded it from the Chittagong Hill Tracts. The type locality is the Andamans.

~ ***Chliaria kina kina*** Hewitson, 1869
The *Blue Tit* is included since it is found in Cachar. *C. kina* is from 'Sylhet', so ssp. *cachara* Moore, 1883 from Cachar can hardly be a valid subspecies.

Genus **HYPOLYCAENA** Felder, 1862
This genus is well developed also in the Afrotropical Region.

Hypolycaena erylus himavantus Fruhstorfer, 1912 **PLATE 4**
The *Common Tit* is quite common at Lowacherra and the Madhabkundo Falls. Jamal found it at Kaptai in the Chittagong Hill Tracts. Single males are often found on damp patches with the *Nacaduba*-group. *H. erylus* Godart, 1824 is from Java, Indonesia; ssp. *himavantus* is from Sikkim.

Genus **ZELTUS** de Nicéville, 1890
This genus is very close to *Hypolycaena* and could be subsumed therein.

~ ***Zeltus amasa amasa*** Hewitson, 1865
The *Fluffy Tit* is known from low levels in the Khasi Hills as well as from Cachar and should be in the Srimangal forests. The type locality is 'India'.

Tribe **Deudorigini** Doherty, 1886

Genus **ARTIPE** Boisduval, 1870

~ ***Artipe eryx eryx*** Linné, 1771
The Green Flash was found at Cachar in a striking form with yellow rather than green undersides (named *skinneri*) and should occur in the Srimangal forests. The type locality is 'China'.

Genus **DEUDORIX** Hewitson, 1863

~ ***Deudorix epijarbas amatius*** Fruhstorfer, 1912
The *Cornelian* is known from Calcutta, Cachar, and the Arakan and should occur sporadically in most of Bangladesh. *D. epijarbas* Moore, 1858 is from Bengal; ssp. *amatius* is from Assam and Tonkin.

~ ***Deudorix gaetulia*** de Nicéville, 1892
The *Assam Cornelian* was collected once at Dowki and should be in the Srimangal forests. The type locality is the Khasi Hills.

* ***Deudorix isocrates*** Fabricius, 1793
The *Common Guava Blue* was bred from 'East Pakistan' by Alam (1962) and may be common in Calcutta. I hardly ever saw in anywhere in India and never in Bangladesh, but it is sure to be there. The type locality is Tranquebar, S. India.

Genus **SINTHUSA** Moore, 1884

~ ***Sinthusa chandrana grotei*** Moore, 1884
The *Broad Spark* should be in Bangladesh since it was found at Dowki; it seems to be generally scarce. *S. chandrana* Moore, 1883 is from Lahul (?); ssp. *grotei* is from NE India.

Genus **BINDAHARA** Moore, 1881

~ ***Bindahara phocides phocides*** Fabricius, 1793
The *Plane* was recorded from 'Sylhet' and was found in lowland Arakan by both Gladman (1947) and Emmet (1948). Forests in the Srimangal area and in the Chittagong Hill Tracts provide suitable habitats and the species should be in Bangladesh. The type locality is Africa [probably Siam].

Genus **RAPALA** Moore, 1881

\# ***Rapala manea schistacea*** Moore, 1879
The *Slate Flash* is one of the more common *Rapala*. We found it in Bhawal National Park, on the Jahangirnagar University campus, at Noakhali, in Rema-Kalenga and Teliapara forests, as well as at Kaptai in the Chittagong Hill Tracts. There are no other records. *R. manea* Hewitson, 1863 is from Sulawesi, Indonesia; ssp. *schistacea* is from Calcutta.

~ ***Rapala scintilla scintilla*** de Nicéville, 1890
The *Scarce Slate Flash* was recorded from Dowki and should be in Bangladesh. The type locality is Sikkim.

 # Rapala varuna orseis Hewitson, 1877
The *Indigo Flash* is known from Calcutta and the Arakan. The only Bangladesh record is one that we took in Lowacherra in May 2002. *R. varuna* Horsfield, 1829 is from Java, Indonesia; ssp. *orseis* is from Sumatra.

~ Rapala nissa rectivitta Moore, 1879
The *Common Flash* has a high degree of ecological tolerance and is found everywhere surrounding Bangladesh; it would be strange if it were absent. *R. nissa* Kollar, 1848 is from Mussoorie, western Himalaya; ssp. *rectivitta* is from N Cachar.

 # Rapala pheretima petosiris Hewitson, 1863
The *Copper Flash* was bound to turn up in Bangladesh since it is known from Calcutta, Dowki, and Cachar. I caught ones or twos in Bhawal National Park and Lowacherra, while Jamal took it at Noakhali and at Kaptai in the Chittagong Hill Tracts. *R. pheretima* Hewitson, 1863 is from 'East Indies [Java or Sarawak]; ssp. *petosiris* Hewitson, is from eastern India.

 # Rapala dieneces dieneces Hewitson, 1878
The *Scarlet Flash* was first caught in Bangladesh when I found a male and a female in Lowacherra (April & November 2002). An IUCN Team found one in the Sunderbans. It has also been recorded from Calcutta and the Arakan and is probably more widespread. The type locality is Singapore. The name *xenophon* Fabricius, 1793 used by early authors is a junior synonym of a different species.

 # Rapala suffusa suffusa Moore, 1883
The *Suffused Flash* was caught in Lowacherra (March 2002). There are records from the Arakan and it should be in the Chittagong Hill Tracts. The type locality is Taoo, Upper Tenasserim, Burma.

 # Rapala iarbus sorya Kollar, 1848
The *Indian Red Flash* is known from Calcutta, but does not extend further

east than Bangladesh. I found it quite common in Bhawal National Park and on the Jahangirnagar University campus, but nowhere else. *R. iarbus* Fabricius, 1787 is from Siam. It is often listed as *R. melampus* Cramer, 1781 (TL Coromandel Coast, S India).

Genus **ARAOTES** Doherty, 1889

**** Araotes lapithis lapithis*** Moore, 1857
The *Witch* was recorded from Barakhal in the Chittagong Hill Tracts by Doherty (de Nicéville 1890); it seems generally to be a scarce butterfly. The type locality is Moulmein, Burma.

Subfamily **Polyommatinae** Swainson, 1827

Tribe **Lycaenesthini** Toxopeus, 1929

Genus **ANTHENE** Doubleday, 1847
In older literature the genus is often known as *Lycaenesthes* Moore, 1866. The genus has well over a hundred members in the Afrotropical Region and a dozen or so in the Australasian.

 # Anthene lycaenina lycambes Hewitson, 1878
The *Pointed Ciliate Blue* was recorded from East Pakistan by Alam (1962). We found it rare in Bhawal National Park and in the Dhaka Botanical Gardens, but never in the forest areas. *A. lycaenina* Felder & Felder, 1868 is from Ceylon; ssp. *lycambes* is from 'N. India'.

 # Anthene emolus emolus Godart, 1824
The *Common Ciliate Blue* was taken frequently in ones and twos at water on all visits to Lowacherra. We also found it at Noakhali and at Malumghat, and I took one female in the Sunderbans. Males are frequent visitors to damp patches. Alam (1962) recorded it from Dinajpur. The type locality is 'Bengal'.

Tribe **Polyommatini** Swainson, 1827

Genus **NACADUBA** Moore, 1881
Members of this genus are very similar and somewhat confusing, but the genitalia have good specific characters in cases of doubt. None of the species are really common and some always scarce. Most material is of males collected at damp patches.

~ ***Nacaduba pactolus continentalis*** Fruhstorfer, 1916
The *Large Four-Lineblue* is included on the basis of specimens from Cachar. *N. pactolus* C. Felder, 1860 is from Amboina, Indonesia; ssp. *continentalis* is from Sikkim.

Nacaduba hermus nabo Fruhstorfer, 1916
The *Pale Four-Lineblue* was collected just once at Lowacherra in March 2002; it was the readily recognizable dry season form with a black blotch on the hindwing underside. *N. hermus* C. Felder, 1860 is from Ambon, Indonesia; ssp. *nabo* is from Assam.

Nacaduba pavana vajuva Fruhstorfer, 1916
The *Small Four-Lineblue* was found just once at Lowacherra in November 2002. It was also found in the northern Arakan. *N. pavana* Horsfield, 1829 is from Java, Indonesia; ssp. *vajuva* is from Siam.

* ***Nacaduba berenice plumbeomicans*** Wood-Mason & deN 1880
The *Rounded Six-Lineblue* was recorded from the Chittagong Division by de Nicéville (1890) and by Alam (1962). I never came across this readily identified species. *N. berenice* Herrich-Schäffer, 1869 is from Rockhampton, Australia; ssp. *plumbeomicans* is from the Andamans.

Nacaduba kurava euplea Fruhstorfer, 1916
The *Transparent Six-Lineblue* is the most common of the true Lineblues and taken on many occasions in the Srimangal forests. It was also found in the northern Arakan. *N. kurava* Moore, 1858 is from Java, Indonesia; ssp. *euplea* is from Sikkim.

~ ***Nacaduba beroe gythion*** Fruhstorfer, 1916
The *Opaque Six-Lineblue* is known from the lower Khasi Hills and should be in the Srimangal forests. *N. beroe* Felder & Felder, 1865 is from Luzon, the Philippines; ssp. *gythion* is from Assam.

Genus **IONOLYCE** Toxopeus, 1930
The genus has often been included in *Nacaduba*.

~ ***Ionolyce helicon merguiana*** Moore, 1884
The *Pointed Lineblue* was found in Cachar as well as in the northern Arakan and is therefore likely to both in the Srimangal forests and the Chittagong area. *I. helicon* C. Felder, 1860 is from Amboina, Indonesia; ssp. *merguiana* is from Mergui, Burma.

Genus **PETRELAEA** Toxopeus, 1929
The genus has often been included in *Nacaduba*. It is sometimes said also to be Afrotropical due to confusion with the similar *Pseudonacaduba* Stempffer, 1943 which is not closely related structurally, though looking very similar.

 # *Petrelaea dana* de Nicéville, 1883
The *Dingy Lineblue* was found twice; Jamal took one in Baridhara, Dhaka and I took one at a damp patch in Teliapara. Alam (1962) recorded it from Dinajpur which is perfectly possible. It was recorded by de Nicéville from Chittagong. The type locality is Bhutan.

Genus **PROSOTAS** Druce, 1891
The genus has often been included in *Nacaduba*.

 # *Prosotas nora ardates* Moore, 1875
The *Common Lineblue* is the only really common species in the *Nacaduba*-group of genera. We found it very occasionally in the Dhaka Botanical Gardens and in Bhawal National Park. It was often common at mud in the Srimangal forests. It is common in the Arakan and should be in the Chittagong Division. *P. nora* C. Felder, 1860 is from Amboina, Indonesia; ssp. *ardates* is from Kashmir [Cashmere].

 # Prosotas ?pia ?marginata Tite, 1963
The *Additional Lineblue*, if that is what it is, was collected amongst masses of *P. nora* in Lowacherra in March 2002. The three males on hand are much more blue, with little violet tint, and the light striae on the underside less precise and washed out towards the margin. There is no black margin on the upperside. *P. pia* Toxopeus, 1929 is from Java, Indonesia; ssp. *marginata* is from the Naga Hills.

~ Prosotas aluta coelestis Wood-Mason & de Nicéville, 1887
The *Banded Lineblue* was recorded from Cachar by the authors of the subspecies the following year, and as rare from the Khasi Hills by Cantlie (1948). Tite (1963) mentions it only from the Andamans but it is hard to see that Wood-Mason & de Nicéville could have been mistaken. *P. aluta* Druce, 1873 is from Borneo; ssp. *coelestis* is from the Andamans.

 # Prosotas dubiosa indica Evans, 1925
The *Tailless Lineblue* is similar to *P. nora*, but without tails. I found a few in Dhaka Botanical Gardens, Lowacherra, and Teliapara, all males at water. *P. dubiosa* Semper, 1879 is from northern Australia; ssp. *indica* is from Ceylon.

 # Prosotas lutea sivoka Evans, 1910
The *Brown Lineblue* was scarce in Lowacherra but seen in ones and twos on most visits to Teliapara. The light tan undersides make them stand out. Females are more frequently seen than in other members of the *Nacaduba*-group of genera. Emmet (1948) found in common in Arakan and it should be in the Chittagong Division. *P. lutea* Martin, 1895 is from Sumatra, Indonesia; ssp. *sivoka* is from Teesta Valley, India.

Genus **CALETA** Fruhstorfer, 1922
In older literature the genus has often been listed under *Castalius*.

 # Caleta decidia decidia Hewitson, 1876
The *Angled Pierrot* was first recorded when Jamal caught one at the DFID Guest House in Srimangal, but we never saw it elsewhere till it was found

in numbers on the Jahangirnagar University campus in February 2003, much to our surprise. It has also been found in the Malda District by W.H. Irvine in some numbers. The type locality is Ceylon. It is sometimes recorded as *C. caleta* Hewitson, 1876.

~ ***Caleta elna noliteia*** Fruhstorfer, 1918
The *Elbowed Pierrot* is included since it is found at low levels in the Khasi Hills. It seems to be a scarce but widespread in the area. *C. elna* Hewitson, 1876 is from Java, Indonesia; ssp. *noliteia* is from E. India [Sikkim, Bhutan, Assam, Burma].

Genus **DISCOLAMPA** Toxopeus, 1929
In older literature the genus has often been listed under *Castalius*.

Discolampa ethion ethion Westwood, 1851
The *Banded Blue Pierrot* is a pretty little Blue that occurred very sparingly at Lowacherra and it was known from 'Sylhet'. De Nicéville (1890) recorded it from the Chittagong Division where I also caught it at Malumghat. The type locality is Ceylon.

Genus **JAMIDES** Hübner, 1819

Jamides pura pura Moore, 1886
The *White Cerulean* is found at low levels in the Khasi Hills near Sylhet so it was not surprising that we found one in Teliapara forest, but it certainly seems very scarce.

Jamides celeno celeno Cramer, 1775
The *Common Cerulean* is a widespread butterfly. I found it in all the Srimangal forests, as well as in Bandarban in the Chittagong Hill Tracts and in the Dhaka Botanical Gardens. It was found by IUCN in the Sunderbans. Surprisingly there are no previous records. It may be very numerous. The type locality is 'India'.

 # *Jamides alecto eurysaces* Fruhstorfer, 1916
The *Metallic Cerulean* usually occurs at low density. I found it in the Srimangal forests as well as at Kaptai and Bandarban in the Chittagong Hill Tracts. I found one in Balda Gardens, Dhaka in July 1977 and in Baridhara in July 2001. *J. alecto* Felder, 1860 is from Ambon, Indonesia; ssp. *eurysaces* is from Assam. For some time the species was misunderstood as *J. elpis*.

 # *Jamides elpis pseudelpis* Butler, 1879
The *Glistening Cerulean* was known from the Khasi Hills and Cachar. The only Bangladesh record is one caught by Jamal at Kaptai in the Chittagong Hill Tracts among hordes of *J. celeno* (verified by genitalia). *J. elpis* Godart, 1824 is from Java, Indonesia; ssp. *pseudelpis* is from Malacca.

 # *Jamides bochus bochus* Stoll, 1782
The *Dark Cerulean* was found sparingly in the Srimangal forests, in Dhaka Botanical Gardens, and in Bhawal National Park. It should be in the Chittagong Hill Tracts. The habitat seems to be the understory of open forests. The type locality is the Coromandel Coast, S. India.

Genus **LAMPIDES** Hübner, 1819
The genus is Palaeotropical with extensions well into the Palaearctic.

 # *Lampides boeticus* Linné, 1767
The *Pea Blue* is a strong migrant that turned up intermittently in the Srimangal forests and in the Dhaka area. Jamal caught one at Kaptai in the Chittagong Hill Tracts. I found it numerous on *Crotalaria* on the Khotka Plain in the Sunderbans. Surprisingly, there are no previous records. The type locality is 'Barbaria' [Algeria].

Genus **CASTALIUS** Hübner, 1819
Some similar Afrotropical species were placed in this genus, but have now been transferred to *Zintha* Eliot, 1973 and *Tuxentius* Larsen, 1982.

 # *Castalius rosimon* Fabricius, 1775 **PLATE 4**
The *Common Pierrot* does not seem to be recorded previously from Bangladesh though it is very widespread throughout the country in most types of habitat, even in the Sunderbans. The type locality is Tranquebar, India.

Genus **TARUCUS** Moore, 1881
The genus is also found in the Middle East, the Mediterranean, and Africa.

 # *Tarucus ?callinara* Butler, 1867
The *Spotted Pierrot* was found to be plentiful in Bengal by Evans (1955) and I caught one in Balda Gardens, Dhaka in July 1977 but did not find it recently. The type locality is Sheemagar, Upper Burma.

 # *Tarucus balkanicus nigra* Bethune-Baker, 1918
The *Black-Spotted Pierrot* was recorded from Dinajpur by Evans and we found it not rare in various parts of Dhaka but saw it nowhere else. *T. balkanicus* Freyer, 1844 is from 'Turkey'; ssp. *nigra* is from Cutch, India.

*** *Tarucus venosus*** Evans, Moore, 1882
The *Veined Pierrot* was recorded from Rajshahi by Alam (1962) and independently from Bangladesh by D'Abrera (1886). I am still not entirely happy with these identifications. The type locality is Dharmsala, West Himalayas.

Genus **LEPTOTES** Scudder, 1876
Till recently the genus was often listed as *Syntarucus* Butler, 1901 but it is clearly identical with the Neotropical *Leptotes*. It is also in the Afrotropical Region.

~ *Leptotes plinius* Fabricius, 1793
The *Asian Zebra Blue* is a migrant that may be common in Calcutta and has been recorded from the Khasi Hills and the Arakan. I am surprised there are no firm Bangladesh records. The type locality is 'Asia'.

Genus **ZIZEERIA** Chapman, 1910
The genus also has an Afrotropical member.

 # *Zizeeria karsandra* Moore, 1865
The *Dark Grass Blue* was found to be scarce in Dhaka and seen nowhere else, but it is easily overlooked. It should be found in fairly open country, including gardens, throughout Bangladesh. There are no previous records. The type locality is Oudh, Uttar Pradesh, India.

Genus **ZIZINA** Chapman, 1910
The genus also has an Afrotropical member; it is often subsumed under *Zizeeria* in older literature.

 # *Zizeeria otis otis* Fabricius, 1787
The *Lesser Grass Blue* is common in the Dhaka area; I found it also in Srimangal and in the Sunderbans. Alam (1962) recorded it from Chittagong. The type locality is China.

Genus **PSEUDOZIZEERIA** Beuret, 1955
The genus is often subsumed under *Zizeeria*.

 # *Pseudozizeeria maha maha* Kollar, 1848
The *Pale Grass Blue* was found commonly in the Dhaka area and occasionally, very localized, in Lowacherra. Emmet (1948) recorded it from Chittagong. It flies among very low vegetation and on lawns, sometimes being very numerous. The type locality is Mussoorie [Central Himalayas].

Genus **ZIZULA** Chapman, 1910
Z. hylax is also found in Africa, and there are a few representatives in the Neotropics. The genus is often subsumed under *Zizeeria*.

 # *Zizula hylax* Fabricius, 1775
The *Tiny Grass Blue* was surprisingly scarce during my time in Bangladesh. I found it in Balda Gardens, Dhaka in July 1977 and very locally in Lowacherra and Teliapara forests. It was common, however, on vegetation fringing the beach at Inani and Teknaf in the Chittagong Division. There are no previous records. The type locality is 'India'[Tranquebar].

Genus **PITHECOPS** Horsfield, 1828

**** Pithecops corvus correctus*** Cowan, 1965
The *Forest Quaker* was recorded from the Chittagong Hill Tracts by de Nicéville (1890). I never saw it. *P. corvus* Fruhstorfer, 1919 is from ?Sumatra; ssp. *correctus* is from the Naga Hills. The name *P. hylax* has been used in error [junior synonym of *Zizula hylax*].

Genus **AZANUS** Moore, 1881

**** Azanus uranus*** Butler, 1866
The *Indian Babul Blue* was recorded from Dinajpur by Alam (1962); it is rare in Calcutta. It is mainly a dry zone butterfly associated with *Acacia*. The type locality is Hassan Abdal, Punjab.

~ Azanus ubaldus Cramer, 1782
The *Desert Babul Blue* is known from 'Bengal', extending east to the dry Burma plains. The species is migratory and might well have established colonies on *Acacia* grown as roadside trees, which simulates their natural savannah habitat. The type is from India but the species is widespread also in Arabia and Africa.

Genus **ACYTOLEPIS** Toxopeus, 1927
This genus has often been included in *Lycaenopsis* Felder & Felder, 1865 (see Eliot & Kawazoe (1983)). There are numerous members of the *Lycaenopsis*-group of genera in the Khasi Hills, but they do not reach plains level.

 # Acytolepis puspa gisca Fruhstorfer, 1910
The *Common Hedgeblue* was found occasionally at Lowacherra and Teliapara forests. Rather surprising I saw one near Bhairab. It is strongly attracted to human and animal excrement. *A. puspa* Horsfield, 1828 is from Java, Indonesia; ssp. *gisca* is from continental India.

Genus **NEOPITHECOPS** Distant, 1884

 # Neopithecops zalmora zalmora Butler, 1870
The *Common Quaker* is a tiny butterfly that skulks in the shade of deep bushland and is easily overlooked. We saw a few in Dhaka Botanical Gardens, Jahangirnagar University campus, Bhairab, Lowacherra, and Teliapara. Jamal found it at Kaptai in the Chittagong Hill Tracts. The type locality is Burma.

Genus **MEGISBA** Moore, 1881

 # Megisba malaya sikkima Moore, 1884
The *Malayan* was found in the Srimangal forests, but never in numbers. Jamal caught it at Kaptai in the Chittagong Hill Tracts; de Nicéville (1890) also recorded it from the Chittagong area. All Bangladesh material is of the tailed form. *M. malaya* Horsfield, 1828 is from Java, Indonesia; ssp. *sikkima* is from Sikkim.

Genus **EUCHRYSOPS** Butler, 1900
The genus is much better represented in the Afrotropical Region.

 # Euchrysops cnejus Fabricius, 1798
The *Gram Blue* was surprisingly scarce in Bangladesh while I was there. The only recent record was a female collected by Abdul Razzak on the Jahangirnagar University campus (March 2003). I caught it in Balda Gardens, Dhaka in July 1977. No other records were traced. It should be all over the country especially since it is a minor pest of several cultivated pulses, especially dal. The type locality is Tranquebar, S. India.

Genus **CATOCHRYSOPS** Boisduval, 1832

 # Catochrysops strabo strabo Fabricius, 1793
The *Forget-Me-Not* was very scarce during my stay in Bangladesh. I caught a few in Dhaka and a small series on the Khotka Plain in the Sunderbans. There are no previous records. The type locality is 'India orientali' [Tranquebar, S. India].

 # Catochrysops panormus exiguus Distant, 1886
The *Silver Forget-Me-Not* was taken just twice during my research in Bangladesh, once at Lowacherra and once at Kaptai in the Chittagong Hill Tracts by Jamal. There are no previous records. *C. panormus* C. Felder, 1860 is from Amboina, Indonesia; ssp. *exiguus* is from Singapore.

Genus **CHILADES** Moore, 1881
The genus is also in the Afrotropical Region.

**** Chilades pandava*** Horsfield, 1829
The *Plains Cupid* was very scarce and I found just a few around Dhaka. No other records were traced. The type locality is Java, Indonesia.

 # Chilades lajus lajus Stoll, 1870
The *Lime Blue* was common in the Dhaka area and we also found it in Malumghat and Kaptai in the Chittagong Division. Alam (1962) recorded it on the host plant *Citrus* from Pabna. The type locality is Coromandel Coast, India.

~ Chilades putli Kollar, 1844
The *Eastern Grass Jewel* is known from Calcutta and from the Arakan. It should be in Bangladesh but is easily overlooked because of its small size and its similarity with the more common Grass Blues in the field. The type locality is Mussoorie [Central Himalayas]. It was previously known in the combination *Freyeria trochylus putli*, but the generic name is invalid and *C. putli* is specifically distinct from *C. trochylus* Freyer, 1845.

Genus **EVERES** Hübner, 1819
This is an essentially Palaearctic genus where a few species have adapted to tropical climates and one or more are found in most of the Australasian area.

**** Everes lacturnus assamica*** Tytler, 1915
The *Indian Cupid* was recorded from Chittagong by Emmet (1948).

Though not listed from neighbouring areas, there is no need to question the record. *E. lacturnus* Godart, 1824 is from Timor; ssp. *assamica* is from Assam.

Subfamily **Lycaeninae** Leech, 1815

Genus **HELIOPHORUS** Geyer, 1832

~ ***Heliophorus epicles latilimbata*** Eliot, 1963
The *Purple Sapphire* is reported to be found 'mostly from the plains to 2,000 Ft on the southern slopes of the Khasi Hills and should be in Bangladesh. *H. epicles* Godart, 1824 is from East Java; ssp. *latilimbata* is from Sikkim. However, *H. indicus* Fruhstorfer, 1908 is now considered a distinct species that is also found in the Khasi Hills so without seeing the specimen, it is impossible to be sure (Eliot 1963). Fruhstorfer (1908) described *latilimbata* as a form, so it takes Eliot's authorship.

FAMILY **RIODINIDAE** Grote, 1895

Subfamily **Nemeobiinae** Bates, 1868

Genus **ABISARA** Felder & Felder, 1860
The genus has a small number of Afrotropical representatives, being very similar to the Oriental. However, all Oriental species are more closely related to each other than to any African species.

Abisara echerius suffusa Moore, 1882
The *Indian Plum Judy* was caught at Calcutta and in the Malda District. The first Bangladesh record was by Abdul Razzak from the Jahangirnagar University campus in April 2003. *A. echerius* Stoll, 1790 is from southern China; ssp. *suffusa* is from southern China. The correct name is possibly *A. bifasciata* Moore, 1877.

Genus **ZEMEROS** Boisduval, 1836

 # *Zemeros flegyas flegyas* Cramer, 1780 **PLATE 4**
The *Punchinello* is a lively little butterfly that is quite common in dry river beds at Lowacherra, Madhabkundo, and Teliapara forests. I also saw a few in foothills near Inani on the Chittagong coast. There are no previous records. *Z. flegyas* is from 'China'.

Genus **DODONA** Hewitson, 1861

~ *Dodona eugenes venox* Fruhstorfer, 1912
The *Tailed Punch* was found at Dowki and should be in Bangladesh. *D. eugenes* Bates, 1868 is from 'Nepaul and Bhutan'; ssp. *venox* is from Assam.

Genus **TAXILA** Doubleday, 1847

*** *Taxila haquinus fasciata*** Moore, 1878
The *Harlequin* was recorded from Cheringa on the Chittagong coast by Emmet (1948). *T. haquinus* Fabricius, 1793 is from 'Malacca'; ssp. *fasciata* is from Burma.

FAMILY **NYMPHALIDAE** Swainson, 1827

Subfamily ***Libytheinae*** Boisduval, 1832

Genus **LIBYTHEA** Fabricius, 1807
There are a few species also in Africa and the Madagascar subregion, and a very similar genus in the Neotropical Region, again with just a few species. One or two additional species might occur in the Chittagong Hill Tracts. The *Libytheinae* appears to be the sister-group of all other Nymphalidae.

**** Libythea myrrha sanguinalis*** Fruhstorfer, 1898
The *Club Beak* was found at Dowki and was mapped from the Chittagong Hill Tracts by Tsukuda (1982-1991). It should be in Bangladesh, especially since it is somewhat migratory. *L. myrrha* Godart, 1819 is from Bombay; ssp. *sanguinalis* is from Sikkim.

Subfamily **Danainae** Boisduval, 1832

Tribe **Danaini** Boisduval, 1832

Genus **PARANTICA** Moore, 1880
The genus has often been included in *Danaus* Kluk, 1802 or in *Danais* Latreille, 1807. The Danainae were monographed by Ackery & Vane-Wright (1984); their generic classification has found universal favour and is followed here.

**** Parantica agleoides agleoides*** Felder & Felder, 1860
The *Dark Glassy Tiger* is mentioned from 'Chittagong' by de Rhé-Philipe (1910); it is also in the Arakan close to the Bangladesh border. This is its northernmost outposts and it is unlikely to be found in the Srimangal area. The type locality is the 'Malay Peninsula'.

 # Parantica aglea melanoides Moore, 1883
The *Glassy Tiger* is quite common in the Srimangal forests. Jamal caught it at Kaptai in the Chittagong Hill Tracts and Emmet (1948) in Teknaf. Alam (1962) records it from Dacca; it has been caught in Calcutta. *P.*

aglea Stoll, 1781 is from India [Madras Coast]; ssp. *melanoides* is from Nepal.

~ ***Parantica melaneus plataniston*** Fruhstorfer, 1910
The *Chocolate Tiger* was recorded from Dhaka by Alam (1962) but that seems impossible. It has been found at Cachar and in the Arakan and might occur in the forests of Srimangal and, more probably, in the Chittagong Hill Tracts. *P. melaneus* Cramer, 1775 was described from 'Coromandel Coast & China' [recte China]; ssp. *plataniston* is from 'the Himalayas'.

Genus **TIRUMALA** Moore, 1880
The genus was often included in *Danaus* Kluk, 1802, or in *Danais* Latreille, 1807. There are also two Afrotropical species.

Tirumala limniace exoticus Gmélin, 1790 **PLATE 5**
The *Common Blue Tiger* is somewhat migratory and widely distributed in Bangladesh, but not usually common. The species is known to migrate. I found males ingesting pyrrolizidine alkaloids from *Crotalaria* in the Sunderbans. *T. limniace* Cramer, 1775 is from China; ssp. *exoticus* is from Ceylon.

Tirumala septentrionis septentrionis Butler, 1874
The *Dark Blue Tiger* was found just once in Lowacherra. It was quite common at Cachar. It should occur in most of Bangladesh since it is somewhat migratory and often flies with *T. limniace*. The type locality is from Nepal.

* ***Tirumala gautama*** Moore, 1877
The *Scarce Blue Tiger* was recorded from Chittagong by de Nicéville (1886), which is repeated later by Moore himself. Gladman (1947) found it in Teknaf and the Arakan. What presumably happens is that they extend along the Arakan coast in good years from further south in Myanmar, where they are more common, and then build up local populations from time to time. The type locality is Heuzada, Rangoon, Burma.

Genus **DANAUS** Kluk, 1802
The genus has been placed in *Danais* Latreille, 1807, a junior objective synonym. There are members of the genus, and of subgenus *Anosia*, in all three tropical regions.

Subgenus ***Anosia*** Hübner, 1816

 # *Danaus chrysippus chrysippus* Linné, 1758
The *Plain Tiger* is found throughout tropical Asia and Africa, and has even established itself in the Mediterranean and in temperate China. It is not as common as I had expected in Bangladesh but may occur anywhere, even in the Sunderbans. It is the model for the female of *Hypolimnas misippus*. Forms *alcippus* and *dorippus* were never seen. The type locality is Canton, China.

Subgenus ***Danaus*** Kluk, 1802

 # *Danaus genutia genutia* Cramer, 1779 **PLATE 5**
The *Common Tiger* or *Indian Monarch* is a widespread butterfly that was found to be much less common than expected. It occurs everywhere, though not recorded from the Sunderbans. It is the model for the female of *Elymnias hypermnestra*. The type locality is Canton, China. It is often listed as *D. plexippus* Linné, 1758, the American Monarch.

 # *Danaus melanippus indicus* Fruhstorfer, 1899
The *Eastern Common Tiger* is an eastern species that just penetrates Bangladesh, occasionally reaching Calcutta and Orissa in India. I saw it at Teknaf in the Chittagong Division and found it modestly common on the Khotka Plain in the Sunderbans. Sevastopulo (1944) notes it from Khulna. *D. melanippus* Cramer, 1777 is from Java, Indonesia; ssp. *indicus* is from W. Burma. The name *hegesippus* Cramer, 1777 is sometimes applied, but is limited to southern Burma and Malaya.

Genus **EUPLOEA** Fabricius, 1807

The genus was earlier split in numerous genera based on the clear

differences in the male androconial organs, but this was quite excessive splitting. There is an *Euploea* also in the Madagascar subregion.

Euploea sylvester hopei Felder & Felder, 1865
**** E. sylvester coreta*** Godart, 1819
The *Double-Branded Crow* in its ssp. *hopei*, with blue forewing, is known from 'Silhet' and Dowki, as well as the Arakan, and should occur in the east of the country. Ssp. *coreta*, with black forewing as in *E. core*, is known from Dhaka (as *coreoides* Moore, 1877) (Alam 1962); ssp. *hopei* is from E. India [Assam, Cachar, Bengalia, Darjeeling] and ssp. *coreta* from 'East Indies' [probably Pondicherri, S. India. *E. sylvester* Fabricius, 1793 is from Queensland, Australia.

 # Euploea mulciber mulciber Cramer, 1777 **PLATE 5**
The *Striped Blue Crow* is sometimes quite common in the Srimangal forests; Jamal found one at Kaptai in the Chittagong Hill Tracts. There are no other records. It is the main model for both *Chilasa slateri* and *Elymnias malelas*, a fine example of parallel evolution. The type locality is 'E. India'. The name *E. linnaei* Moore, 1883 was used in early literature when the name *mulciber* was erroneously associated with *E. midamus*.

 # Euploea midamus rogenhoferi Felder & Felder, 1865
The *Blue-Spotted Crow* seems to be very rare in our area. One was caught at Dowki and four at Cachar. I found a few just once at Lowacherra (May 2002). The more elongate forewing and the one cm brand on the male forewing immediately made clear that it was different from *E. klugii*. *E. midamus* Linné, 1758 is from Canton, China; ssp. *rogenhoferi* is from 'India sept.' [Assam]. The name *E. splendens* Butler, 1866 is best considered a junior synonym of *rogenhoferi*.

 # Euploea klugii klugii Moore, 1858
Euploea klugii kollari Felder & Felder, 1865
The *Blue King-Crow* (ssp. *klugii*) with a blue forewing was found sporadically during the first half of the year in Lowacherra, Teliapara, and at Madhabkundo Falls. The *Brown King-Crow* (ssp. *kollari*) has a brown

forewing with postdiscal and submarginal spots as in *E. core*. It flies through the Eastern Ghats to West Bengal, reaching Calcutta from time to time, and might be found in Bangladesh. The nomenclatural history is quite confused, and many names have been used in our area. *E. klugii* Moore, 1858 is from Assam (Cherrapunji, Khasi Hills). Ssp. *kollari* has no type locality, but is probably from 'India sept.'. Ssp. *sinhala* Moore, 1877 is from Ceylon but also flies in the Western Ghats of India; the name *kollari* has been erroneously applied to this. The name *erichsonii* Felder & Felder, 1865 (TL Siam) has been applied to Bangladesh (Ackery & Vane-Wright 1984), but this commences in western Burma (perhaps Chittagong); *crassa* Butler, 1866 seems to be a junior synonym thereof.

 # *Euploea algea deione* Westwood, 1848

The *Long-Branded Blue Crow* is a scarce butterfly that we found from time to time in Lowacherra Forest. It was recorded from Teknaf in the Chittagong Hill Tracts by Gladman (1947) as ssp. *limborgii* Moore, 1879 [Tenasserim, Burma]. *E. algea* Godart, 1819 is from Buru, Indonesia; ssp. *deione* is from 'Bengal'.

 # *Euploea core core* Cramer, 1780

The *Common Crow* is the most common of the Danainae in Bangladesh and is found everywhere, including the Sunderbans. It is, however, never numerous. Males are often seen patrolling for hours in a restricted area with the bright yellow pheromone-dispensing brushes extruded and the abdomen bent. It may aggregate in winter roosts. It is the model for the female of *Hypolimnas bolina*. The type locality is the Coromandel Coast, S. India.

 # *Euploea crameri nicevillei* Moore, 1890 **PLATE 5**

The *Sunderbans Crow* is limited to the Sunderbans and other mangroves on the Indian Bengal coast. I found it quite common on the Khotka Plains in December 2002, together with *E. core*. In October a IUCN expedition had found the species here for the first time since its description (though it seems to have been found also in Orissa mangroves a hundred years ago).

E. crameri Lucas, 1853 is from Borneo, Malaysia; ssp. *nicevillei* is from the 'Calcutta Sunderbunds' [probably Bangladesh].

**** Euploea doubledayi doubledayi*** Felder & Felder, 1865
The *Striped Black Crow* was described from Sylhet and is known from Cachar; it also occurs in the northern Arakan. It is a lowland butterfly that should occur in Bangladesh, but I never came across it. The type locality is Sylhet. It is sometimes listed as *E. alcathoe* Godart, 1819 or as a subspecies thereof.

~ Euploea radamanthus radamanthus Fabricius, 1793
The *Magpie Crow* occurs widely in the Arakan and was common in Cachar. It should be both in the Srimangal forests and in the Chittagong Division. The type locality is Canton, China. Several subspecies were described from Assam, but seem unnecessary. It is often listed as *E. diocletianus* Fabricius, 1793.

Genus **IDEA** Fabricius, 1807
The generic name *Hestia* Hübner, 1816 has often been used but *Idea* has priority. This distribution of the genus is interesting; there is one species in the Western Ghats of India, but the Sunderbans apart it recurs only in Myanmar, south to Sundaland.

 # Idea agamarschana arrakana Fruhstorfer, 1910
The *Burma Tree Nymph* is a large butterfly of mangrove habitats which in Bangladesh is limited to the Sunderbans and the mangroves at Teknaf, most of which have disappeared. I saw a few during my only visit on the Khotka Plains in the Sunderbans, almost floating along the edge of the forest canopy. *I. agamarschana* Felder & Felder, 1865 was described from the Andamans but is certainly from southern Myanmar (Tavoy area), since the Andamans populations are quite different (ssp. *cadelli* Wood-Mason & de Nicéville 1880); the excellent painting of the male type cannot have been from the Andamans. Ssp. *arrakana* is from 'Arakkan'. Ssp. *margherita* Fruhstorfer, 1910 (TL Margherita, Assam) is some sort of

error; there are no *Idea* in Assam. It was often placed as a subspecies of *I. lynceus* Drury, 1773.

Subfamily ***Satyrinae*** Boisduval, 1833

Tribe **Melanitini** Reuter, 1896

Genus **MELANITIS** Fabricius, 1807
The genus also has three representatives in the Afrotropical Region.

 # *Melanitis leda leda* Linné, 1758 **PLATE 5**
The *Common Evening Brown* is a very common butterfly throughout Bangladesh, especially when the dry season morphs hatch at the end of the monsoon. I even saw a few in the Sunderbans. It flies in any type of country and is often common in gardens. Seasonal variation is very strong. The type locality is 'Asia'. *M. leda* is also in the Afrotropical Region.

*** *Melanitis phedima bela*** Moore, 1857
The *Dark Evening Brown* was recorded from Sylhet by Alam (1962). It is also in the Arakan and should be in the Chittagong Hill Tracts. The habitat is forest in fair condition. *M. phedima* Stoll, 1780 is from Java, Indonesia; ssp. *bela* is from 'Bengal'.

Tribe **Elymniini** Herrich-Schäffer, 1864

Genus **ORINOMA** Gray, 1846
~ *Orinoma damaris* Gray, 1846
The *Tiger Brown* has been recorded from Cachar and 'Sylhet' and though it apparently usually does not descend to the plains should be in Bangladesh. The type locality is Nepal.

Genus **ETHOPE** Moore, 1866
The generic name *Anadebis* Butler, 1867 was long used, but it is a junior objective synonym of *Ethope*.

~ ***Ethope himachala*** Moore, 1857
The *Dusky Diadem* was recorded from Dowki and found commonly in Cachar; it was also recorded from the Arakan. Kaushic Mondal (pers. comm.) believes that it was caught in the Chittagong Hill Tracts by Dhaka University researchers. It is likely to be in both the Srimangal forests and in the Chittagong Division. The type locality is 'Bengal'.

Genus **PENTHEMA** Doubleday, 1848
The genus used to be placed among the Nymphalinae since the members do not look like Satyrinae at all.

~ ***Penthema lisarda lisarda*** Doubleday, 1845
The *Yellow Kaiser* was found very commonly in Cachar and should occur in the Srimangal forests. The type locality is 'India bor.'.

Genus **ELYMNIAS** Hübner, 1818
Several generic names have been applied to what at most should be considered species-groups.

Elymnias hypermnestra undularis Drury, 1773
The *Common Palmfly* is widely distributed in Bangladesh and often quite common, though females are rarely seen. It was even found in the Sunderbans by an IUCN expedition. *E. hypermnestra* Linné, 1763 is from 'Java'; ssp. *undularis* is from 'Bengal'.

* ***Elymnias penanga chelensis*** de Nicéville, 1890
The *Pointed Palmfly* was found near Sylhet (de Nicéville 1885) and at Cheringa in the Chittagong area. It is generally rare. *E. penanga* Westwood, 1851 is from Penang, Malaysia; ssp. *chelensis* is from the Khasi Hills.

Elymnias nesaea timandra Wallace, 1869
The *Tiger Palmfly* was known from Dowki, but the only firm record from Bangladesh is a single perfect female that came to a banana trap in Lowacherra Forest in March 2002. It is also in the northern Arakan. *E. nesaea* Linné, 1764 is from 'Asia' [Java]; ssp. *timandra* is from 'Sylhet'.

 # Elymnias malelas malelas Hewitson, 1865
The *Spotted Palmfly* is known with certainty only from a male that I took near Bandarban in the Chittagong Hill Tracts. There is a female, presumably from Bangladesh, in the Jahangirnagar University Zoology Department; it is believed to be from the campus, but that seems improbable for a forest butterfly. There is a record from 'Sylhet' (Marshall & de Nicéville 1883). The type locality is 'Bengal'. The name *leucocyma* Doubleday, 1844 has sometimes been employed, but this is a misidentification.

~ Elymnias patna patna Westwood, 1851
The *Blue-Striped Palmfly* was found at Dowki and in Cachar and should occur in Bangladesh. It is a rare and secretive butterfly. The type locality is 'East India'.

~ Elymnias vasudeva deva Moore, 1893
The *Jezebel Palmfly* was found at Dowki and in the northern Arakan (Emmet 1948). It is almost certainly in Bangladesh, but is rare in forested areas. *E. vasudeva* Moore, 1857 is from 'Bengal'; ssp. *deva* is from the Khasi Hills. If in the Chittagong area it will perhaps be in ssp. *burmensis* Moore, 1893 [Tenasserim].

Genus **LETHE** Hübner, 1819
The genus was subject to excessive splitting about 100 years ago. Most of the species are from mountainous areas, usually from 800m up; some are common in the Khasi Hills and recorded from 'Sylhet', where they almost certainly do not occur. A few additional species might be in the Chittagong Hill Tracts.

 # Lethe vindhya vindhya C. Felder, 1859
The *Black Forester* was recorded from Chittagong by Alam (1962). It is quite common in Lowacherra in March and April, but sporadic at other times; it is much less common at Teliapara. It likes resting on the vertical banks of streams or cut roads, but otherwise skulks in bamboo thickets. The type locality is Assam.

 # *Lethe mekara zuchara* Fruhstorfer, 1911
The *Common Red Forester* was known from Dowki so it was not surprising to find it moderately common at Lowacherra and occasionally in Teliapara. There are no previous Bangladesh records. *L. mekara* Moore, 1857 is from Darjeeling, India; ssp. *zuchara* is from Assam.

 # *Lethe europa niladana* Fruhstorfer, 1911
The *Bamboo Treebrown* is widely distributed and known from Calcutta and Cachar. We caught a few at Lowacherra on separate occasions and one on a hotel terrace in Srimangal Town. It should also be in the Chittagong Division since it is known from the northern Arakan. I would have expected it even in Dhaka. *L. europa* Fabricius, 1775 is from South India; ssp. *niladana* is from 'Kumaon to Burma'.

~ *Lethe rohria rohria* Fabricius, 1787
The Common Treebrown was caught in the northern Arakan and is known from Calcutta and Cachar. It must be in Bangladesh. The type locality is S. India.

Genus **MYCALESIS** Hübner, 1818
The genus was subject to excessive splitting up to about 100 years ago. At least 25 other genera are now placed in synonymy. Many of the species and subspecies have been combined and recombined in different ways. A few additional species will probably be found in Bangladesh. Most of the species are seasonally dimorphic, with the eye-spots suppressed in the dry season. The most extreme case is *M. visala* where ground-colour and wing shape are also altered.

~ *Mycalesis fransisca sanatana* Moore, 1857
The *Lilacine Bushbrown* is included since it was found at the lower levels of the Khasi Hills near Sylhet and has been found at low levels elsewhere. *M. fransisca* Stoll, 1780 is from China; ssp. *sanatana* is from Assam. Some authors consider ssp. *sanatana* to be specifically distinct.

 # *Mycalesis anaxias aemate* Fruhstorfer, 1911
The *White-Bar Bushbrown* is known from Lowacherra, where we met with it sporadically, rarely seeing more than two or three on any one day. It is also in the Arakan and should be in the Chittagong Division as well. A few came into banana traps. *M. anaxias* Hewitson, 1862 is from South India (Kanara); ssp. *aemate* is from Tenasserim, Burma.

 # *Mycalesis gotama charaka* Moore, 1874 **PLATE 5**
The *Chinese Bushbrown* was found in some numbers in a very restricted spot in Lowacherra forest during my last visit there in February 2003. It was known from 'Sylhet'. At this time large numbers of the dry season form of *M. mineus* and *M. visala* were also on the wing, with lesser numbers of *M. perseus*, seen there also for the first time. The dry form of *M. gotama* is less extreme than in the others. The type locality of *M. gotama* Moore, 1857 is from China (Chusan); ssp. *charaka* is from NE India.

 # *Mycalesis perseus blasius* Fabricius, 1798
The *Common Bushbrown* was found very rarely in the Dhaka area, being outnumbered by *M. mineus*, *M. visala*, or both. I saw it just once in Lowacherra (14.ii.2003). In the Chittagong Division was not rare at Malumghat and very common inside the large betel plantations around Inani. Males would sit on the bamboo fences so prevalent in the area, which is unusual for a *Mycalesis*. We found a few also near Bandarban. *M. perseus* Fabricius, 1775 is from Australia; ssp. *blasius* is from East India.

 # *Mycalesis mineus mineus* Linné, 1767
The *Dark-Brand Bushbrown* was rather sporadic in the Dhaka area, but sometimes very common in the Srimangal forests. An IUCN team found it in the Sunderbans. The habitat is open forests and dense bushland, including gardens. The type locality is Canton, China.

~ *Mycalesis intermedia* Moore, 1891
The *Intermediate Bushbrown* is known from 'Sylhet' and from the northern Arakan, and should be in Bangladesh. The type locality is 'Sylhet'. *M. khasia* Evans, 1920 is a junior synonym.

 # Mycalesis visala visala Moore, 1857
The *Long-Brand Bushbrown* was sometimes common at Lowacherra and Teliapara; large numbers would enter banana traps (at least 25 in one trap). It was found on the Jahangirnagar University campus, but not in Bhawal National Park or elsewhere in the Dhaka area. Seasonal variation is extreme. Gladman (1947) found it in the Arakan, so it should be in the Chittagong Hill Tracts. The type locality is 'Bengal'.

~ Mycalesis suaveolens suaveolens Wood-Mason & de Nicéville, 1883
The *Wood-Mason's Bushbrown* has Cachar as type locality and is known from the lower slopes of the Khasi Hills. It should be in the Srimangal forests. The habitat is dense forest. The type locality is Cachar.

~ Mycalesis malsarida Butler, 1868
The *Plain Bushbrown* is known from both Cachar and Dowki, so it should be in the Srimangal forests. The type locality is Assam. *M. khasiana* Moore, 1890 is a junior synonym, based on one of the seasonal forms which were not fully understood at that time.

**** Mycalesis malsara*** Moore, 1857
The *White-Line Bushbrown* was recorded by Doherty (1886) as being taken abundantly in the dry season form (*rudis*) in the Chittagong Hill Tracts. It was also found at Dowki and should be in the Srimangal forests. The type locality of *B. malsara* is 'Bengal'.

Genus **ORSOTRIAENA** Wallengren, 1858
 # Orsotriaena medus medus Fabricius, 1775
The *Nigger* was quite common in Lowacherra forest. We caught it also near Bandarban in the Chittagong Hill Tracts. Dhaka garden suburbs should suit it, but we never found it there. The three prominent hindwing eye-spots disappear in the dry season form. The type locality is Calcutta, India.

Tribe **Eritini** Miller, 1968

Genus **ERITES** Westwood, 1851

~ ***Erites falcipennis falcipennis*** Wood-Mason & de Nicéville, 1883

The *Common Cyclops* is known from Cachar, from the Khasi Hills, and is certain to be in Bangladesh. The type locality is Cachar, Assam.

Genus **RAGADIA** Westwood, 1851

~ ***Ragadia crisilda crisilda*** Hewitson, 1862

The *Striped Ringlet* is known as a lowland forest species from both Cachar and 'Sylhet' and should be in the Srimangal area. The boldly banded underside with a full row of marginal eye-spots makes it conspicuous when sitting on green leaves. The type locality is Assam.

Tribe **Satyrini** Boisduval, 1833

Genus **YPTHIMA** Hübner, 1818

Members of the genus are relatively small butterflies that flutter about in grassy places, with some shade on hand. They are frequent visitors to flowers unlike the other Satyrinae. There has been endless confusion in the taxonomy and nomenclature of the genus, which is also well represented in the Afrotropical Region. At least a dozen genera are placed as synonyms. Species and subspecies have been combined, re-combined, and synonymized on numerous occasions. Surprisingly, I found only two species in Bangladesh, but there are probably more than listed here. The male genitalia are usually diagnostic.

~ ***Ypthima inica*** Hewitson, 1864

The *Lesser Three-Ring* is generally listed as occurring from Punjab to Bengal and is recorded from near Bangladesh in the Malda District (Bholahat) by Elwes & Edwards (1893). The type locality is North India (almost certainly Bengal).

Ypthima huebneri Kirby, 1871

The *Common Four-Ring* is a very common butterfly that was mostly found

to be scarce in Bangladesh, though often numerous in peninsular India (and in Cachar). I found very few on a number of occasions in the Dhaka Botanical Gardens, and a few in Malumghat in the Chittagong Division. I did find many in Lowacherra in February 2003. It was collected in the Sunderbans by an IUCN team. There is extreme seasonal variation. The type locality is India [almost certainly Bombay or Madras, *teste* Gaonkar]. The species is sometimes erroneously listed as a subspecies of *Y. ceylonica* Hewitson, 1864, the genitalia of which differ substantially.

 # *Ypthima baldus baldus* Fabricius, 1775
The *Common Five-Ring* is a very common butterfly in the Srimangal forests, as well as in the Chittagong area (Bandarban, Malumghat, Inani). It is in Calcutta and should be elsewhere as well. Seasonal variation is modest. It is most common in fairly open places in forest country and comes readily to flowers. The type locality is 'India' [Bengal].

Subfamily **Morphinae** Newman, 1834

Tribe **Amathusiini** Moore, 1894

Genus **THAUMANTIS** Hübner, 1826

~ *Thaumantis diores diores* Doubleday, 1845
The *Jungle Glory* is known from the lower slopes of the Khasi Hills and from the Arakan. It should be in Bangladesh. The type locality is 'Sylhet'.

Genus **DISCOPHORA** Boisduval, 1836

 # *Discophora sondaica zal* Westwood, 1851
The *Common Duffer* was recorded from Sylhet by Alam (1962). We found it intermittently in the Srimangal forests in ones or twos. Jamal caught one at light in Noakhali and we saw some in the Dhaka Botanical Gardens. One was caught on the Jahangirnagar University campus. There is one in a small collection at the Baptist Hospital in Malumghat. *D. sondaica* Boisduval, 1836 is from Java, Indonesia; ssp. *zal* is from 'India orientali'.

 # *Discophora timora timora* Westwood, 1850 **PLATE 6**
The *Great Duffer* is known with certainty from Bangladesh only from a single female that entered a banana trap in Lowacherra in March 2002. The type locality is 'Sylhet'. The species has also been known as *D. celinde* Stoll, 1790 and as *continentalis* Staudinger, 1885.

Genus **STICHOPTHALMA** Felder, 1862

~ *Stichopthalma camadeva camadevoides* de Nicéville, 1899
The *Northern Jungle Glory* was once very common in Cachar and in the lower parts of the Khasi Hills. It is also known from the Arakan. I suspect I saw one at long distance in the Lowacherra Forest's bamboo zone. *S. camadeva* Westwood, 1848 is from India, Sikkim; ssp. *camadevoides* is Cachar, Assam.

Genus **AMATHUXIDIA** Staudinger, 1887

~ *Amathuxidia amythaon amythaon* Doubleday, 1847
The *Ko-hi-noor* is known from Dowki and was described from 'Sylhet'. There are also records from Cachar. It is certain to be in Bangladesh. The type locality is 'Sylhet'.

Subfamily **Apaturinae** Boisduval, 1840

Genus **ROHANA** Moore, 1880

~ *Rohana parisatis parisatis* Westwood, 1850
The *Black Prince* was 'common in Dowki and on rivers as they emerge from the mountains'. It is bound to be in the Srimangal Forests. The type locality is Assam [Silhet].

Genus **DILIPA** Moore, 1857

~ *Dilipa morgiana* Westwood, 1850
The *Golden Emperor* generally does not descend below 700 m or so, but is

included here on the basis of a capture at Dowki. The type locality is Khasi Hills (*teste* Gaonkar).

Genus **EURIPUS** Doubleday, 1848

 # Euripus nyctelius nyctelius Doubleday, 1845 **PLATE 6**
The *Courtesan* was present in small numbers in Lowacherra on most of my visits. Single males would suddenly swoop down to damp patches from high up, always together with *Athyma ranga*. It is common in the Arakan and should be in the Chittagong Hill Tracts. The dimorphic females are fine mimics of blue *Euploea* and of *E. radamanthus* but we never saw any. The name *halitherses* Westwood, 1850 is used in most older literature; because of the polymorphism and dimorphism the species was described under both names.

Subfamily **Charaxinae** Guenée, 1865

Tribe **Charaxini** Guenée, 1865

Genus **CHARAXES** Ochsenheimer, 1816

**** Charaxes psaphon imna*** Butler, 1870
The *Indian Tawny Rajah* is found from South India to Calcutta, where it is very rare. A single male in relatively poor condition was collected by an IUCN expedition to the Sunderbans in October 2002. It is smaller and duller than material of *C. bernardus* from Srimangal and the black markings are more extensive. It certainly seems to be this species, but more material would be desirable. *C. psaphon* Westwood, 1847 is from Ceylon; ssp. *imna* is from S. India.

 # Charaxes bernardus Felder & Felder, 1867 **PLATE 6**
The *Tawny Rajah* is quite common in Lowacherra and Teliapara forests. It is also recorded from Chittagong by de Nicéville (1886). Most of those seen are males coming to excrement and rotting substances; I never had any in banana traps. I once found one in the net of a *Nephele* spider, which

given the strength of a *Charaxes* is amazing. Males come in several different forms: there may or may not be a white forewing band; the base of the forewing may be tawny or olivaceous; and there are sometimes white submarginal spots on both wings. Experience with the 'black charaxes' from Africa makes me feel sure that at least three distinct species are involved. The type locality of *C. bernardus* Fabricius, 1793 is China; many other names are available. The entire complex throughout Asia badly needs an in-depth revision.

 # *Charaxes marmax marmax* Westwood, 1848
The *Yellow Rajah* is generally a rare butterfly. The only Bangladesh record is a male that I captured on human excrement on the railway line through Lowacherra Forest in May 2002. Emmet (1948) often found it hilltopping in the Arakan and it should be in the Chittagong Hill Tracts as well. The type locality is 'Sylhet'.

~ *Charaxes kahruba kahruba* Moore, 1896
The *Variegated Rajah* is a rather rare species that often flies with *C. marmax* and is known from Cachar, 'Sylhet', and the Arakan. It is certain to be in Bangladesh. The type locality is Sikkim.

 # *Charaxes solon sulphureus* Rothschild & Jordan, 1898
The *Black Rajah* was found with many other butterflies on sap oozing from the crown of a low palm in Bhawal National Park in March 2002. It is known also from the northern Arakan. Despite a very wide distribution it seems to be local and rarely numerous. *C. solon* Fabricius, 1793 is from Tranquebar, South India, and may reach Calcutta; ssp. *sulphureus* is from Tenasserim & the Shan States.

Genus **POLYURA** Billberg, 1820
The genus has been referred to *Eriboea* Hübner, 1819, which is actually a junior synonym of *Charaxes*.

 # *Polyura athamas athamas* Drury, 1770 **PLATE 6**
The *Common Nawab* is known from Sylhet and the Srimangal forests and,

according to de Nicéville (1886), also in the Chittagong Hill Tracts. I expected to see it in Dhaka, but never did. The type locality is 'China'.

 # *Polyura arja* Fielder & Felder, 1867
The *Pallid Nawab* is a larger and more wide-banded cousin of *P. athamas*, usually less common and more tied to good forest. It was known from Cheringa (Emmet 1948) and from Chittagong (de Nicéville 1886). We saw it regularly in small numbers in the Srimangal forests. The type locality is 'Silhet'.

 # *Polyura delphis delphis* Doubleday, 1843
The *Jewelled Nawab* is a spectacular butterfly that I had not expected in Bangladesh, despite its having 'Silhet' as type locality. On my first visit to Srimangal a perfect female was in a banana trap together with large numbers of *Melanitis leda*, various *Bicyclus,* and *Tanaecia lepidea*. I found it twice in Lowacherra and once at Teliapara on rotting substances. A group of tourists videoed one on a cow-pat for fifteen minutes. In flight it can be confused with *Catopsilia pomona*. The type locality is 'Silhet'.

~*Polyura schreiber assamensis* Rothschild, 1899
The *Blue Nawab* is an unusual and generally very rare butterfly that is well known from the Khasi Hills (450-1900m). Since it is usually found at lower levels than this, including Cachar and the Arakan, it should be in Bangladesh. The type of ssp. *assamensis* is Khasi Hills, that of *P. schreiber* Godart, 1824 Java.

Subfamily **Heliconiinae** Swainson, 1822

Tribe **Acraeini** Boisduval, 1833

Genus **ACRAEA** Fabricius, 1807
A. violae is often placed in the quite unnecessary genus *Telchinia* Hübner, 1816. The genus is strongly represented in Africa and to a lesser extent in the Neotropical Region. The subfamily Acraeinae should probably be demoted to a tribe under the Heliconiinae.

* ***Acraea violae*** Fabricius, 1775 **PLATE 6**

The *Indian Acraea* or *Tawny Coster* is known from Dhaka (Ameen & Chowdhury 1968) and was found during seven months of 1996/1997 on the Jahangirnagar University campus in a thesis, which also records it from Chittagong (Jahangirnagar University 1998). I never saw it. The type locality is Tranquebar, S. India.

Genus **CETHOSIA** Fabricius, 1807

\# ***Cethosia cyane cyane*** Drury, 1773 **PLATE 6**

The *Leopard Lacewing* was quite common in the Srimangal forests, with at least some about on all visits. Jamal caught one on the grounds of Dhaka University and it was then found to be common on the Jahangirnagar University campus. Even more surprising was its presence in the Sunderbans, established by a team from the IUCN. The type locality is Bengal.

~ ***Cethosia biblis tisamena*** Fruhstorfer, 1912

The *Red Lacewing* is common at higher levels in the Khasi and Naga Hills, but also listed from 'Sylhet', and was found at Cachar. It should also be in the Srimangal forests. *C. biblis* Drury, 1773 is from southern China; ssp. *tisamena* is from 'India'.

Tribe **Vagrantini** Pinratana & Eliot, 1996

Genus **PHALANTA** Horsfield, 1829

Especially *P. alcippe* has often been placed in the genus *Atella* Doubleday, 1848, whose African type species can hardly be distinguished from *P. phalantha*.

\# ***Phalanta phalantha phalantha*** Drury, 1770

The *Common Leopard* is widespread in Bangladesh, but not very common, and quite scarce in the Srimangal forests. There are no records from the Chittagong Division or from the Sunderbans, but since it is migratory it probably occurs there. Both sexes are fond of *Lantana* flowers. The type

locality is 'India' [either Madras or Bombay from where Drury received material].

~ ***Phalanta alcippe alcippoides*** Moore, 1899
The *Small Leopard* was collected at Dowki and should be in the Srimangal forests. It is on the map of Tsukuda from the Chittagong Division (1982-1991). *P. alcippe* Stoll, 1782 is from Ambon, Indonesia; ssp. *alcippoides* was described as a wet season form and may not be valid as a subspecies.

Genus **CIRROCHROA** Doubleday, 1848

Cirrochroa tyche mithila Moore, 1872
The *Common Yeoman* was quite frequent in Cachar but not at low levels in the Khasi Hills. The only Bangladesh record is a single male (two more seen) from Lowacherra (May 2002). It is also in the Arakan. A stray was once caught in Calcutta and another in Malda District. *C. tyche* Felder & Felder, 1861 is from Mindoro, the Philippines; ssp. *mithila* is from Bengal.

Genus **VAGRANS** Hemming, 1934
In older literature the genus is often given as *Issoria* Hübner, 1819, the type species of which has nothing to do with *Vagrans*.

Vagrans sinha sinha Kollar, 1848
The *Vagrant* is known from 'Sylhet', the lower Khasi Hills, and Cachar. I saw a male in Teliapara in May 2002. It is also in the Arakan and probably in the Chittagong Hill Tracts. The type locality is 'Himalaya, Massuri' [Mussoorie]. In older literature the name *A. egista* Stoll, 1780 is used; the two taxa are now considered specifically distinct.

Genus **CUPHA** Billberg, 1881

* ***Cupha erymanthis lotis*** Sulzer, 1776
The *Rustic* is known from Dhaka where it does not occur today: 'Captain Mortimer J. Slater notes that this species was tolerably plentiful at Dacca, 1844. Flies quietly and is easily captured.' (de Nicéville 1886). It was common at Dowki and in the Arakan, indicating its presence in the

Srimangal forests and the Chittagong Division. The type locality of *C. erymanthis* Drury, 1773 is 'S China'; ssp. *lotis* is from northern India.

Genus **VINDULA** Hemming, 1934
In older literature the name *Cynthia* Fabricius, 1807 is often employed; this genus has *Vanessa cardui* as its type species and has nothing to do with the species placed in *Vindula*.

~ ***Vindula erota erota*** Fabricius, 1793
The *Cruiser* was found at Cachar and in the lower parts of the Khasi Hills; de Nicéville (1886) records it from 'Sylhet'. It must be in the Srimangal forests. The type locality is Pulau Salang, southern Thailand.

Tribe **Argynnini** Swainson, 1833

Genus **ARGYREUS** Scopoli, 1771

~ ***Argyreus hyperbius hyperbius*** Linné, 1764
The *Indian Fritillary* is from a Palaearctic group that is found from the Himalayas to China, but also in montane zones of the tropics such as Ethiopia, South India, Sri Lanka, Malaysia, Indonesia, and even Papua New Guinea. It is common on the plateau of the Khasi Hills. The species tends to migrate down during winter and to breed on the plains (Larsen 1986), so it should occur in the Sylhet area from time to time. The type locality is Canton, China.

Subfamily **Limenitidinae** Behr, 1864

Tribe **Adoliadini** Doubleday, 1845

Genus **DOPHLA** Moore, 1880
This genus is included in *Euthalia* in older literature.

~ ***Dophla evelina derma*** Kollar, 1848
The *Red-Spot Duke* has been found at Dowki, and said to be 'somewhat

common' in 'Sylhet'. It is also in the northern Arakan and should be in Bangladesh. It is a rare, local, and shy butterfly lowland forest butterfly. *D. evelina* Stoll, 1790 is from Coromandel Coast, India; ssp. *derma* is from 'Himalaya, Massuri [Mussoorie].

Genus **BASSARONA** Moore, 1897
This genus is included in *Euthalia* in older literature.

~ ***Bassarona teuta teuta*** Doubleday, 1848
The *Banded Marquis* is known from the Arakan, Cachar, and 'Sylhet' and should be in Bangladesh. It is the most widespread of the *Bassarona*, extending to the Philippines and Malaysia. The type locality is 'Sylhet'.

Genus **LEXIAS** Boisduval, 1832
This genus is included in *Euthalia* in older literature.

* ***Lexias dirtea khasiana*** Swinhoe, 1893
The *Southern Archduke* is a fine butterfly that was recorded from Cheringa by Emmet (1948). It is also known from Dowki and Cachar, so it should be in the Srimangal forests as well. *L. dirtea* Fabricius, 1793 is from the Naga Hills, Myanmar; ssp. *khasiana* is from the Khasi Hills, Meghalaya and may be superfluous.

~ ***Lexias cyanipardus cyanipardus*** Butler, 1869
The *Great Archduke* is very close to *L. dirtea*. It was recorded from Cachar and taken frequently at Dowki, so it should be in Bangladesh. The type locality is 'Sylhet' [Khasi Hills].

Genus **EUTHALIA** Hübner, 1819

Euthalia lubentina indica Fruhstorfer, 1904
The *Gaudy Baron* is one of the few members of the genus to be found in more open and drier forests. It seems to be somewhat migratory in India. We found it common once (March 2002) in Bhawal National Park where many were imbibing sap from wounded palm in the company of dozens of

E. aconthea. In October 2002 Jamal took one at light in Noakhali! *E. lubentina* Cramer, 1777 is from southern China; ssp. *indica* is from Sikkim.

 # *Euthalia aconthea garuda* Moore, 1857 **PLATE 7**
The *Common Baron* is a species of rather open country and drier forests which is not rare in and around Dhaka, from where it was recorded by Ameen & Chowdhury (1968). At the old ferry ghat in Bhairab several usually flew about the many food vendors, settling on fruit and sugar confections. It was only seen once at Lowacherra. Many came to sap bleeding from a palm in Bhawal National Park. *E. aconthea* Cramer, 1777 is from Java, Indonesia; ssp. *garuda* is from 'NE India'.

~ *Euthalia alpheda jama* Felder & Felder, 1867
The *Streaked Baron* is included since it is known from Dowki, Cachar and the northern Arakan. We certainly never saw it. *E. alpheda* Godart, 1824 is from Java, Indonesia; ssp. *jama* is from Sikkim.

*** *Euthalia anosia anosia*** Moore, 1857
The *Grey Baron* was recorded from Chittagong by de Nicéville (1886) and was found also in Cachar; it should thus occur in the Srimangal forests. The type locality is Assam.

 # *Euthalia monina kesava* Moore, 1859
The *Powdered Baron* is not uncommon in Lowacherra forest and could usually be found in one spot on visits to Teliapara. Tsukuda (1982-1991) includes Chittagong in its range on his usually very exact maps. *E. monina* Fabricius, 1787 is from western Malaysia; ssp. *kesava* is from 'Silhet'.

~ *Euthalia telchinia* Ménétriés, 1857
The *Blue Baron* is known from the lower Khasi Hills and Cachar and should be in the Srimangal forests. The type locality is 'India Orientalis' [almost certainly Khasi Hills].

 # *Euthalia phemius* Doubleday, 1849
The *White-Edged Blue Baron* was scarce in just one part of Lowacherra Forest, and I saw one at Teliapara. Emmet (1948) recorded it from Cheringa in the Chittagong Division and it is also in the Arakan. The type locality is 'Sylhet'.

Genus **TANAECIA** Butler, 1869
This genus was included in *Euthalia* in older literature.

 # *Tanaecia julii appiades* Ménétriés, 1857
The *Common Earl* is the most common of the *Euthalia*-group in the Srimangal forests, usually in deep forest. Ameen & Chowdhury record it from Chittagong. *T. julii* Lesson, 1837 is from Sumatra, Indonesia; ssp. *appiades* is from Sikkim. The name *sedava* Moore, 1857 has also been employed.

 # *Tanaecia lepidea lepidea* Butler, 1868 **PLATE 7**
The *Grey Count* is common in the Srimangal forests. At the DFID Guest House I had dozens in banana traps. There is a record from Chittagong (de Nicéville 1886); we found it at Kaptai and in Malumghat (Dulahazara Safari Park). The type locality is Assam.

*** *Tanaecia jahnu jahnu*** Moore, 1857
The *Plain Earl* was recorded from Chittagong by de Nicéville (1886) and from Cox's Bazaar by Gladman (1847). I never saw it. The type locality is Darjeeling, Sikkim.

Genus **SYMPHAEDRA** Hübner, 1816
This genus is often included in *Euthalia*.

~ *Symphaedra nais* Forster, 1771
The *Baronet* is a species of lighter and drier forests that has been recorded from Calcutta from time to time, probably as strays, since it is somewhat migratory. It must occur occasionally in western Bangladesh. The foxy red of fresh specimens is quite striking in flight. The type locality is Madras, India.

Tribe **Parthenini** Reuter, 1896

Genus **LEBADEA** Butler, 1848

 # Lebadea martha martha Fabricius, 1778 **PLATE 7**
The *Knight* is quite common in the Srimangal forests, especially along the beds of dry or flowing streams. It was recorded also from Rangamati in the Chittagong Hill Tracts by de Nicéville (1886). It perches on green leaves about eye-level and is very pugnacious. The type locality is Pulau Salang, Phuket, Thailand.

Genus **PARTHENOS** Hübner, 1819

 # Parthenos sylvia gambrisius Fabricius, 1787 **PLATE 7**
The *Clipper* is an imposing butterfly with a gliding flight that is such a fine sight in nature that even casual observers comment on it. Females often circle creeper-clad tree-trunks in search of host plants, working their way steadily higher. It is quite common in the Srimangal forests. Jamal saw it at Kaptai and Gladman (1947) collected it at Teknaf, so it is probably well established in the Chittagong Division. *P. sylvia* Cramer, 1775 is from Java, Indonesia; ssp. *gambrisius* is from E. India.

Tribe **Limenitidini** Behr, 1864

Genus **NEUROSIGMA** Butler, 1868

**** Neurosigma siva siva*** Westwood, 1850
The *Leopard* is a very unusual butterfly that was specifically recorded from Chittagong by Doherty, who caught dozens (*teste* Elwes). The record is repeated by Wynther-Blyth (1957). It is found also at Cachar and in the Khasi Hills, but apparently not below 1,000 feet. The type locality is 'Sylhet'. The name *N. doubledayi* Westwood, 1848 is used in older literature.

Genus **ATHYMA** Westwood, 1850
In older literature the species is usually placed in *Pantoporia* Hübner, 1819 due to an erroneous designation of the type species of this very different genus.

 # Athyma perius perius Linné, 1758
The *Common Sergeant* can usually be found in Bhawal National Park in small numbers, but in November 2001 we saw hundreds during one day, many coming to sap oozing from a damaged palm. It was also regularly found on the Jahangirnagar University campus during 1986/87. We found very few in the Srimangal forests, though in February 2003 it was quite common at the DFID Guest House. The type locality is 'Indiis' [India or Canton, China].

 # Athyma asura asura Moore, 1858
The *Studded Sergeant* was found once in Rema-Kalenga Forest and there are no other records from Bangladesh. It is in the Khasi Hills, but not mentioned from lower levels. The type locality is 'W. Himalayas'.

~ Athyma pravara acutipennis Fruhstorfer, 1906
The *Lance Sergeant* was recorded from both Dowki and Cachar and should occur in the Srimangal forests. It is generally a scarce butterfly. *A. pravara* Moore, 1858 is from Borneo, Malaysia; ssp. *acutipennis* is from Assam.

 # Athyma kanwa phorkys Fruhstorfer, 1912
The *Dot-Dash Sergeant* is generally considered very rare in eastern India and we met this butterfly once only at Lowacherra (November 2002). There are no other records. *A. kanwa* Moore, 1858 is from Borneo, Malaysia; ssp. *phorkys* is from 'Assam and Upper Burma'.

 # Athyma inara inara Westwood, 1850 **PLATE 7**
The *Colour Sergeant* is fairly common in the Srimangal forests, where up to a dozen would be seen during any one visit, mostly coming to damp patches. Jamal caught a few also at Kaptai in the Chittagong area, but

Gladman (1947) considered it rare and local in the Arakan. The type locality is N. India. It was till recently considered the continental subspecies of *A. nefte* Cramer, 1779.

 # *Athyma ranga ranga* Moore, 1857
The *Blackvein Sergeant* was often quite common in the Srimangal forests, more so than I have seen it elsewhere where it is normally rather scarce. Males frequently came down to water. There are no records from Chittagong or the Arakan and no previous records from Bangladesh. The type locality is 'Sikkim' [perhaps Khasi Hills].

 # *Athyma selenophora bahula* Moore, 1858
The *Staff Sergeant* was recorded just once when a single female was caught in Lowacherra. It is also known from Cachar and Dowki so may be more widely distributed. There are no records from Chittagong or the Arakan and no previous records from Bangladesh. *A. selenophora* Kollar, 1844 is from India [Mussourie, Central Himalayas]; ssp. *bahula* is from 'Sylhet'.

Genus **SUMALIA** Moore, 1898

~ *Sumalia daraxa daraxa* Doubleday, 1848
The *Green Commodore* is a butterfly that I do not know but Cantlie writes on the Khasi Hills that 'it is common from 4,000ft down, found with and sharing the habits of the very common *Moduza procris*'. It is also included from Chittagong in the usually accurate distribution maps of Tsukuda (1982-1991). The type locality is 'Sylhet', Assam.

Genus **MODUZA** Moore, 1881
The species in this genus were often included in the wholly Palaearctic *Limenitis* Fabricius, 1807.

 # *Moduza procris procris* Cramer, 1777
The *Commander* is found sparingly in the Dhaka area, even in the Sheraton Hotel gardens, and is uncommon in the Srimangal forests, where

we rarely saw more than three or four in a day. Jamal caught one at Kaptai in the Chittagong Hill Tracts. The type locality is Java, Indonesia.

Genus **PANTOPORIA** Hübner, 1819
The genus has often been included in *Neptis*; the type species was wrongly assumed to be a member of the genus *Athyma*.

 # *Pantoporia hordonia hordonia* Stoll, 1790
The *Common Lascar* is the first of three very similar species that must be captured before they can be identified. It is quite common in Lowacherra and Teliapara. Jamal found it at Kaptai in the Chittagong Hill Tracts. The type locality is the Guinea Coast, Africa [in error for Bengal].

 # *Pantoporia sandaka davidsoni* Eliot, 1969
The *Extra Lascar* was the most common *Pantoporia* in Teliapara, but also occurred in Lowacherra. There are no previous records. *P. sandaka* Butler, 1892 is from Borneo, Malaysia; ssp. *davidsoni* is from N. Kanara, India.

 # *Pantoporia paraka paraka* Butler, 1879
The *Perak Lascar* seems much scarcer than the other two. We found in only in Lowacherra and not on every visit. It was found in Chittagong by Emmet (1948). The type locality is Malacca, Malaysia.

Genus **LASIPPA** Moore, 1898
The genus has often been included in *Neptis*.

~ *Lasippa tiga camboja* Moore, 1879
The *Burmese Lascar* was collected at Cachar and should be somewhere in the Srimangal forests. *L. tiga* Moore, 1858 is from Java, Borneo; ssp. *camboja* is from Cambodia.

~ *Lasippa viraja viraja* Moore, 1872
The *Yellowjack Sailer* was recorded once from Dowki and should be in the northeast on occasion, but it is not normally a low-level species. The type locality is 'NE Bengal'.

Genus **NEPTIS** Fabricius, 1807

Neptis and allied genera (*Lasippa*, *Pantoporia*, and *Phaedyma*) were subject to an in-depth revision by Eliot (1969).

 # Neptis hylas kamarupa Moore, 1872 **PLATE 7**

The *Common Sailer* is the most widely distributed and ecologically tolerant of the *Neptis*. It was scarce in the Dhaka area, though found even in Gulshan, and common in the Srimangal forests. We also found it in Kaptai, Malumghat, Cox's Bazaar, and Teknaf in the Chittagong Division. *N. hylas* Linné, 1758 is from southern China; ssp. *kamarupa* is from Assam. The subspecies name *varmona* Moore, 1878 is probably just a seasonal form.

 # Neptis sappho astola Moore, 1872

Pallas' Sailer was collected just once at Teliapara (June 2002), much to my surprise since I always considered it a montane species. It was sufficiently different from *N. hylas* to be flagged down as interesting in the field. *N. sappho* Pallas, 1771 is from Russia [on the Volga]; ssp. *astola* is from the 'NW Himalayas'.

 # Neptis clinia susruta Moore, 1872

The *Clear Sailer* is by far the most common *Neptis* in the broadleaf forests, usually outnumbering all the other members of the genus combined. It was found in all the Srimangal forests. There are records from Chittagong (de Nicéville 1886), Teknaf (Gladman (1947), and Jamal caught many at Kaptai (December 2001). Both sexes are frequent at damp patches. *N. clinia* Moore, 1872 is from the Andamans, India; ssp. *susruta* is from 'N India'.

 # Neptis nata adipala Moore, 1872

The *Dirty Sailer* was found just twice in May 2002, at Lowacherra and Teliapara. They are easily told apart from *N. clinia*, even in the field. It seems to be very scarce in Bangladesh. *N. nata* Moore, 1858 is from Borneo, Malaysia; ssp. *adipala* is from the Khasi Hills, Meghalaya. There has been much confusion in the usage of the names *N. nata* and *N. soma*.

**** Neptis soma soma*** Moore, 1858
The *Sullied Sailer* was recorded from Teknaf by Gladman (1947), but it might be a misidentification of *N. nata*. However, since *N. soma* was described from Sylhet and was also noted from Cachar, it is tentatively included in the Bangladesh list. The type locality is 'Silhet'.

 # Neptis jumbah jumbah Moore, 1857
The *Chestnut-Streaked Sailer* was found sporadically in the Srimangal forests, in Bhawal National Park, once rather commonly, and on the Jahangirnagar University campus. One was collected by a team from IUCN in the Sunderbans. The type locality is Calcutta, India.

 # Neptis magadha khasiana Moore, 1872
The *Spotted Sailer* is known from a male that I took on the road through Srimangal It was clear from the jet black and pure white colour scheme with no trace of brown that it was something I had never seen before (March 2002). It was previously recorded from Dowki so its presence in Bangladesh is not surprising. *N. magadha* Felder & Felder, 1867 is from Myanmar; ssp. *khasiana* is from the Khasi Hills, Meghalaya.

 # Neptis harita harita Moore, 1874
The *Indian Dingiest Sailer* was found a few times in ones or twos at Lowacherra and it was considered 'distinctly rare' in Cachar. The typical *Neptis* flight and the absence of the white markings make it very noticeable. It was also found at Cheringa in the Chittagong Division by Emmet (1948). The type locality is 'East Bengal'.

~ Neptis nashona nashona Swinhoe, 1896
The *Less Rich Sailer* is very like *N. harita* and two cannot be distinguished when on the wing. It was found at Dowki on a few occasions and should be in the Srimangal forests. The type locality is Cherrapunji, Khasi Hills.

~Neptis miah miah Moore, 1857
The *Small Yellow Sailor* is included because of a record from Cachar by Butler (1979), and it is found all over Sikkim and Assam. It does not

usually descend as low as Bangladesh. The type locality is Darjeeling, Sikkim.

Genus **PHAEDYMA** Felder, 1861
The genus was usually included in *Neptis* till Eliot's (1969) revision.

 # *Phaedyma columella ophiana* Moore, 1872
The *Short-Banded Sailer* was collected only four times in Lowacherra and Teliapara. I found no other references. *P. columella* Cramer, 1780 is from China; ssp. *ophiana* is from Sikkim. A case could probably be made for synonymizing several described subspecies.

Subfamily **Cyrestinae** Guenée, 1865

Tribe **Cyrestini** Guenée, 1865

Genus **CYRESTIS** Boisduval, 1832
This small genus also has an Afrotropical representative.

 # *Cyrestis thyodamas thyodamas* Boisduval, 1836 **PLATE 8**
The *Indian Map Butterfly* is a most unusual butterfly that had me dumbstruck when I caught my first in 1956-at the age of 12-in the Nilgiris in South India before even having seen its picture. I found it very scarce in Lowacherra, coming down to drink on wet sand. There are no prior records, but it could be common at Dowki. The type locality is 'North India'.

Genus **CHERSONESIA** Distant, 1883

~ *Chersonesia risa risa* Westwood, 1848
The *Common Maplet* was found at Dowki and in the northern Arakan and should occur in Bangladesh. It shares with *Cyrestis* the unusual habit of always settling with the wings held flat, even when roosting under leaves. The type locality is ?Assam.

Tribe **Pseudergolini** Jordan, 1898

Genus **PSEUDERGOLIS** Felder, 1867

**** Pseudergolis wedah*** Kollar, 1844
The *Tabby* was recorded from Chittagong by de Nicéville (1886) and is known from the Arakan. It is not normally found below 300m in the Himalayas and in Bangladesh it may be restricted to the Hill Tracts. It is, however, recorded from 'Silhet'. The type locality is 'India Orientali'.

Genus **STIBOCHIONA** Butler, 1868

 # Stibochiona nicea nicea Gray, 1846 **PLATE 8**
The *Popinjay* was found in small numbers at Lowacherra in March and May 2002. The males perched in more open positions than *Euthalia*. It is common in the northern Arakan and should be in the Chittagong Division. Its placement in the Pseudergolini was finally settled by DNA studies by Wahlberg on material that I sent from Lowacherra. The type locality is Nepal.

Genus **DICHORRAGIA** Butler, 1869

~ Dichorragia nesimachus nesimachus Doyére, 1840
The *Constable* was recorded from near Dowki. It often flies with *S. nicea* and should be in the Srimangal forests. The type locality is in the Himalayas.

Subfamily **Biblidinae** Boisduval, 1833

Genus **ARIADNE** Horsfield, 1829
The generic name *Ergolis* Boisduval, 1836 is used in older literature. The egg is covered with long hair-like spikes, presumably evolved to keep parasitic Braconiidae at bay.

 # Ariadne merione tapestrina Moore, 1884
The *Common Castor* is found throughout Bangladesh, usually where *Ricinus*, one of the host plants, grows in towns and villages. It is also found in forests. However, there are no records from the Sunderbans. I found larvae on *Ricinus* in Gulshan, Dhaka. *A. merione* Cramer, 1777 is from Coromandel, South India; ssp. *tapestrina* is from Dehra Dun [central Himalayas].

 # Ariadne ariadne pallidior Fruhstorfer, 1899
The *Angled Castor* is much scarcer than *A. merione*. We have a few records from the Srimangal forests as well as from Kaptai and Teknaf in the Chittagong Division. Ameen & Chowdhury (1968) records it from Dhaka, but this could be a misidentification since they do not mention the common *A. merione*. *A. ariadne* Linné, 1763 is from Java, Indonesia; ssp. *pallidior* is from Assam.

Subfamily **Nymphalinae** Swainson, 1827

Tribe **Junoniini** Reuter, 1896

Genus **HYPOLIMNAS** Hübner, 1819
Hypolimnas is also well represented in Africa. Most species are mimetic and some are among the most effective mimics, not least since they may be polymorphic.

 # Hypolimnas misippus Linné, 1758
The *Danaid Eggfly* or *Diadem* is one of the finest examples of mimicry, the female being a mimic of *Danaus chrysippus*. It is found throughout Africa and Asia, and has recently established itself in the Caribbean. It is surprisingly rare in Bangladesh. There are old records from Dhaka. I saw only two in Gulshan (1996 and March 2003). The type locality is 'America' [probably Java].

 # Hypolimnas bolina bolina Linné, 1758
The *Great Eggfly* is migratory and may not be a permanent resident. It was

quite common in the Dhaka area from time to time. In the Srimangal forests we found it only intermittently in ones or twos. Jamal caught it in Noakhali. We saw it also in Malumghat and at Teknaf in the Chittagong area. In flight the female is a much better mimic of *Euploea core* than might be thought from set specimens. A team from IUCN collected a few in the Sunderbans. *H. bolina* is from 'India', perhaps Canton, China.

Genus **JUNONIA** Hübner, 1819

The genus is Pantropical. Most species have distinct dry season forms, most developed in *J. almana*.

* ***Junonia orithya ocyale*** Hübner, 1816

The *Blue Pansy* is a common dry zone butterfly which is scarce in Bangladesh. The only certain specimens I know of were caught by an IUCN team in the Sunderbans in October 2002. It is migratory and is possibly common during some years. *J. orithya* Linné, 1758 was described from S. China; ssp. *ocyale* is from the Coromandel Coast. The species is also found in Africa.

 # *Junonia hierta hierta* Fabricius, 1793

The *Yellow Pansy* is well distributed throughout Bangladesh but is not usually common except in forest fringes in the Sylhet Division. There is none from the Sunderbans. The type locality is 'South India'. The species is also found in Africa.

 # *Junonia lemonias lemonias* Linné, 1758

The *Lemon Pansy* is often common in the Sylhet and Chittagong areas but seems rather scarce, though well distributed, in the rest of the country. We found it only twice in Dhaka, but it may be numerous on the Jahangirnagar Campus. The dry season form may have a wine-red underside. The type locality is Canton, China.

 # *Junonia almana almana* Linné, 1758 **PLATE 8**

The *Peacock Pansy* is found throughout Bangladesh and is probably the most numerous butterfly in the country, not least in the garden suburbs of

Dhaka. Seasonal variation is among the strongest in Bangladesh. I saw a few also in the Sunderbans. The type locality is Canton, China.

 # Junonia atlites atlites Linné, 1763
The *Grey Pansy* is a common butterfly all over the country, not least in Dhaka gardens, and even in the Sunderbans (IUCN). The type locality is 'Asia' [possibly Canton].

 # Junonia iphita iphita Cramer, 1779
The *Chocolate Pansy* is a resident of paths and clearings in the tropical forests. It is usually common in Lowacherra and Teliapara, and I have it also from Bandarban and Kaptai in the Chittagong Hill Tracts. The type locality is China.

Tribe **Kallimini** Doherty, 1886

Genus **DOLESCHALLIA** Felder, 1861

~ Doleschallia bisaltide indica Moore, 1899
The *Autumn Leaf* is known from Dowki, Cachar, and northern Arakan so there can be little doubt it is in Bangladesh. *D. bisaltide* Felder & Felder, 1860 is from Surinam [perhaps Sumatra]; ssp. *indica* is from 'India', described in contradistinction the subspecies in Sri Lanka. Evans (1932) considered ssp. *continentalis* Fruhstorfer, 1912 to be a junior synonym of ssp. *indica* and did not consider ssp. *siamensis* Fruhstorfer, 1899 to be in the region.

Genus **KALLIMA** Westwood, 1850
African species were once included in the genus but have been removed to three recently described genera-resemblance to the Oriental *Kallima* was wholly superficial.

~ Kallima inachus inachus Boisduval, 1836
The *Indian Oakleaf* was collected at Dowki, Cachar, and in the northern Arakan. It should be in Bangladesh. It is perhaps the most celebrated example of camouflage among butterflies. The type locality is western Himalayas. The name is often mis-spelt *inachis*. The nominate subspecies

is from 'India'. If found in the Chittagong Hills it might be as ssp. *siamensis* Fruhstorfer, 1912.

Genus **RHINOPALPA** Felder, 1860

**** Rhinopalpa polynice birmana*** Fruhstorfer, 1897
The *Wizard* was collected near Chittagong by one H.M. Parish (de Nicéville 1886). It was also found at Cachar and could be in the Srimangal forests. *R. polynice* Cramer, 1779 is from SE Sumatra, Indonesia. Ssp. *birmana* is from 'Mergui, Burma'.

Tribe **Nymphalini** Swainson, 1827

Genus **VANESSA** Fabricius, 1807
V. cardui is the type species of the genus *Cynthia* Fabricius, 1807 and the combination *Cynthia cardui* is still in use, but it represents an excessive splitting of the genus *Vanessa*. The name *Pyrameis* Hübner, 1816 has also been applied. The genus is mainly Palaearctic.

 # Vanessa cardui cardui Linné, 1758
The *Painted Lady* is the world's most widely distributed butterfly, missing only from the Neotropical forest zone, Australia, and the Arctics. It is very rare in our area, with occasional singles from Cachar and Calcutta. I saw a male hilltopping at Inani on the Chittagong coast. As a strong migrant it should be found anywhere from time to time, and in winter could well breed in numbers. The type locality is Sweden.

Genus **SYMBRENTIA** Hübner, 1819

 # Symbrenthia lilaea khasiana Moore, 1874 **PLATE 8**
The *Common Jester* in the Himalayas is mainly a species of the middle levels and I was somewhat surprised to find it occasionally at Lowacherra. Its pattern is similar to that of the *Pantoporia* but it is a much stronger and fast-flying butterfly. *S. lilaea* Hewitson, 1864 is from 'East Indies' [in error]; ssp. *khasiana* is from the Khasi Hills, Meghalaya.

WHAT IS GOING ON HERE?

Zeltus amasa is one of the smallest of the Theclinae [Lycaenidae] and flies in shady places. When on the wing it is only visible because of the long tails. The tails, in conjunction with the black hindwing anal spots, combine to create a supernormal false-head, much more enticing to potential predators than the tiny little real head to the right. Jumping spiders, mantids, and other enemies attack the wrong end, either glancing off or getting a 'mouth'ful of fluff. There is - literally - an extra twist to the story. A fraction of a second before landing the butterfly turns 180 degrees in the air so that the false-head points in the flight direction. thus the butterfly will fly off in the opposite direction to the expected when disturbed. The similarity in patterns and behaviour with several groups of coral fish with butterfly false heads is quite uncanny.

SUPERFAMILY **HESPERIOIDEA** Latreille, 1809

FAMILY **HESPERIIDAE** Latreille, 1809

Subfamily Coeliadinae Evans, 1937

Genus **BIBASIS** Moore, 1881

~ ***Bibasis oedipodea belesis*** Mabille, 1876

The *Branded Orange Awlet* was found in Cachar and should be in Bangladesh. *B. oedipodea* Swainson, 1820 is from Java, Indonesia; ssp. *belesis* is from 'Siam'.

~ ***Bibasis harisa harisa*** Moore, 1865

The *Orange Awlet* is a lowland species known from the low Khasi Hills and should be in Bangladesh since it is a widespread lowlands butterfly. The type locality is 'Bengal'.

~ ***Bibasis mahintha*** Moore, 1874

The *Slate Awlet* was found in Cachar and in the northern Arakan and should be either in the Srimangal forests and/or in the Chittagong Division. The type of *B. mahintha* is from 'Burma'. Evans (1949) listed it as a subspecies of *B. iluska* Hewitson, 1867 from Macassar, Indonesia, which is now considered specifically distinct.

~ ***Bibasis sena sena*** Moore, 1865

The *Orange-Tail Awl* was found in Cachar and in the northern Arakan and should be either in the Srimangal forests and/or in the Chittagong Division. The type locality is 'Bengal'.

Genus **HASORA** Moore, 1881

Hasora chromus chromus Cramer, 1782

The *Common Banded Awl* was collected by Enam ul Haq on the Shahjalal Char, an unlikely place for any butterfly. A team from IUCN found a few in the Sunderbans. I saw one in Balda Gardens, Dhaka in July 1977. It should be found throughout Bangladesh. The type locality is 'Coromandel Coast', S. India. In older literature usually as *H. alexis* Fabricius, 1773, a junior homonym.

~ ***Hasora taminatus bhavara*** Fruhstorfer, 1911
The *White-Banded Awl* was found by Gladman (1947) in the northern Arakan and should be in the coast in the Chittagong Division. *H. taminatus* Hübner, 1818 is from South India [not as stated 'Surinam']; ssp. *bhavara* is from Sikkim.

~ ***Hasora khoda coulteri*** Wood-Mason & de Nicéville, 1887
The *Large Banded Awl* was found in Cachar and should be in the Srimangal forests. *H. khoda* Mabille, 1876 is from New Caledonia in the Pacific; ssp. *coulteri* is from Cachar.

~ ***Hasora anura anura*** de Nicéville, 1889
The *Slate Awl* is not rare in the lower Khasi Hills and was found at Cachar and therefore qualifies for the Bangladesh list. The type locality is Sikkim.

* ***Hasora badra badra*** Moore, 1858
The *Common Awl* was found by an IUCN team in the Sunderbans and at Cheringa in the Chittagong Division by Emmet (1948). Many were caught in Cachar so it should also be in the northeast. The type locality is Java, Indonesia.

~ ***Hasora vitta indica*** Evans, 1932
The *Plain Banded Awl* was found very close to Bangladesh in the northern Arakan (Emmet 1948) and should be in the Chittagong Hill Tracts. *H. vitta* Butler, 1870 is from Labuan, Indonesia; ssp. *indica* is from the Karen Hills, Myanmar.

Genus **CHOASPES** Moore, 1881

~ ***Choaspes benjaminii formosanus*** Fruhstorfer, 1911.
The *Indian Awlking* was found in a single specimen at Cachar and the Khasi Hills; it should be in the Srimangal forests. *C. benjaminii* Guérin-Méneville, 1843 is from the Nilgiris in South India; ssp. *formosanus* is from 'Formosa' [Taiwan].

Genus **BADAMIA** Moore, 1881
There are just two species in the genus, one widespread through the Oriental Region, the other in the Pacific area.

~ ***Badamia exclamationis*** Fabricius, 1775
The *Brown Awl* is a strong migrant which occurs fitfully, often in places where it was never seen before, sometimes in singles and sometimes in numbers. Gladman (1947) found it not rare in the Arakan. I suspect it might turn up anywhere in the country from time to time, but there are no actual records. The type locality is 'S. India'.

Subfamily **Pyrginae** Burmeister, 1878

Genus **CAPILA** Moore, 1865

* ***Capila phanaeus fiducia*** Evans, 1949
The *Fulvous Dawnfly* was caught at Cheringa in the Chittagong Division by Emmet (1948). It is also in the Khasi Hills. *C. phanaeus* Hewitson, 1867 is from Sarawak; ssp. *fiducia* is from the Khasi Hills, Meghalaya.

Genus **CELAENORRHINUS** Hübner, 1819
There are several other species in the Khasi Hills some of which may reach Bangladesh.

* ***Celaenorrhinus asmara consertus*** de Nicéville, 1890
The *White-Banded Flat* was caught at Cheringa in the Chittagong Division by Emmet (1948). It is also in the Khasi Hills. *C. asmara* Butler, 1877 is from Malacca, Malaysia; ssp. *consertus* is from the Khasi Hills, Meghalaya. A. Devyatkin (pers. comm.) suspects that ssp. *consertus* should be raised to species level.

\# ***Celaenorrhinus leucocera*** Kollar, 1844
The *Common Spotted Flat* is a very characteristic butterfly that was quite common in Lowacherra in March 2002, but which we saw only in small numbers in later months. There are several similar species in the Khasi Hills, most of which probably do not go low enough to reach Bangladesh. The type locality is 'Himalaya'.

 # Celaenorrhinus aurivittata aurivittata Moore, 1865
The *Dark Yellow-Banded Flat* was taken once only at Teliapara (May 2002) and there are no records from neighbouring areas. I was very surprised to find it. The type locality is Meetan, Burma.

Genus **PSEUDOCOLADENIA** Shirozu & Saigusa, 1962
A number of species were recently removed from *Coladenia* Moore, 1881 to this genus.

 # Pseudocoladenia dan fabia Evans, 1949
The *Fulvous Pied Flat* is fairly common in Lowacherra and Teliapara, flying low down along paths and dry streams. Here I saw a bee-eater sweep down from high to catch a male just two metres from me with an audible click of the beak. It should also be in the Chittagong area, especially since it is found in the northern Arakan. *P. dan* Fabricius, 1787 is from Tranquebar, South India. Ssp. *fabia* is from Margherita, Assam and might be specifically distinct.

Genus **COLADENIA** Moore, 1881

~ Coladenia indrani indrani Moore, 1865
The *Tricolour Pied Flat* was once found in Calcutta and is in the Khasi Hills and so should be in Bangladesh. The type locality is 'Bengal'.

Genus **SARANGESA** Moore, 1881
The genus is well represented in Africa.

 # Sarangesa dasahara dasahara Moore, 1865
The *Common Small Flat* is rather uncommon at Lowacherra and Teliapara. It was also found along the Chittagong coast by Gladman (1947). It flies low down and is very inconspicuous except when coming to flowers. The type locality is 'Bengal'.

Genus **ODONTOPTILUM** de Nicéville, 1890

 # Odontoptilum angulata angulata Felder, 1862
The *Chestnut Angle* is not rare in Lowacherra and Teliapara; usually one or two can be found in sunny spots where it was previously seen. Gladman (1947) recorded it from Teknaf in the Chittagong Division. The type locality is Hong Kong.

Genus **GEROSIS** Mabille, 1903
The generic name *Daimio* Murray, 1875 is often employed.

~ Gerosis bhagava bhagava Moore, 1866
The *Common Yellow-Breast Flat* is widely distributed in the Arakan and should be in the Chittagong Hill Tracts, though I only caught *G. phisara* there. The type locality is NE Bengal.

 # Gerosis phisara phisara Moore, 1884
The *Dusky Yellow-Breast Flat* was met with once at Lowacherra and once at Bandarban in the Chittagong Hill Tracts. It is not normally common. The type locality is the Khasi Hills, Meghalaya. The name *hamiltonii* de Nicéville, 1888 (TL Sylhet) has been applied.

Genus **TAGIADES** Hübner, 1819
The genus is represented by a few species in Africa as well.

 # Tagiades japetus ravi Moore, 1865
The *Common Snow Flat* is a widely distributed and ecologically tolerant Skipper. We found in the garden suburbs of Dhaka, in Bhawal National Park, and on the Jahangirnagar University campus (Abdul Razzak). It is common in the Srimangal forests. In the Chittagong area we took it at Bandarban and at Inani near Cox's Bazaar. In behaviour is strikingly similar to that of the common African *T. flesus* Fabricius, 1781. *T. japetus* Stoll, 1782 is from Ambon, Indonesia; ssp. *ravi* is from 'Bengal'.

Tagiades gana athos Plötz, 1884
The *Suffused Snow Flat* is much scarcer than *T. japetus* and we took it only in the Srimangal forests. It is found in the Arakan and should be in the Chittagong Division. *T. gana* Moore, 1865 is from Java; ssp. *athos* is from Calcutta, India.

Tagiades litigiosa litigiosa Möschler, 1878
The *Water Snow Flat* was distinctly rare in Lowacherra. The snow-white hindwing makes it very conspicuous on the wing. Emmet (1948) records it from the northern Arakan and it must be in the Chittagong Hill Tracts. The type locality is 'Sylhet'.

Genus **SPIALIA** Swinhoe, 1912
The genus has two independent centres of dispersal, the Middle East and southern Africa. The name *Hesperia* Fabricius, 1807 has been used, but that relates to a completely different set of Palaearctic species.

* ***Spialia galba galba*** Fabricius, 1793
The *Indian Grizzled Skipper* is rare in Calcutta, though it was locally common in nearby Barrackpore (Rothney 1882). It is included from Bangladesh on the distribution map of de Jong (1978) in his monograph on the genus. The distribution is very sporadic in Myanmar. It frequents open habitats rather than forest. The type locality is Tranquebar, S India.

Subfamily **Hesperiinae** Latreille, 1809

Genus **ASTICTOPTERUS** Felder & Felder, 1860

~ ***Astictopterus jama olivascens*** Moore, 1878
The *Forest Hopper* was found at Cachar and flies in the Khasi Hills and must be in Bangladesh. *A. jama* C. Felder, 1860 is from Malacca, Indonesia; ssp. *olivascens* is from 'Salween', N. Burma. The name *kada* Swinhoe, 1893 has been applied.

Genus **BARACUS** Moore, 1881

~ ***Baracus vittatus septentrionum*** Wood-Mason & Nicéville, 1887

The *Hedge Hopper* was found at Cachar and should be in northern Bangladesh. *B. vittatus* C. Felder, 1862 is from Ceylon; ssp. *septentrionum* is from Cachar. A. Devyatkin (pers. comm.) believes that ssp. *septentrionum* is distinct from the nominate and its South Indian subspecies.

Genus **AMPITTIA** Moore, 1882

~ ***Ampittia dioscorides dioscorides*** Fabricius, 1793
The *Bush Hopper* is known from Calcutta, Cachar, and the Arakan; it is certain to be in Bangladesh. It frequents open areas such as marshes and the verges of rice-fields and may be locally common. The type locality is Tranquebar, S India.

Genus **AEROMACHUS** de Nicéville, 1890

Aeromachus pygmaeus pygmaeus Fabricius, 1793
The *Veined Scrub Hopper* is a tiny unobtrusive butterfly that Emmet (1948) found frequent south of Chittagong to the Arakan; Evans (1949) also mentions it from Chittagong. I found it just once on a river bank at Inani near Cox's Bazaar. The type locality is Tranquebar, S. India. The subspecies name *indistincta* Moore, 1878 has been used for Assam material.

Genus **HALPE** Moore, 1878
There are about ten other *Halpe* and species of related genera in the Khasi Hills. Most probably do not descend to the plains.

~ ***Halpe sikkima*** Moore, 1882
The *Sikkim Ace* was found at Cachar and occurs commonly in the lower Khasi Hills; it should be in northern Bangladesh. The type locality is Sikkim.

Halpe porus Mabille, 1876
Moore's Ace is not rare in Lowacherra and Teliapara. Males were often taken on cowpats, of which they are fond also in South India. It is also

found in the Arakan and should be in the Chittagong Hill Tracts. There is even a record from Calcutta. The type locality is Himalaya [probably Assam].

Genus **PITHAURIA** Moore, 1879

Pithauria stramineipennis stramineipennis Wood-Mason & de Nicéville, 1887
The *Light Straw Ace* was found in numbers on the banks of a stream in Lowacherra in May 2002, but never seen again. It has a habit of coming to embers from cooking fires, presumably for minerals, a trait that I also observed in Malaysia. I saw one on human excrement. The type locality is Cachar, Assam.

~ ***Pithauria marsena*** Hewitson, 1855
The *Banded Straw Ace* was redescribed as *Pithauriopsis aitchisoni* Wood-Mason & de Nicéville, 1886 (TL Cachar). It should thus be in the Srimangal forests. The type locality is Sumatra, Indonesia.

Genus **IAMBRIX** Watson, 1893

Iambrix salsala salsala Moore, 1865
The *Chestnut Bob* is a widespread and quite common butterfly that was found in the Dhaka area (Gulshan, Bhawal National Park, Jahangirnagar, Botanical Gardens). It was never common in the Srimangal forests, though we found it on nearly all visits. The only Chittagong record is from Bandarban, but it must be more widespread. The type locality is Sikkim.

Genus **KORUTHAIALOS** Watson, 1893

Koruthaialos rubecula cachara Evans, 1949
The *Narrow-Banded Velvet Bob* is a forest skipper that was relatively scarce at Lowacherra and Teliapara. It should also be in Chittagong Division, especially since it is in northern Arakan. *K. rubecula* Plötz, 1882 is from Borneo, Malaysia; ssp. *cachara* is from Cachar, Assam.

Genus **SANCUS** de Nicéville, 1891
The generic name *Psolos* Staudinger, 1889 is still sometimes in use; it was only a manuscript name that was not resurrected till after the valid name *Sancus* was published.

 # Sancus fuligo subfasciatus Moore, 1878
The *Coon* was collected by Jamal at Noakhali and at Kaptai in the Chittagong Hill Tracts. It was found at Cachar and should be in the Srimangal area as well. *P. fuligo* Mabille, 1876 is from Java, Malaysia; ssp. *subfasciatus* is from Upper Tenasserim, Burma.

Genus **UDASPES** Moore, 1881

 # Udaspes folus Cramer, 1775
The *Grass Demon* is widespread in the Oriental Region but not necessarily common. Jamal caught one on *Lantana* flowers in Gulshan, Dhaka and I found two males fighting in a clearing in Bhawal National Park. One was collected in Teliapara; another came into the kitchen of the DFID Guest House in Srimangal at dusk and settled on the trouser leg of one of the cooks. It has been found in the Arakan and I suspect it could turn up anywhere in Bangladesh. The type locality is 'Surinam'. Since there is no geographical variation a formal designation of a type locality is not indicated.

Genus **ANCISTROIDES** Butler, 1874
The genus name *Kerana* Distant, 1886 is used in older literature.

 # Ancistroides nigrita diocles Moore, 1865
The *Chocolate Demon* was usually seen in Lowacherra and occasionally at Teliapara, but always only a few. I once saw a fight amongst three males, conducted in a rather relaxed manner for a large skipper. It was found in the northern Arakan and must be in the Chittagong Division. *A. nigrita* Latreille, 1824 is from Java, Indonesia; ssp. *diocles* is from 'Bengal'.

Genus **NOTOCRYPTA** de Nicéville, 1889

 # *Notocrypta feisthameli alysos* Moore, 1865
The *Spotted Demon* was only seen in Lowacherra in March 2002 and was uncommon. I have no further records but presumably it will be found also in the Chittagong Hill Tracts. *N. feisthameli* Boisduval, 1832 is from Amboina, Indonesia; ssp. *alysos* is from 'Bengal.

 # *Notocrypta curvifascia curvifascia* Felder, 1862
The *Restricted Demon* was also uncommon in Lowacherra (March 2002) and seen just once in Teliapara. It was also collected by Emmet (1948) at Cheringa in the Chittagong Division. The type locality is Ningpo, China.

 # *Notocrypta paralysos asawa* Fruhstorfer, 1911
The *Common Banded Demon* is the most common of the three *Notocrypta* and we saw it during most visits to Lowacherra, but only once in Teliapara. It was considered not rare at Cheringa in the Chittagong Division by Emmet (1948). *N. paralysos* Wood-Mason & de Nicéville, 1881 is from the Andamans; ssp. *asawa* is from Tonkin, Vietnam.

Genus **SCOBURA** Elwes & Edwards, 1897

 # *Scobura isota* Swinhoe, 1893
The *Forest Bob* is a forest skipper that was found in very small numbers in March and April 2003 in Lowacherra. There are no further records. The type locality is the Khasi Hills, Meghalaya.

Genus **SUADA** de Nicéville, 1895

 # *Suada swerga swerga* de Nicéville, 1883
The *Grass Bob* was quite common in Lowacherra and also seen in Teliapara in March 2002. It was considered not rare at Cheringa in the Chittagong Division by Emmet (1948). Males perch on palm fronds along small streams in full sunlight and are very pugnacious. It will only be found in good forest. The type locality is Sikkim.

Genus **SUASTUS** Moore, 1881

 # *Suastus gremius gremius* Fabricius, 1798

The *Indian Palm Bob* was quite common in the Dhaka area, even in Old Dhaka gardens, but we never saw it elsewhere. It is known from the northern Arakan and should be in the Chittagong Division. Both sexes are strongly attracted to flowering *Lantana*. The type locality is 'India'.

 # *Suastus minuta aditia* Evans, 1943

The *Small Palm Bob* is generally scarce. We found it in ones or twos during visits to Lowacherra in March, April, and May 2002. *S. minuta* Moore, 1877 is from Ceylon; ssp. *aditia* is from Sikkim.

Genus **CUPITHA** Moore, 1884

 # *Cupitha purreea* Moore, 1877

The *Wax Dart* was not that rare at the DFID Guest House in Srimangal (March, May, November), and rare in Lowacherra and Teliapara. There are probably more in collections than there should be since the characteristic underside sets it apart from other orange-yellow skippers. The type locality is the Andamans, India.

Genus **HYAROTIS** Moore, 1881

 # *Hyarotis adrastus praba* Moore, 1865 **PLATE 8**

The *Tree Flitter* was rather scarce in Bhawal National Park and was also taken on the Jahangirnagar University campus. We saw very few in the Srimangal forests. It was found in the northern Arakan and should be in the Chittagong Division. *H. adrastus* Stoll, 1782 is from Ceylon [in error as Surinam]; ssp. *praba* is from 'Bengal'.

~ *Hyarotis microstictum microstictum* Wood-Mason & de Nicéville, 1887

The *Brush Flitter* is known from Cachar and should be in the northeast of Bangladesh. The type locality is Cachar, Assam.

Genus **QUEDARA** Swinhoe, 1907

~ ***Quedara monteithi monteithi*** Wood-Mason & de Nicéville, 1887
The *Dubious Flitter* is included because it was described from Cachar, but Evans (1949) seems to have no additional material from the area. There are no other records. The type locality is Cachar, Assam.

Genus **GANGARA** Moore, 1881

Gangara thyrsis thyrsis Fabricius, 1775 **PLATE 8**
The *Giant Redeye* is the largest skipper in Bangladesh and was found in the Srimangal forests occasionally. Jamal caught a perfect female on the wing at Teliapara, having no idea what it was, since it is three times larger than the average skipper. Mostly the records are based on finding larvae or pupae in the huge cigar-like shelters that adults roll up, using half a banana leaf (we bred a few from Lowacherra). One was caught at light at the DFID Guest House in the middle of the night. It is also found in the Arakan and should be in the Chittagong Hill Tracts. The larval shelters are so large that can be seen even while driving, but we never saw any from the car. The type locality is given in error as 'America'; the true locality is Tranquebar, S. India.

Genus **ERIONOTA** Mabille, 1878

~ ***Erionota thrax thrax*** Linné, 1767
The *Palm Redeye* was not rare in Calcutta and should be in Bangladesh. It seems to be of rather sporadic occurrence. The type locality is Java, Indonesia.

Genus **MATAPA** Moore, 1881
The genus was revised by de Jong (1983).

Matapa aria Moore, 1865
The *Common Redeye* was occasionally seen in Dhaka (Gulshan and Baridhara), sometimes at light. We saw it in a village near Bhairab and

collected a few at Lowacherra. I also caught it near Bandarban in the Chittagong Hill Tracts. The type locality is 'Bengal'.

Matapa druna Moore, 1865
The *Grey-Brand Redeye* was found in March 2002 at Lowacherra but not subsequently seen. It was also recorded from the northern Arakan (as *M. shalgrama*), but this could have been in error for *M. cresta* which had not yet been described. The type locality is 'Bengal'.

Matapa cresta Evans, 1949
The *Fringed Redeye* was found sympatrically with *M. druna* in March and April 2002 at Lowacherra. It is probably also in the Chittagong Hill Tracts but seems generally to be scarce. The type locality is Sikkim.

Matapa sasivarna Moore, 1865
The *Black-Veined Redeye* was found in Lowacherra in April 2002, a single male. It was also collected in Cheringa in the Chittagong Division by Emmet (1948). The type locality is 'Bengal'.

Genus **TARACTROCERA** Butler, 1870
The genus is also found in Africa, but the African species may not be congeneric.

Taractrocera maevius maevius Fabricius, 1893
The *Common Grass Dart* is a small, unobtrusive skipper that also seems intensely local. We found it only in May 2002 at the DFID Guest House in Srimangal. The edges of lawns and forest there must be typical of its normal habitat. *T. maevius* is from 'India' [definitely Tranquebar, S. India]. Ssp. *sagara* Moore, 1866 from Darjeeling, India is a junior synonym. Evans (1949) erroneously considered the type locality to be Sri Lanka and therefore maintained the name *sagara* for the population from India to Thailand (Gaonkar pers. comm.).

Genus **ORIENS** Evans, 1932

 # Oriens gola pseudolus Mabille, 1883
The *Common Dartlet* was found in small numbers in Dhaka Botanical Gardens. We met it just twice in Lowacherra and Teliapara forests respectively. Jamal collected few at Kaptai in the Chittagong Hills, and it was caught by Emmet (1948) at Cheringa. *O. gola* Moore, 1877 is from the Andamans; ssp. *pseudolus* has no type locality.

Genus **TELICOTA** Moore, 1881
Evans (1932) used the genus name *Astycus* Hübner, 1822. It is an invalid name.

 # Telicota colon stinga Evans, 1949
The *Common Palm Dart* was found once at Bhairab and once at Srimangal. I also caught it at Bandarban and Teknaf in the Chittagong Division. It does not seem to be very common in Bangladesh. Old records may refer to some of the following species described by Evans. *T. colon* Fabricius, 1775 is from India; ssp. *stinga* is from Malacca, Malaysia.

 # Telicota besta besta Evans, 1949
The *Besta Palm Dart* was one among the material of the genus collected in the Srimangal forests. The type locality is Hainan, China.

 # Telicota linna linna Evans, 1949
The *Linna Palm Dart* is the most common of the Bangladesh *Telicota* and many were found in the Srimangal forests. The type locality is Sikkim.

 # Telicota bambusae bambusae Moore, 1878
The *Dark Palm Dart* is the smallest of the Bangladesh *Telicota* and can be very common in Calcutta. I found the larvae on palms in Gulshan in 1997 but the specimen is not available. It is also known from Cachar and the Arakan. The type locality is Calcutta. It must be in Bangladesh.

Telicota indet refers to a single male from Lowacherra that I am unable to place with certainty.

Genus **POTANTHUS** Scudder, 1872
A dozen additional species of the genus are recorded from the Khasi Hills. The number of specimens and species that we caught is surprisingly small given that Hesperiidae were high on our list species to be studied. The name *Padraona* Moore, 1881 is used in older literature; it is a junior subjective synonym.

Potanthus trachala tytleri Evans, 1914
The *Detached Dart* is known from two males from Kaptai in the Chittagong Hill Tracts collected by Jamal; the genitalia were examined. It is also recorded from Cachar, though early records may not be correct, so it is likely also to be in the north. *P. trachala* Mabille, 1877 is from Java, Indonesia; ssp. *tytleri* is from Manipur.

* ***Potanthus pseudomaesa clio*** Evans, 1932
The *Indian Dart* was recorded from Chittagong by Emmet (1948) and should be more widespread. *P. pseudomaesa* Moore, 1881 is from Ceylon; ssp. *clio* is from Dharmsala.

Potanthus confucius dushta Fruhstorfer, 1911
The *Confucian Dart* was collected once at Lowacherra in June 2002. *P. confucius* Felder & Felder, 1862 is from Ning Po, China; ssp. *dushta* is from Annam [Central Vietnam].

Genus **CEPHRENES** Waterhouse & Lyell, 1914

~ ***Cephrenes acalle oceanica*** Mabille, 1904
The *Plain Palm Dart* was regularly caught in Calcutta and was found in Cachar. It must be in Bangladesh. *C. acalle* Hopffer, 1874 is from Sulawesi, while ssp. *oceanica* is probably from 'Assam'. The species is better known as *C. chrysozona* Plötz, 1883.

Genus **POLYTREMIS** Mabille, 1904

 # *Polytremis lubricans* Herrich-Schäffer, 1869
The *Contiguous Swift* ought to be a common butterfly (120 were caught at Cachar), but in fact we only found two. One was from Kaptai in the Chittagong Hill Tracts (December 2001), the other from Lowacherra (March 2002). Emmet (1948) recorded it also from Chittagong. Abdul Razzak caught one on the Jahangirnagar University campus in March 2003, the first from the Dhaka area. The species seems to be widespread in the country but much scarcer than it should be. The type locality is ?Java.

Genus **PARNARA** Moore, 1881
The genus was revised by Chiba & Eliot (1991). It is weakly represented also in the Afrotropical Region.

*** *Parnara guttatus mangala*** Moore, 1865
The *Straight Swift* is the larger of three similar species. We found it in Dhaka Botanical Gardens, Gulshan, and Dhaka University, but only rarely. Older records may be unreliable. *P. guttatus* Bremer & Grey, 1853 is from China; ssp. *mangala* is from North India.

 # *Parnara bada bada* Moore, 1878
The *Ceylon Swift* is not rare in Dhaka garden suburbs. We collected it also at Bhairab and in Teliapara. It was found throughout the Arakan and must be in the Chittagong Division. Older records include *P. ganga*. The type locality is Ceylon.

 # *Parnara ganga* Evans, 1937
The *Continental Swift* is quite common in Dhaka gardens and we have found it in Bhawal National Park and on the Jahangirnagar University campus. Few were found also at Lowacherra and the Madhabkundo Falls. The type locality is Manipur.

Genus **BORBO** Evans, 1949
The genus is well represented in the Afrotropical Region. It was often placed in *Baoris* Moore, 1881 or in *Pelopidas* Walker, 1870.

 # *Borbo cinnara* Wallace, 1866
The *Rice Swift* ought to be common, but we found it only sparsely in the Dhaka area. I took one in Lowacherra and a few at Teknaf in the Chittagong Division. It is a potential pest on rice. The type locality is Formosa.

Genus **PSEUDOBORBO** Lee, 1962
The species was earlier placed in *Borbo* Evans, 1949.

*** *Pseudoborbo bevani*** Moore, 1878
The *Bevan's Swift* was found by Emmet (1948) near Chittagong. I definitely never saw it. This species, too, ought to be much more common. The type locality is Moulmein, Burma.

Genus **PELOPIDAS** Walker, 1870
There are two species in the Afrotropical Region as well.

 # *Pelopidas sinensis* Mabille, 1877
The *Chinese Swift* is rare in Calcutta and has been recorded from Cachar. I found one male in Bhawal National Park. The type locality is Shanghai, China.

 # *Pelopidas agna agna* Moore, 1865
The *Bengal Swift* is by far the most common skipper in the country and in October/December it swarms on flowering Lantana and other plants in Dhaka. It is less common in the Srimangal forests. I saw large numbers on *Ixora* in the Baptist Hospital in Malumghat, Chittagong Division and a few at Teknaf. I even caught it on the Khotka Plain in the Sunderbans. The type locality is 'Bengal'.

~ *Pelopidas subochracea subochracea* Moore, 1878
The *Large Branded Swift* is known from Calcutta and Cachar and must be in Bangladesh. The type locality is Calcutta, India.

 # *Pelopidas mathias mathias* Fabricius, 1798
The *Small Branded Swift* does not seem to be common in Bangladesh. It is mainly a dry zone butterfly. Jamal collected a female at Kaptai in the

Chittagong Hill Tracts, but females are notoriously difficult to identify with certainty. The type locality is Tranquebar, S India. The species is also in Africa.

~ ***Pelopidas conjuncta conjuncta*** Herrich-Schäffer, 1869
The *Conjoined Swift* was once recorded from Calcutta and several were collected in Cachar. Gladman (1947) recorded it from the Arakan. It should be in Bangladesh but is evidently uncommon. The type locality was not given.

Pelopidas assamensis de Niceville, 1882
The *Great Swift* is generally not a common species. I found it only once when I spotted a female deep inside a bush in Lowacherra (November 2002); the only way to catch it was with the fingers and as I grasped the female I found it was a perfect pair *in copula*, the male of which disengaged and flew away. The type locality is Sikkim.

Genus **BAORIS** Moore, 1881

Baoris farri farri Moore, 1878
The *Paintbrush Swift* was caught at Bhairab and in the Srimangal forests, where it can be modestly common. Emmet (1948) caught it at Teknaf in the Chittagong Division. We never saw any of the *Baoris* in the Dhaka area. The type locality is Calcutta, India.

Baoris chapmani Evans, 1937
The *Small Paintbrush Swift* was described as a subspecies of *B. penicillata* Moore, 1881 from Ceylon, but I tentatively keep it distinct. I found it in Rema-Kalenga and Lowacherra, and Jamal caught one at Kaptai in the Chittagong Hill Tracts. The type locality is Thaungyin, Burma.

Baoris unicolor Moore, 1883
The *Black Paintbrush Swift* is a completely unmarked species that we found sparsely in Teliapara and Lowacherra together with one or more of the other two in both sexes. Jamal obtained a single male at Kaptai in the Chittagong Hill Tracts. The type locality is Darjeeling, Sikkim.

Genus **CALTORIS** Swinhoe, 1893
Members of the genus have been placed in *Baoris* Moore, 1881.

 # *Caltoris brunnea caere* de Nicéville, 1891
The *Dark Branded Swift* was found just once at Teliapara (March 2002). Emmet (1948) recorded it from Cheringa in the Chittagong Division. The orange hindwing cilia immediately distinguished it from the *Pelopidas*. *C. brunnea* Snellen, 1876 is from Java, Indonesia; ssp. *caere* is from Thaungyin, Myanmar.

 # *Caltoris cahira austeni* Moore, 1883
The *Colon Swift* was found in a male specimen at Lowacherra (March 2002); a female was taken at Teliapara (October 2002). Emmet (1948) recorded it from Cheringa in the Chittagong Division. *C. cahira* Moore, 1877 is from the Andamans; ssp. *austeni* is from the Khasi Hills, India.

 # *Caltoris cormasa* Hewitson, 1876
The *Full Stop Swift* was found by Jamal at Kaptai in the Chittagong Hill Tracts in December 2001. I found it in Rema-Kalenga in March 2002 and at Lowacherra in November 2002. The type locality is Borneo, Indonesia.

 # *Caltoris kumara moorei* Evans, 1926
The *Blank Swift* was found just once at Teliapara (March 2002). It has also been recorded from Calcutta and the Khasi Hills, and should be more widespread, probably including the Chittagong Hill Tracts. *C. kumara* Moore, 1878 is from N. Kanara, India; ssp. *moorei* is from Sikkim.

~ *Caltoris tulsi tulsi* de Nicéville, 1883
The *Purple Swift* is a lowland butterfly known from the Khasi Hills and should be in the forested areas of Bangladesh. The type locality is Sikkim.

Genus **ITON** de Nicéville, 1895

 # *Iton semamora semamora* Moore, 1866
The *Common Wight* was numerous in Lowacherra in March 2002 and seen in small numbers at Rema-Kalenga and Teliapara during March and April. There are no previous records. The type was from 'Bengal'.

APPENDIX 1

SPECIES RECORDED FROM 'SYLHET' ('SILHET') OR CACHAR BUT NOT INCLUDED IN THE CHECKLIST, AND A FEW SPECIES RECORDED IN ERROR FROM BANGLADESH

A significant proportion of the 'Sylhet' records are of middle or higher level butterflies that are unlikely to be found in Bangladesh (e.g. it would be surprising if more than one of the five *Lethe* or any of the *Abisara* were actually found in Bangladesh).

Teinopalpus imperialis imperialis Hope, 1843 (Khasi Hills, montane)
Atrophaneura dasarada Moore, 1857 (Cachar, only Nemotha, 1,000ft)
Atrophaneura adamsoni Grose-Smith, 1896 (in error from Dhaka by Alam (1962))
Papilio sakontala Hewitson, 1864 (invalid-an ab. of *P. polytes*)
Papilio rhetenor Westwood, 1842 (Cachar, only Nemotha, 1,000ft; Arakan)
Papilio arcturus arcturus Westwood, 1842 ('Bangladesh', unlikely)

Dercas lycoreus Doubleday, 1842 (Sylhet)
Dercas verhuelli Doubleday, 1847 (Sylhet)
Prioneris sita Felder & Felder, 1865 (only S India-error by Alam (1962))

Arhopala abseus indica Hewitson, 1862 (Sylhet)
Arhopala paraganesa zephyretta Doherty, 1891 (de Nicéville, 1882 (Sylhet))
Deudorix barthema Distant, 1885 (female nomen dubium)
Mota massyla Hewitson, 1862 (Sylhet)
Pratapa cotys Hewitson, 1865 (Sylhet)
Suasa lisides Hewitson, 1863 (Sylhet)
Rapala rectivitta Moore, 1879 (Cachar)
Rapala nicevillei Swinhoe, 1911 (Sylhet)

Abisara fylla Doubleday, 1847 (Sylhet)
Abisara neophron Hewitson, 1861 (Sylhet)
Abisara chela de Nicéville, 1886 (Sylhet)
Dodona ouida ouida Hewitson, 1865 (Sylhet)

Lethe yama Moore, 1857 (not lowlands) (Sylhet)
Lethe latiaris latiaris Hewitson, 1863 (Sylhet)

Lethe sura Doubleday, 1849 (Sylhet)
Lethe chandica chandica Moore, 1857 (Sylhet)
Lethe sinorix Hewitson, 1863 (not lowlands) (Sylhet)
Lethe sidonis Hewitson, 1863 (not lowlands) (Sylhet)
Ypthima asterope mahratta Moore, 1884 (Bengal-surely wrong, NW India only)

Enispe cycnus Westwood, 1851 (Sylhet) (only recorded from Shillong)
Enispe euthymius euthymius Doubleday, 1845 (=*sylhetensis* Staudinger, 1887)
Faunis canens arcesilas Stichel, 1933 (Sylhet)

Hestina nama Doubleday, 1844 (Sylhet)

Charaxes aristogiton Felder & Felder, 1867 (Sylhet)
Polyura dolon magniplagus Fruhstorfer, 1904 (submontane) (Sylhet)
Polyura eudammipus eudammipus Doubleday, 1843 (Silhet)-not usually at low elevation

Bassarona recta de Nicéville, 1886 (Sylhet)
Parasarpa dudu Westwood, 1850 (Sylhet)
Neptis ananta ochracea Evans, 1924 (Sylhet)
Cyrestis cocles cocles Fabricius, 1793 (Sylhet)
Boloria chitralensis Moore, 1899 (as *Melitaea* (Alam 1962) only high Palaearctic-error)

Bibasis gomata gomata Moore, 1865 (Sylhet)
Bibasis amara Moore, 1865 (Sylhet)
Celaenorrhinus dhanada affinis Elwes & Edwards, 1897 (Sylhet)
Odina decoratus Hewitson, 1867 (TL Sylhet)
Chamunda chamunda Moore, 1865 (Sylhet)
Stimula swinhoei Elwes & Edwards, 1897 (Sylhet)

WHAT IS GOING ON HERE?

The common nawab (*Polyura athamas*) drinking sweat from my mother's nose in the Syon Park Butterfly Park in London. This is a common butterfly in Bangladesh. Butterflies are not always the delicate nectar-feeders of the standard schoolbooks. As usual the specimen photographed is a male, since 99% of all butterflies coming to water and foul substances are males, seeking salts and amino acids that will boost their sperm production. On rotting or fermenting fruit the sex-ratio is much more even. Despite her smile, my mother said it tickled almost unbearably!

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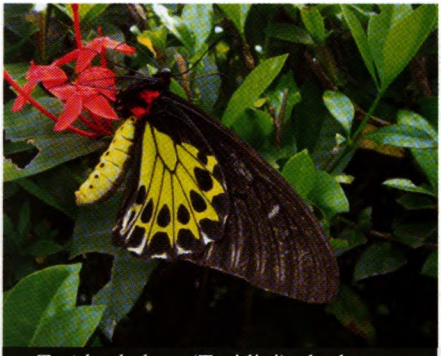
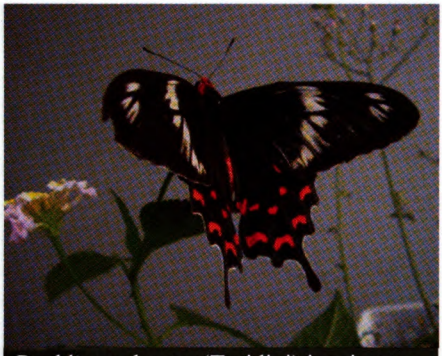
PLATE 1 PAPILIONIDAE (TROIDINI & PAPILIONINI)

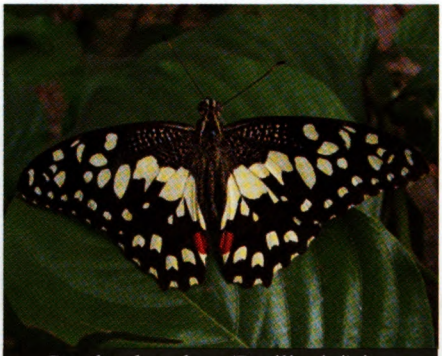


Troides helena (Troidini), the largest butterfly in Bangladesh from Srimangal.



Pachliopta hector (Troidini) is migratory but may be common (Sundarbans).

Atrophaneura varuna (Troidini) from Teliapara Forest.

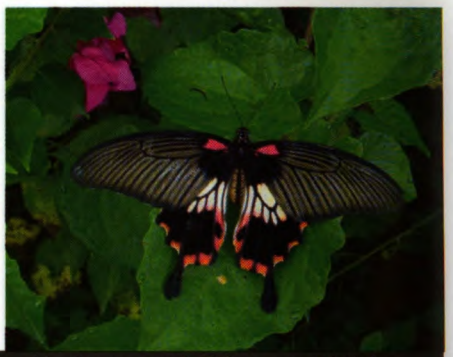


Papilio demoleus (Papilionini) is a common butterfly all over Bangladesh.

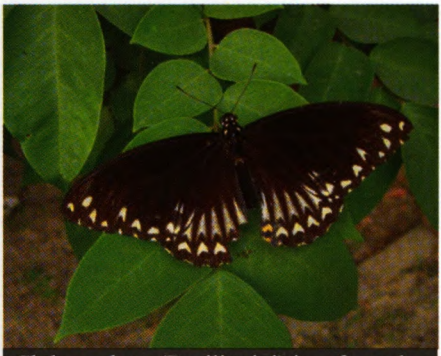
Papilio chaon (Papilionini) flies in the Srimangal forests and may be common.

Papilio polytes (Papilionini) is common everywhere and feeds on garden *Citrus*.

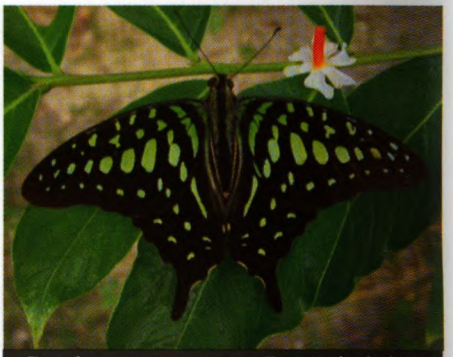
PLATE 2 PAPILIONIDAE (PAPILIONINI & LEPTOCIRCINI)



Papilio memnon (Papilionini) is widespread in the east and Chittagong Division. The female (right) is very different from the male and comes in many different forms.

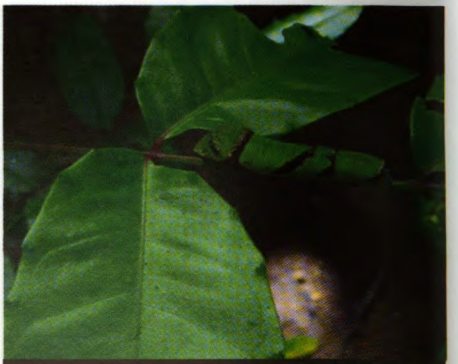


Chilasa clytia (Papilionini) in a form that mimics *Euploea* (see plate 5).



Graphium agamemnon (Leptocircini) is is found even in Dhaka gardens.

Pathysa antipathes (Leptocircini) is a butterfly of the few remaining forests.

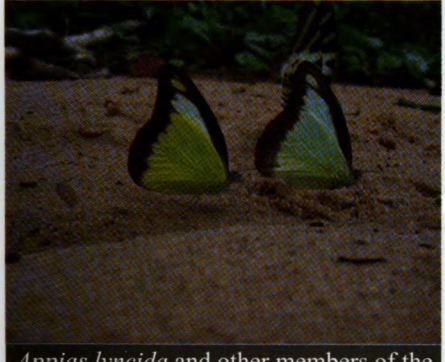


The well-camouflaged larva of *Papilio chaon* feeds on forest Rutaceae plants.

PLATE 3 PIERIDAE (COLIADINAE & PIERINAE)

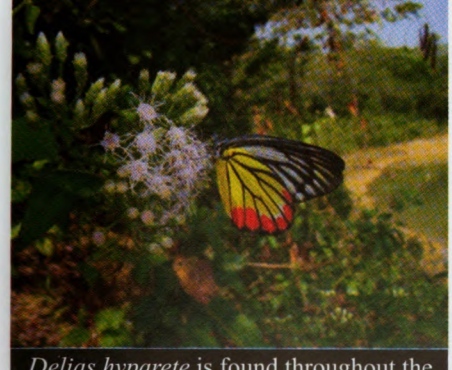
Eurema hecabe is common all over the country and often clusters to sip water.

Artogeia rapae is mainly a winter visitor to most of Bangladesh, even Dhaka City.



Appias lyncida and other members of the genus are avid visitors to wet sand.

Leptosia nina is a fragile butterfly that is common even in Dhaka (a pair is mating).



Delias hyparete is found throughout the country, here photographed at Bhawal.

Delias pasithoe is mainly a forest butterfly that may occasionally be found in Dhaka.

PLATE 3 ECOLOGICAL PHOTOS

Bhawal National Park in spring when the butterfly fauna is at its best. Though mainly a rather monotonous 'sal' forest the number of butterfly species is surprisingly large.

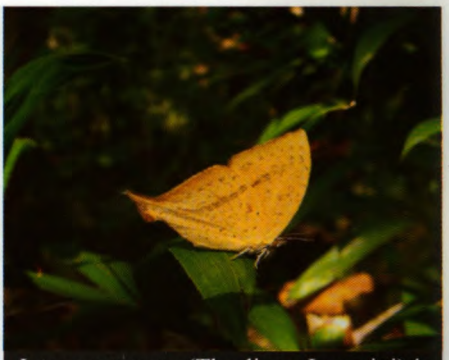
The Khotka Plains in the Sunderbans was of considerable entomological interest. The forest guards took considerable interest in my work and no tiger dared attack!

The Dulahazara Safari Park at Malumghat near Cox's Bazaar. This locality would handsomely repay further research.

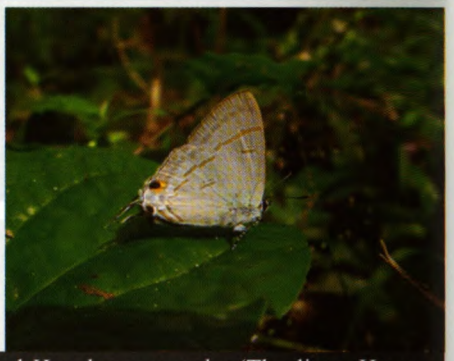
The author collecting along a stream in Lowacherra Forest which kept producing species not previously seen on every subsequent visit.

PLATE 4 LYCAENIDAE & RIODINIDAE

Amblypodia anita (Theclinae, Amblypodiini) is very rare in Bangladesh.



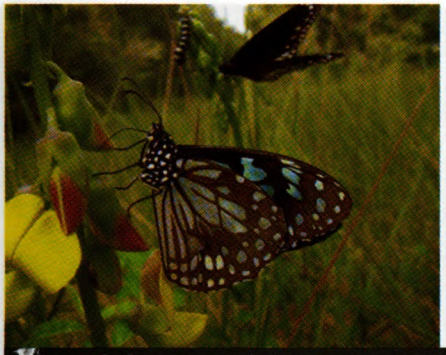
Loxura atymnus (Theclinae, Loxurini) is locally common, this one from Bhawal.

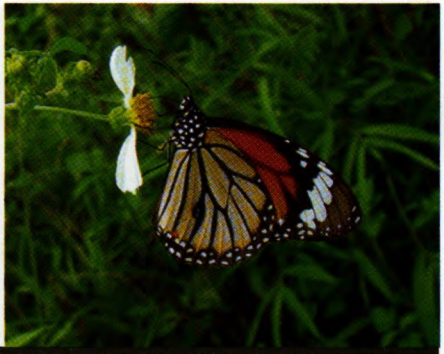


Spindasis lohita (Theclinae, Aphnaeini) and *Hypolycaena erylus* (Theclinae, Hypolycaenini) both have life-like false-heads that make predators attach the wrong end.

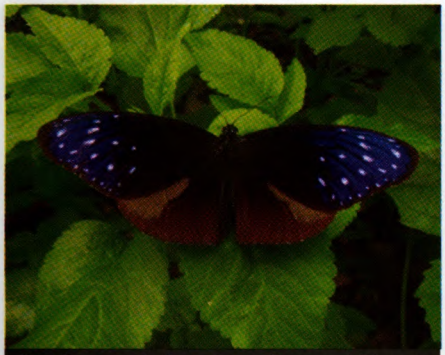
Castalius rosimon (Polyommatinae) is one of the most common of its subfamily.

Zemeros flegyas (RIODINIDAE) flies in broadleaf forests (Srimangal, Chittagong).

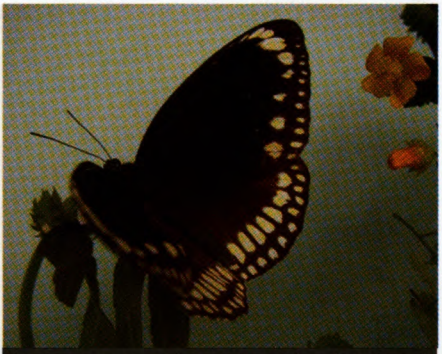




Tirumala limniace and *Danaus genutia* (right) are two related species that are quite common throughout Bangladesh. Both are toxic and mimicked by non-toxic species.



Euploea mulciber, one of several Danainae with beautiful blue gloss.



Euploea crameri in a subspecies that is only in the Indian and Bangladesh mangroves.

Melanitis leda is common throughout the country-here on sugar cane in Dhaka.

Mycalesis gotama-the photo depicts the first ever recorded from Bangladesh.

PLATE 6 NYMPHALIDAE
(AMATHUSIINAE, APATURINAE, CHARAXINAE & HELICONIINAE)

Discophora timora (Amathusiinae)-the only known Bangladesh specimen.

Euripus nyctelius (Apaturinae) is a species strictly of the few broadleaf forests.

Charaxes bernardus (Charaxinae) is not rare in broadleaf forests.

Polyura athamas (Charaxinae) is common in broadleaf forest, but also elsewehere.

Acraea violae (Heliconiinae) is a genus with a single member in Bangladesh.

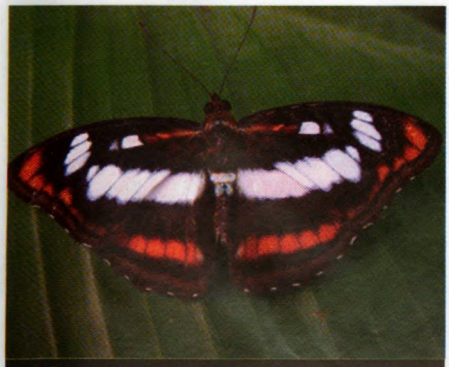
The larva of *Cethosia cyane* the bold colours advertise that it is bad to eat.

Euthalia aconthea (Adoliadini) on bananas in a fruitshop at the Bhairab ferry.

Tanaecia lepidea (Adoliadini) is common in the broadleaf forests.

Lebadea martha (Parthenini) is a lovely butterfly of broadleaf forest.

Parthenos sylvia (Parthenini) is a large spectacular species with a majestic flight.



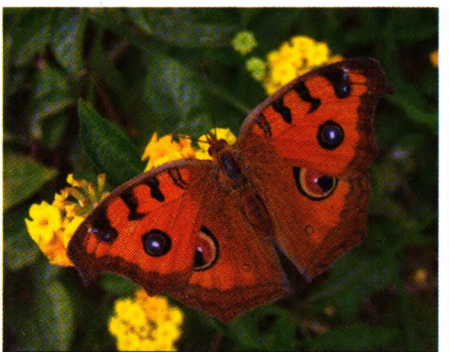
Athyma inara (Limenitidini) is the most colourful member of a large genus.

Neptis hylas (Limenitidini) is a widespread member of a large, confusing genus.

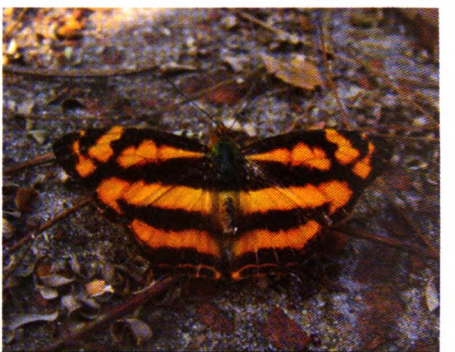
PLATE 8
NYMPHALIDAE (CYRESTINAE, NYMPHALINAE)

Cyrestis thyodamas (Cyrestinae) is very characteristic, but uncommon in forests.

Stibochiona nicea (Cyrestinae) has been met with just a few times in Lowacherra.



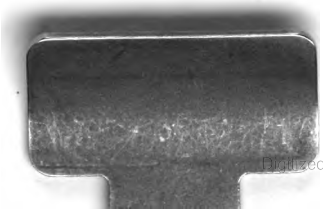
Junonia almana (Nymphalinae) is common throughout Bangladesh.



Symbrenthia lilaea (Nymphalinae) may occasionally be seen at Lowacherra.

Gangara thyrsis (Hesperiinae) is by far the largest hesperiid in Bangladesh.

Hyarotis adrastus (Hesperiinae) in the unusual resting posture of the subfamily.



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As a Union, IUCN seeks to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.

The World Conservation Union builds on the strengths of its members, networks and partners to enhance their capacity and to support global alliances to safeguard natural resources at local, regional and global levels.

IUCN Bangladesh Country Office established in 1991 has been providing support to the national institutions both government and non-government by advising them on environmental planning and assessment, sustainable management of natural resources, formulation of environmental policies, habitat conservation and restoration, ecosystem and livelihood management, water management, biodiversity conservation, demonstration of knowledge application through pilot interventions, institutional capacity strengthening, environmental education and awareness promotion, environmental law and water and climate change issues.

About the author

The author enjoying a coconut at Teknaf after a day's collecting.

The author was born in Denmark in 1944 but spent much of his childhood in India where he developed a lasting interest in butterflies. After graduation from the University of Copenhagen as an economist he worked as a specialist in family planning for various international organizations. In 1984 his spare-time work on butterflies in Lebanon, Jordan, and Arabia earned him a doctorate in biological sciences from Copenhagen and he began an ambitious programme of butterfly research in Africa. He has published more than a dozen books and monographs on the butterflies of the Middle East, South India, and Africa. The present checklist is the outcome of two years in Bangladesh, where his spouse was posted from 2001 to 2003. He hopes that this will provide a basis for more research on Bangladesh butterflies.

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