

**COMMONER BUTTERFLIES  
OF NEPAL**





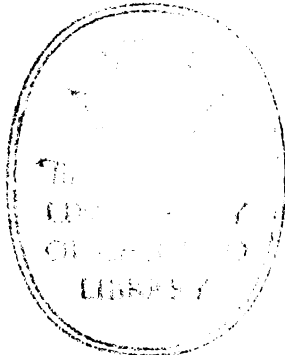
N.H.M. BULLETIN SERIES I.

**COMMONER BUTTERFLIES  
OF NEPAL**

C. SMITH  
NATURAL HISTORY MUSEUM

**Copyright Reserved by  
Natural History Museum**

TRIBHUVAN UNIVERSITY  
INSTITUTE OF SCIENCE  
NATURAL HISTORY MUSEUM  
Anandakuti, Swoyambhu  
Kathmandu, Nepal.  
1975.



**PL 480**

1st Printing Jan. 1976. 500 Copies.

**Copyright reserved  
by National History Museum**

*Printed by University Press*

Tribhuvan University, Kathmandu.

# FOREWORD

Since early civilization men have been fascinated by butterflies. In the present day world Naturalists travel far and wide, from one corner of the world to the other in search of butterflies and other specimens of natural history. The Natural history of Nepal remained a subject of curiosity for a long time. Until 1951 Nepal was an inaccessible kingdom for foreigners: and only a few naturalist could obtain permission for making collections in Nepal. Since that year the number of expeditions and naturalists visiting Nepal has been ever increasing. But specimens of natural history, collected from every nook and corner of the kingdom have been deposited in museums in different countries. The Natural History Museum has been established in Nepal with the purpose of initiating collection, preservation and research work on various aspects of natural history.

Collection and cataloging of butterflies of Nepal had been initiated by Mr. Colin Smith.

Mr. Smith has been engaged in this area for the last ten years. This book discribes some common genera of butterflies found in Nepal.

I hope, this book will be useful to the hobbyist as well as to naturalists and help stimulate interest in the study of butterflies of Nepal.

Shanker P. Pradhan  
Dean  
Institute of Science  
T.U., Kirtipur  
Nepal.

# COMMONER BUTTERFLIES OF NEPAL

## (1) INTRODUCTION

This booklet is intended to help introduce the beauties of the butterfly world to those whose good fortune allows them to live in or visit Nepal. It is hoped that it will encourage the study of these most attractive of insects, by helping to recognise at least the commoner ones. Note that it is not necessary to collect them in order to study them. (For those wishing to collect, the techniques are described in any book on butterflies or in "Collecting Butterflies in Nepal" published by the Natural History Museum). Whether specimens are obtained or not, the important thing to obtain is the record-place, altitude and date of the particular species observed. Another point of interest to note is what the butterfly was doing—feeding on the nectar of a flower (if so what flower), laying eggs on a plant (if so what plant), sunning itself on dry earth or stones, sucking water from mud, or a sandy patch by a stream, or flying round in seemingly meaningless circles (to give just a few of their varied occupations). These occupations give a clue as to some of the places you can expect to find them. Butterflies can be found all through the year at the lower altitudes in Nepal, but of course the season gets shorter the higher you go. They certainly fly up to 17,000 feet, i.e. well above the snow line.

Butterflies form one superfamily of the insect order Lepidoptera (i.e. scaly-winged insects). Other insects such as Cicadas, Dragon-flies, grass-hoppers etc. may have coloured wings, but only in Lepidoptera is it due to pigmented scales (which very easily come off as powder. For this reason butterflies need to be handled with much more care than is necessary for other insects). All the other superfamilies of Lepidoptera taken together are classed as Moths. We therefore start by giving the characteristics which distinguish butterflies from moths, then go on to divide the butterflies into ten families. These are then further divided into Genera and then species. The descriptions of 100 commoner genera was first prepared in 1969, but the photographs have now been revised to include more species in each genus where this has been possible.

(2)

## Differences between butterflies and Moths

### Butterflies

### Moths

always have clubbed antennae,  
fly only by day (but some at  
dusk-Amathusiidae, Satyridae  
Hesperiidae)

always have straight antennae, often  
feathered,  
fly mainly by night, (but some by day-  
Arctiidae, agaristidae, zyganidae etc.)

(Note Butterflies and day-flying moths are generally brighter colours  
than night-flying moths.)

usually have rounded forewings  
(except Hesperiidae, Papilionidae)

usually have narrow pointed forewings  
(except Geometridae)

Usually have slender bodies and  
are flappy in flight (except-  
Hesperiidae)

usually have stout bodies and are  
buzzy in flight (except Geometridae)

usually rest with wings upright  
(Except Flats and Maps)

usually rest with wings flat  
(Some exceptions)

Caterpillars always have 16 legs,  
usually hairless, some spikey,

caterpillars have 8, 14, or 16 legs,  
often hairy, some horned,

Crysalis is naked, usually on plant  
stem or leaf.

Crysalis is in silk cocoon, often  
buried underground.

## (3) Families of Butterflies

Group (i) Use all six legs for walking-

- A. PAPILIONIDAE (Swallow Tails)- Medium - very large  
(2"-7"), Wings long, Hindwings often with backward pro-  
jections, Flight strong, Basically black with often  
brilliant colours (Yell., red, green, blue).
- B. PIERIDAE (Whites) Small - Medium (1"-3½") Wings rounded,  
with no projections, Flight not so strong, Basically  
white or yellow.
- C. PARNASIIDAE (Apollos) Small (1½"-2½") Rounded wings,  
with no projections, rapid fluttering flight, translu-  
sent white. High altitude only.

(Note- Parnasiidae may be in Papilionidae although  
they appear very different)

- D. HESPERIIDAE (Skippers) Small - Very small (1 - 3½")  
Wings pointed, Flight swift & erratic, Basically brown,  
Antennae set wide apart and clubs pointed or hooked,  
Body stout.
- Group (ii) Use only 4 legs for walking, front legs reduced  
or absent.
- E. DANIDAE (Tigers & Crows) Medium - Large (2¼ - 4¼") Wings  
rounded, Slow lazy flight, often congregate in large  
numbers, tough and distasteful to birds, antennae  
slender, discal cell closed.
- F. SATYRIDAE (Browns) - Small - Medium (1 - 3"), Wings  
rounded or scalloped, veins at base of forewing swollen,  
Weak bobbing flight in shadey places, shades of brown,  
usually with eyespots on wings, Club of Antennae not  
pronounced, discal cell closed.
- G. AMATHUSIIDAE Medium sized (2 ¾ - 3 ¼") Wide  
squarish wings, dark with purple sheen, rapid flight at  
dusk and in jungle, discal cell open. (Typical of  
South America).
- H. ACRAEIDAE Small (1 ¾ - 2 ¾") Narrow semi-transparent  
wings, Very weak flight, yellow/ tawny, give off bad-  
smelling liquid, discal cell open, (Typical of Africa).
- I. NYMPHALIDAE Small - Medium (1 ¼ - 3 ½") Wings  
rounded, tailed or scalloped, flight strong, generally  
brightly coloured and loving sun and flowers, discal  
cell open.
- J. ERYCINIDAE Small (1 ½ - 2 ¼") Wings may be lobed or  
tailed, dull colours, flight swift.
- K. LYCAENIDAE Small - Very Small (¾ - 2") Wings Gene-  
rally rounded, some with lobes or fine hair tails,  
costa of hindwing swollen basally, bright colours  
metallic blues, green, copper-coloured etc.
- (4) Main Genera of Each Family (more than 100 divisions)
- A. PAPILIONIDAE (Swallow Tails) Plates 1 - 3. 39 species  
in Nepal.
- A.1. Troides (Birdwings) Plate 1. Very large (5 - 7"),  
Black forewings, yellow hindwings, no tails, soaring  
flight around treetops, (but do descend to flowers such  
as lillies in the mornings), Usually found singly, from  
mid-May onwards, up to 9,000 ft. 2 species.



A. PAPILIONIDAE (Cont)

A.2. Antrophaneura (Windmills or Red-bodied Swallowtails)

Plate 1. Large ( $3\frac{1}{2}$  -  $4\frac{1}{2}$ " ) Elongated black forewings and tailed hindwings with white and red spots, sides of abdomens red, leisurely flight, visit water and flowers, March onwards, up to 9,000 ft. 6 species.

A.3. Chilasa (Mimes) Plate 1. Medium (2 - 3") Rounded wings, no tails, Markings as Danidae, rapid flight, visit flowers and water, Late March onwards, low - medium altitude, but one occurs to 9,000 ft. 3 species.

A.4. Papilio (Black-bodied Swallowtails)- Plate 2.

(i) Memnon Group - Large - Very large ( $3\frac{1}{2}$  -  $5\frac{1}{2}$ " ), Forewings black, Hindwings always have red spot at base on underside, may have other red or white markings, some tailed, strong flight, visit water, sides of abdomen yellow or black, from April onwards, 1,000 - 6,500 ft. 4 species.

(ii) Protenor Group (Spangle)- Large (3 - 4") Above black with blue/grn. sheen, no red spot at base on underside, no tails, March onwards, below 6,000 ft.

(iii) Paris Group (Peacocks) - Large (3 -  $4\frac{1}{2}$ " ) Wings black, Upperhindwing with bright metallic blue/green patch and tails - 4 species, 2 of them below 6,000 ft, other two above to 9,000 ft.

(iv) Helen Group - Large (2 - 5"), Dull black, Hindwings tailed with red spots on underside and white patch or stripe on both sides. Erratic flight, mid-March - October, below 5,000 ft. 3 species.

(v) Demoleus Group - Medium (3"), more Yellow than Black-chequered pattern, low erratic flight, from mid-March, up to 16,000 ft. 2 species one tailed and the other not.

A.5. Zetides (Bluebottles & Jays) - Plate 3. Medium ( $2\frac{1}{2}$  - 3") With extensive pale blue-green area on both wings (Semi-transparent in Bluebottles, more broken up in Jays). One species of each tailed, circle trees on hilltops). March onwards, up to 9,000 ft. 5 species.

A.6. Pathysa (Swordtails - Plate 3. Medium (2 - 3") More creamy white than black, very fine tails, rather rapid flight, usually found near water, March onwards, low altitudes to 6,000 ft. 4 species.

A. PAPILIONIDAE (Cont)

- A.7. Pranticopsis (Zebras) - Plate 3. - Medium (2¼ - 3")  
Black and white striped. Jungle butterflies found near water, Terai - 1,500 ft. 2 species.
- A.8. Teinopalpus imperialis (Kaiser-i-hind)- Plate 3. Large (3") Very rare and beautiful, rich green and purple with yellow patches on hindwings, tailed, flies on tops of hills covered with thick jungle, usually settling high in trees, strong flight, May & June, 6,000 - 10,000 ft.
- B. PIERIDAE (Whites & Yellows) - Plate 4. (47 species in Nepal) .
- B.1. Leptosia nina (Psyche) (¾ - 1 ¼") - Smallest White with feint green mottling on underhindwings. Single black spot on forewings which have very rounded tips. Weak flight near ground in shadey places. Spring & Autumn Broods, low altitude to 5,000 ft.
- B.2. Aporia agathon (Great Blackvein) - (2 ¾ - 3") White with black veins creamy yellow on underside, one bright yellow spot at base hindwings. Slow floating flight, often cluster on wet ground, April - June 4,000 - 10,000 ft.
- B.3. Delias (Jezebels) (2½ - 3") 3 species rather like black-vein, but all with much brighter yellow, others usually have red as well on underhindwings. Common on flowers, lazy flight, all year some species are out. Terai to 10,000 ft. 9 species in all.
- B.4. Cepora (Gulls) (1 ¾ - 2 ¼") - White with black tips, some veins darkened, no black spots, always greenish on underside. Fast flight all through year, below 5,000 ft. 2 species.
- B.5. Anapheis aurota (Pioneer) (1 ¾") - White above except for darker of forewing, Strong flier, any time of year, up to 8, 500 ft.
- B.6. Appias (Albatrosses) (1 ¾ - 2 ¼") - White with black tips, and usually plain undersides (yellowish or brownish), very fast flight, love sun and visit flowers and damp patches, common in Autumn at lower altitudes, but sometimes to 9,000 ft. 5 species.
- B.7. Ponta daplidice (Bath White) (1 ½") - Distinctive large green blotches on underside, love sun and flowers, Spring & Autumn broods, Medium to high altitudes.

B. PIERIDAE (Cont) Plate 4

- B.8. Pieris (Cabbage Whites) (1 1/4 - 2 3/4") White with black tips and up to two black spots on forewings, Weak flight, love sun & flowers, Throughout year, up to 12,000 ft. 4 species.
- B.9. Hebomois glaucippe (Great Orange Tip) (2 1/2 - 3 1/2") - White with bright orange tips to forewings, speckled with brown on underside, the largest and strongest flier of the white family, swift exvasive flight. Visits damp patches, best found September - November below 3,500 ft. though does occur in Spring, & up to 4,500 ft.
- B.10. Ixias pyrene (Yellow Orange Tip) (1 1/2 - 2 1/2") - Male is bright yellow with orange tip, female black and white (rather like Appias but with more black), flight not so swift, Common below 3,500 ft. June and Autumn.
- B.11. Parenomia (Wanderers) (2 - 2 1/2") - Stripecy like Danais (Glassy Tigers), Males pale blue, strong flight, low altitudes to 5,500 ft. From February. 2 species.
- B.12. Catopsilia (Emigrants) (1 1/2 - 2 1/2") White or yellow with lightly marked wing tips and cell spots, fast flying, sun loving, Common all through year, up to 8,000 ft. 4 species.
- B.13. Gonepteryx (Bri mstones) (1 3/4 - 2 1/4") - Plain yellow (males) to creamy white (females), no markings on tips, redish spots in cells, forewings toothed, flight not so strong, from March onwards, 2,500 - 10,000 ft. 2 species.
- B.14. Eurema (Grass Yellows) (1 - 1 3/4") - Sulphur yellow with black tips, redish spots in cells, forewings toothed, flight not so strong, from March onwards, 2,500 - 10,000 ft. 2 species.
- B.15. Colias (Clouded Yellows) (1 1/4 - 1 3/4") Yellow or Orange with thicker black borders, stronger flight (low but rapid), one found all the year at some altitude between Terai and 15,000 ft. 7 species.

C. PARNASSIIDAE (Snow Apollos) - Plate 5.

- C.1. Parnassius (1 1/2 - 2 1/2") White with black, red and blue spots, rapid flutterfing flight, never far from snow, May - October, 9,000 - 18,000 ft. 3 species.

D. HESPERIIDAE (Skippers) - Plate 5. 80 species in Nepal  
subfamilies-

D.1. Celaenorrhinae (Flats) (1 1/4 - 1 3/4") Forewings  
generally brown, some have white hindwings (Snow Flats),  
always settle with wings flat, often on stones or  
undersides of leaves, February onwards, up to 7,000 ft.  
21 species.

D.2. Hesperinae only one species Spialia galba (Indian  
Skipper) (1") Speckled black and white, flies close to  
ground in sunshine, all year, up to 5,000 ft.

D.3. Ismeninae (Awls) (1 1/2 - 2") - Powerfully built, often  
with bright colours, typical of thick jungle, sus-  
tained bounding flight, come to water, up to 7,000 ft.  
12 species.

D.4. Plastingiinae (Bobs) (1 1/2") Dark Brown with semitranspa-  
rent discal spots on Forewings, no light spots on hind-  
wings, visit flowers and water, Low altitudes (below  
2,000 ft.) 4 species.

D.5. Erionotinae (Red-eyes) ( 1/4 - 3 1/4") Also powerful  
but duller colours (brown & yellow), with blood red  
eyes, low altitudes up to 3,000 ft. in Autumn.  
2 species.

D.6. Pamphilinae (Grass Darts) (1") - Small speckled, rather  
weak flight in grass or on low flowers, up to 7,000 ft.  
5 species.

D.7. Erynninae (Darts & Aces) ( 1 - 1 1/4") - Darts, Tawny  
& Black, Aces, Brown with white cell and spots. Flight  
swift about trees and shrubs, prefer shade, up to  
6,500 ft. 11 species.

D.8. Baorinae (Swifts) (1 - 2") - Dark brown with transpa-  
rent spots on forewings, strong flight, visit flowers,  
to 10,000 ft. 13 species.

D.9. Notocryptinae (Demons) (1 1/2") - Black with (perhaps  
broken) white band acro-s tip of forewing, love shade,  
often found near water, fast flight, up to 8,000 ft.  
4 species.

E. DANIDAE (Tigers & Crows) Plate 5. 13 species found in  
Nepal.

(i) g. Danais (Tigers) - Generally stripey (i.e. veins  
darkened).

DANIDAE (Cont) Plate 5

- E.1. Glassy Tigers (3 - 4 1/4") - Ground colour semi-transparent white or blue, found all year round, up to 9,000 ft. 5 species.
- E.2. Tawny Tigers (2 1/4 - 3") Ground colour tawny orange-brown, white bar on tip forewing, one species unstriped, all year round, up to 9,000 ft. 2 species.
- (ii) Euploea (Crows) (3 - 3 1/2) Ground colour dark brown.
- E.3. Brown Crows - Border of white spots, no blue sheen on wings, all year round, to 8,000 ft. 2 species.
- E.4. Blue Crows - May have few very small white dots (not on border) Blue sheen on wings, Terai to 5,500 ft. 4 species.
- F. SATYRIDAE (Browns) - Plate 6. 68 species in Nepal.
- F.1. Mycalesis (Bushbrowns) (1 3/4 - 2 1/4") - Marked on underside with light band and series of rings, weak low flight, settle on grass or undergrowth, all year round, up to 5,000 ft. 9 species.
- F.2. Lethe (Treebrowns) (1 3/4 - 2 3/4") - Intricate patterns of lines and rings on undersides, some have white band across tip, rapid irregular flight, all year round, to 10,000 ft. 24 species.
- F.3. Parage (Wall Browns) (1 3/4 - 2 1/2") - Distinctive Tawny colours, found in open country in Autumn, 6,000 - 14,000 ft. 4 species.
- F.4. Orinoma damaris (Tiger Brown) (2 - 2 1/2") - Marked like Glassy Tiger (creamy white) but with distinctive orange spot in cell forewing, Rather weak flight in jungle, May - October, 4,500 - 6,000 ft.
- F.5. Aulocera (Satyrs) (2 1/2 - 3") - Powerfully built dark brown butterflies with a clear white strip across both wings (and no rings), mainly in Autumn, only above 4,000 ft. 5 species.
- F.6. Erebia (Arguses) (1 1/2 - 2 1/2") - Dark velvety brown with rings but no bands, very rounded wings, Bobbing flight, from May onwards, 4,000 - 9,000 ft. 5 species.
- F.7. Ypithima (Rings) (1 - 1 3/4") - Lighter brown, having 3 to 5 rings on underhindwings and no stripes, Weak jerky flight, near ground, all year round, 2,000 - 9,000 ft. 9 species.

F. SATYRIDAE (Cont) Plate 6

- F.8. Orsotrianea medus (Nigger) ( $1\frac{1}{2}$  - 2") - Very like Bushbrowns, above plain dark brown, below two ring-spots on each wing, sometimes white line too, very weak flight in dense shade. Common all year, up to 4,000 ft.
- F.9. Melanitis (Evening Browns) ( $2\frac{1}{2}$  - 3") - Toothed wings, prominent orange eye-marking on upperforewing, undersides leaflike and variable, swift erratic flight, in shadey places. all year, but commonest in winter, up to 7,000 ft. 3 species.
- F.10. Elymnias (Palmflies) ( $2\frac{1}{4}$  -  $3\frac{1}{2}$ ") - Have purple, yellow, red etc. to mimic Danaids or a Jezebel, slow high flight, generally near jungle, all through year, low altitudes to 4,000 ft. 3 species.

G. AMATHUSIIDAE Plate 6. Only one species recorded.

- G.1. Discophora tullia (Common Duffer) ( $2\frac{3}{4}$  -  $3\frac{1}{4}$ ") - Mimic of Blue Crow? Forewings have purple sheen, female has orange spots in rows, often found near Bamboo, very rapid flight, Aug.- Nov. up to 3,000 ft.

H. ACRAEIDAE (Costers) Plate 6. Only two species in Nepal.

- H.1. Pareba vesta (Yellow Coster) ( $2\frac{1}{4}$  -  $2\frac{3}{4}$ ") Dull yellow with black scaling, May onwards, abundant in September 5,000 - 7,000 ft. but does occur also in Terai.
- H.2. Telchinia violae (Tawny Coster) ( $1\frac{3}{4}$ ") - Red-tawny colour with white spots on border of underhindwings, all year at low altitudes to 2,500 ft.

I. NYMPHALIDAE Plates 7 - 9 102 species so far recorded in Nepal.

- I.1. Charaxes (Rajahs) Plate 7. ( $2\frac{1}{2}$  -  $3\frac{1}{2}$ ") - Tawny chestnut with dark borders, short tail or tooth on hindwing, powerful flight, jungly places, like sun and water, plentiful in Terai in Spring, but also as late as November and up to 5,000 ft. 2 species.
- I.2. Polyura (Nawabs) Plate 7. ( $2$  -  $3\frac{1}{4}$ ") - Pale cream with dark borders, two teeth or tails on hindwings. Powerful flight, in jungle & also rice fields, often found at water, May onwards, low altitude to 9,000 ft. 4 species.
- I.3. Dilipa morgiana (Golden Emperor) Plate 7. ( $2\frac{1}{4}$ ") Tawny with dark border but no tails, Strong flight, comes to water and over ripe Fruit Found best March - July between 4,000 - 6,000 ft.

I. NYMPHALIDAE (Cont)

- I.4. Sephis chandra (Eastern Coutier) Plate 7. (2 1/4 - 2 3/4") Mimic of Tigers, males - tawny with white band across tip of forewing, females - bluish with only cell of forewing tawny, strong flight around trees and hill-tops, comes to water, May onwards, 3,000 - 6,000 ft.
- I.5. Hestina nama (Circe) Plate 7. ( 2 3/4 - 3 1/4") - Mimic of Glassy Tigers, but has more dark stripes, strong flight, likes tops of hills, also comes to water, March onwards, up to 6,500 ft.
- I.6. Stibochiona nicea (Popinjay) Plate 7. (2 - 2 1/2") - Velvet Blue-black with obscure white marginal spots. Rapid flight in jungle, settles with wings flat, on tree-trunks or near water, April - Oct. to 6,000 ft.
- I.7. Euthalia (Barons) Plate 7. (2 - 3 1/2") - Basically dark brown, some have light bands on forewings, others light borders to hindwings, Strong fliers, usually found in jungle, often lay wings flat, some out all through year, low altitude to 7,000 ft. 12 species.
- I.8. Limenitis (Admirals) Plate 7. (2 1/4 - 3") Dark brown or black, usually with one clear straight white stripe across both wings. Graceful sailing flight, forest areas up to 8,000 ft. 5 species.
- I.9. Abrota ganga (Sergeant Major) Plate 8. (2 1/2 - 3") - Rich yellow-brown with darker markings, much like Sergeants but larger, flies in shadey jungle, April - June, 2,500 - 4,000 ft.
- I.10. Pantoporia (Sergeants) Plate 8. (2 - 2 3/4") - Dark brown or black with one or more curved white stripes (Sometimes yellow in females) each side joining across abdomen, settle with wings flat, sun-loving, sailing flight, come to water in jungle up to 10,000 ft. 8 species.
- I.11. Neptis (Sailers) Plate 8. (1 3/4 - 2 1/2") - Colouring as Sergeants, but either both sexes white, or both yellow, usually have more light markings, main stripe never crosses abdomen, wings narrower, Jerk and glide flight, sun-loving & come to water, still mostly jungle butterflies, all year round, Terai - 8,000 ft. 20 species recorded.
- I.12. Cyrestis thyodamas (Common Map) Plate 8. (2 1/4") - White with map like markings and short tails, distinctive jerky flight, settles with wings flat, all year, up to 8,000 ft. visits flowers and water.

I. NYMPHALIDOE (Cont)

- I.13. Chersonesia risa (Common Maplet) Plate 8. (1½") - similar markings to map, but basically yellow instead of white. Much more shy & hides by jungle streams, April - November, low altitudes to 3,500 ft.
- I.14. Pseudergolis wedah (Tabby) Plate 8. (2") - Very like Castors bright brown, with black lines and a clear row of dots, gliding flight, generally near streams. April - October, up to 5,500 ft.
- I.15. Hypolimnas (Eggflies) Plate 8. (2 1/4 - 3 1/4") - Females mimic Danaids (Blue Crow or Tawny Tiger). Males- dark brown with central white patch on each wing, also purple sheen, August - October to 5,000 ft, 2 species.
- I.16. Doleschallia bisaltide (Autumn Leaf) Plate 8. (2½") - Rich tawny orange with black tips to forewings, and white tails to hindwings, leaf-shaped, and leaf-like below, low altitudes - 2,000 ft. Summer & Autumn.
- I.17. Kallima inachus (Orange Oakleaf) Plate 8. (3¼") Bright Orange and blue above, leaf-like below. (Pointed tips to wings also matching the leaf-shape). Often settle on Bamboo with Common Duffer, very fast flight when disturbed, March to October not above 8,000 ft.
- I.18. Precis (Pansies) Plate 9. (1¼ - 2½") - Generally bright, but in various colours (Blue, Yellow, Orange, Grey), have eye-markings on wings, Forewings outer edge concave, rapid flight near ground, take off very quickly, but soon settle again, love sun and flowers, found, in open country most of the year, and up to 9,000 ft. 6 species.
- I.19. Vanessa (Admirals) Plate 9. ( 3/4 - 2 1/2") - Similar to Pansies but stronger, red, tawny or blue markings, wings concave and sometimes toothed on hindwings, no eye-markings, Many have habit of returning to the same spot, love sun and flowers, all types of country up to 15,000 ft. 7 species.
- I.20. Symbrenthia (Jesters) Plate 9. (1 1/4 - 1 3/4") Look like small yellow sailers above, but quite different below, have toothed hindwings, jerky flight, come to flowers and water, from February onwards, up to 7,500 ft. 3 species.
- I.21. Cupha erymanthis (Rustic) Plate 9. (2") - Above dark brown with very broad yellow band, rather weak flight, April - October, Shadey Jungle up to 5,000 ft.



I. NYMPHALIDAE (Cont)

- I.22. Argynnis (Fritillaries) Plate 9. (1 3/4 - 3") - Above Tawny with lines of black spots, below silver spots or striped. Rapid flight, love sub and flowers, all year round, from Terai to 15,000 ft. 7 species.
- I.23. Atella phalantha (Common Leopard) Plate 9. (2") - Like Fritillary above, but no silver below, weaker flight, July - Oct. Terai - 7,500 ft.
- I.24. Issoria sinha (Vagrant) Plate 9. (2 1/4") Golden tawny colour with darker base and margins, Hindwing toothed, rapid flight in sunny forest glades, often near streams, April - November 2,000 - 5,000ft.
- I.25. Cethosia (Lacewings) Plate 9. ( 2 1/4 - 3 1/4") Males brightly coloured above (red or orange), females grey. Intricate aptterns below, deeply scalloped wings, slow deliberate flight, generally like damp jungle, but also visit flowers in open country, March - November to 7,000 ft. 2 species.
- I.26. Ergolis (Castors) Plate 9. (2") - Dark brown with wavy black lines, but no line of dots like Tabby, sailing flight is weak and short, often very local, July - October, Terai to 6,000 ft. 2 species.
- J. ERYCINIDAE PLATE 6. - 12 species recorded in Nepal.
- J.1. Libythea (Beaks) (1 3/4") Tawny and black, beak or snout is formed by palpi, forewingtips hooked, quick darting flight, like shadey streams in jungle, April onwards, Terai to 9,000 ft. 2 species.
- J.2. Zemerus flegyas (Punchinello) (1 1/2") - Brown and orange chequered. Wings edges comparatively straight, settle on bushes, quick flight, found all year, up to 6,500 ft.
- J.3. Dodona (Punches) (1 1/2 - 2") Lobed hindwings, some tailed as well, 3 species brown and orange, and 3 species brown and white, most have silver lines on underside, fly on sunny hillsides and near streams, from April, 2,500 - 9,000 ft. 6 species.
- J.4. Abisara (Judies) (1 3/4 - 2 1/4") Rather like Treebrowns, but much plainer on underside, and more rapid flight. Two species have white or yellow bars on forewingtip, one has white tails, generally prefer shadey places, found all year, low altitudes to 5,500 ft. 3 species.

- K. LYCAENIDAE (Blues) Plate 10. 163 species recorded in Nepal.
- (i) Subfamily Poritinae (Gems)
- K.1. Poritia hewitsoni (Common Gem) (1 1/4 - 1 1/2") - Bright greenish blue, black basal markings and margins, flies fast, settles on leaves, no tails, most plentiful in winter, below 3,000 ft.
- (ii) Subfamily Lycaeninae (Weak Blues) - Generally slender bodies, rounded wings, weak flight, some have single hair-like tails.
- K.2. Spalgis epius (Apefly) (1") - Above nearly all brown with faint white patch on each wing, below grey criss-crossed with black lines. no tails, Summer & Autumn, below 4,000 ft.
- K.3. Castalius (Pierrots) (1" - 1 1/4") - Underside white with large black spots, upperside mainly black & white (one has some blue scaling), fly low settle on grass or near streams, tailed, mostly Autumn & Winter, low elevations to 3,500 ft. 3 species.
- K.4. Everes (Cupids) (1") Blue (males) or brown (females) above, tailed and with orange spots by tail on underside, love sun and damp ground, April - October, up to 7,000 ft. 4 species.
- K.5. Lycaenopsis (Hedge Blues) (1" - 1 1/2") Above generally bright blue, with dark borders, and sometimes white patches, Underside white with small isolated black dots, love sun & flowers, settle on bushes and damp patches, tailless, all year, Terai - 8,000 ft. 14 species.
- K.6. Zizeeria (Grass Blues) (3/4 - 1 1/4") - Dusky blue with dark borders, underside grey with rows of black spots (one species has orange ones too). no tails, fly low in grassy places. The smallest of the Indian butterflies, all year, Terai to 6,000 fts. 5 species.
- K.7. Lampides boeticus (Peablu) (1 - 1 1/4") - Above light blue (female brownish), underside covered with wavy lines and 2 black spots by tail, sustained flight in sunshine (Migrate in Spring) all year to 10,000 ft.
- K.8. Jamides (Ceruleans) (1 - 1 1/2") - Above very pale blue (one species deep shiny blue), distinct broken wavy lines on underside (4 on forewing, 6 on hindwing), one black spot by tail, low flight around bushes, or at water, mainly Autumn & Winter, up to 6,000 ft. 3 species.

LYCAENIDAE (Cont) Plate 10

- K.9. Lycaena (Coppers) (1 - 1 1/4") - Above copper-coloured with black dots on forewings, low flying, 4,500 - 15,000 ft. 2 species
- K.10. Heliophorus (Sapphires) (1 - 1 1/4") - Above basically brown, males have shiny green, purple, blue or gold, females often have orange patch, Below Yellow with red marginal zigzag line, rather fast flight, settle on bushes or near water, all year, 2,000ft - 12,000 ft. 7 species.
- (iii) Subfamily Theclinae (Strong Blues) - stout bodies, strong flight, often pointed wings, may have one to three tails on hindwings or lobes.
- K.11. Thecla (Hairstreaks) (1 1/2 - 1 3/4") - Males usually shiny green above, below fawn or white with distinctive discal line and two orange spots near tail, like woods and shade, from May onwards, 5,000 - 12,000 ft. 9 species.
- K.12. Curetis (Sunbeams) (1 1/2 - 1 3/4") - Very pointed angular wings, males bright orange (females white) with black borders above, silver below, no tails, come to water, or settle on trees, February - November, up to 5,000 ft. 2 species.
- K.13. Iraota timoleon (Silverstreak Blue) (1 1/2") Bright shiny blue above with wide black borders, below brown with basal silver streak tails and lobes, settles on trees, May - December, up to 6,000 ft.
- K.14. Amblypodia (Oakblues) (1 - 2") Above shiny blue, purple or green, Below black spots arranged in distinctive pattern. Most have tails, visit water, found all year in jungle, up to 7,000 ft. 19 species.
- K.15. Loxura atymnus (Yamfly) (1 1/2") Orange with broad white-tipped tail, rather weak flight, best found in Autumn, below 4,000 ft.
- K.16. Spindasis (Silverlines) (1 - 1 1/2") - Above generally brown, some males have blue glass, some have orange markings, Below white/yellow with black/red silver-centred broad bars. Have double tails, April onwards, Terai to 7,000 ft. 5 species.

LYCAENIDAE (Cont) Plate 10

- K.17. Pratapa & Tajuria (Royals) (1 1/4 - 1 3/4") - Blue above, white or silver or brown below with black spots or lines. Hindwings lobed and with orange spots by double tails. Jungle butterflies - at streams or on hilltops, May onwards, Terai - 7,000 ft. 13 species.
- K.18. Catopocilma elegans (Common Tinsel) (1 - 1 1/4") - Dark violet blue above, below brown studded with silver spots, triple-tailed, Settles on bushes, March - June, up to 5,000 ft.
- K.19. Zeltus etolus (Fluffy Tit) (1 1/4") - Above blue-black, below whitish, very long fluffy tails (double), flies in damp jungle, mainly Summer and Autumn, up to 4,000 ft.
- K.20. Rapala (Flashes) (1 - 1 1/2") - Red, Blue, Purple above, with discal band below, single black spot by tail, also have lobes, skipper-like flight, visit flowers, water, and often settle high on bushes & trees, April onwards, up to 7,000 ft. 12 species.

## Distinctions between male and female butterflies

### APPENDIX

1. In many cases the markings are identical, the only difference being that the females having on abdomen full of eggs, are (a) fatter (fresh specimens only) and (b) slightly larger.
2. There are various other distinguishing characters peculiar to certain genera- The main ones are listed below.
  - (i) Females have an extra tail on hindwing A.8. Teinopalpus- 2 instead of 1. 1.1. Charaxes - one instead of teeth.
  - (ii) Males have bright colours (red or orange) which is replaced by white in female B.10. Ixias, 1.3. Dilipa, 1.4. Sepsis, 1.25. Cethesia, K.12. Curetis.
  - (iii) Males have blue colour which is replaced by brown in females K.4. Everes, K.6. Zizeeria, K.7. Lampides, K.16. Spindasis, K.19. Zeltus.
  - (iv) Metallic colours of males is replaced by orange in females K.11. Thecla, K.10. Heliophorus.
  - (v) Bright colours of males (yellow or blue) is slightly reduced in females 1.9. Abrota, 1.18. Precis.
  - (vi) Females have wider dark margins to wings than males. B.12. Catopsilia, K.5. Lycaenopsis, K.8. Jamides, K.14. Amblypodia.
  - (vii) Upperside of males mainly white, females have veins darkened till nearly black B.3. Delias (4 species), B.4. Cepora, B.6. Appias, B.11. Parenomia.
  - (viii) Males have no or only one black spot centre forewing, whereas females have two B.7. Pontia, B.8. Pieris.
  - (ix) Males have no spots on hindwings, females a row of brown spots B.9. Hebomoia.
  - (x) Females have white or yellow spots on otherwise dark wings or borders B.15. Colias (1 species) G.1. Disco-phora.
  - (xi) Females have white bands across tips of forewings which males do not F.2. Lethe (2 species), J.3. Dodona (1 species) 1.7. Euthalia (3 species).

- (xii) Females have white bands across both wings, whereas males are plain 1.8. *Limenitis* (1 species).
- (xiii) Females have pale yellow hindwings, males darker yellow B.13. *Gonepteryx*.
- (xiv) Females different pattern as well as different colours 1.10. *Pantoperia* (3 species orange and black, males being white & black) F.10. *Elymnias* (2 species), 1.15, *Hypolimnas*, 1.22. *Argynnis* (1 species) for females to mimic Danaids.
- (xv) Males have brand on forewings F.3. Parage- diagonal dark brand, (wide) B.8. Baorinae (2 species)- diagonal light brand (narrow) E.(ii) *Euploea* horizontal light brand.
- (xvi) Males have brand near base of hindwing (naturally covered by forewing) F.1. *Mycalesis*, K.17. *Pratapa*.
- (xvii) Males have on extra dark spot or fold on lower hindwing E.(i) *Danais*.

# PLATES

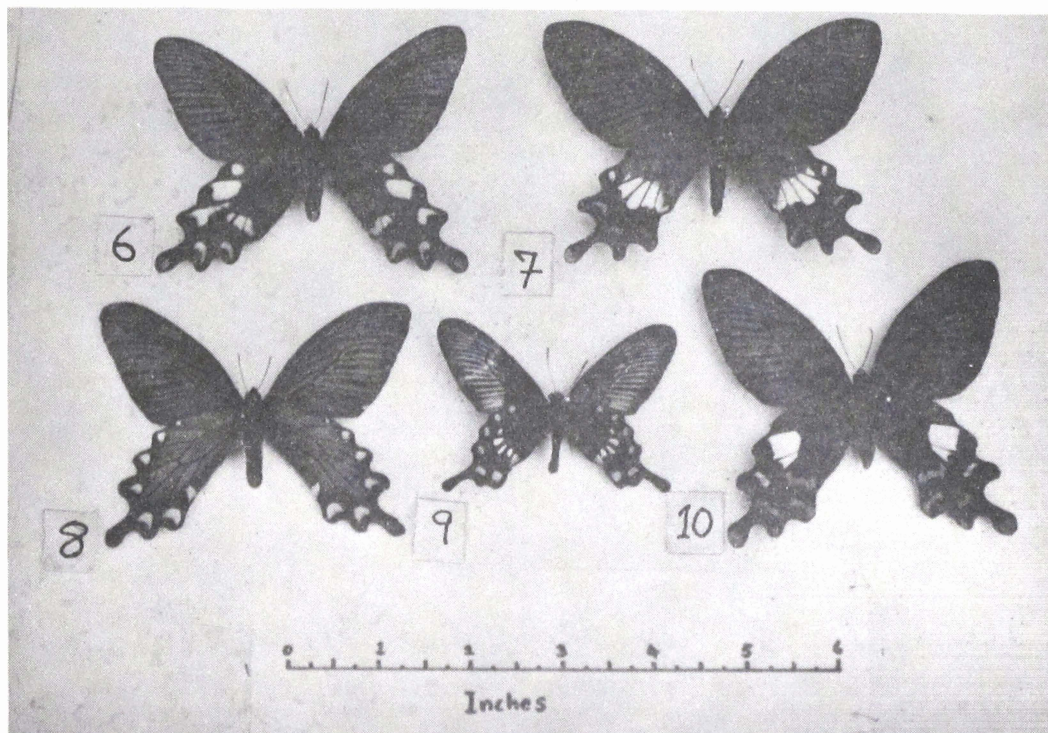
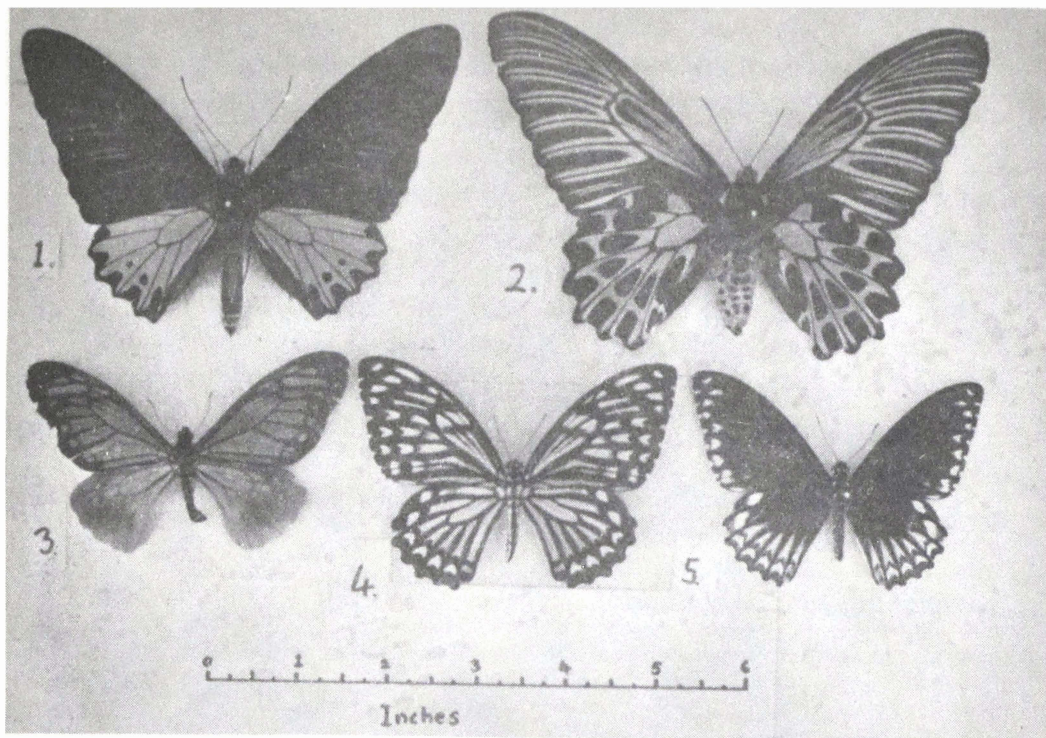




PLATE 1. PAPILIONIDAE

A.1. *Troides*

*T. helena* (Common Birdwing) male 1.

*T. aecus* (Golden Birdwing) female 2.

A.3. *Chilasa*

*C. agestor* (Tawny Mime) 3.

*C. clytia dissimilis* (Common Mime) 4.

*C. clytia clytia* (Common Mime) 5.

A.2. *Antrophaneura*

*A. dasarada* (Great Windmill) 6.

*A. latreillei* (Rose Windmill) 7.

*A. plutonius* (Chinese Windmill) 8.

*A. aristolochiae* (Common Rose) un. 9.

*A. philoxenus* (Common Windmill) 10.

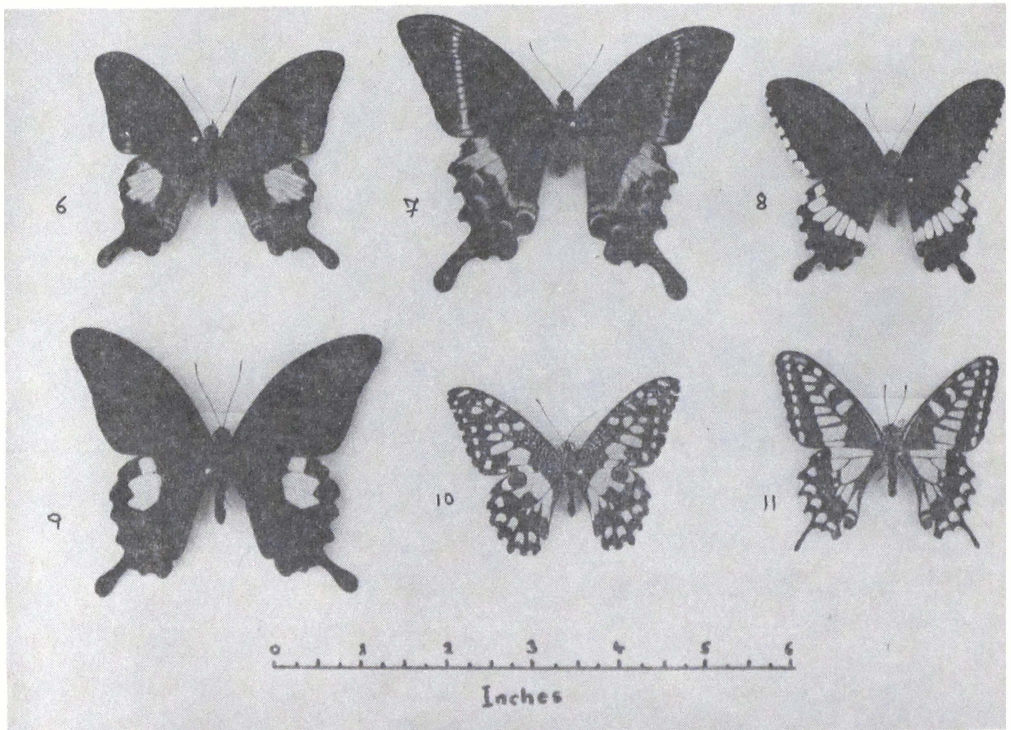
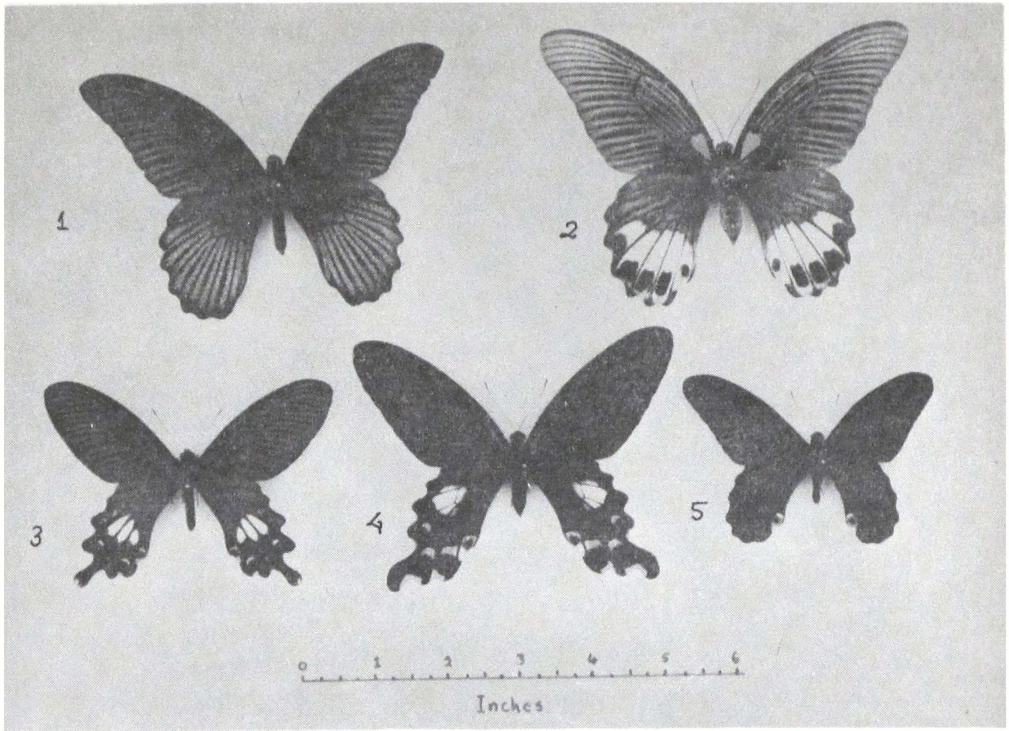


PLATE 2. PAPILIONIDAE

A.4. *Papilio*

- (i) *P. memnon agenor* (Great Mormon) male 1.  
*P. memnon agenor* (Great Mormon) female 2.  
*P. janaka* (Tailed Redbreast) 3.  
*P. rhetenor* (Redbreast) female 4.
- (ii) *P. protenor* (Spangle) 5.
- (iii) *P. polyctor* (Common Peacock) 6.  
*P. krishna* (Krishna Peacock) 7.
- (iv) *P. polytes* (Common Mormon) male 8.  
*P. helenus* (Red Helen) 9.
- (v) *P. demoleus* (Lime Swallowtail) 10.  
*P. machaon* (Common Yellow Swallowtail) 11.

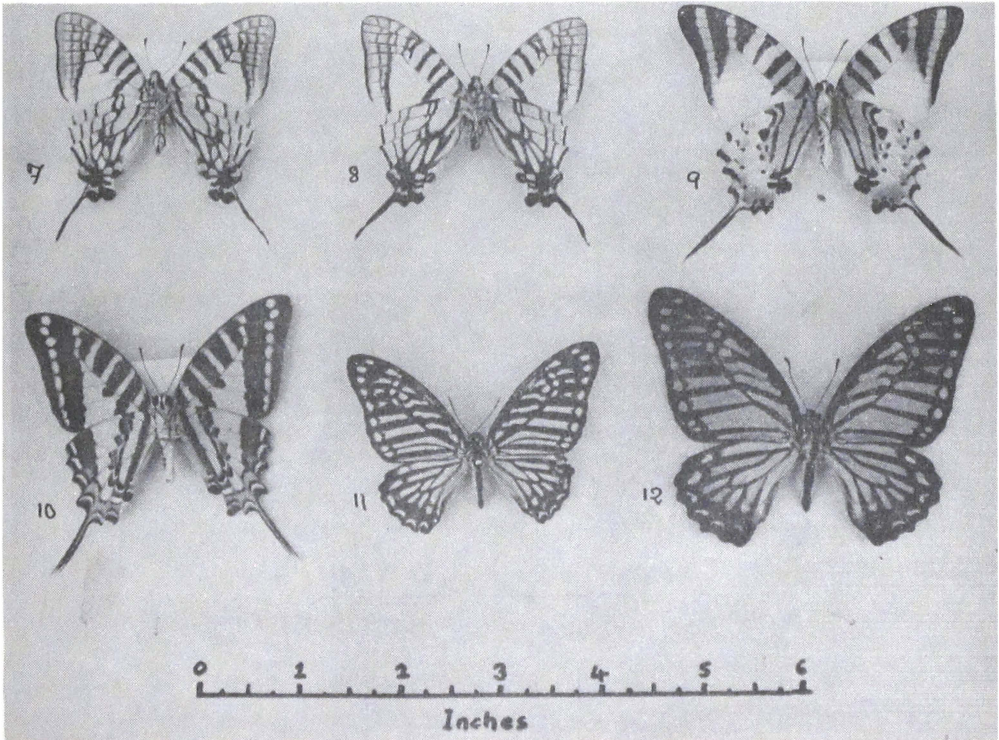
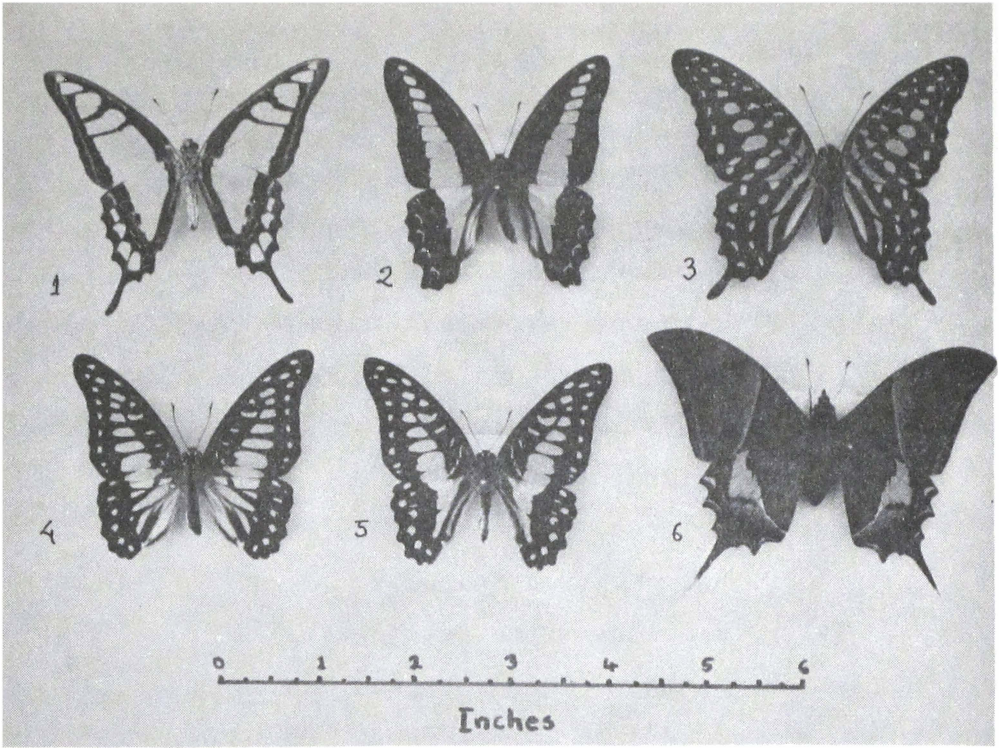


PLATE 3. PAPILIONIDAE

A.5. *Zetides*

*Z. cloanthus* (Glassy Bluebottle) 1.

*Z. sarpedon* (Common Bluebottle) 2.

*Z. agamemnon* (Tailed Jay) 3.

*Z. bathycles* (Veined Jay) 4.

*Z. doson* (Common Jay) 5.

A.8. *Teinopalpus*

*T. imperialis* (Kaiser-i-hind) 6.

A.6. *Pathysa*

*P. euros* (Six-bar Swordtail) 7.

*P. glyceron* (Spectacle Swordtail) 8.

*P. antiphates* (Five-bar Swordtail) 9.

*P. nomius* (Spot Swordtail) 10.

A.7. *Paranticopsis*

*P. macareus* (Lesser Zebra) 11.

*P. xenocles* (Great Zebra) 12.

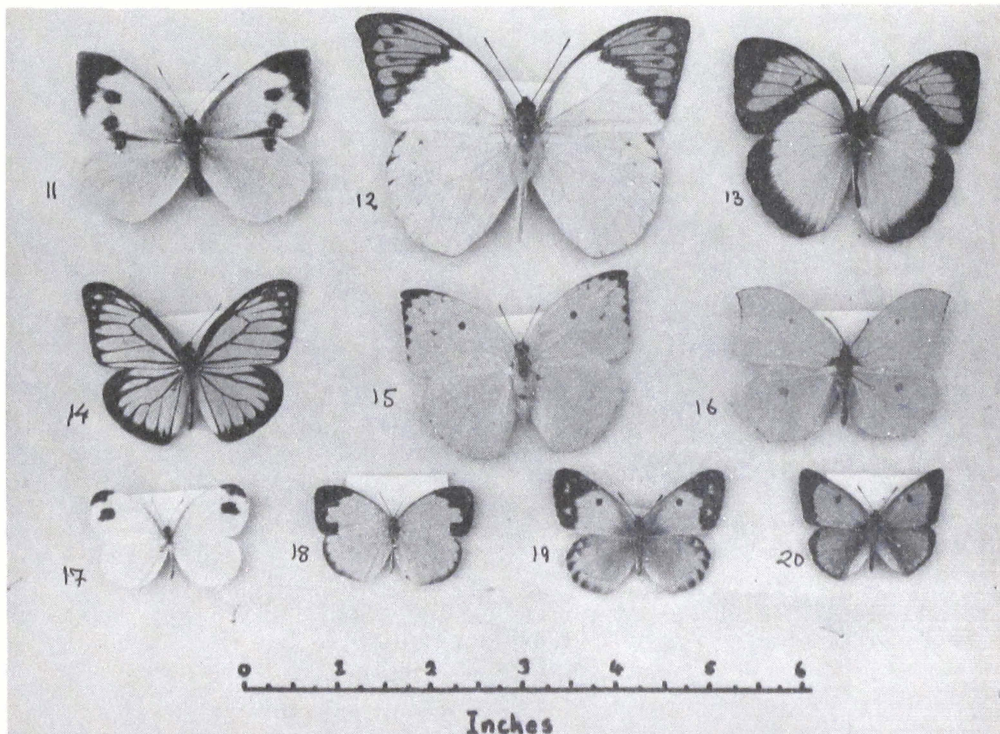
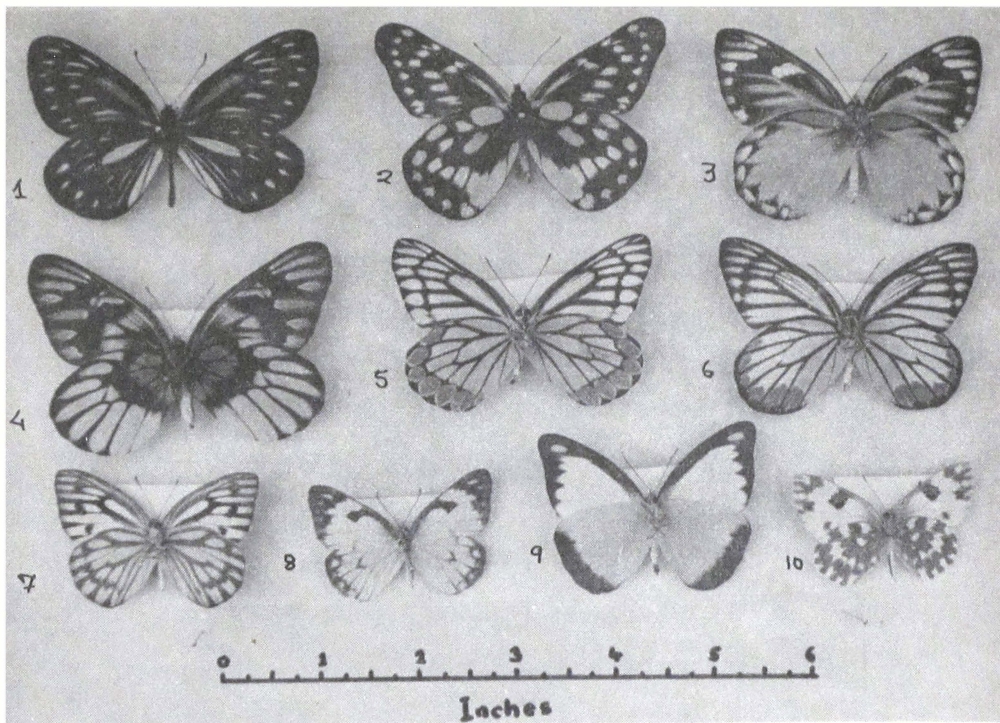


PLATE 4. PIERIDAE

- B.2. *Aporia*  
A. *agathon* (Great Blackvein) 1.
- B.3. *Delias*  
D. *belladonna* (Hill Jezebel) un. 2.  
D. *descombesi* (Red-spot Jezebel) un. 3.  
D. *thysbe* (Red-base Jezebel) un. 4.  
D. *eucharis* (Common Jezebel) un. 5.  
D. *hyparete* (Painted Jezebel) un. 6.
- B.4. *Cepora*  
C. *nerissa* (Common Gull) un. 7.
- B.5. *Anapheis*  
A. *aurota* (Pioneer) 8.
- B.6. *Appias*  
A. *lyncida* (Chocolate Albatross) un. 9.
- B.7. *Ponta*  
P. *daplidice* (Bath White) un. 10
- B.8. *Pieris*  
P. *brassicae* (Large Cabbage White) female 11.
- B.9. *Hebomoia*  
H. *glaucippe* (Great Orange Tip) male 12.
- B.10. *Ixias*  
I. *pyrene* (Yellow Orange Tip) male 13.
- B.11. *Parenomia*  
P. *valeria* (Common Wanderer) male 14.
- B.12. *Catopsilia*  
C. *pomonia* (Lemon Emigrant) female 15.
- B.13. *Gonepteryx*  
G. *rhamni* (Common Brimstone) male 16.
- B.1. *Leptosia*  
L. *nina* (Psyche) 17.
- B.14. *Eurema*  
E. *hecebe* (Common Grass Yellow) 18.
- B.15. *Colias*  
C. *erate* (Pale Clouded Yellow) 19.  
C. *fieldii* (Dark Clouded Yellow) male 20.

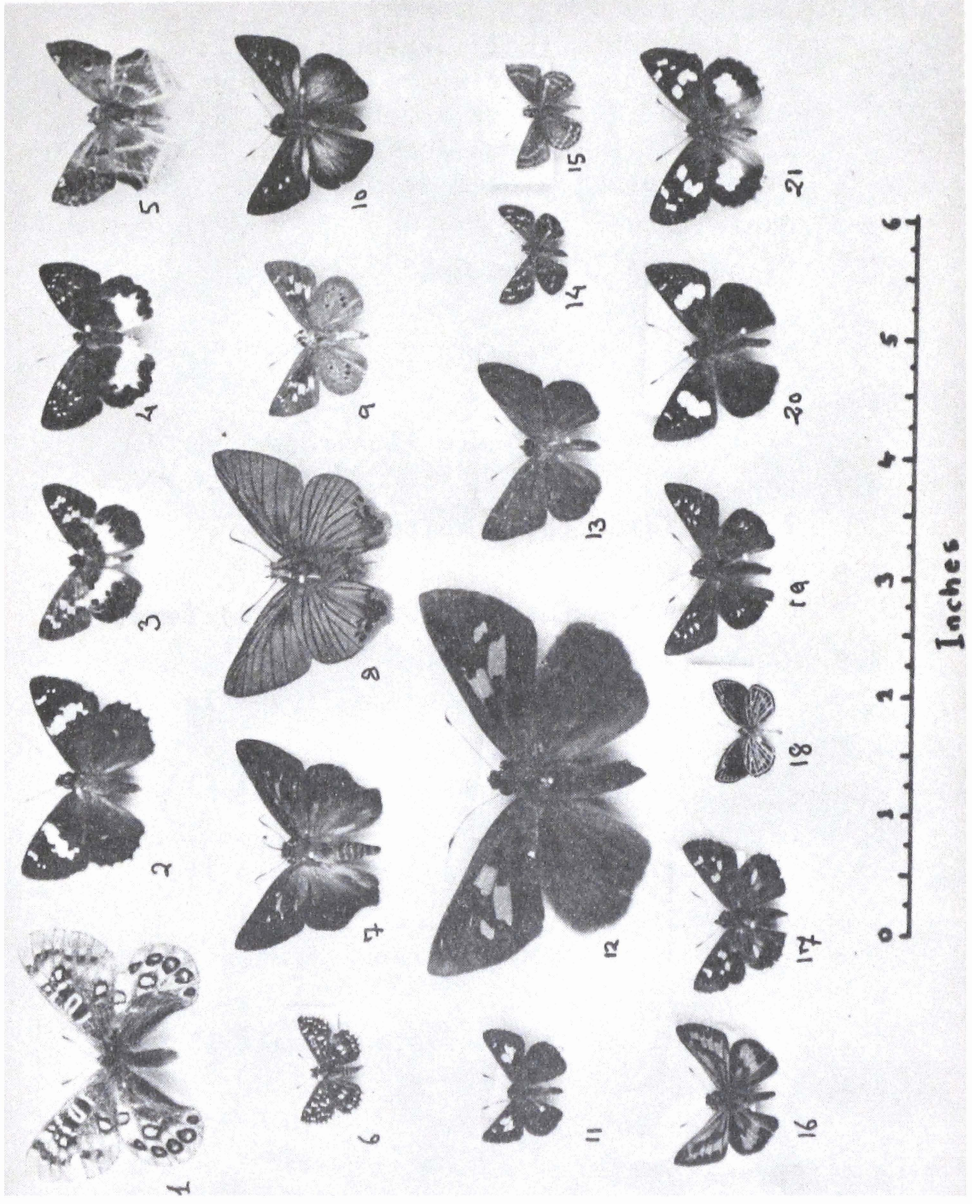


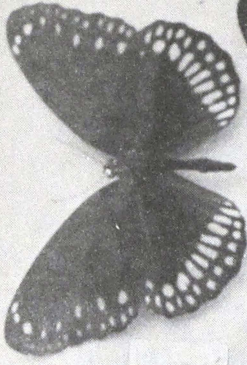


PLATE 5.A. PARNASSIIDAE

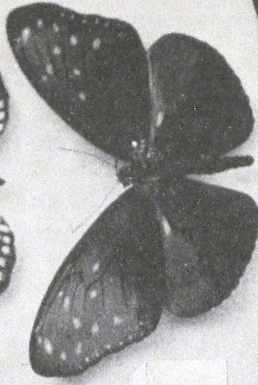
- C.1. Parnassius  
P. hardwickei (Common Blue Apollo) 1.

HESPERIIDAE

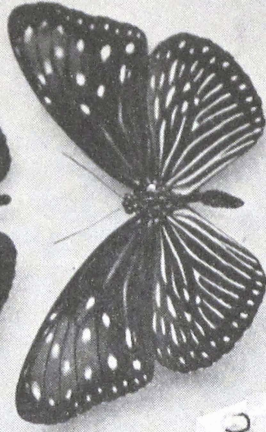
- D.1. Celaenorrhinae  
Celaenorrhinus leucosera (Common Spotted Flat) 2.  
Daimio bhagava (Common Yellow-breasted Flat) 3.  
Tagiades litigiosa (Water Snow Flat) 4.  
Odontoptilum angulata (Chestnut Angle) 5.
- D.2. Hesperinae  
Spialia galba (Indian Skipper) 6.
- D.3. Ismeninae  
Badamia exclamationis (Brown Awl) 7.  
Choaspes heximanthus (Hooked Awlking) 8.
- D.4. Plastingiinae  
Suastus gremius (Indian Palm Bob) 9.  
Pithauria stramineipennis (Light Straw Ace) 10.  
Pedesta masauriensis (Mussoorie Bush Bob) 11.
- D.5. Erionotinae  
Erionata thrax (Palm Red-eye) 12.  
Matapa aria (Common Red-eye) 13.
- D.6. Pamphilinae  
Taractrocera maevius (Common Grass Dart) 14.  
Aeromachus stigmata (Veined Scrub Hopper) 15.
- D.7. Erynninae  
Telicota ancilla (Dark Palm Dart) 16.  
Halpe homolea (Indian Ace) 17.  
Ochus subvittatus (Tiger Hopper) 18.
- D.8. Baorinae  
Pelopidas sinensis (Large Branded Swift) 19.
- D.9. Notocryptinae  
Notocrypta curvifascia (Restricted Demon) 20.  
Udaspes folus (Grass Demon) 21.



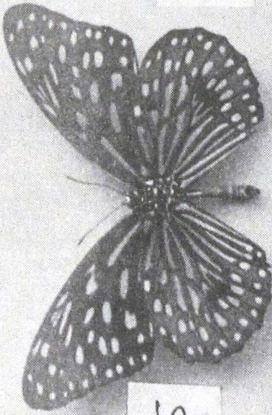
28



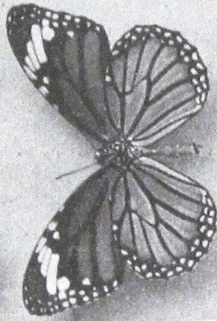
29



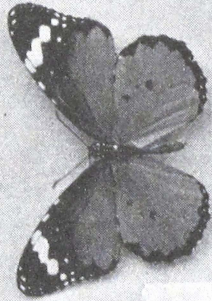
30



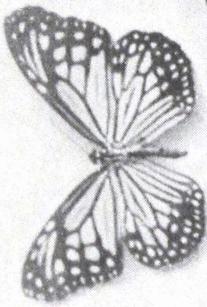
25



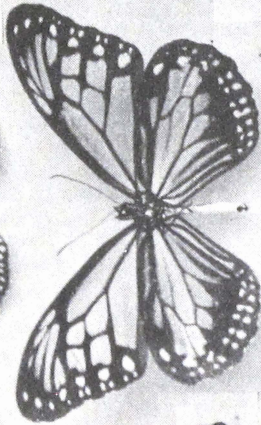
26



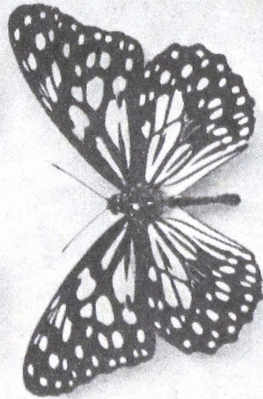
27



22



23



24



Inches

PLATE 5.B. DANIDAE

E.1. Danaïis

- D. aplea (Glassy Tiger) 22.
- D. tytia (Chestnut Tiger) 23.
- D. limniace (Blue Glassy Tiger) 24.
- D. melissa (Dark Blue Tiger) 25.

E.2. D. genutia (Common Tiger) 26.

- D. chrysippus (Plain Tiger) 27.

E.3. Euploea

- E. core (Common Indian Crow) 28.

E.4. E. mulciber (Striped Blue Crow) male 29.

- E. mulciber (Striped Blue Crow) female 30

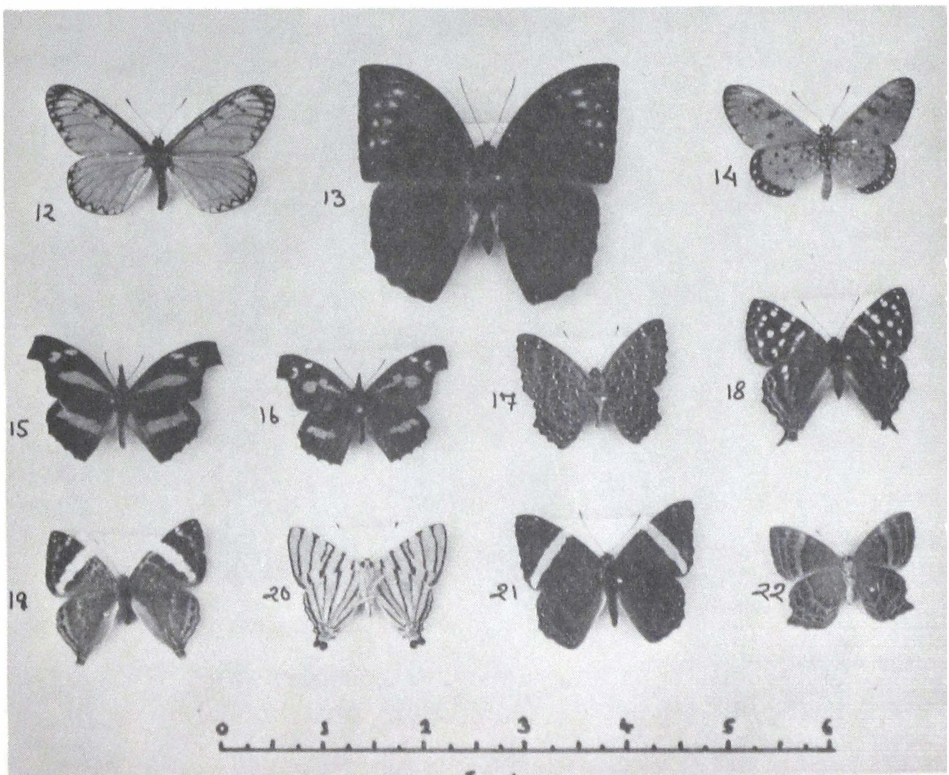
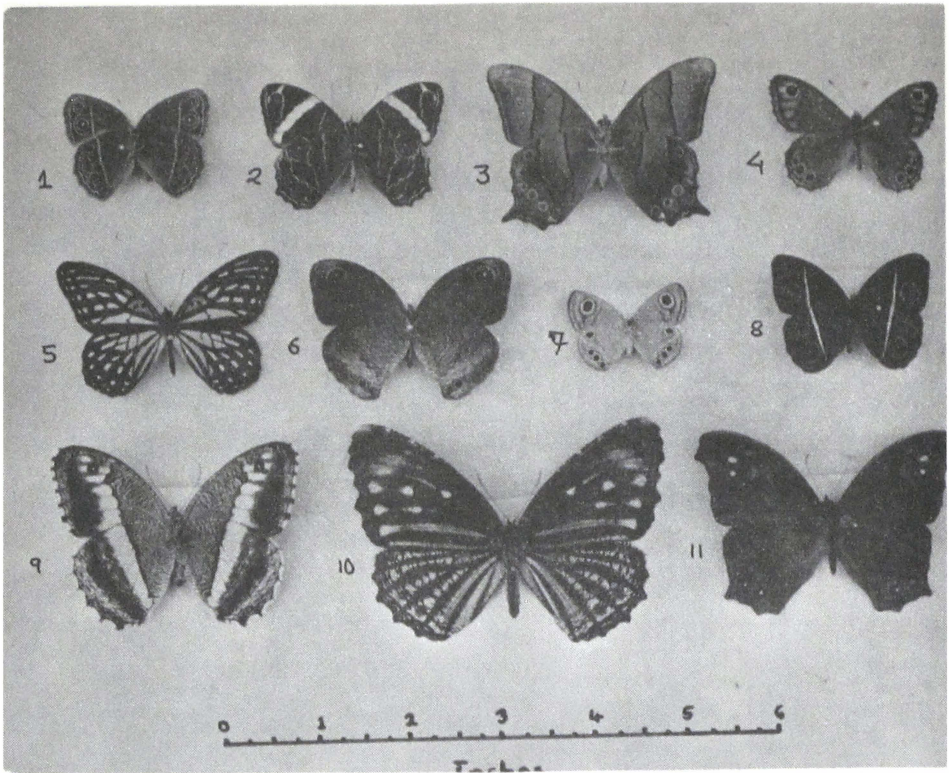


PLATE 6. SATYRIDAE

- F.1. *Mycalesis*  
    *M. mineus* (Dark-brand Bushbrown) un. 1.
- F.2. *Lethe*  
    *L. confusa* (Banded Treebrown) un. 2.  
    *L. Kansa* (Bamboo Forester) un. 3.
- F.3. *Parage*  
    *P. schakra* (Common Wall) 4.
- F.4. *Orinomia*  
    *O. damaris* (Tigerbrown) 5.
- F.6. *Erebia*  
    *E. annada* (Ringed Argus) un. 6.
- F.7. *Ypithima*  
    *Y. hubneri* (Common Fouring) un. 7.
- F.8. *Orsotrianea*  
    *O. medus* (Nigger) un. 8.
- F.5. *Aulocera*  
    *A. saraswatti* (Striated Satyr) un. 9.
- F.10. *Elymnias*  
    *E. malelas*, (Spotted Palmfly) female 10.
- F.9. *Melanitis*  
    *M. leda* (Common Evening Brown) 11.

AMATHUSIIDAE

- G.1. *Discophora*  
    *D. tullia* (Common Duffer) male 13.

ACRAEIDAE

- H.1. *Pareba*  
    *P. vesta* (Yellow Coster) male 12.
- H.2. *Telchinia*  
    *T. violae* (Tawny Coster) 14.

ERYCINIDAE

- J.1. *Libythea*  
    *L. myrrha* (Club Beak) 15.  
    *L. lepita* (Common Beak) 16.
- J.2. *Zemerus*  
    *Z. flegyas* (Punchinello) 17.
- J.3. *Dodona*  
    *D. eugenes* (Tailed Punch) 18.  
    *D. ouida* (Mixed Punch) female 19.  
    *D. adonira* (Striped Punch) 20.
- J.4. *Abisara*  
    *A. fylla* (Dark Judy) 21.  
    *A. echerius* (Plum Judy) 22.

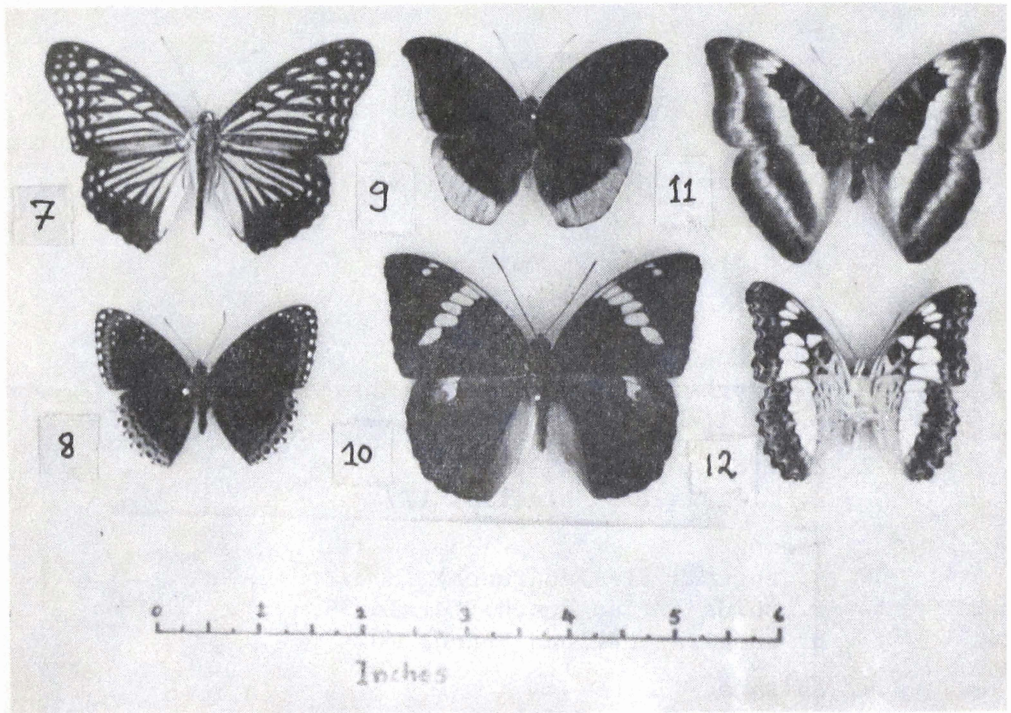
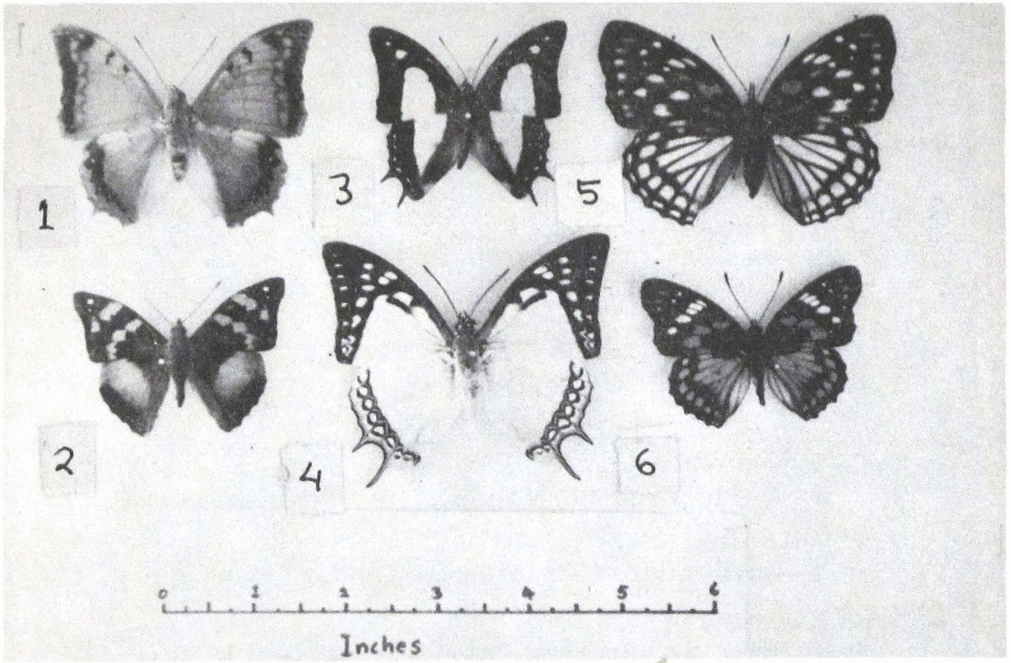


PLATE 7. NYMPHALIDAE

- I.1. Charaxes
  - C. marmax (Yellow Rajah) 1.
- I.3. Dilipa
  - D. morgiana (Golden Emperor) 2.
- I.2. Polyura
  - P. athamas (Common Nawab) 3.
  - P. eudamippus (Great Nawab) 4.
- I.4. Sephisa
  - S. chandra (Eastern Courtier) female 5.
  - S. chandra (Eastern Courtier) male 6.
- I.5. Hestina
  - H. nama (Circe) 7.
- I.6. Stibochionea
  - S. nicea (Popinjay) 8.
- I.7. Euthalia
  - E. lepidea (Grey Count) 9.
  - E. patala (Grand Duchess) 10.
- I.8. Limenitis
  - L. danava (Commodore) female 11.
  - L. procris (Commander) un. 12.

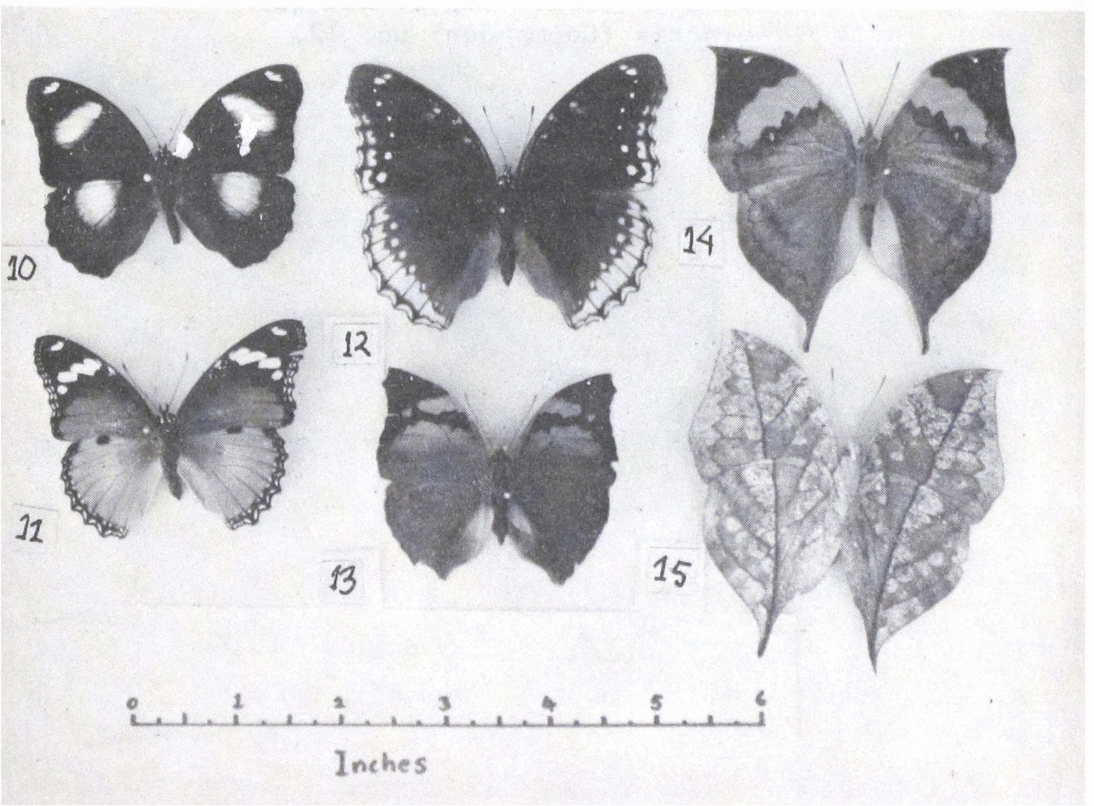
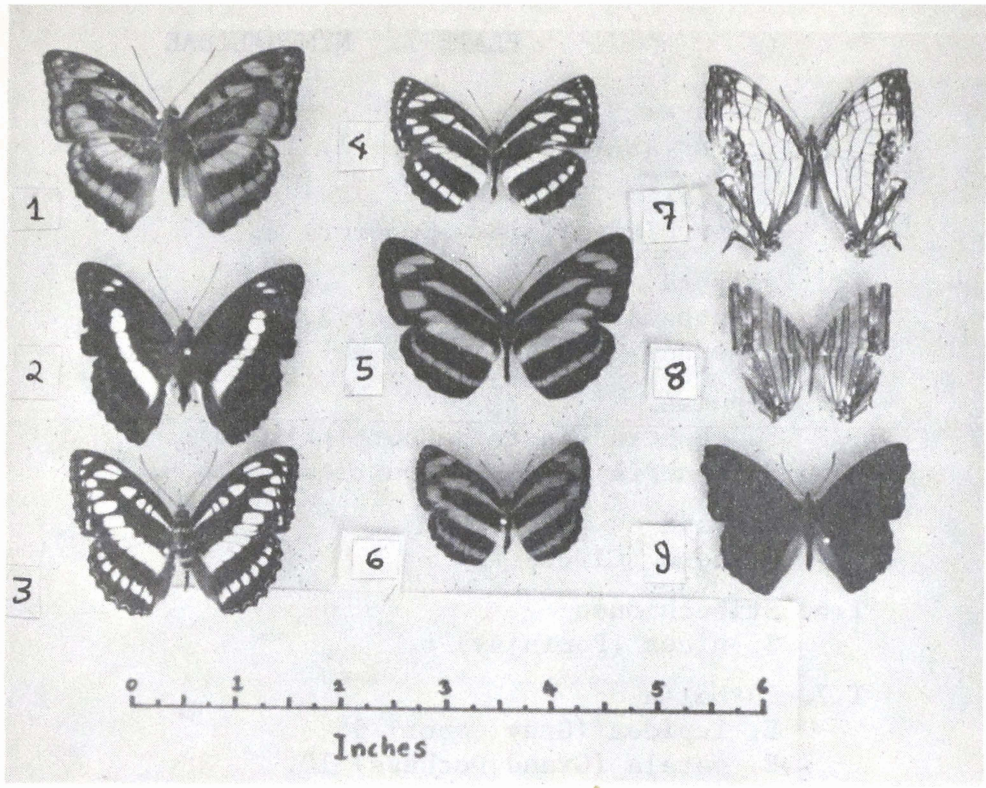




PLATE 8. NYMPHALIDAE

- I.9. Abrota  
A. ganga (Sergeant Major) 1.
- I.10. Pantoporia  
P. selenophore (Staff Sergeant) male 2.  
P. perius (Common Sergeant) 3.
- I.11. Neptis  
N. hylas (Common Sailer) 4.  
N. ananta (Yellow Sailer) 5.  
N. hordonia (Common Lascar) 6.
- I.12. Cyrestic  
C. thyodamas (Common Map) 7.
- I.13. Chersonesia  
C. risa (Common Maplet) 8.
- I.14. Pseudergolis  
P. wedah (Tabby) 9.
- I.15. Hypolimnas  
H. bolina (Great Eggfly) male 10.  
H. Misippus (Danaid Eggfly) female 11.  
H. bolina (Great Eggfly) female 12.
- I.16. Doleschallia  
D. bisaltide (Autumn Leaf) 13.
- I.17. Kallima  
K. inachus (Orange Oakleaf) up 14.  
K. inachus (Orange Oakleaf) un 15.

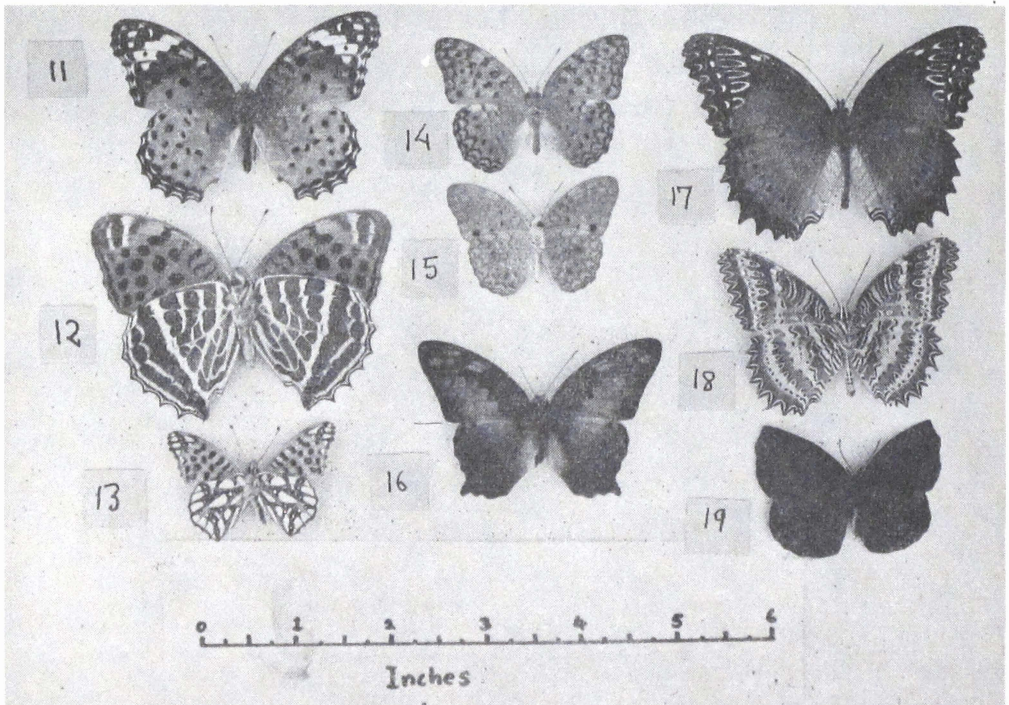
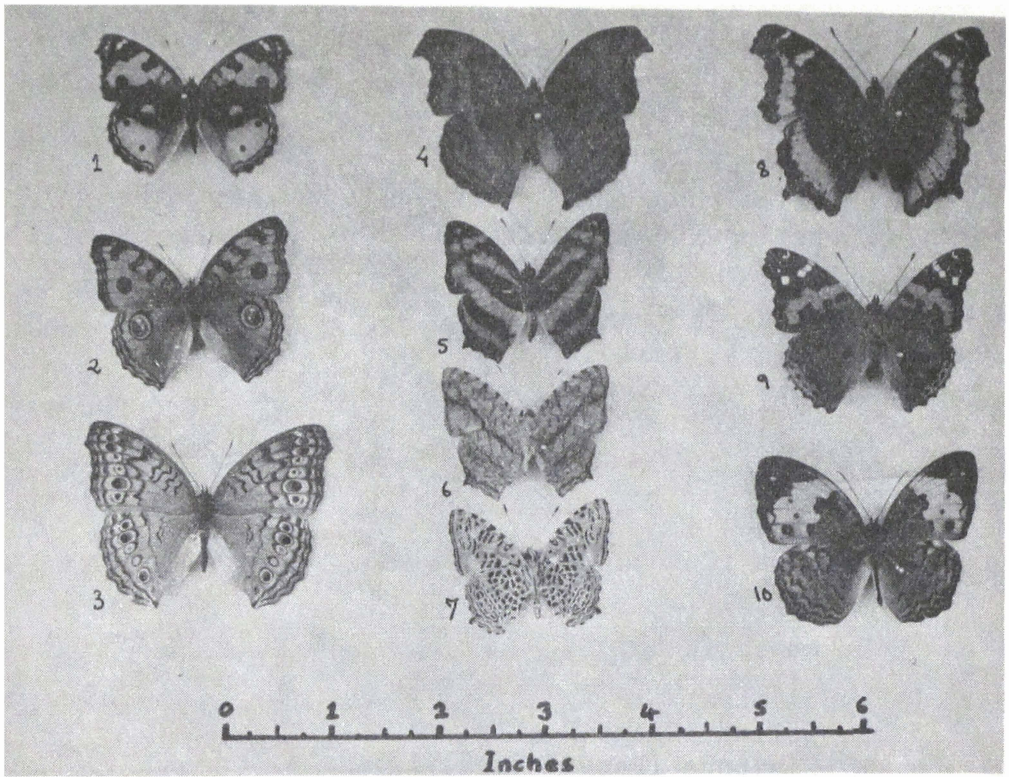


PLATE 9. NYMPHALIDAE

I.18. *Precis*

- P. hierta* (Yellow Pansy) 1.
- P. almana* (Peacock Pansy) 2.
- P. atlites* (Grey Pansy) 3.
- P. iphita* (Chocolate Pansy) 4.

I.20. *Symbrenthia*

- S. hippoclus* (Common Jester) up. 5.
- S. hippoclus* (Common Jester) un. 6.
- S. hypselis* (Himalayan Jester) un. 7.

I.19. *Vánessa*

- V. canace* (Blue Admiral) 8.
- V. indica* (Indian Red Admiral) 9.

I.21. *Cupha*

- C. erymanthis* (Rustic) 10.

I.22. *Argynnis*

- A. hyperbuis* (Indian Fritillary) female 11.
- A. childreni* (Large Silverstripe) un 12.
- A. lathonia* (Queen of Spain Fritillary) un. 13.

I.23. *Atella*

- A. phalantha* (Leopard) up. 14.
- A. phalantha* (Leopard) un. 15.

I.24. *Issoria*

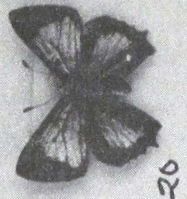
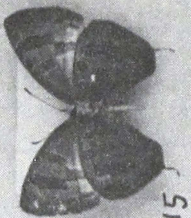
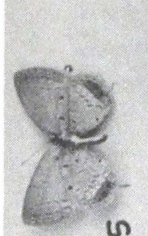
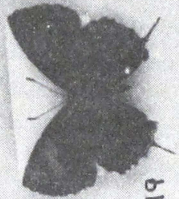
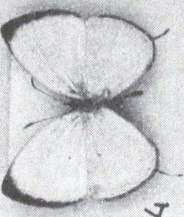
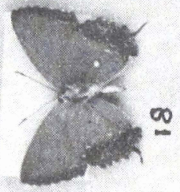
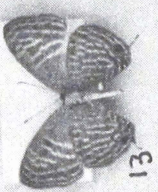
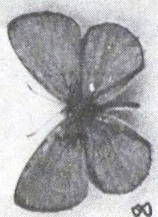
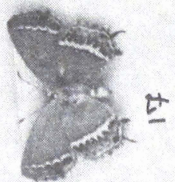
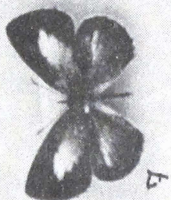
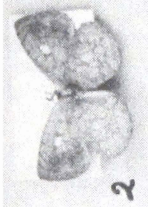
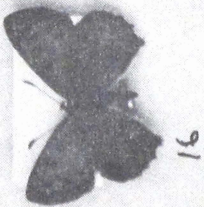
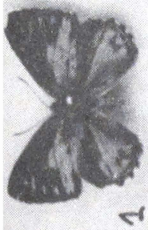
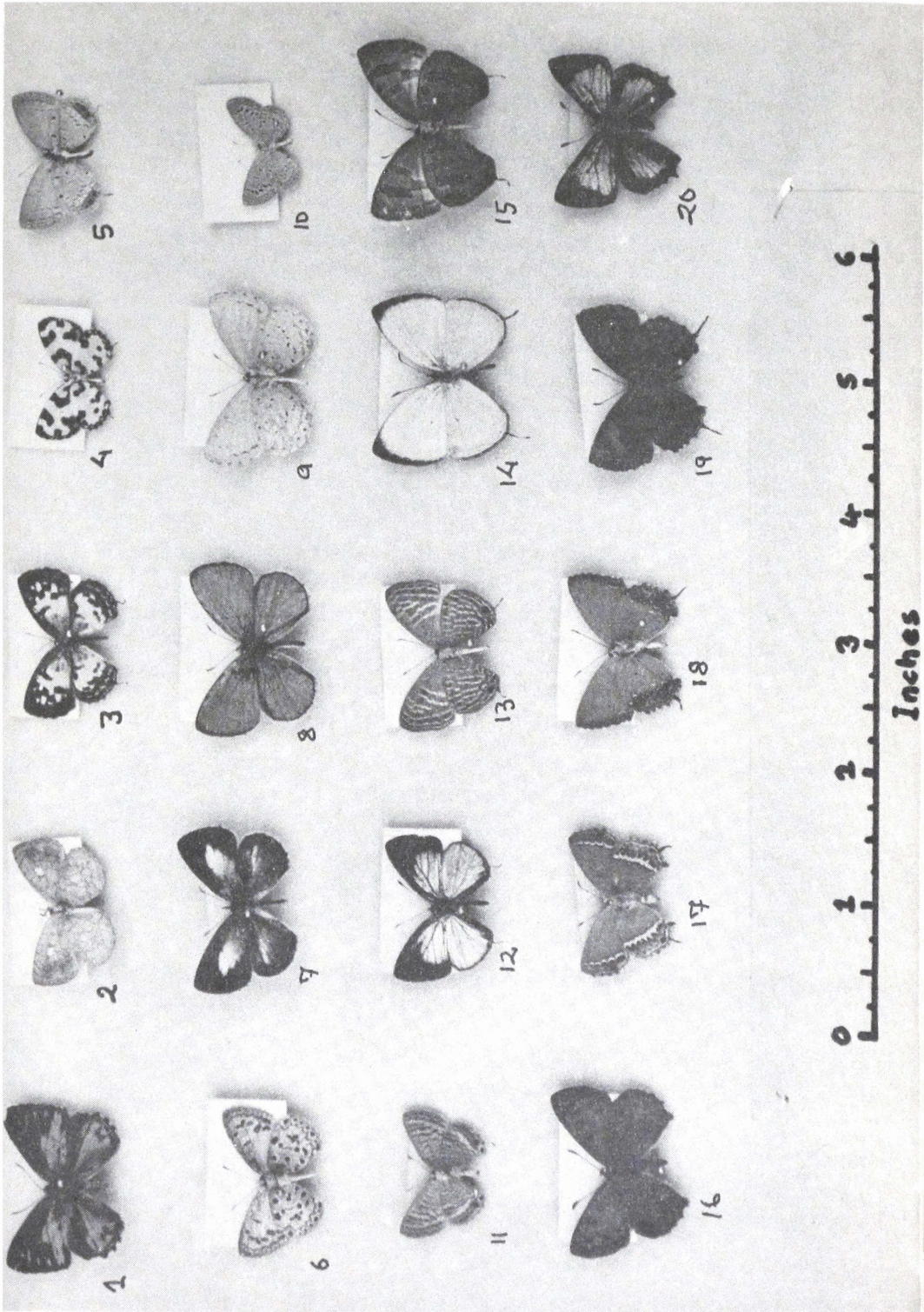
- I. sinha* (Vagrant) 16.

I.25. *Cethosia*

- C. biblis* (Red Lacewing) up. 17.
- C. biblis* (Red Lacewing) un. 18.

I.26. *Ergolis*

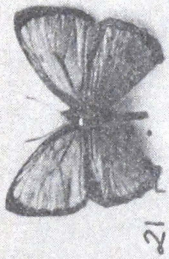
- E. merione* (Common Castor) 19.



0 1 2 3 4 5 6  
Inches

PLATE 10. A. LYCAENIDAE

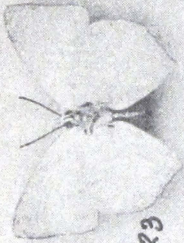
- K.1. *Poritia*  
    *P. hewitsoni* (Common Gen) male 1.
- K.2. *Spalgis*  
    *S. epius* (Apefly) un. 2.
- K.3. *Castalius*  
    *C. rosimon* (Common Pierrot) 3.  
    *C. caleta* (Angled Pierrot) un. 4.
- K.4. *Everes*  
    *E. parrhassius* (Indian Cupid) un. 5.
- K.5. *Lycaenopsis*  
    *L. puspa* (Common Hedgeblue) un. 6.  
    *L. puspa* (Common Hedgeblue) female 7.  
    *L. hugelii* (Large Hedgeblue) male 8.  
    *L. hugelii* (Large Hedgeblue) un 9.
- K.6. *Zizeeria*  
    *Z. lysimon* (Dark Grass Blue) un. 10
- K.7. *Lampides*  
    *L. boeticus* (Peablue) un. 11.
- K.8. *Jamides*  
    *J. bochus* (Dark Cerulean) male 12.  
    *J. alecto* (Metallic Cerulean) un. 13.  
    *J. celeno* (Common Cerulean) male 14.  
    *J. celeno* (Common Cerulean) dry season un. 15.
- K.9. *Lycaena*  
    *L. pavana* (White-bordered Copper) male 16.
- K.10. *Heliophorus*  
    *H. sena* (Sorrel Sapphire) un. 17.  
    *H. epicles* (Purple Sapphire) un. 18.  
    *H. epicles* (Purple Sapphire) female 19.  
    *H. androcles* (Green Sapphire) male 20.



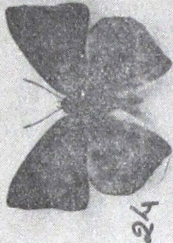
21



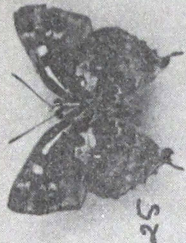
22



23



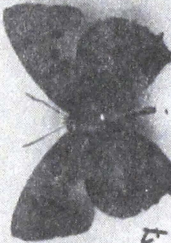
24



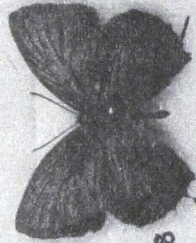
25



26



27



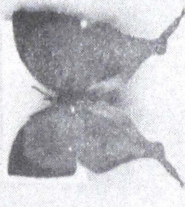
28



29



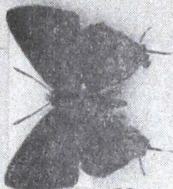
30



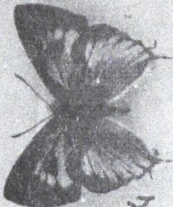
31



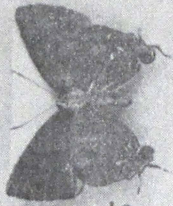
32



33



34



35



36



37



38



39



40



Inches

PLATE 10.B. LYCAENIDAE

- K.11. *Thecla*  
T. *duma* (Metallic Green Hairstreak) male 21.  
T. *birupa* (Fawn Hairstreak) un. 22.
- K.12. *Curetis*  
C. *bulis* (Bright Sunbeam) un. 23.  
C. *acuta* (Angled Sunbeam) male 24.
- K.13. *Iraota*  
I. *timoleon* (Silverstreak Blue) un. 25.
- K.14. *Amblypodia*  
A. *oenea* (Hewitson's Dull Oakblue) un. 26.  
A. *singla* (Yellowdisc Oakblue) un. 27.  
A. *eumolphus* (Green Oakblue) male 28.  
A. *paraganesa* (Dusky Bushblue) un 29.  
A. *adriana* (Variegated Plushblue) un. 30.
- K.15. *Loxura*  
L. *atymnus* (Yamfly) 31.
- K.16. *Spindasis*  
S. *vulcanus* (Common Silverlines) un 32.  
S. *lohita* (Long-banded S'lines) male 33.
- K.17. *Pratapa*  
P. *ctesia* (Bispatch Royal) 34.  
*Tajuria*  
T. *jangala* (Chocolate Royal) un. 35.  
T. *illurgis* (White Royal) ub. 36.
- K.18. *Catopoecilma*  
C. *elegans* (Common Tinsel) un. 37.
- K.19. *Zeltus*  
Z. *etolus* (Fluffy Tit)male 38.
- K.20. *Rapala*  
R. *tara* (Assam Flash) un. 39.  
R. *dieneces* (Scarlet Flash) male 40.