

The Vibrant Colors

An Initiative of CASFOS, Burnihat

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About Authors:

"Team Butterfly". This Booklet is not an individual work rather a result of the team work of Officer Trainees of 2019-21 SFS Induction course with Team Leader, Kirubaharan K and the team members Ashutosh Bhagat, Balgovind Sahu, Chupitho, Dimpay Bais, Nikhil Agrawal, Santhawarman S, Sathishkumar A, Sharmili A and Vinothraj G.

Photograph:

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Declaration:

Majority of butterfly photographs were taken by Officer Trainees of 2019-21 SFS Induction Course and some photos are taken by Shri Ganesh Hegde FRO 2012-14 batch. Many photographs of butterflies were taken from www.ifoundbutterflies.org due to non-availability of good photographs with authors. Copyrights along with source of photograph is mentioned below each photographs and diagrams wherever used in this booklet.

Team Butterfly

CASFOS, Burnihat

Designed and Printed at Luxhmi Print Solution, Dehradun

FOREWORD

Pokhila(পখিলা) in Assamese language means butterfly. The CASFOS campus at Burnihat is home to hundreds of butterflies. R. Buckminster Fuller states, "There is nothing in a caterpillar that tells you it's going to be a butterfly". Similarly, the Officer Trainees toiled behind the scenes, traversing throughout the length and breadth of the campus and eventually brought this booklet **Pokhila...The Vibrant Colors** to 'flight'. In the process of bringing out this booklet, Officer Trainees have worked tirelessly to ensure its timely and successful completion. I commend them for their sincere efforts and sheer dedication. I'm certain that this booklet will act as a field guide for the butterfly enthusiasts and the future Trainees of this Academy as well.

I would also like to congratulate the attempts put up by the Faculty Members, Officer Trainees and all those who were directly or indirectly involved in bringing out this booklet. I wish the Officer Trainees a bright future ahead and hope they will carry on the outstanding work in their future endeavors.



Dr. C. Ramesh, IFS
Principal, CASFOS

Burnihat

MESSAGE



Butterflies can be considered as one of the best Natural Wonders which Mother nature has ever created. The beauty of the butterflies are so enchanting that we humans have created an emotion out of it to denote 'pleasant tingling'. The iridescent glow of the butterfly wings casts a spell on the eyes of the persons who cherish its beauty.

Similarly, in the beautiful campus of the Central Academy for State Forest Service, Burnihat, the butterflies have made their presence known by their sheer diversity and population. It acts as one of the jewels in the crown of our glorious institution. And we rarely admit the changes that the butterflies have gone through in their lifecycle to achieve this beauty. The Officer Trainees belonging to the 2019– 21 SFS Induction Course have put sincere efforts to document their existence. I congratulate their hard work and I am sure that this booklet, Pokhila...The Vibrant Colors, will propel the future butterfly enthusiasts to take many steps forward in identifying new species and become better foresters on their own.

Shri. S.K. Bora, IFS(Retd.)
Course Director, CASFOS Burnihat

(ii)

MESSAGE

In the words of Kjell B. Sandved, "Nature's message was always there and for us to see. It was written on the wings of butterflies". Butterflies are one of the most unique life-forms, as they use their wings not only for flight, but as a canvas for some of the most striking patterns in nature. They're an object of admiration and inspiration for many.

The CASFOS Campus at Burnihat has a good number of butterflies, however no previous documentation in this regard has not been carried out and hence a realization dawned upon the Officer Trainees, the need for a booklet which provides information about the butterflies and their other relevant details. With this objective, the Officer Trainees came forward with their contributions to make "Pokhila...The Vibrant colors" into a reality.

I congratulate the Officer Trainees for their sincere effort and I'm sure that this booklet will go a long way in aiding and guiding butterfly enthusiast, those exploring into this region of the country.



Shri. C. A. Rahman IFS (Retd.)
Associate Faculty, CASFOS Burnihat

(iii)

ACKNOWLEDGEMENT



The CASFOS campus at Burnihat has a rich biodiversity of butterflies. However, no documentation has been done with regard to these beautiful creatures, nor data is available on the information about their host plants, characters, etc. Therefore, this booklet is a modest attempt to compile information and photos collected by the Officer Trainees of 2019-21 SFS Induction Course.

The drops of words are few, but the ocean of feelings of gratitude is deeper in our heart for those who proved to be lampposts in the way of completion of this booklet. I, on behalf of the *Butterfly Team Members*, express our gratitude to

Director of Forest Education, Shri. Kunal Satyarthi IFS, for providing appropriate administrative facilities. I would also like to express our deep sense of gratitude to the Principal CASFOS, Dr. C. Ramesh IFS for providing encouragement, valuable suggestions and guidance throughout the work. Without his support, the publication of this booklet would not have been possible.

I express our heartfelt appreciation to Shri. Wangdup Bhutia IFS, for he was the strong catalyst, which aroused our interest in taking up photography as a hobby. I'm extremely grateful to our Course Director, Shri. S. K. Bora IFS (Retd.), Associate Faculty, Shri. C. A. Rahman IFS (Retd.), and PT & GI, Shri. Ajay Rajak and all the faculty members of CASFOS, Burnihat for all the support and valuable suggestions during our work.

There are persons who remained behind the scene but indirectly helped a lot; these persons are the authors, critics and editors of invaluable books, magazines and journals, I'm highly thankful to them. In the end I would like to thank all those, who at any step of this work helped us and made it a success.

Kirubaharan K
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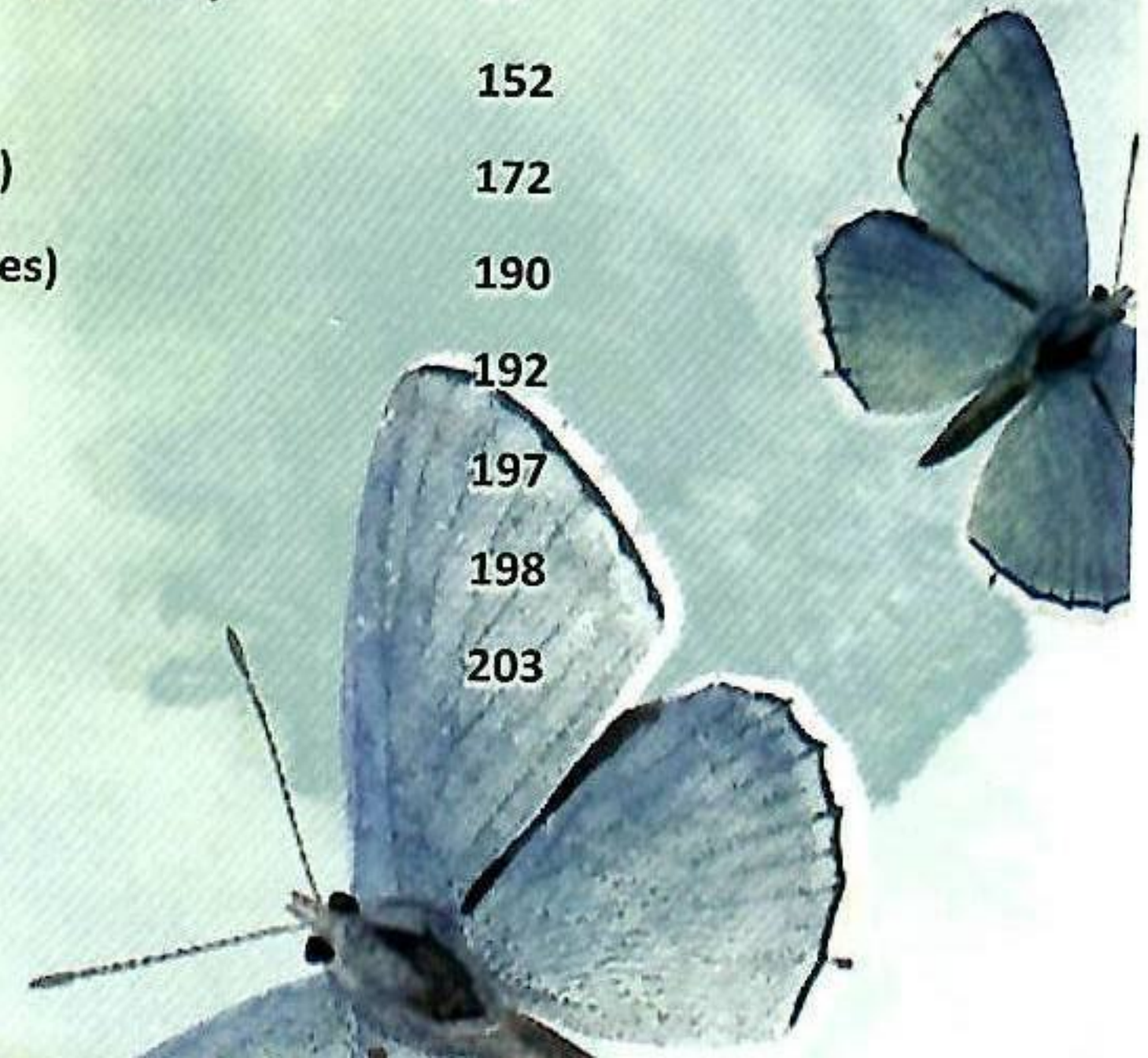


Vinothraj G



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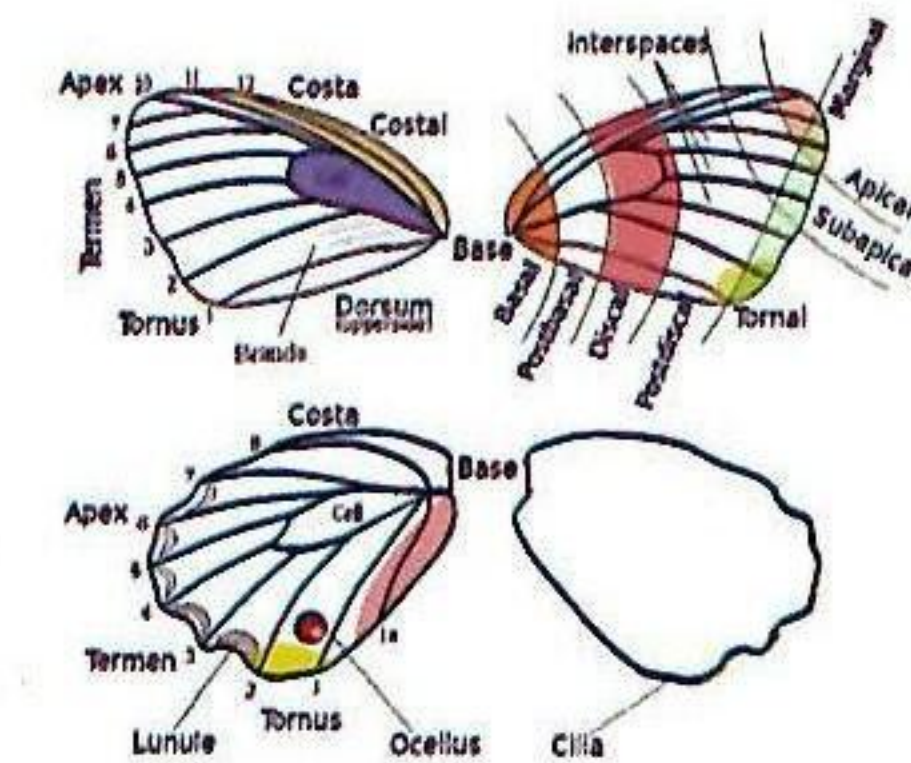
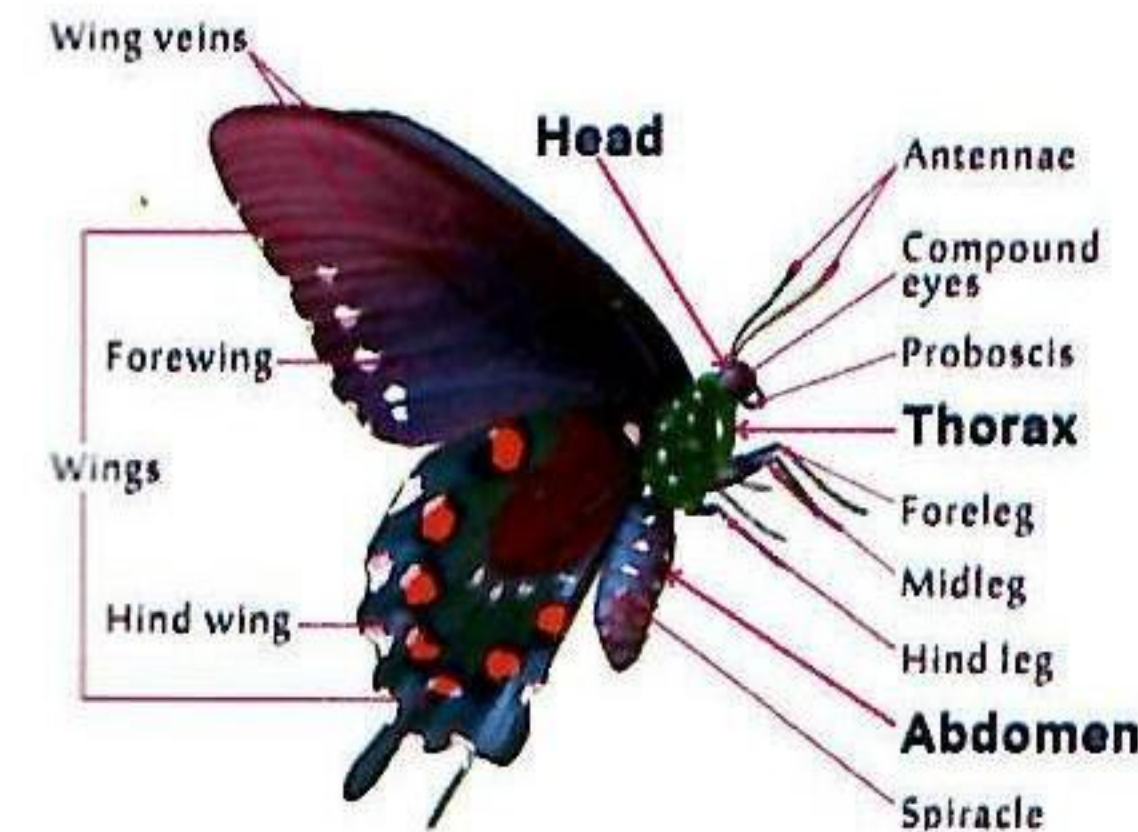




INTRODUCTION

Butterflies have always fascinated the mankind and are celebrated in art for their great shapes, magnificent colours and unique patterns. They play an ecologically important position owing to their key role as pollinators as well as part in food web, thus maintaining the biodiversity. Butterflies are good biological indicators of ecological variation and environmental quality. They occur in widespread habitats. Lifespan of butterflies ranges from 1-3 weeks to few months. Butterflies belong to the order Lepidoptera, which means scaly winged insects. These include Moths (Heterocera: have the antennae variable in form) and Butterflies (Rhopalocera: clubbed or knobbed antennae). Mostly the butterflies are diurnal and usually rest with their wings closed, while moths are nocturnal and rest with their wings open with some exceptions. Antennae of butterflies are always slender with clubbed or hooked tip whereas moths show variable antennae viz. feathery, hair like, club shaped.

Parts of Butterfly



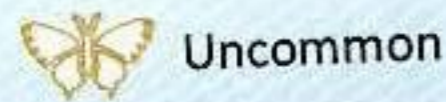
BUTTERFLIES AND MOTHS

Butterflies and moths belong to a large insect group called Lepidoptera (which means scaly-winged). Though very similar, moths and butterflies do differ from one another superficially. Moths outnumber butterflies, as there are almost 10 times more species of moths than butterflies. Most butterflies fly during the day, whereas a majority of moths fly after sunset. However, some butterflies like the Evening Brown could be seen around lights in the evening like moths. Similarly, there are day-flying moths like the Bee Hawkmoth, Forester moths, Burnet moths, and Blue Tiger Moth. Butterfly antennae are always slender with the tip clubbed, or hooked as in Skipper butterflies, whereas antennae of moths are variable, ranging from feathery, hair-like, to even club-shaped in Burnet moths.

With more time in the field, differentiating butterflies from brightly coloured day-flying moths and separating the Skippers and Browns from moths will be easy.



Common Butterfly Moth



SYMBOLS/ABBREVIATION

Base-cell: Base of cell

Mid-cell: Middle of cell

End-cell: End of cell

DSF: Dry Season Form

WSF: Wet Season Form

FW: Forewing

HW: Hindwing

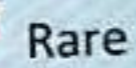
UPF: Upper forewing

UNF: Under forewing

UPH: Upper hindwing

UNH: Under hindwing

lfb: ifoundbutterflies.com




Rare

CLASSIFICATION


There are about 18,000 plus species of butterflies in the world. In the Indian region, there are approximately 1,500 species of butterflies, of which 1,318* species of butterflies are known to occur in India.


Butterflies are classified into two superfamilies of which Hesperioidea has all the Skippers, while the rest of the "true" butterflies are under Papilionoidea, which has five families. Totally six families of butterflies are present in India. They are:


 **Hesperiidae (Skippers)**

 **Lycaenidae (Blues)**

 **Nymphalidae (Brush-footed butterflies)**

 **Papilionidae (Swallowtails)**

 **Pieridae (Whites and Yellows)**

 **Riodinidae (Judies and Punches)**

Campus Diversity

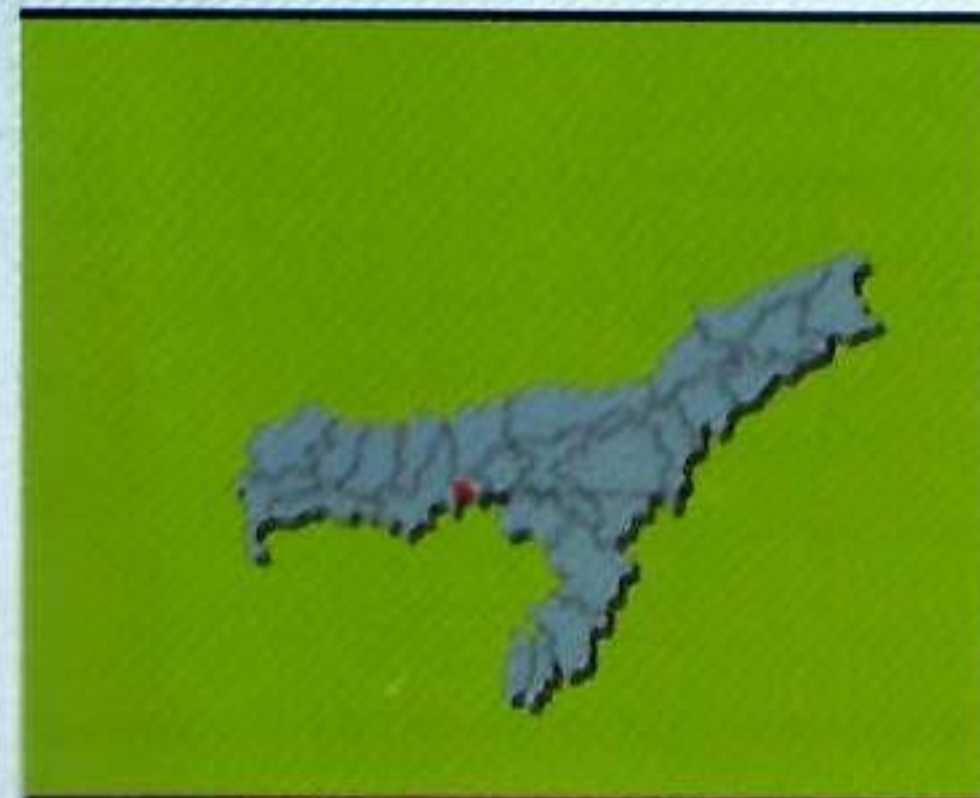


The Central Academy for State Forest Services (CASFoS) Burnihat is located in the valley between Assam and Meghalaya. The National Highway NH-40 from Guwahati to Shillong bifurcates the campus into two. The campus contains a variety of ecosystems such as grassland, forest, pond, canal ecosystems etc., which houses rich biodiversity like varieties of butterflies, moths, dragonflies, damselflies, birds, insects, snakes, etc.

Several butterfly species can be sighted inside and near the campus. There are more than 200 species of butterflies within the campus with photographic evidences of more than 165 species. These species makes the academy campus aesthetically serene by playing key role in maintaining the diversity of plant species such as creepers, climbers, grasses, herbs, shrubs and trees.

The rich butterfly diversity of the campus is supported by the presence of wide variety of host and nectar plants for the caterpillar and adult stage of butterflies. Some host plants in the campus includes *Magnolia champaca*, *polyalthia longifolia*, *Cassia siamea*, etc. and some nectar flowering plants includes *Lantana camera*, *Hibiscus rosa-sinensis*, *Tectona gradis*, etc.

Butterfly status of Assam



The state of Assam in North Eastern India, harboring some of the world's richest biodiversity, is home to more than 500 species of butterflies. Large-scale habitat deforestation and fragmentation has led to the decline of several butterfly populations in the state. If the decline is not checked, it will perhaps reach a point where downward trends can no longer be reversed.

Butterflies serve as important plant pollinators in the local environment, and help pollinate more than 50 economically important plant crops. The thousand-year-old silk industry of the state is also dependent on Lepidoptera, but increased pesticide use in the region has caused population declines of silk moths. Butterflies act as important indicators of environmental health and the 'ecosystem services' provided by Lepidoptera is immense. However, a contemporary discourse regarding butterfly conservation and its importance is lacking amongst the public.

Academic research on butterflies is also lacking and there is no readily available published information or baseline data on butterflies of the region. The parks and sanctuaries of the state do not even have butterfly lists. Moreover, very few serious ecological studies on the Lepidoptera of the region have been undertaken and thus very little technical information is available for managers and policy makers to take steps for effective butterfly conservation.

Vegetation of CASFoS



Woodlands:

The CASFoS Burnihat campus has about 50 tree species. The woodland type of vegetation is found in the Assam side of the campus, where the landscape is fairly plain. The tree species include *Tectona grandis*, *Moringa oleifera*, *Terminalia arjuna*, *Dalbergia sissoo*, *Gmelina arborea*, *Ficus religiosa*, etc.

Grasslands:

The places which are devoid of the tree vegetations are covered by swathes of grass species like *Cyanodon dactylon*, *Arundinella nepalensis*, *Andropogon chinensis*, etc. Fresh flush of grass cover can be seen during the rainy season from May to September.



Vegetation of CASFoS

Water Bodies:

Water bodies play a vital role in the distribution of the butterfly. In the campus there are two ponds and a small nallah which flows across the length of the Eastern boundary wall. During the monsoons, the lower plains of certain areas are flooded by the rain water.

Hill Forest:

The hill forest is dominated by *Pinus kesiya* in the upper ridges and species like *Syzygium cumini*, *Mangifera indica*, *Tectona grandis*, *Artocarpus heterophyllus* etc. occur in the middle and lower ridges of this hills which are situated towards the Meghalaya side of the campus.





HESPERIIDAE

SKIPPERS

Throughout the world, there are about 3,500 species of Skippers, out of which 277 species occurs in the Indian region. They exhibit a rapid bounding flight and are therefore named as Skippers. They are often mistaken for moths. Skippers are generally distinguished from 'true butterflies' by their relatively stout bodies compared to their wings, relatively small angular wings, and a thin extension or curved hook of the antenna club, called apiculus.

Skippers are of two types: one holds its wings completely open and flat across when settled, while the other usually alights with its wings completely closed or with its hindwings more or less completely open, but forewings only partially open. Many species have long proboscis that makes their access to nectarines of tubular flowers a lot easier. Forelegs are fully developed and used for walking. These butterflies lay their dome-shaped eggs singly.

The caterpillars are cylindrical, narrow at the neck and tail, and have a flat belly. They roll leaves or bind grass stems with silk to live concealed within the cell. While some of them feed on grasses, palms, bamboos, ginger, and other monocotyledons, others feed on *Achyranthes*, *Terminalia*, *Grewia*, *Dalbergia*, and other such dicotyledons. Most of the caterpillars feed at night. Pupation may take place in the old leaf cell or a fresh leaf cell may be constructed.



Common Awl

Hasora Badra



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Sub Family: Coeliadinae

Description: Wingspan 50-55mm. UN purple glazed. A bluish white spot in UNH cell. Male UNH has a black patch on lower end of lobe. Female has three large, squarish spots on UPF.

Habitat: Confined to thick hilly Forest in heavy rainfall areas at an elevation upto 900m. Seen during March-November . Distributed in India (southern India, Bihar, Sikkim-Arunachal, NE, A&N Is.), Nepal, Bhutan, Bangladesh, Myanmar.

Habit: Flight extremely rapid and skipping. Active during early morning and evening. Rest on undersides of leaves. Visits flowers as well as bird droppings.

Larval Host Plant: *Derris trifoliata* , *Derris elliptica* (*Fabaceae*).



Small Green Awlet

Bibasis amara

Sub Family: Coeliadinae

Description: Wingspan 40-48 mm, both sexes with greenish gloss on brown upper, Coastal streak on upper hindwing ochreous yellow in male, the streak less prominent in female. Short , brownish white fringe along both wings. Dark brown body with greyish bands on abdomen; head, legs and anal tuft ochreous yellow.

Habitat: Recorded in the terai forests of the Himalayan foothills up to 960m Seen during March-November. Distributed in India, (Sikkim eastwards through Assam), Myanmar. It is also found in the Andaman Islands.

Habit: Active in the early morning and at dusk. It is crepuscular.

Larval Host Plant: Data deficient.



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Black Tufted Bob

Arnetta atkinsoni



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Sub Family: Hesperinae

Description: Wingspan 28-32mm. Found in north eastern state of India. Forewing with a small yellow semi-diaphanous spot at end of the cell, three smaller contiguous spots obliquely before the apex and two contiguous spots obliquely on the disc. Hindwing with a median discal curved series of eight small prominent white spots and a spot at end of the cell.

Habitat: Confined to low elevation of terrestrial - semi evergreen rainforest. Distributed in India (Sikkim- Arunachal, NE), Nepal, Bhutan, Myanmar.

Habit: Fast flight and a good skipper.

Larval Host Plant: Poaceae family vegetation.



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Chestnut Bob

Iambrix salsala

Sub Family: Hesperinae

Description: Wingspan 26-30 mm. Adult dark brown overlaid with chestnut scales. Black edged silver spots at the center of under hindwing unmistakable. Male has orange spots, while female has semi transparent or white spots.

Habitat: Confined to forests elevation up to 1200m. Seen predominantly from March - November. Distributed in India, Nepal, Bangladesh, Sri Lanka and Myanmar

Habit: It is more abundant during and after the monsoon dodging, fast flight, close to ground. Comes to flowers, birds dropping and animal dung.

Larval Host Plant: Grass and bamboo (Poaceae)



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Indian-Palm-Bob
Suastus-gremius



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© ASIM MTRA (ifb)

Sub Family: Hesperinae

Description: Wingspan 32-45 mm. UNH markings distinguish it from other Skippers. Brown UNH in both sexes overlaid with grey scales, bearing a variable number of distinct black spots. Semi-transparent white spots on both sides of brown FW.

Habitat: Distributed in India, Nepal, Bhutan, Sri Lanka, Pakistan, Bangladesh, Myanmar. Seen at lower elevations up to 1,200 m.

Habit: One of the most common among this group, this sun loving Skipper is seen on flowers, damp patches and on its favorite bird droppings. Flight fast, keeps skipping from one perch to another. The bobs get their name from their fast-dipping flight.

Larval Host Plant: *Calamus spp.*, *Caryota urens*, *Cocos nucifera*, *Licuala grandis*, *Phoenix acaulis*, *P. lourierii* (Arecaceae).

Sub Family: Hesperinae

Description: Wingspan 33-39 mm. Male upper-side, rich dark brown. Forewing with two small spots, the lower one twice the size of the upper a rounded spot at the lower outer end of the cell. Underside also dark brown but the apex of the forewing and the outer margin of the hindwing broadly washed with purple. Hindwing is bright yellow in colour, the outer margin irregular in colour. Female differs only from the male in being larger, the wings broader and the apex of the forewing less acute.

Habitat: An inhabitant of densely forested regions with elevation upto 1200m. Distributed in India (Uttarakhand – Arunachal, NE), Nepal, Bhutan, Myanmar.

Habit: Flight fast, prefers flowers near the ground.

Larval Host Plant: *Aganope thyrsiflora*.



Purple and Gold Flitter
Zographetus satwa



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Common Dartlet

Oriens golagola



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Sub Family: Hesperinae

Description: Wingspan 24–28 mm. Adult: Small, dark brown skipper with tawny yellow markings, having orange marking on upper forewing where discal band touches cell marking. Upper forewings has tawny yellow discal band made up of spots. Upper hindwings with central discal band, no cell spot. Discal bands on upper not divided by black veins.

Habitat: Confined in forest with heavy rainfall up to 1000m from January–December. Distributed in India (Sikkim-Arunachal, NE, W. Bengal)

Habit: Comes out to bask, seen on flowers, but rarely on damp patches. Flight rapid, but never too far, among the dappled undergrowth at ground level.

Larval Host Plant: Poaceae family, *Ottochloa nodosa*, *Axonopus compressus*, *Centotheca lap-pacea*.



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Indian Dartlet

Oriens goloides

Sub Family: Hesperinae

Description: Wingspan 24-28 mm. A small yellowish-brown skipper. Tawny yellow markings or bands on the wings. All the bands are at central part of the wings.

Habitat: Prefers openings and clearings in moist forest habitat. Usually settles on leaves and herbaceous flowers. Altitudinal range from the foothills up to 1,200 m.

Habit: Fast flier, often return to its perch, bask on upper surface of leaf with partially opened wings.

Larval Host Plant: Grasses like *Oplismenus burmani*, etc.

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Chocolate Demon

Ancistroides nigrita



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Sub Family: Hesperinae

Description: Wingspan 48-60 mm. A large butterfly, unmarked brown on both sides, marginal areas of both wings broadly pale on UN. Female paler. A unique feature of this species is the exceptionally long proboscis.

Habitat: Often seen at the forest edge and clearings near villages. Seen on the wing from July to November, in the foothills up to 1200 m. Distributed in India (Uttaranchal to Arunachal, NE, W, Bengal [Darjeeling region]), Nepal, Bhutan, Bangladesh, Myanmar.

Habit: A comparatively weak flier among the large Skippers. Often stops to bask with half open forewings and hindwings open flat. Visits flowers and damp patches.

Larval Host Plant: Plants related to ginger and turmeric (Zingiberaceae).



Grass Demon

Udaspes folus

Sub Family: Hesperinae

Description: Wingspan 40-48 mm. A black butterfly with white spotting and patches. Big semi-transparent central white patch on hindwing. Presence of many white spots on forewing which is visible from both sides. Hindwing with brown edges and spots.

Habitat: Prefers deciduous and semi-evergreen forests. Seen often close to the water. Altitudinal range from the foothills up to 2,400 m.

Habit: Fast fliers, territorial by nature. Basks with partial opened wings. Feeds on flower nectar and bird droppings. Can be seen abundantly during monsoon.

Larval Host Plant: *Curcuma aromatica* (*Curcuma* sp.), *Zingiber* sp., *Hedychium* sp.

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Restricted Demon

Notocrypta feisthameli



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Sub Family: Hesperinae

Description: Wingspan 38-50 mm. Black butterfly with a broad, bent, semi-transparent, whitish band on upper forewings; the band not continued to costa. Apical dots on upper forewings. Under similar with a few pale scales, markings on under forewings more prominent. Sexes are alike.

Habitat: Prefers moist deciduous, evergreen and semi-evergreen forests. Frequents forest openings, edges and shady streams. Seen up to 1,860 m from March to November.

Habit: Active during mornings and evenings, rests during the day among foliage close to the ground. Flight fast in short bursts, close to the ground. Fond of flowers.

Larval Host Plant: *Notocrypta curvifascia*, *Costus speciosus*, *Curcuma decipiens*, *Kaempferia rotunda*, *Zingiber cassumunar* (Ginger).



Indian Grizzled Skipper

Spialia galba



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© CK.SAJI (ifb)

Sub Family: Hesperinae

Description: Wingspan 20-27 mm. Small Skipper with black-and-white wing pattern and chequered prominent hairy fringe. UP black or dark brown, marked with small semi-transparent yellowish white spots, and may have light rusty brown gloss. Sexes alike, but female larger and darker with smaller spots on UP.

Habitat: Distributed in all over India. Seen in grasslands as well as in forests up to 1,300 m in the Himalaya and 2,700 m in South Indian hills. Absent in arid or wet dense habitats. Seen from January to November in suitable habitats.

Habit: Keeps near the ground, settling on grass and herbs. Flight low, swift and often swinging. Rests on hanging grass blades or branch tips of low shrubs and herbs.

Larval Host Plant: *Hibiscus* sp., *Sida rhombifolia* (Malvaceae), *Waltheria indica* (Sterculiaceae).



Common Small Flat

Sarangesa dasahara



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Sub Family: Hesperinae

Description: Wingspan 30-35 mm. Dark brown butterfly, with light brown mottling, forewing has semi-transparent minute spots. Female has an additional spot in cell. All three spots in female are in straight line.

Habitat: Seen over the grass and among bushes, countryside, open forest, prefers wetter habitat. Altitudinal range from the foothills up to 2,500 m.

Habit: Fast flier, some what erratic and jerky. Fly close to the ground. Like nectar of flower, visit bird droppings, occasionally seen in damp patches. Rests on the under side of the leaf, but bask on the upper side of the leaf. More frequently can be seen during end of monsoon.

Larval Host Plant: *Asystasia sp.*, *Blepharis asperima*.

Sub Family: Hesperinae

Description: Wingspan 45-50 mm. Adult is Similar to Suffused Snow Flat, but differs in upper forewings having two additional discal semi-transparent white spots. Discal black spots on upper hindwings.

Habitat: India (South India [up to Madhya Pradesh] to West Bengal, Uttaranchal to Arunachal Pradesh, Northeast), Nepal, Bhutan, Bangladesh, Myanmar, Sri Lanka.

Habit: Flight very rapid, that makes it appear as a series of white flashes. Being territorial, it returns to the same perch after a brief sortie. Fond of flowers and occasionally seen on damp patches, along rivers and streams in evergreen as well as mixed deciduous forests.

Larval Host Plant: *Dioscorea oppositifolia* (Dioscoreaceae).



Common Snow Flat

Tagiades japetus



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Fulvous Pied flat

Pseudocoladenia dan



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Sub Family: Hesperinae

Description: Wingspan 40-46 mm. Adult: UP dark brown, overlaid with bright rufous scales. UPF has large semi-transparent spots, which are yellow in male and colourless in female. Otherwise sexes alike. HW has suffused indistinct conjoined dark spots on both sides.

Habitat: India (South India [upto Gujarat], Himachal Pradesh to Arunachal Pradesh), Nepal, Bhutan, Bangladesh, Myanmar. Rarely found away from the forest. Confined to wet hill forests and higher forests in the subtropical zone up to 2,100 m.

Habit: Flight extremely rapid. Display flights in shaded clearings. Fond of visiting flowers, bird droppings and damp patches. On the wing from March to November in suitable habitats.

Larval Host Plant: *Achyranthes aspera* (Amaranthaceae).



Water Snow Flat

Tagiades litigiosa

Sub Family: Hesperinae

Description: Wingspan 37-44 mm. Small semi transparent white spots on upper forewings and broad area of upper hindwings white with dark marginal spots.

Habitat: Hill forest up to 2000 m. Found in India, Nepal, Bhutan, Myanmar, Sri Lanka.

Habit: Flight fast and straight, at times erratic and jerky. Remains in shade and basks on the underside of a leaf. Comes to damp patches and flowers. More often seen on bird droppings. on wings in March- November.

Larval Host Plant: *Dioscorea alata*, *Dioscorea oppositifolia*, *Dioscorea pentaphylla*, *Dioscorea wallichii* (Dioscoreaceae), *Shorea roxburghii*, etc.



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Bush Hopper

Ampittia dioscorides



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Sub Family: Hesperinae

Description: Wingspan 22-28 mm. Under hindwings yellow with black spots. Chequered hair fringe, mostly yellowish –brownish in color. UPF with long narrow spots. Female dark brown with reduced yellow marking. Some females similar to male.

Habitat: Prefers Grassland and forests Up to 800m. Often seen in rice fields. Found in India, Nepal, Bhutan, Bangladesh, Sri Lanka. Flies in August -November

Habit: Low, Darting, comparatively weak flight . Comes to flowers. Often seen basking on bushes and herbs.

Larval Host Plant: Poaceae family , *Leersia hexandra*, *Oryza sativa*.



Forest Hopper

Astictopterus jama



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Sub Family: Hesperinae

Description: Wingspan 38-40 mm. WSF: No spots on male UPF, female has two or three white conjoined apical spots. Indistinct narrow irregular band on UNH. DSF: male UPF has two semi-transparent white apical spots, UNH with sandy reddish scaling.

Habitat: Occurs in Forests with Low elevations. Predominantly seen from March-November. Distributed in India (Uttarakhand - Arunachal, NE, Andaman Is.), Nepal, Bhutan, Myanmar.

Habit: Swift flier, close to the ground. Often seen on grasses and herbs.

Larval Host Plant: *Phrynium spicatum*.


Pygmy Scrub Hopper
Aeromachus pygmaeus


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Sub Family: Hesperinae

Description: Wing span 20-22 mm. Short antennae with club, but no pointed tip. UNH markings indistinct. Smallest skipper in south India. Upper grey brown.

Habitat: Prefers grassland and scrub with an elevation up to 750 m. Seen predominantly in April- November. Distributed in India (W. Ghats, Assam, Arunachal, NE), Bangladesh, Myanmar

Habit: Flies in sunshine over grass, settling frequently. Comes to flowers, but never seen on damp patches.

Larval Host Plant: Poaceae family vegetation, *Cyrtococcum trigonum*, *Stenotaphrum secundatum*, *Polytrias indica*

Sub Family: Hesperinae

Description: Wingspan 22-25 mm. An unmistakable small Skipper. UP black or dark brown with one or more bright yellow streaks and dark spots. UNH yellow with dark brown or black streaks and marginal row of dark brown or black spots. UNF dark brown with costal bright yellow streaks from base to termen.

Habitat: Distributed in India (Sikkim to Arunachal Pradesh). Nepal, Bhutan, Myanmar. Flies from Terai to 1,200 m from May to November.

Habit: A small Skipper seen among grasses, feeding on flowers. Visits damp patches.

Larval Host Plant: Data deficient.


Tiger Hopper
Ochus subvittatus


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Light Straw Ace

Pithauria straminepennis



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Sub Family: Hesperinae

Description: Wingspan 44-50 mm. UNH and UNF apex overlaid with grey scales. Male UNF has a double pale cell spot. UNH with indistinct spots. Male much paler in DSF. Female has a double pale spot near UNF inner edge. Female WSF has indistinct pale spots and dark central markings on UN. DSF is unmarked.

Habitat: Occurs in Forests at an elevation Up to 650 m. Seen predominantly from April-October. Distributed in India (Sikkim-Arunachal, NE), Nepal, Bhutan, Myanmar.

Habit: Fast flier, more active in sunshine.

Larval Host Plant: Data deficient



Long Banded Ace

Halpe Zola

Sub Family: Hesperinae

Description: Similar to Banded Ace (No. 101), but smaller and darker, margins on both sides of white band on UNH are irregular, deeply excavated at veins. Female has additional spot near inner edge and a small spot near UNH apex. Male dark chocolate brown.

Habitat: Confined to Hill forests at Low elevations. Seen predominantly from April-October. Distributed in India (Assam, Arunachal, NE), Bhutan, Bangladesh, Myanmar.

Habit: Flying in bright sunshine. Females are rarely seen. Comes to damp patches.

Larval Host Plant: Data deficient

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Moores Ace
Halpe porus



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Sub Family: Hesperinae

Description: UNH dark brown with a dull yellowish white central band and marginal spots, and a row of black spots between them.

Habitat: Seen in forest ranging from mixed deciduous to wet evergreen from March–November. Usually remains confined to bamboo. Distributed in India (W. Ghats, Jharkhand, Uttarakhand–Arunachal, NE, Andaman Is.), Nepal, Bhutan, Bangladesh, Myanmar.

Habit: Flies very fast, high above the ground. Keeps to shade, but can be seen basking during early morning. Comes to sip moisture from damp patches. Males also seen in cow dungs and bird droppings.

Larval Host Plant: Bamboo (Poaceae)



Banana Redeye
Erionota torus



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© CHUZING LEPCHA (ifb)

Sub Family: Hesperinae

Description: FW apex rounded, outer edge convex unlike Palm Redeye. FW has no whitish scaling along outer edge and apical area. Pale, indistinct central area on UNH. White antennal club with long black tips. Purplish white band from inner edge to apex on UNH. UPF male unmarked. Central yellow transparent spots on female.

Habitat: Occurs in forest and farmlands at low elevations from March–November. Distributed in India (Uttarakhand, Sikkim–Arunachal), Nepal, Bhutan, Myanmar.

Habit: A dweller of the bamboo forest, this skipper is seen flying or basking during early morning and at dusk along forest paths.

Larval Host Plant: Data deficient



Black Veined Redeye

Matapa sasivarna



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© BRAJO BASUMATARY (ifb)

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Sub Family: Hesperinae

Description: Wingspan 40—47 mm. Thorax and wing bases covered with bluish green metallic hairs, more so in female. UN sooty dark grey with black veins. UP uniform brown. HW hair-fringe broadly bright orange. Abdomen tip orange. UN rusty, not purple in north-eastern races, always divided by dark veins, sometimes less prominent.

Habitat: Found at low elevations in the forests from January to November. Its distribution ranges from India (Sikkim - Arunachal), Bhutan and Myanmar.

Habit: Crepuscular in habit.

Larval Host plant: Data Deficient.



Common Red Eye

Matapa aria



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© SWAPNIL LOKHANDE (ifb)

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Sub Family: Hesperinae

Description: Dark buff-brown with no markings on UP. HW has greyish fringe tinged with pale yellow. UN more yellowish orange-brown. Indistinct black band on male UPF.

Distribution: Distributed in India (southern India up to Mumbai), Uttarakhand NE, W. Bengal, Andaman Is.), Nepal, Bhutan, Sri Lanka, Bangladesh, Myanmar.

Habitat: Confined to Forests with an Elevation upto 840 m from January-December

Habit: Dweller of bamboo forest, this skipper is seen flying or basking during early mornings and at dusk along forest paths. Flight very rapid. Occasionally visits flowers.

Larval Host Plant: *Bambusa arundinacea*



Colon Swift

Caltoris cahira



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© NAGRAJ V (ifb)

Sub Family: Hesperinae

Description: Wingspan 34-42 mm. Two spots in UPF cell, three central spots, two apical spots. A spot near male UPF inner edge. No spots on dark chocolate UNH, maybe a spot near inner edge. Besides eight spots, female has a triangular yellow spot near FW inner edge.

Habitat: Confined to Hill forests with an elevation upto 1,680 m seen predominantly from March-December. Distributed in India (Sikkim-Arunachal, NE), Bhutan, Bangladesh Myanmar.

Habit: Active during early mornings, basking or on flowers, but prefers to remain in the shade. Flight very rapid. Being territorial.

Larval Host Plant: Data deficient

Sub Family: Hesperinae

Description: Wingspan 36-42 mm. Two cell spots on UPF almost merged, transparent pale yellowish spots in central area and a spot near inner edge. UPH may be plain or with a series of spots. UNH without brand. UN pattern of spots same as on UP. UNH with transparent pale yellow.

Habitat: Found in the forest up to an elevation upto 450 m in the month of March to November. Its distribution ranges from India (W. Ghats, Bihar, Uttarakhand-Arunachal), Nepal, Bhutan, Bangladesh, Myanmar.

Habit: It is a common butterfly in secondary jungles and in open spaces in woods and is confined to the lowlands.

Larval Host plant: *Imperata cylindrica* (Lallang)



Contiguous Swift

Polytremis lubricans



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© HEMANTOGALE (ifb)



Continental swift

Parnara ganga



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Sub Family: Hesperinae

Description: Wingspan 30-32 mm. Rarely male has a lower cell spot on UPF. Uppermost apical spot may be absent or small. UPH has a row of four white central spots, somewhat irregular. Male does not have brand.

Habitat: Confined to Forest edges, grasslands and cultivation at Low elevations seen predominantly from March-November. Distributed in India (southern India up to Central India, W. Bengal, NE), Bangladesh, Myanmar.

Habit: Often settles on ground to bask. Visit flowers.

Larval Host Plant: Data deficient



Full Stop Swift

Caltoris cormasa

Sub Family: Hesperinae

Description: Wingspan 36-42 mm. Large square central spot equidistant from lower cell spot and the smaller central spot on male UPF. Upper cell spot often absent on UPF. Female has two spots near inner edge. Female UNF has prominent white area near inner edge.

Habitat: Found at low elevations in the forests from February to April. Its distribution ranges from India (Sikkim-Arunachal, NE), Bhutan, Myanmar.

Habit: The adults fly with a swift, strong and darting flight.

Larval Host Plant: *Ottochloa nodosa*, *Panicum maximum* and *Ischaemum ciliare*.



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Great Swift

Pelopidas assamensis



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Sub Family: Hesperinae

Description: Wing span 34 mm. UNF has similar pattern of white semi transparent spots on UP. UNH may have spots in variable number. Antennae conspicuously whitened below base of club. Two cell spots are generally conjoined, white semi transparent central spots, three apical spots and one prominent non transparent spot near inner edge on UPF.

Habitat: Confined to Hill forest at an elevations up to 1770m seen predominantly from January-November. Distributed in India, Nepal, Bhutan, Bangladesh, Myanmar, Sri Lanka

Habit: Strong flier.

Larval Host Plant: Poaceae family, *Imperata cylindrica*

Sub Family: Hesperinae

Description: Wingspan 43-48 mm. UPF two spots in cell, three apical spots, and three central spots. Male has black paintbrush-like tuft of scales in the cell on UPH which overlaps with a whitish grey area near inner edge on UNF.

Habitat: Confined to Forests with an elevation up to 900 m seen predominantly from March-November. Distributed in India (W. Ghats) [Goa southwards], W. Bengal, Jharkhand, Uttarakhand (Kashmir, NE, A&N Is.), Nepal, Bhutan, Bangladesh, Myanmar, Sri Lanka.

Habit: Active during early mornings along forest paths on flowers or basking but activity ceases in afternoon.

Larval Host Plant: Data Deficient



Paintbrush Swift

Baoris farri



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Rice Swift
Borbo cinnara


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© DATTAPRASAD SAWANT (ifb)

Sub Family: Hesperinae

Description: Wingspan 30-36 mm. UNH has spots in spaces 2, 3, and 6. Rarely a spot at end-cell or in space 4. Male does not have brand.

Habitat: Confined to Forest edges, grasslands, and farmlands at an elevation upto 1,200 m. seen predominantly from March-December. Distributed in India, Nepal, Bhutan, Bangladesh, Myanmar, Sri Lanka.

Habit: Prefers sunny open places, where it flies close to ground. Often settling down on plants to bask or to feed on flowers. Comes to bird droppings and damp patches.

Larval Host Plant: *Oryza sativa*, *Andropogon* spp, *Cymbopogon* spp, *Eragrostis* spp, *Ischaemum* spp.

Sub Family: Hesperinae

Description: Wingspan 32-38 mm. Five small spots usually present and one in cell or none at all on UNH. Grey patches in DSF on UN. Female similar to the female of Large Branded Swift.

Habitat: Confined to Grasslands, scrub, and forest edges with an elevation upto 2,250 m seen predominantly from March-November. Distributed in India, Nepal, Bhutan, Myanmar, Sri Lanka.

Habit: Frequently settles on the ground to bask or to feed on flowers. Though seen throughout the day, active in morning and evening.

Larval Host plant: *Oryza sativa*, *Cymbopogon* spp, *Imperata cylindrica*


Small Branded Swift
Pelopidas mathias


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LYCAENIDAE

BLUES

More than 5,000 species are found the world over, out of which 380 species are found in India. Most of these butterflies have different shades of blue on the upper side, though there are species with other colours too. Many species in this group are known for their thread-like tails on the hindwings, ranging from small tufts to long fluffy tails. Often their hindwings are lobed. A dark spot at the base of the tail makes the decoy perfect to confuse a potential predator from attacking the real head, resulting in early detection and escape.

Lycaenid eggs are almost spherical, but flattened at both ends so they appear turban-shaped. The surface is densely pitted, and some may have spines or projections. But the most unique aspect of this group is that caterpillars of several species share a very special relationship with ants.

These caterpillars have specialized secretory organs or glands to attract and reward ants in return for the protection that they receive from the ants. Male Lycaenid butterflies use only four legs out of six: the forelegs are non-functional and smaller, and the tarsi are usually unsegmented, lacking claws or having only one claw. Females have six normal legs.



Bigg's Brownie
Miletus biggsii



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Sub Family: Miletinae

Description: Wingspan 32-38 mm. UN has a series of black dots near outer edge. UPF reddish brown, with oblique broad white band, even edged with both sides straight, apical area blackish brown. White band variable.

Habitat: Found in the forest at low elevations in the month of July-August. Its distribution ranges from India (Assam-Arunachal) to Myanmar

Habit: The butterfly has a weak flight, but very often when disturbed from its perch, it flies erratically without stopping to rest for quite some time. It feeds on several species of aphids and coccids attended by ants of the genus *Dolichoderus*.

Larval Host Plant: Data Deficient



Apefly
Spalgis epeus



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Sub Family : Miletinae

Description: Wingspan 20-30 mm. HW tailless. Small little butterfly which has grey UN with several fine wavy vertical lines. Both sexes brown on UP with diffuse or well-defined discal white patch at end-cell on UPF. Male FW has rounded apex and straight termen, while female has rounded apex and termen.

Habitat: Prefers forested regions with moderate to heavy rainfall up to an altitude of 1,220 m throughout the year. Distributed in India (peninsular India up to Gujarat, W. Bengal, Arunachal to Arunachal, NE), Sri Lanka, Nepal, Bhutan, Bangladesh, Myanmar.

Habit: Fast, erratic flight, keeps among the bushes. Caterpillars feed on scale insects and mealy bugs.

Larval Host Plant: Carnivorous caterpillar feed on scale insects and mealy bugs.



Common Ciliate Blue

Anthene emolus



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Sub Family: Polyommatae

Description: Wingspan 28-35 mm. HW is tailless but with three short projections of tufts. UN markings consist of band of continuous spots. It has a small black dot on the bottom mid cell of Hindwing under part. UP male dark purple blue, thin black borders. HW rounded. UP female brown glossed basally with pale blue, marginal spots on black UPH.

Habitat: Prefers Evergreen forests at low elevation mainly bushes and small trees near forest streams at an elevation upto 1370m seen predominantly from March –November.

Habit: Its not a strong flier and it comes to damp patches for mudpuddling

Larval Host Plant: *Saraca asoca* ,*Combretum extensum* , *Terminalia paniculata*



Common Hedge Blue

Acytolepis puspa

Sub Family : Polyommatae

Description: Wingspan 28-35mm. Tailless. UP male blue. White central patches and black margins variable on UP male. Female with broad black margins, UPF central patch white. Base iridescent. UNF spot in space 2 oblique, directed towards spot at end-cell. Spot in space 3 vertical, directed towards center of spot in space 4.

Habitat: Found in the forest up to an elevation 1000 m in the month of January to December. Its distribution ranges all over India (incl A&N Is.)

Habit: The Common Hedge Blue is usually found flying along brightly sunlit footpaths along forest tracks. It flies in an erratic manner and males are usually observed feeding on damp patches on the forest floor.

Larval Host plant: *Combretum sondaicum* , *Vernonia maingayi*, *Prunus polystachya* , *Rosa hy-*



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Common Line Blue

Prosotas nora



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Sub Family: Polyommatainae

Description: Wingspan 18-25 mm. HW are tailed. UN May vary from grey to brown with bands. Small black ternal spot conspicuous, often along with metallic spot-on Dorsum of UNH. Male has deep blue on UP, whereas female lacks blue color on UP

Habitat: Prefers forest and gardens at an elevation upto 2590m over the year. Comes to flowers and seen on tall trees during blooming season. Eggs laid on flower buds. Caterpillars attended by ants.

Habit: Fairly strong flight, at times flies restlessly for a long period. Males are mostly involving on mudpuddling on bird and animal droppings

Larval Host Plant: *Acacia catechu*, *A.tora*, *Mimosa spp*, *Pithecellobium dulce*.

Sub Family : Polyommatainae

Description: Wingspan 22-26 mm. HW tailless. UN pale brown with pairs of white-margined darker bands similar to Common Line blue. Male UP dull purple-blue, but brighter than Common Lineblue, with similar thin black line borders and with indistinct small ternal black spot on UPH.

Habitat: Confined to forests with an elevation upto 1,460 m seen from April to October. Distributed in India (except arid regions incl. Andamans).

Habit: Except for being tailless, this butterfly is very similar to Common Line blue, sharing the same range and habits. Less tolerant of and con-

Larval Host Plant: *Acacia spp.*, *Mimosa pudica*, *Leucaena spp.* (Mimosaceae).



Tailless Lineblue

Prosotas dubiosa



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© ROHIT GIROTRA (ifb)



Dark Grass Blue

Zizeeria karsandra



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© ROHIT GIROTRA (fjb)

Sub Family: Polyommatae

Description: Wingspan 18-24 mm. Tailless. Underside of the forewing having spot at mid-cell. UP male deep blue with dark borders.

Habitat: Prefers grassy patches, bushes in the forest openings and scrubs. Altitudinal range from the foothills up to 2,430 m.

Habit: Weak fliers, Sun loving butterfly, stay close to the ground. Often in company of Pale-grass Blue.

Larval Host Plant: *Amaranthus spinosus*, *Zornia gibbosa*, *Polygonum plebejum*, *Tribulus terrestris*.

Sub Family: Polyommatae

Description: Wingspan 19-26 mm. Adult: HW tailless. Sexes differ. UN pale greyish brown with rounded, not very dark spots. UNF has no costal spots or any spot inside the cell. Male UP dark blue with fairly distinct black border along termen, broadening towards apex. Female dark brown on UP, with iridescent blue scaling at wing bases.

Habitat: Confined to forest edges and grasslands seen over the year at the elevation up to 2000m. Distributed in India, Pakistan, Nepal, Bhutan, Bangladesh, Myanmar, Sri Lanka.

Habit: Flight close to ground, flying often endlessly before settling to feed on flowers. Prefers open clearings. On the wing all year round. Eggs laid inside flower buds.

Larval Host Plant: *Lathyrus sp.*, *Vicia spp.* (Fabaceae).



Lesser Grass Blue

Zizina otis



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Pale Grass Blue

Pseudozizeeria maha



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Sub Family: Polyommatinae

Description: Wingspan 26-30 mm. Tailless. Underside of the forewing having spot on mid-cell present. UP male pale blue with dark borders; female basically blue, rest dark brown.

Habitat: Prefers open grassy areas, more abundant in hills, prefers forest paths, open countryside and near habitation amidst grass and shrubs. Distributed from plains up to the altitude of 2,500 m.

Habit: Weak flier, stays close to the ground on grassy patches. Visits flowers for nectar. Larger caterpillars occasionally attended by ants.

Larval Host Plant: *Strobilanthus* sp., *Tephrosia* sp., *Oxalis corniculata*



Tiny Grass Blue

Zizula hylax



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Sub Family: Polyommatinae

Description: Wingspan 16-24 mm. UNH has black spots in a curve, a bar at cell-end, a spot in cell between two basal spots. Male UP pale blue, black border on UPH, broad, diffused black border at UPF apex. Female UP brown.

Habitat: Found in grasslands and forest edges in the month of March to November. Its distribution ranges from India (A&N Is.), Pakistan, Nepal, Bhutan, Bangladesh, Myanmar to Sri Lanka.

Habit: The butterfly has a weak fluttering flight and can usually be found on sunny days at flowering plants. The species loves Lantana blooms and stays around the flowers all day long.

Larval Host Plant: *Mimosa pudica*


Lime Blue
Chilades lajus


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Sub Family: Polyommatae

Description: Wingspan 26-30 mm. Tailless. One pair of spots on each wing, joined together at angles. UP male purplish blue, thin black border; female blackish brown, metallic blue wing bases. DSF: Markings vary, UN brownish.

Habitat: Confined to forests and farmlands at the elevation Up to 1,980 m seen predominantly from January - December. Distributed in India, Pakistan, Nepal, Bhutan, Bangladesh, Myanmar, Sri Lanka.

Habit: More common in drier, open habitat. Fluttering flight, usually around food plants, close to the ground. Visit flowers, bird droppings and damp patches.

Larval Host Plant: *Atlantia racemosa*, *A. Wightii*, *Citrus aurantifolia*, *C. grandis*, *C. limon*


Pea Blue
Lampides boeticus


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Sub Family: Polyommatae

Description: Wingspan 24-36 mm. Tailed. Below, pale brown with broken basal, discal and post-discal white lines. A prominent post-discal whitish band. Underside of the hindwing two orange-crowned black tornal spots. UP male pale purple-blue, female largely brown with variable amount of blue scalation.

Habitat: Seen at stream edges, open countryside, gardens, wet roads and agricultural fields. Altitudinal range from the foothills up to 3,500 m throughout the year.

Habit: Flies fast, mud puddling by male, feeds on flower nectar. Lays eggs on various species of legumes (Fabaceae) including pea, as per its name Pea blue.

Larval Host Plant: Species of cultivated peas and beans, *Butea monosperma*, *Crotolaria sp.*, *Vigna sinensis*, *Pisum sativum*.


Zebra Blue
Leptotes plinius


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Sub Family: Polyommatainae

Description: Wingspan 22-30 mm. Tailed. Below, dark brown with basal, discal and post-discal white lines. Pattern distinct and unmistakable. Underside of the hindwing two orange-crowned metallic tornal spots. UP male violet blue, female largely brown with white discs with brown spots upper side of the forewing.

Habitat: Present in Drier regions, also seen at the edges of evergreen forests. Seen near streams and trickling water on roads. Altitudinal range from the foothills up to 2,200 m.

Habit: Fast fliers, sustained for long time in flight, more often seen around food plants and bushes. Visits flower, damp patches, mud puddling with other Lycaenids.

Larval Host Plant: *Albizia sp.*, *Dalbergia sp.*, *Indigofera sp.*, *Sesbania sp.*, *Mimosa sp.*, *Plumbago zeylanica*, *Dyerophytum indicum*


Malayan
Megisba malaya


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Sub Family : Polyommatainae

Description: Eastern subspecies sikkima tailed. UN similar to Malayan. White patch on UPF absent or reduced. UP dark brown with whitish discal patch usually present on UPF, and no blue scalation. Female has broader and rounded FW than male.

Habitat: Found in the hill forests up to an elevation of 790 m in the month of January to November. Its distribution ranges from India (Uttarakhand-Arunachal, NE, W. Bengal, A&N Is.), Nepal, Bhutan, Bangladesh to Myanmar.

Habit: It flies rapidly and in a zigzag path. The adult is fond of bird droppings and decaying animal matter. It basks in the early morning sun with open wings.

Larval Host plant: *Allophyllus cobbe*



Plains Cupid
Chilades pandava



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Sub Family: Polyommatainae

Description: Wingspan 25-35 mm. Tailed. Central row of spots on UNF unbroken, no cell spot. UNH central band more united near lower tip. Four dark spots near UNH base. DSF: UNH central area with broad dark band. UP bright lavender blue with dark border, and may have darkened veins. UPH has a dark spot lower tip and maybe an entire row of small marginal spots.

Habitat: Confined to Forest edges. With an elevation up to 2,400 m seen throughout the year. Distributed in India (incl. A & N Is. [except desert region]), Pakistan, Nepal, Bhutan, Bangladesh, Myanmar, Sri Lanka.

Habitat: Males often seen on damp patches than on flowers. Female fly low on grasses .

Larval Host Plant: *Cycas revoluta*, *Acacia* spp., etc.



Quaker

Neopithecops zalmora



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Sub Family: Polyommatainae

Description: Wingspan 16-30 mm. HW tailless. Sexes similar. FW costa and termen rounded. White UN with a prominent large black spot near UNF costa and another small black spot on dorsum of UNH, also there may be three small basal spots and outer discal band on UNH. Markings vary from small white discal patch on UPF in WSF, to larger white discal area on UPF and white UPH in extreme DSF.

Habitat: Prefers agricultural areas & forests with good rainfall. Seen In the Himalaya up to 460 m in May- November. Distributed in India (W. Ghats and E. Ghats in peninsular India, Uttarakhand to Arunachal & NE)

Habit: Weak, fluttering flight, close to the ground. Males are avid mudpuddlers.

Larval Host Plant: *Glycosmis pentaphylla* (Rutaceae).



Angled Pierrot

Caleta decidia



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Sub Family: Polyommatinae

Description: Wingspan 26-32 mm. Angled black band from leading edge to lower edge on UNF. UP dark with broad white band. Small Black and white butterfly, with broad black marking on White UN. Tail in Hindwing .

Habitat: Confined to Open evergreen forest to mixed deciduous forest region with moderate to heavy rainfall. At the elevation up to 2800m seen predominantly from January—November.

Habit: Flutters low & Weak in flight . Mudpuddles, attracted by flowers and birds droppings. Abundantly seen during rains.

Larval Host Plant: *Zizyphus rugosa* (Rhamnaceae)



Common Pierrot

Castalius rosimon



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Sub Family: Polyommatinae

Description: Wingspan 24-34 mm. Tailed. Below, white with numerous black spots. Underside of the forewing/hindwing with basal streak on hindwing, continued to forewing. Upper side of the forewing/hindwing white with brown spots, bases bluish. Female with browner above. Marking on below gets reduced in dry season form.

Habitat: Prefers open forests, countryside and edges of fields in the plains and foothills. Altitudinal range from the foothills up to 2,500 m.

Habit: Fluttering flight, close to the ground. Fond of sunshine, mud puddling. Visits flower, dead insects, bird droppings and animal dung.

Larval Host Plant: *Zizyphus sp.* (*Z. jujube*, *Z. mauritiana*, *Z. rugosa*)



Common Cerulean

Jamides celeno



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Sub Family: Polyommatae

Description: Wingspan 27-40 mm. Tailed. Grey to greyish brown with white lines below. Male-pale bluish-white above. Upper side of the forewing border narrow, widening to apex. Female-bluish-white above. Upper side of the forewing very broad border, widens to apex. Upper side of the hindwing with sub-marginal spots.

Habitat: Prefers forest under growth and flowers, seen in wooded habitats of plains and hills, forest tracks and gardens with larval plants. Altitudinal range from the foothills up to 2,000 m.

Habit: Weak fluttering low flight around bushes, like moist or damp areas, it's the only Cerulean can be seen outside forested areas. Feeds on flower nectar and bird droppings.

Larval Host Plant: Flame of the Forest (*Butea monosperma*) and *Pongamia sp.*, *Saraca asoca*,



Metallic Cerulean

Jamides alecto

Sub Family: Polyommatae

Description: Wingspan 30-44 mm. HW tailed. UN grey to brown, strongly marked in WSF, with third line from base of UNF bent and broken. UP male metallic pale violet-blue, dark border broadening towards UPF apex.

Habitat: Prefers Hill Forest, especially with plantations of its food plant, Cardamom with the elevation up to 1460m seen predominantly from January—November. Distributed in India (W. Ghats, Andhra Pradesh, Bihar, W. Bengal, Sikkim -Arunachal, Assam)

Habit: Weak fluttering flight, low along forest clearing

Larval Host Plant: *Elettaria cardamomum* (Zingiberaceae)

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Dark Cerculean

Jamides bochus



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Sub Family: Polyommatainae

Description: Wingspan 25-34 mm. Female is tailed, male may be tailed. UNF basal area plain brown without any bars. UP male iridescent blue, broad black border on FW. Female dull blue, broad black borders. Dark marginal spots crowned with white crescent on UPH.

Habitat: Confined to forest with the elevation upto 2430m which can be seen throughout the year. Distributed widely in India (except arid NW).

Habit: Strong and rapid flight, around bushes. Seen in open or particularly shade places. Males seen on damp patches. Eggs laid singly on flower buds. Caterpillars are occasionally eaten by ants.

Larval Host Plant: *Butea monosperma*, *Pongamia pinnata*, *Xylia spp.*



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Purple Sapphire

Heliophorus epicles



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Sub Family: Polyommatainae

Description: Wingspan 28-34 mm. Tailed. UN bright yellow with no prominent markings, except a few dots near red marginal area. Prominent white - edged black spot near UNF lower tip. Red marginal band continues from UNH to UNF apex. UNH has no basal black spots. Female dark brown on UP, with broad orange central patch on UPF and orange marginal band on UPH.

Habitat: Seen along the forest patches with an elevation up to 2100m seen mainly from February– October. Distributed in India (Uttarakhand– Arunachal, NE, W. Bengal, Andaman Is.), Nepal, Bhutan, Bangladesh, Myanmar.

Habit: Flies near the ground level. Male territorial.

Larval Host Plant: *Polygonum spp*, *Rumex hastatus*



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Copper Flash
Rapala pheretima


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Sub Family: Polyommatainae

Description: Wingspan 38-42 mm. UP dark copper red, broad black apex and costa and termen narrowly dark. UPH all copper-red. Lobe yellowish. Female UP dull blue or purple, shading to brownish on border. Both sexes yellowish-brown on UN. Markings dark brown, fairly prominent and white-edged on outer side. Bars at end cells prominent. Male has spot in the UNF cell, and a spot near base of vein 7 usually present on UNH.

Habitat: Common at low elevations in terai up to 1,500 m in the Himalaya. Seen predominantly from March –December. Distributed in India (Odisha, W. Bengal, Uttarakhand-Arunachal, NE)

Habit: Strong flier**Larval Host Plant:** Data Deficient

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Indian Red Flash
Rapala iarbas


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Sub Family: Polyommatainae

Description: Wing span 33–41 mm. Tailed. UN slaty grey, no yellowish tinge. Fine central line. Two black spots at lower tip, one not prominently orange - crowned on UNH. UP male bright red with purple sheen. UPF apex, leading and outer margin with dark brown - black border narrowing to lower tip. UPH red, black lobe at lower tip with a few orange and metallic scales. UP female dull coppery red, broad dark brown borders.

Habitat: Present in Grasslands, scrub, and forests and altitudinal variation from Plains to 2,300 m. Seen predominantly from March - November India (except desert and very wet regions) and Indian subcontinent.

Habit: Rapid and straight flier. Flash their bright upper side to signal their presence.

Larval Host Plant: *Zizyphus rugosa*, *Nephelium lappaceum*.



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Slate Flash
Rapala manea



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Sub Family: Polyommatainae

Description: Wingspan 30-33 mm .Tailed. Two black spots at lower tip on UNH, upper spot orange - crowned. UN pale brown to slaty - brown. UN darker central band slightly curved, white - edged on outer side. White - edged bars at cell - end on both wings. UN female yellowish brown. UP dark slaty - blue with brilliant blue suffusion. UPF leading and outer margins black bordered.

Habitat: Confined to Plains and hills at the elevation up to 1,980 m predominantly seen from March - November . Distributed in India (incl. Andaman Is. except arid region), Pakistan, Nepal, Bhutan, Bangladesh, Myanmar, Sri Lanka

Habit: Flight rapid, Most active during and post monsoon period. Often seen underside of leaves.

Larval Host Plant: *Camelia sinensis*, *Acacia pennata*



Yamfly
Loxura atymnus

Sub Family: Polyommatainae

Description: Wingspan 36-40 mm. HW extended to a long white - tipped tail. Both sexes are reddish orange on UP, with a broad black border and apex. Black border on UPH narrow or absent.

Habitat: Confined to Forests with an elevation up to 950 m seen predominantly from April - November. Distributed in India (Uttarakhand, Arunachal, W. Bengal, peninsular India up to Jharkhand), Nepal, Bhutan, Bangladesh, Myanmar, Sri Lanka.

Habit: Weak fluttering flight. Avoid open spaces. Keeps to wet forest with bamboo. Attracted to plant bugs. Caterpillars are always assisted by ants.

Larval Host Plant: *Dioscoria pentaphylla*, *Smilax spp*



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Common Acacia Blue

Surendra quercetorum



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Sub Family: Polyommatainae

Description: Wingspan 30-40 mm . UN with fine black markings, some markings silver edged outwardly. UNH has irregular basal and central lines, and marginal dots. Male has one pair of tails. UP dark brown, purple blue central area on UPF. Female has two pairs of tails. UP brown.

Habitat: Common in lower hill forest with fairly heavy rainfall from March—September. Distributed in India (W. Ghats , Madhya Pradesh, Andhra pradesh, Jharkhand, Himachal, Arunachal, Assam) , Nepal, Bhutan, Bangladesh, Myanmar

Habit : Often seen in the nectars of Acacia leaflets sharing nectars with the ants. Though a reluctant flier, it has short burst of strong flight.

Larval Host Plant: *Acacia torta*, *A. pennnata*,
A. suma



Falcate Oakblue

Mahathala ameria



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Sub Family: Polyommatainae

Description: Wingspan 38-42 mm . Silver stripes on UNH irregular and broken into separate spots in both sexes. Female UNF apical area broadly dark blue below white band. It has tail . Male UP deep blue with narrow borders. Female purple with broad borders.

Habitat: Confined to forest Up to 600 m. Distributed in India (W. Bengal, Assam, Arunachal, NE) Nepal, Bangladesh, Myanmar. Predominantly seen in March - November .

Habit: Strong flight, often seen in darker or shaded region .

Larval Host Plant: Data deficient



Chocolate Royal

Remelana jangala



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Sub Family: Polyommatainae

Description: Wingspan 32-42 mm. Two tails. Male UN chocolate in varying shades. UNH spots at lower tip crowned by metallic green line, with sprinkling of white scales. Female UNH yellow to pale reddish brown. UPH with purple - blue central patch from base to central area. Female UP paler brownish black with blue areas. UNH yellow to pale reddish brown.

Habitat: Common at low elevations in forest regions predominantly seen from march—November. Distributed in India (Sikkim, Arunachal, Bihar, Assam), Nepal, Bhutan, Myanmar.

Habit: Males comes to damp patches often in large numbers in hot weather.

Larval Host Plant: *Rhododendron* spp



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Common Tit

Hypolycaena erylus



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Sub Family: Polyommatainae

Description: Wingspan 32-36 mm. Two tails. UN pale greyish brown. Double bars at cell ends. Narrow regular central line continuous on UNF, broken and less regular on UNH. No spot near base at HW leading edge. Yellow - crowned spot at lower tip on UNH. UP dark shining purple, FW has black brand. UP dark brown, UPH has indistinct white disconnected central band above lower tip.

Habitat: Confined to forests at the elevation Up to 1,280 m seen predominantly from March - December. Distributed in India (Sikkim, Arunachal, NE, Andaman Is.), Nepal, Bhutan, Bangladesh, Myanmar.

Habit: Males are seen dominant on damp patches, female are rarely seen.

Larval Host Plant: *Cinnamomum zeylanicum*, *Meyna pubescens*.



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Fluffy Tit
Zeltus amasa


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Sub Family: Polyommatainae

Description: Wingspan 28-32 mm. Two long fluffy tails. UN blueish white, apices of both wings broadly pale ochreous brown with darker markings. Narrow central line continuous on UNF, but broken on UNH. UPF black with basal area powdery pale blue on UPF. Female UP dark brown, white - ringed spot at lower tip on white area .

Habitat: Confined to Forests with an elevation Up to 1,120 m seen predominantly from April - December. Distributed in India (W. Ghats [Goa southwards], Sikkim, Arunachal, NE), Nepal, Bhutan, Myanmar.

Habit: Flight weak. Keep to shade, confined to hot, humid evergreen forests.

Larval Host Plant: Data deficient


Common Imperial
Cheritra freja


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© ABHISHEK NARVEKAR (IFB)

Sub Family: Polyommatainae

Description: Wingspan 38-42 mm. Two tails, both sexes on UN white to pale brown; faint bars at cell ends. Narrow dark outer central line on UNF. UNH with outer central and marginal lines and black spots crowned with metallic scales at lower tip. UP dark brown, male has purple tinge. White area at lower tip on UPH, bearing black spots.

Habitat: Mostly confines to hilly jungles of elevation upto 760m seen predominantly from April- November. Distributed in India (W. Ghats, Uttarakhand- Arunachal, Assam, Meghalaya, Nepal, Bhutan, Myanmar.

Habit: Weak fluttering flight. Settles under leaves in dull weather.

Larval Host Plant: *Cinnamomum spp*, *Xylia xylocarpa*



Mandarin Blue

Charana mandarinus



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Sub Family : Polyommatae

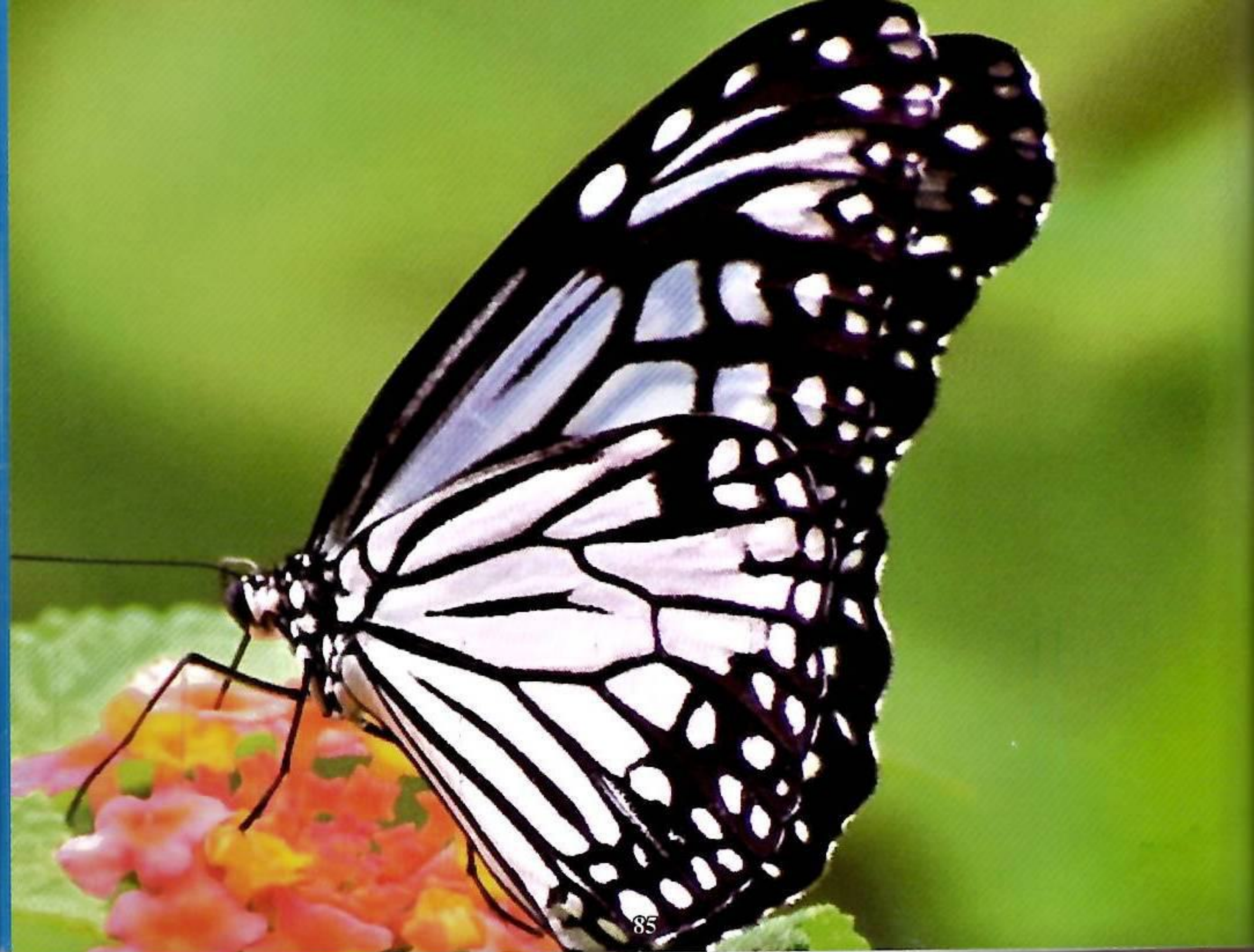
Description: Wingspan 40-44 mm. Two tails. UN yellowish cream, reddish brown central band on broad paler reddish brown (rufous) marginal area. UNH considerably white - banded in the rufous marginal area. Male UP dull blue, broad apical border. Female UP dark brown. UPH lower tip area white with submarginal black spots.

Habitat: Confined to Forests of Low elevations. Seen predominantly from March - November. Distributed in India (Sikkim, Arunachal, NE, W. Bengal (northern hills), Andaman Is.), Nepal, Bhutan, Myanmar Forests.

Habit: Settles on both top of the tree leaves as well as in the bushes.

Larval Host Plant: *Dendrophthoe* spp





NYMPHALIDAE

BRUSH-FOOTED BUTTERFLIES

With around 6,000 species worldwide, it is the largest family of butterflies and has a number of subfamilies, based on recent concepts of phylogenetic analysis and classification. In India 461 species of Nymphalids are known to occur. The first pair of fore legs is small and covered with hairs that appear like brushes.

Nymphalids use only four of their six legs to perch and to walk. Milkweed butterflies need pyrrolizidine alkaloids, essential as precursors of male pheromones for the males in courtship. This is why large assemblages of Tigers and Crows are often seen on decaying or uprooted plants like rattlepod and *Crotalaria*, from which they obtain the alkaloids. The *Danaus* and *Tirumala* groups have small pockets on the underside of the hindwing, with openings on the upper side, containing scent scales.

The males have hair pencils that are stroked on these pockets to scatter and direct pheromones towards a female during courtship. They are distasteful to predators due to toxic chemicals derived from their larval food plants, which include latex-bearing milkweeds, dogbanes, and figs. The Northern Jungle Queen and Manipur Jungle Queen have possibly the largest wing area among Indian butterflies. Many of the larger species are active around early morning and again in the late afternoon and dusk.



Yellow Coster

Acraea issoria



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© ATANU BOSE (ifb)

Sub Family: Acraeinae

Description: Wingspan 45-85 mm. Sexes differ, Male UP yellowish brown with black bar at end cell. UP has black. Outer border with spots of ground colour in both wings. Female heavily marked with additional black on FW and veins blackened on both wings. Very variable.

Habitat: Inhabits open and scrub country at the forest edges on the elevation of 600-2400m seen predominantly from March—December. Distributed in India (Himachal Pradesh to Arunachal , NE) Nepal, Bhutan, Myanmar.

Habit: Flight slow and fluttering often settling on leaves and flowers. Usually around food plants

Larval Host Plant: *Boechmeria salicifolia*, *Debregeasia bicolor*, *pouzolzia spp.*

Sub Family: Acraeinae

Description: Wingspan 80-95mm. Female dull moss green or whitish grey on UP. White band across Black apical half of UPF. UN Variegated. White V-shaped marks along the scalloped margin. Sexes differ, Male mimics Plain Tiger.

Habitat: Inhabits open and scrub country at the forest edges at elevation upto 4500m from January– November. Distributed in India (Uttarakhand to Arunachal Pradesh, Bihar, West Bengal, Nepal, Bhutan), Nepal , Bhutan, Myanmar.

Habit: Flight usually slow, but quite swift when alarmed. Prefers to fly in warmer valleys along forest streams . Egg laid on batches.

Larval Host Plant: Passifloraceae



Leopard Lacewing

Cethosia cyane



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Black Prince

Rohana parisatis



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Sub Family: Apaturinae

Description: Wingspan 45-50 mm. Male UP velvet Black, unmarked except for a single apical white dot. Female is yellowish brown with paler band, small white apical spot on UPF. Resembles Brown prince, but doesn't have prominent dark spot in lower area on each wing.

Habitat: Seen in evergreen hill forest at an elevation of 600-1800m, predominantly from April to December. Distributed in India (Uttarakhand–Arunachal & NE), Nepal, Bhutan, Bangladesh and Myanmar.

Habit: Strong, swift flier. Both sexes come to damp patches.

Larval Host Plant: *Celtis cinnamomea*, *C.lycodoxylon*, *C.tetrandra*



Pasha

Herona marathus

Sub Family: Apaturinae

Description: Wingspan 70–90 mm. The adults are dark brown above with two yellow or white discal bands on forewing and hindwing. They have a basal streak in vein 1b of forewing. Underside of forewing, in vein 5 with white streak in outer half till the termen

Habitat: It is fairly common up to 1200 m in the Sikkim-Darjeeling area. Most frequent between 600–900 m. It is very fond of over-ripe fruits.

Habit: Visits damp patches for puddling. When disturbed it sits with head down and wings close to tree trunks and thus perfectly camouflaged. Very difficult to catch/locate in this stage.

Larval Host Plant: *Hygrophila auriculata*, *Ruellia elegans*, *Ruellia simplex*



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Courtesan
Euripus nyctelius



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Sub Family: Apaturinae

Description: Wingspan 65-85 mm. Males with Black markings, absence of red spots . Markings are similar on UP and UN. Female occurs in various mimetic forms with wings elongation. UPF of female with broad white band , rest of FW dark brown. UPH white with narrow marginal brown band. Female larger than male and less frequently seen. Female mimics magpie crow.

Habitat: Occurs in Evergreen & Moist Deciduous forests from 400-1000m elevation. Distributed in India (Sikkim– Arunachal, NE), Myanmar.

Habit: Males are fast fliers compared to females , which fly like Milkweed Butterflies.

Larval Host Plant: *Albizia stipulate* (Mimosaceae), *Trema orientalis* (Urticaceae)



Painted Courtesan
Euripus consimilis



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Sub Family: Apaturinae

Description: Sexes differ. Male cream-coloured on UP with black veins. A black bar in cell and at end-cell on UPF. Black discal marginal bands present in both wings. Small white dots in pairs on termen. Red marginal spots in spaces 1 to 3 on UPH. Red basal markings on UNH

Habitat: Occurs in moderate to heavy rainfall areas. from 300 up to 1,370 m in January–December. Visits overripe fruits and flowers. Prefers tree-tops. Distributed in India (S. India [W. Ghats and E. Ghats], Uttaranchal to Arunachal & NE)

Habit: Flight of the male is fluttering, more like a day-flying moth, while female flies like a Milkweed butterfly.

Larval Host Plant: *Trema orientalis* (Urticaceae).



Common castor

Ariadne merione



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Sub Family: Biblidinae

Description: Size 40-45 mm. In both sexes, upper sides are rich dark reddish yellow. Both wings crossed transversely by fine black lines. The space within the basal and sub-basal pair of lines dusted with dusky scales, the space within the pair of post-discal lines bearing a dark band, broken up on the forewing.

Habitat: Confined to Forest and gardens throughout the year. Seen up to 2500m in Himalaya. Distributed in India (except arid NW)

Habit: The butterflies are commonest in the wet season, and will fly in light rain, although they are much more active in hot sunny weather conditions, at which time they can be found in wet parts of the forest, flying in places where dappled sunlight filters through the trees.

Larval Host Plant: *Ricinus communis*, *Tragia involucrata*

Sub Family: Biblidinae

Description: Wingspan 45-60 mm. Similar to Common Castor, but darker with black lines regular, slender and much apart. FW outer edge deeply concave in the middle. UPF has a single dark line beyond cell bent at an angle.

Habitat: Occurs in forest throughout the year. Its present up to the elevation of 2300m in Himalaya. Distributed in India (except arid NW), Nepal, Bhutan, Myanmar, Sri Lanka.

Habit: Slow sailing, Jerky irregular flight. Its more active in sunny weather conditions.

Larval Host Plant: *Ricinus communis*, *Tragia involucrata*, *Tragia plukentii* (Euphorbiaceae)



Angled Castor

Ariadne ariadne



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© THEVAPRAKASAM H (ifb)



Fringed Redeye

Matapa cresta



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Sub Family: Hesperinae

Description: Wingspan 42-54 mm. UPF ap with grey scales, more so in DSF, absent in male. UNF apex and basal half of leading edge broadly grey. UNH basal half grey in DSF, faint so in WSF, outer half dark brown, no redd tinge. Abdomen end and HW fringe orange.

Habitat: Confined to Hill forests at a Low elevations seen predominantly from April-November. Distributed in India (Sikkim-Arunachal, NE, Andaman Is.), Nepal, Bhutan, Myanmar.

Habit: Flickers fast. Generally seen in dark regions on the leaves near the ground level.

Larval Host Plant: Data Deficient



Chinese Swift

Pelopidas sinensis

Sub Family: Hesperinae

Description: Wingspan 35-40 mm. UPF has a row of three central spots, two spots in cell and three apical spots. Female with spot near inner edge on UPF. Male has prominent brand on UPF. UNF has a row of five spots and spot in cell.

Habitat: Confined to Forest fringes with an elevation upto 2,400 m seen predominantly from February-November. Distributed in India (Himachal-Arunachal, NE), Pakistan, Nepal, Bhutan, Myanmar.

Habit: Flies during sunshine weather. Comes out to bask and visit flowers.

Larval Host Plant: Data Deficient



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Common Nawab

Polyura athamas



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Sub Family: Charaxinae

Description: Wingspan 60-75 mm. Smaller than Blue Nawab with pale greenish yellow, very wide, discal band of variable width and large pale green spot near apex on both wings and on both sides. Resembles A common species, which has two small yellow dots Nawab may have one or none.

Habitat: Seen along forest paths when it visits damp patches, oozing sap, animal droppings and dead land crabs. Wing from March to November. Distributed in India (peninsular India, Uttaranchal to Arunachal, NE , Andamans)

Habit: Swift flier. Forest-loving, often seen basking on tree-tops. Males more commonly seen than females. Eggs laid singly.

Larval Host Plant: *Delonix regia* (Caesalpiniaceae), *Adenantha pavonia*, *Albizia julibrissin*, *Albizia lebbeck*.



Great Nawab

Polyura eudamippus



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© TARUN KARMAKAR (ifb)

Sub Family: Charaxinae

Description : Wingspan 100-120 mm. UNF has two black spot at leading edge near the base. Brown submarginal band lined outwardly with black edged blue crescents and corresponding black spot in each space on UNH. Female has Larger tails.

Habitat: Flies in the terai upwards to 1,550 m in April, May, July and August. Comes on damp patches along forest paths and clearings. Distributed in India (Uttaranchal to Arunachal Pradesh), Nepal, Bhutan, Myanmar.

Habit: Strong, swift flier. Males more commonly seen than females.

Larval Host Plant: *Albizia spp.* (Mimosaceae), *Celtis spp.* (Umaceae).



Eastern Tawny Rajah

Charaxes bernardus



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Sub Family: Charaxinae

Description: Wingspan 80-100 mm. Male occurs in three forms : hierax, Pleistoanax and hipponax. Its male from hipponax is shown here which has pale or white band on UPF ; wing base deep yellow to reddish yellow, margin not spotted. Female has white cental band and pale spot on border mostly white.

Habitat: Seen in hill forest and low elevations from March– November at an altitude upto 1500m. Distributed in India (Sikkim– Arunachal, NE), Nepal, Bhutan, Myanmar.

Habit: Strong flier. Male flies among tree tops.

Larval Host Plant: *Saccopetalum tomentosum* (Annonaceae), *Tamirandus indica* (Caesalpinia-ceae), *Dalbergia sp* (Fabaceae), *Aglaia roxburghiana* (Meliaceae), *Adenantha pavonina*, *Albizia spp*

Sub Family: Charaxinae

Description: Wingspan 80-100mm. Male occurs in three forms : hierax, Pleistoanax and hipponax. Its male from hipponax is shown here which has pale or white band on UPF ; wing base deep yellow to reddish yellow, margin not spotted. Female has white cental band and pale spot on border mostly white.

Habitat: Seen in hill forest and low elevations from March– November at an altitude upto 1500m . Distributed in India (Sikkim– Arunachal, NE), Nepal, Bhutan, Myanmar

Habit: Strong flier. Male flies among tree tops.

Larval Host Plant: *Saccopetalum tomentosum* (Annonaceae), *Tamirandus indica* (Caesalpinia-ceae), *Dalbergia sp* (Fabaceae), *Aglaia roxburghiana* (Meliaceae), *Adenantha pavonina*, *Albizia spp*



Eastern Tawny Rajah

Charaxes bernardus



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Common Maplet

Chersonesia risa



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Sub Family: Cyrestinae

Description: Wingspan 40-48 mm. Small butterfly. UP golden tawny with nine dark parallel lines across both wings. On UPF, sixth line from base is straight. HW have a short tail at vein 4. Female paler and sometimes larger.

Habitat: Flies at low elevations in the terai upto 1300m. Seen mostly from March to December. Distributed in India (Uttarakhand to Arunachal, NE), Nepal, Bhutan, Bangladesh, Myanmar.

Habit: Flies fast and often settles on damp patches or on the underside of a leaf when alarmed.

Larval Host Plant: Data deficient.



Wavy Maplet

Chersonesia intermedia



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Sub Family: Cyrestinae

Description: Wingspan 35-45 mm. UP golden tawny with nine dark parallel lines across both wings. On UPF, sixth line from base is wavy. Sexes are similar.

Habitat: Occurs at lower elevations and forest. Predominantly seen from March-November. Distributed in India (NE, Assam-Arunachal), Myanmar.

Habit: Flight fast. Active during hottest part of the day. Usually settles on the underside of leaves.

Larval Host Plant: Data deficient.


Blue King Crow
Eupolea klugiiklugii


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Sub Family: Danainae

Description: Wingspan 85-100 mm. Very similar to Common Crow with overall dark brown wings. UN also similar but there is no spot in cell of either wing. All wings bordered with a series of marginal and submarginal white spots. Male has a short, oval dark brand on UPE. UPH has greyish scales on apical half and a pale yellow scent patch of specialized scales.

Habitat: Confined to moist forested areas from sea level to 1,500 m. On the wing from April to October. Distributed in India (South India up to Maharashtra, Orissa, West Bengal, Sikkim to Arunachal Pradesh, Northeast)

Habit: It favors dry, low regions. Fond of flowers and mudpuddles. Known to migrate.

Larval Host Plant: *Ficus huspida*, *Streblus asper* and other *Ficus* sp. (Moraceae).


Brown King Crow
Eupolea klugiikollari


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Sub Family: Danainae

Description: Crow with overall dark brown wings. UN has no spot in cell of either wing. All wings bordered with a series of marginal and submarginal white spots. Male has a short, oval dark brand on UPF UPH has greyish scales on apical half and a pale yellow scent patch of specialized scales. Northern subspecies is known as Blue King Crow *E.k.klugu*. while Southern subspecies is called Brown King Crow *E.k.kollari*.

Habitat: Confined to moist forested areas from sea level to 1,500 m. On the wing from April to October. In Sri Lanka, it favors dry, low regions.

Habit : Fond of flowers and mudpuddles. Known to migrate.

Larval Host Plant: *Ficus hispida*, *Streblus asper* and other *Ficus* sp. (Moraceae)



Common Crow

Eupolea core



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Sub Family: Danainae

Description: Wingspan 85-95 mm. Dark velvety brown on UP and paler on UN, with all wings bordered by two rows of small white spots. The inner spots are larger on both wings, and elongate on HW. Thorax black with white spots. Male UPF has a dark velvety, short narrow brand between veins and a white streak at the same place on UNE. Mimicked by female of Great Egfly. Sexes similar.

Habitat: Flies up to 2,500 m throughout the year. Distributed in India, Sri Lanka, Nepal, Bhutan, Bangladesh, Myanmar.

Habit: Weak, sailing flight, occurs in forest to open country. Roosts together in large numbers in sheltered woodlots during dry season. Comes to flowers and wet mud.

Larval Host Plant: *Holarrhena pubescens*, *Ichnocarpus frutescens*, *Nerium sp.*(Apocynaceae), *Cryptolepis buchani*.

Sub Family : Danainae

Description: Wingspan 95-100 mm. UP dark brown with a lustrous blue sheen on glossy black UPE Male has a long, broad brand, and sometimes a small white spot in cell and one to three white discal spots on UPE Female with straight dorsum. Otherwise sexes alike.

Habitat: Prefers woodlands as well as areas of open cultivation near water sources On the wing from April to June, August, October and November. Distributed in India (Sikkim to Arunachal), Bhutan, Bangladesh, Myanmar.

Habit: Keeps close to the ground, while gliding very slowly in the typical flight of the Crows. . Comes to flowers and mudpuddles. Roosts communally during dry season and migrates.

Larval Host Plant: *Ichnocarpus frutescens*, *Ficus sp.* (Moraceae). *Heliotropium indicum* (dried plant), *Tournefortia argentea* (dead twigs and fruit).



Long Branded Blue

Eupolea algea



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Stripped Blue Crow

Euploea mulciber



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Sub Family : Danainae

Description: Wingspan 90-100 mm. Male overall glossy black on UP. Blue gloss on UPF, with small pale spots in discal, marginal and submarginal areas and spot at end-cell. UPH unspotted. apical half overlaid with greyish scales. Small yellow patch of specialized scales in cell. Female dark brown on UP, with UPF having the blue gloss on smaller area. Spots similar, but white.

Habitat: Mainly seen in forested tracts and their periphery, on plains as well as on hills up to 2,500 m. Distributed in India (Himachal Pradesh to Arunachal, NE, South India [E. Ghats]), Nepal, Bhutan, Bangladesh, Myanmar.

Habit: On the wing from February to December. Female flies much lower, among the vegetation. Male often seen basking and mudpuddling. Visits flowers.

Larval Host Plant: Ichnocarpus sp., Nerium oleander (Apocynaceae), Ficus sp. (Moraceae).



Blue Tiger

Tirumala limniace



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Sub Family : Danainae

Description: Wingspan 90-100 mm. Strikingly marked with pale blue streaks and spots against a black or dark brown background. Pale or almost white cell on UNH has a thin black, narrowly forked streak in the middle. Males smaller and with UNH pouch containing scent gland which appears as a patch on the UPH.

Habitat: On the wing throughout the year up to elevation of 2000m. Distributed in India, Pakistan, Afghanistan, Nepal, Bhutan, Bangladesh, Myanmar, Sri Lanka.

Habit: Slow, flapping, at times sailing flight, seen in gardens as well as in forested tracts. Frequently settles on flowers and wet patches.

Larval Host Plant: Asclepias curassavica, Calotropis procera, Heterostemma sp., Hoya viridiflora, Tylophora indica, Wattakaka volubilis (Asclepiadaceae).



Glassy Tiger

Parantica aglea



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Sub Family: Danainae

Description: Wingspan 70-85 mm. Both sexes with bluish white transparent markings on dark brown UP. Transparent markings more extensive than in Blue Tiger. Two fine dark lines divide the pale streak in FW cell. UN paler. Male with patches of scent scales on UPH and black scent scales on UNH.

Habitat: Flies throughout the year in open or partially cultivated areas with heavy rainfall. On the hills up to 2,100 m. Distributed in India, Sri Lanka, Nepal, Bhutan, Bangladesh & Myanmar.

Habit: Slow, weak flight close to the ground, along shady paths. Often migrates with other Milkweed butterflies.

Larval Host Plant: *Calotropis sp.*, *Ceropegia sp.*, *Cryptolepis buchanani*, *Tylophora indica*.



Plain Tiger

Danaus chrysippus

Sub Family : Danainae

Description: Wingspan 70-80 mm. Both sexes pale orange with black marginal borders, and black UPF tips having a subapical white band of elongated spots. Similar to Striped Tiger but without the bold outlines to veins. Three or four small black discal spots on both sides of HW. UN much paler. Male has a pouch containing scent Scales on UNH and patch of scent scales on UPH.

Habitat: Prefers open country, but seen in forests too, and up to 2,500 m in the hills. On the wing throughout the year. Distributed in India, Pakistan, Afghanistan, Sri Lanka, Bangladesh, Nepal, Bhutan, Myanmar.

Habit: Slow flight close to the ground. Visits flowers and seen only occasionally on damp patches. Known to migrate.

Larval Host Plant: *Calotropis sp.*, *Caralluma sp.*, *Ceropegia sp.*, *Tylophora sp.* (Asclepiadaceae).



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Stripped Tiger

Danaus genutia



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Sub Family: Danainae

Description: Wingspan 72-100 mm. Tawny with bold black veins. Black wing margins with small white spots along border, and broadly black apex with white elongated subapical spots. UN similar to UP, but much paler. Male has a pouch containing scent scales on UNH.

Habitat: Seen in a variety of habitats from wet evergreen forest to scrub, light forest and open country throughout the year. Seen in the hills up to 2,500 m. Distributed in India, Pakistan, Sri Lanka, Bangladesh, Nepal, Bhutan, Myanmar.

Habit: Flight slow, close to the ground. Visits gardens for flowers. Comes to water Occasionally. Eggs laid singly.

Larval Host Plant: *Asclepias currassavica*, *Ceropegia* sp., *Cynanchum* sp., *Marsdenia roylei*, *Stephanotis* sp., *Tylophora tenuis* (*Asclepiadaceae*).sp.,



Common Leopard

Phalanta phalantha



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Sub Family: Heliconiinae

Description: Wingspan 50-60mm. UP tawny with rows of small black spots and wavy lines. UPF cell with four dark lines, excluding bar at end cell. No silver UN markings. UNH has pinkish violet tinge. Female has larger marking than male.

Habitat: Inhabits the forest edges, Plains and gardens. Flies upto 2280m. Wings throughout the year. Distributed in India, Nepal, Bangladesh, Sri Lanka, Myanmar, Pakistan

Habit: Restless butterfly, swift flyer. Territorial and pugnacious. Fond of flowers and comes to damp patches. Egg laid singly.

Larval Host Plant: *Flacourtia montana*, *F.ramontchi*, *F.sepiaraia*, *Xylosma longifolium*



Common Yeoman

Cirrochroa tyche



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Sub Family: Heliconiinae

Description: Wingspan 70-85mm. Medium sized tawny, with Black very narrow outer margin on UPF and an irregular discal and one or two wavy marginal black lines on UP of both wings. UPH with discal series of black spots. Pale band on UNF.

Habitat: Found in hilly and plain regions. Prefers open clearings, Common along streams and roads seen from March—September. Distributed in India (Sikkim to Arunachal Pradesh, North-east, West Benagl, Andamans), Nepal, Bhutan, Bangladesh, Myanmar.

Habit: Fond of flower and visits damp patches

Larval Host plants: *Hydnocarpus castanea* and *Hydnocarpus alpina*.



Large Yeoman

Cirrochroa aoris



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Sub Family : Heliconiinae

Description: Wingspan 80-90 mm. Sexes differ. Large-sized, tawny, with black narrow outer margin broadening towards UPF apex, and an irregular discal and one or two wavy marginal black lines on UP of both wings. Upper three discal spots. in a line on UPH. FW slightly produced at apex. Both sides of HW with discal series of black spots. Female has darker markings and a lilac-white discal band on UN. Considerable seasonal variation.

Habitat: Hill species found up to 2,000 m from May to December. Common along forest clearings, paths and streams.

Habit: Fast flier. Avid mud puddler

Larval Host plants: *Hydnocarpus* spp. (Flacourtiaceae).



Common Jester

Symbrenthia lilaea



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Sub Family: Nymphalinae

Description: Wingspan 45-55 mm. Yellow, with dark reddish brown irregular markings. UN has a straight, dark brown line from middle of inner edge of HW continuing on FW towards apex. UN pattern does not match other Jesters. UP dark brown with yellow or tawny bands.

Habitat: Confined to forest areas with an elevation from 300-1,700 m. Seen predominantly from January-December.

Habit: Flight slow, like sailer. Flies around streams and nullahs and often visits damp patches.

Larval Host Plant: *Debregeasia bicolor* (Urticeae)

Sub Family: Limenitinae

Description: Wingspan 80-90 mm. Sexes differ. The apical topsides of the antennae of the Archduke are prominently yellow - tipped. The undersides of the antenna in both species are orange. Male UPF velvet black with small yellow spots in and beyond cell, and greenish blue wing margin broad. UPH blue margin very broad, blue at upper end and green attenuated. UN pale ochreous brown. Female dark brown on UP with bands of yellow spots on both wings.

Habitat: Confined to thick forest in hilly regions. Attracted to overripe fruit and comes to damp patches.

Habit: Swift and powerful flier.

Larval Host plant: *Garcinia lateriflora* (Guttifer-ae).



Archduke

Lexias pardalis



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Common Baron

Euthalia aconthea



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Sub Family: Limenitinae

Description: Wingspan 55-80 mm. Similar to Chocolate Pansy. Both sexes have outer discal band of small black dots on UPH. UP with deep olive green sheen over brown. UN white with sparse white markings. Male darker with band of small white dots, spots in female are larger.

Habitat: Seen in variety of habitats except dry scrub from January—December. Distributed in India, Nepal, Bhutan, Pakistan, Bangladesh, Sri Lanka, Myanmar.

Habit: Strong rapid flight, Keeps close to the ground. Fond of Basking. An avid mudpuddler. Eggs are laid singly.

Larval Host Plant: *Anacardium occendantalis*, *Mangifera indica*, *Bryonia* spp.



Powdered Baron

Euthalia monina



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Sub Family: Limenitinae

Description: Wingspan 50-80 mm. Sexes differ. Male UP dark brown or black, with Marginal half of UPH and discal band of UPH powdery blue. Female UP pale brown, two dark lines across FW and HW with paler area in between. UPH cell has two streaks. FW apex not produced. UPF has pale central band.

Habitat: Prefers Dense Evergreen forest with Heavy rainfall at low elevations from April to December. Distributed in India (Sikkim—Arunachal, NE), Bangladesh, Myanmar

Habit: Attracted to Over ripe fruits and visit damp patches.

Larval Host Plant: Data deficient.



Clipper
Parthenos sylvia



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Sub Family: Limenitinae

Description: Wingspan 95-130 mm. Large , handsome butterfly. UP greenish with a series of large, semi - transparent white discal spot on UPF. On UPH , veins black with two short black lines between each pair of veins , and a series of submarginal black markings on UPH. Submarginal marking are conical spots with heads rounded . Sexes similar.

Habitat: Confined to thick forests with heavy rainfall. Powerful and gliding flight , but at times erratic. On the wing throughout the year. It flies between 300 and 900 m from September to February. Distributed in India (Arunachal, NE), Bangladesh, Myanmar.

Habit: Graceful, more often seen at canopy level , when not at flowers lower down.

Larval Host Plant: *Tinospora cordifolia* (*Menispermaceae*) , *Adenia hondala* , *Modecca sp.*



Commander
Moduza Procris



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Sub Family: Limenitinae

Description: Wingspan 60-75 mm. Both Sexes tawny on UP with Prominent white spots on both wings forming a discal band and some more scattered spots. UPH has two rows of submarginal black spots on the tawny area. FW has two pale wavy lines on terminal border. UN brightly patterned with greyish white markings on reddish brown

Habitat: Prefers Evergreen Semi Evergreen to moist deciduous forest regions, having heavy to moderate rainfall. Often seen in middle of Urban areas. Distributed all over India .

Habit: Swift flyer, usually seen gliding in Forest Valleys, Clearings, Long Roads. Male is territorial. Comes to damp patches as well as flowers.

Larval Host plant : *Hedyotis orixense*, *Mitragyna parvifolia*



Grey Count
Tanaecia lepidea



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Sub Family: Limenitinae

Description: Wingspan 65-85 mm. Upper side dark brown with pale grey border. Border broad on hindwing and narrow on forewing, ending before apex. Forewing apex produced and outer edge incurved.

Habitat: Widely distributed in moist forested region, seen at stream edges at open forest areas. Altitudinal range from the foothills up to 2,000m. Distributed in Peninsular India, Uttarakhand—Arunachal, NE.

Habit: Strong fliers, fond of basking on the ground and lower canopy, feeds on rotting fruits and tree sap.

Larval Host Plant: *Melastoma sp.*, *Careya arborea*



Knight
Lebadea martha



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Sub Family: Limenitinae

Description: Wingspan 62-75 mm. UP tawny brown, both wings crossed by a discal white band. A series of white crescents present on UPF and black crescents on UPH. FW apex white-tipped and rounded, wing produced and concave below apex. Female larger with distinctly broader wings and FW apex not strongly whitened as in male.

Habitat: Flies at low elevations, in the Terai. Seen on wing from August to November. Distributed in India (Sikkim—Arunachal, NE), Nepal, Bhutan, Bangladesh, Myanmar.

Habit: Flight weak, frequently settles on leaves in the sunshine. Fond of flowers. Male pugnacious.

Larval Host plant: Data insufficient



Common Lascar

Pantoporia hordonia



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Sub Family: Limenitinae

Description: Wingspan 45-50 mm. Similar to perak Lascar but differs in having only one narrow orange line on the black marginal border of UPF, while perak Lascar has two narrow lines. UP dark brown with prominent orange bands. UPH with two orange bands, upper band broad and lower narrow. UN orange –yellow with reddish brown bands and fine brown streaks.

Habitat: Seen along forest paths and clearings at moderate elevations and sometimes away from forest areas. Wings from March-December. Distributed in India (S.India, Uttarakhand – Arunachal, NE).

Habit: Flight similar to sailers, but much weaker, close to the ground. Eggs laid singly.

Larval Host Plant: *Acacia concinna*, *A.pennata*, *Albizia corniculata*.



Plain Earl

Tanaecia jahnu



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Sub Family: Limenitinae

Description: Wingspan 65-80 mm. Sexes differ. Discal bands on UP of both sexes conspicuous, of connected crescents. Male UP rich reddish brown with purple gloss. No blue margin. UN yellowish brown. Female large. FW apex produced. UP pale brown, paler between the dark discal lines, which are often whitish at their upper ends on UPF. UNF yellow and UNH bluish.

Habitat: Flies at Low elevations. Occurs in Forests hill area between 400-1520 m, seen on the wing between February and October.

Habit: Flight like a baron. Mainly flies close to the ground.

Larval Host Plant: Data deficient



Clear Sailer

Neptis clinia



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Sub Family: Limenitinae

Description: Wingspan 45-60 mm. UPF cell streak and a spot almost conjoint. UPH discal band broader. Markings on UP normally clear. UN brighter brown. UPF upper marginal spots not shifted in.

Habitat: Prefers Forested regions and seen predominantly from February—November. India (Madhya Pradesh, Sikkim to Arunachal Pradesh, North East, south India (Goa southwards), Andaman), Nepal, Bhutan and Myanmar

Habit: Flight typical but more wary, tends to keep at higher level.

Larval Host plant: Data deficient.



Common Sailer

Neptis hylas



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Sub Family: Limenitinae

Description: Wingspan 50-60mm. UP black with white markings. UPF costal streak in discal band very short, and discal spot in end-cell outwardly sharp. UPH discal bands does not widen towards costa. UN white markings that are sharply edged with black.

Habitat: Prefers Deciduous and Evergreen forest. India, Nepal, Bhutan, Pakistan, Bangladesh, Sri Lanka.

Habit: Graceful sailing flight with wings spread out flat and occasional flicking of wings. More often after rain. Fond of flowers and comes to water. Eggs laid singly.

Larval Host Plant : *Bombax malabaricum*, *Thespesia populnea*, *Dalbergia sp*, *Pongamia glabra*, *Zizyphus sp*.



Short-Banded-Sailer

Phaedyma columella



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Sub Family: Limenitinae

Description: Wingspan 60–70 mm. UP black, with white markings. On UPF passes through centre of first two large spots meets leading edge just before apex. UPH has prominent outer band of separate white spots.

Habitat: Seen in Evergreen as well as Deciduous Forest from January to October. Present in both plains and hills. Distributed in India (Uttarakhand—Arunachal, NE, Peninsular India up to Gujarat & W. Bengal, Nicobar).

Habit: Typical sailing Flight, maintained by a few flicks of the wings

Larval Host Plant: *Dalbergia* spp., *Pterocarpus* Spp (fabaceae)

Sub Family : Limenitinae

Description : Wingspan 60-70mm. It has a prominent row of Black spots strictly towards the inner edge of white postdiscal band on the yellow UNH. UPF white cell streak divided into four parts.

Habitat: On the forest edges. India(Himachal Pradesh to Arunachal, hills of North East, Peninsular India, Till Pachmarhi (MP)), Myanmar. Seen predominantly from February—December.

Habit: Typical Sailing, Often seen basking. Visits flowers and comes to damp patches.

Larval Host plant: *Glochidion lanceolarum*, *G. velutinum*



Common Sergeant

Athyma perius



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Colour Seargent
Athyma nefte


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Sub Family: Limenitinae

Description: Wingspan 55-70 mm. Sexes differ. Male UP velvety black with a white band and a few orange markings, female UP dark brown with very broad orange bands. In male, UPF cell streak yellowish, obscure (or broken) with a prominent white detached spot at end UPF has a white discal band with blue tinged edges, a dark yellow submarginal band from the apex downwards. Similar dark yellow submarginal band and white sub basal band on UPH.

Habitat: Flies at low and moderate elevations in thick evergreen forests in wet hilly regions. In the north, it flies from the terai to 1,150 m. On the wing throughout the year.

Habit: Fond of flowers. Male visits damp patches. Strong flight.

Larval Host Plant: *Glochidion* sp. (Euphorbiaceae).

Sub Family: Apaturinae

Description: Wingspan 62-75 mm. UP tawny brown, both wings crossed by a discal white band. A series of white crescents present on UPF and black crescents on UPH. FW apex white-tipped and rounded, wing produced and concave below apex. Female larger with distinctly broader wings and FW apex not strongly whitened as in male.

Habitat: Typical Sailing, Often seen basking. Visits flowers and comes to damp patches. Distributed in India (Sikkim—Arunachal, NE), Nepal, Bhutan, Bangladesh, Myanmar.

Habit: Flight weak, frequently settles on leaves in the sunshine. Fond of flowers. Male pugnacious.

Larval Host Plant: Data insufficient


Sergeant Emperor
Mimathyma chevana


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© ARJAN BASU ROY (ifb)



Great Eggfly

Hypolimnast bolina



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Sub Family: Nymphalinae

Description: Wingspan 70-110 mm. Under side chocolate brown colored, sexually dimorphic. Male upper part black with white centered iridescent blue oval spot on both wing. Female with a broader wing, concave termen and scalloped hindwing border. Only two blue spots at forewing, a row of white spots along margin from apex to lower tip.

Habitat: Prefers forest openings and edges, specially wet forest areas, bushes, roadsides and gardens. Altitudinal range from the foothills up to 2,100 m throughout India.

Habit: Strong and fast fliers, flies along the undergrowth and along streams inside forest. Fond of basking, feeds on nectar of flower. Males territorial and aggressive.

Larval Host Plant: *Hibiscus sp.*, *Sida rhombifolia*, *Laportae interrupta*



Chocolate Phansy

Junonia iphita



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Sub Family: Limenitinae

Description: Wingspan 55-80 mm. Female can be told apart from the male by white markings on the oblique line on the underside of the hindwing. The wavy lines on the underside of the wings vary from wet- to dry-season forms. Individuals maintain a territory and are usually found close to the ground level and often bask in the sun.

Habitat: Scrublands, roadside vegetation, parks and forest openings. Distributed throughout the country at the elevation up to 2100m.

Habit: It likes to fly in sunny open spaces in spite of its dark brown color which can be used as a marvelous camouflage technique on gloomy forest floors. This is a migrant species.

Larval Host Plant: Acanthaceae family including *Barleria prionitis*, *Dipteracanthus prostratus*, *Strobilanthes diandra*.



Grey Phansy

Junonia atlites



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Sub Family: Nymphalinae

Description: Wingspan 55-65 mm. Upper side of both sexes pale lavender brown, apical half of wings paler. Forewing: cell with, three transverse, short, sinuous black bands, the outermost defining the discocellulars; a similar short, somewhat broader band beyond the apex of the cell; Hindwing: a short slender black loop from veins 6 to 4 at apex of cell-area.

Habitat: It is commonly found all over the country and in fewer numbers in the hills up to the elevation of 1300m..

Habit: The Grey Pansy's habits are similar to that of the Lemon Pansy, but it is a much slower flier and the males prefer to perch on bushes to seek out mates.

Larval Host Plant: *Barleria*, *Hygrophila auriculata*, *Hygrophila costata*



Lemon Phansy

Junonia lemonias

Sub Family : Nymphalinae

Description: Wingspan 40-60 mm. It is brown with numerous eyespots as well as black and lemon-yellow spots and lines on the upper side of the wings. The underside is a dull brown, with a number of wavy lines and spots in varying shades of brown and black. The wet- and dry-season forms differ considerably in coloration and even shape. This helps it camouflage in the dried leaf litter.

Habitat: This butterfly is found abundantly in open vegetation in the dry zone. It is sometimes found in the wet zone, likely during migration.

Habit: It feeds on the flowers of herbs and small shrubs. Females lay eggs even on bare ground after confirming that there are enough larval food plants nearby. Its a migrant species.

Larval Host Plant: *Barleria prionitis*, *Hygrophila schulli*, *Lindernia rotundifolia*



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Peacock Phansy

Junonia almana



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Sub Family: Nymphalinae

Description: Wingspan 60–65 mm. Upper side rich orange-yellow. Fore wing with a pale dusky and a much darker short transverse bar with lateral jet-black marginal lines across cell. Hind wing: a small minutely white-centered and very slenderly black-ringed discal ocellus in interspace 2, with a very much larger pale yellow and black-ringed ocellus.

Habitat: Terrestrial Habitats: Wide variety including secondary rainforest, monsoon forest, plantations, rural areas and gardens. Widespread presence in India up to 2100m elevation.

Habit: Active in bright sunshine and prefers open areas, where it flies close to the ground.

Larval Host Plant: *Acanthus*, *Barleria* and *Gloxinia*. Specific host plants include *Hygrophila auriculata* and *Phyla nodiflora*

Sub Family: Nymphalinae

Description: Wingspan 54-58 mm. The male upper side is bright yellow. The costa of the forewing has a broad triangular jet-black projection downwards at the discocellulars. The anterior half and the terminal margin of the hindwing is black, and the dorsum is broadly shaded with brown while the anterior black area has a large brilliant blue spot.

Habitat: The Yellow Pansy is usually seen in open scrub and grassland habitats. Commonly seen basking on flowers in garden and parks at elevation upto 2000m throughout India.

Habit: Found in the Palaeotropics. It is usually seen in open scrub and grassland habitats

Larval Host Plant: *Asystasia*, *Barleria*, *Eremomastax*, *Hygrophila auriculata*, *Mimosa pudica*.



Yellow Phansy

Junonia hierta



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Chinese Bushbrown

Mycalesis gotama



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Sub Family: Satyrinae

Description: Wingspan 45-50 mm. UP pale brown with a large eyespot in space 2 and a small eyespot in space 5. UPH unmarked, but UN eyespots show through faintly on UP in WSE UN pale brown, basally darker in DSE. UN discal line white or yellowish, one large eyespot on each wing and one or two small eyespots on UNF. Male brand on UPF barely seen and tuft indistinct; UNF has small brand; UPH has brand and tuft.]

Habitat: Low, weak flight among grasses. Distribution in India (Northeast, Arunachal Pradesh), Bangladesh, Myanmar.

Habit: Low, weak flight among grass.

Larval Host Plant: *Bambusa spp.*, *Isachne sp.*, *Oryza sativa*, *Setaria spp.* (Poaceae).

Sub Family: Satyrinae

Description: wingspan 40-50mm. Similar to Common Bushbrown, but all eyespots on UNH are in line. Markings vary seasonally. Two dark lines mark a pale area on UPF in which the eyespot is situated. The eyespot has a dark yellow ring often diffused into pale area. In DSE, pale area extensive. Sexes alike, but male has a salmon pink oval or rarely brown brand on UPH, and another small brown brand on UNF.

Habitat: Flies in the hills up to 1,500 m. On the wing throughout the year.

Habit: Low jerky flight over grasses and shrubs. Attracted to tree sap over ripe fruit, cattle dung. Males visit damp patches. Seen mainly during the morning and evening, or on overcast days. Eggs laid singly.

Larval Host Plant: *Oryza sativa* and other grasses (Poaceae).



Dark Brand Bushbrown

Mycalesis mineus



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© MAHEN KONWAR (jfb)

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Long Brand Bushbrown

Mycalesis visala



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Sub Family: Satyrinae

Description: Wingspan 45-55 mm. Both sexes similar to Dark-brand Bushbrown, but larger. Variable seasonally. In DSF, FW apex sharply pointed and termen straight. In WSF, both apex and termen more rounded. UPF eyespot prominent in WSE Male has brown to pale brown brand on UNF, and another pale brown brand on UPH.

Habitat: Confined to forest flies throughout the year. India (peninsular India [Karnataka southwards], West Bengal, Madhya Pradesh [Pachmarhi], Himachal Pradesh to Arunachal, NE).

Habit: More common in the eastern part of its range, especially at lower elevations around Darjeeling- Sikkim region.

Larval Host Plant: data deficient.



Common Five Ring

Ypthima baldus



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Sub Family: Satyrinae

Description: Wingspan 32-48 mm. UN pale brown or whitish with coarse brown striations, and discal and inner bands prominent. Large, double-pupilled apical eyespot, with golden yellow ring, on both sides of FW, ring broad on UNF. UPH with two eyespots. UNH with six eyespots in three pairs, which in DSF are reduced to dots; Sexes alike, except for prominent brand in male.

Habitat: Distributed in India (peninsular India up to Gujarat, Madhya Pradesh, Himachal Pradesh to Arunachal, NE), Nepal, Bhutan, Bangladesh, Myanmar. Flies mainly from February—October at the elevation up to 1800m.

Habit: Flight stronger. Fond of flowers and visits damp patches. Often seen with wings half open. Eggs laid singly.

Larval Host Plant: data deficient.



Common Four Ring

Ypthima huebneri



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Sub Family: Satyrinae

Description: wingspan 30-40mm. UN greyish white. UNF with a large yellow-ringed eyespot near apex and indistinct dull brown bands. UNH has four yellow-ringed eyespot near apex. UPH has two or three eyespots near the margin. DSF: Eyespots very small or absent on UNH.

Habitat: Prefers both forested hills as well as open hilly country up to 1500m. Distributed in India, Nepal, Bangladesh, Sri Lanka, Myanmar.

Habit: Usually settles on the ground and occasionally over flowers.

Larval Host Plant: *Grasses (poaceae)*

Sub Family: Satyrinae

Description: Wingspan 65-75mm. Pale brown, with whitish bands and series of black eyespots on UN. UNF has a V-shaped white band in discal area and another broader one in postdiscal area. UNH has pale irregular discal band with dark border and irregular whitish basal line with inward dark border.

Habitat: It is seen in forests as well as open country at elevation upto 2100m. Distributed in India (South India to Madhya Pradesh [Pachmarhi] and Jharkhand, J&K to Arunachal & NE), Indian Subcontinent

Habit: Active in the early morning and at dusk. It is crepuscular.

Larval Host Plant: *Apluda spp, Capillipedium spp., Imperata cylindrica, Microstegium ciliarum (Poaceae).*



Common Red Forester

Lethe mekara



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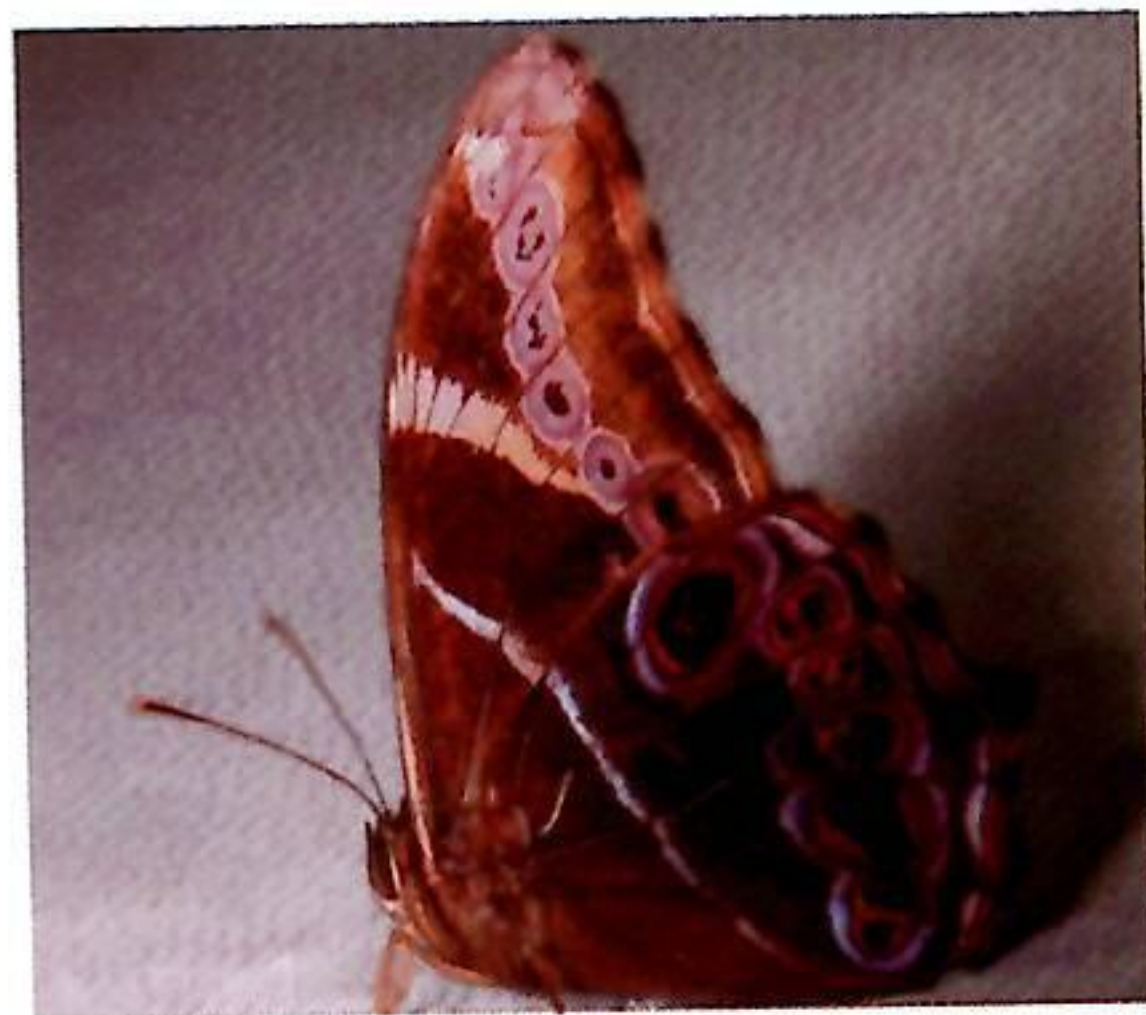


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Bamboo Tree Brown

Lethe europa



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Sub Family: Satyrinae

Description: Wingspan 65-75 mm. Blackish brown, with prominent whitish bars and series of eyespots on UN. UN has a basal, slender bluish white line across both wings. All eyespots very large and much disintegrated. No discal band on UNH. UN of both wings with a postdiscal series of black eyespots, which curves inwards on UNF and outwards on UNH.

Habitat: Flies in bamboo forests at low elevations. Prefers overripe fallen fruit, decomposing land crabs and fresh cow dung. Comes to damp patches.

Habit: Often seen during and immediately after rains. Usually keeps close to the ground, but at times may fly straight up among the tree-tops.

Larval Host plant: Bambusa spp, Microstegium ciliatum spp. (Poaceae).

Sub Family: Satyrinae

Description: Wingspan 50 - 60 mm. Resembles Straight-banded Tree brown, but has a whitish basal line across UN. UNF has two black apical eyespots, the upper one larger. UNH eyespots not disintegrated. UNH apical eyespot larger than the second last eyespot.

Habitat: Found in the Hill Forest at elevations of 600-1,700 m in the month of February to November. Its distribution ranges from India (Kashmir- Arunachal, NE), Pakistan, Nepal, Bhutan and Myanmar.

Habit: It flies in the hopping manner quite similar to the related Mycalesis and Orsotriaena species and remains close to the ground.

Larval Host Plant: Data Deficient



Banded Treebrown

Lethe confusa



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Dark Evening Brown

Melanitis Phedima Varaha



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Sub Family: Satyrinae

Description: Wingspan 65-80 mm. Similar to Common Evening Brown, but differs in being much darker, and the apical eyespots on UPF lack the orange and are much reduced. Both wings have grey border on UP. In WSE, UP blackish brown, often unmarked or marked like Common Evening Brown, but more indistinctly. In DSF UPF has ashy grey Termen. FW termen angled in male, falcate in female.

Habitat: Flies in the Himalaya up to 130m from April to December. Distributed in Western Ghats [Maharashtra southwards], Madhya Pradesh, Jammu & Kashmir to Arunachal Pradesh, NE.

Habit: Weak flier, usually confined to forested areas where bamboo is dense. Unlike Common Evening Brown, it is not attracted to lights.

Larval Host Plant: *Microstegium ciliatum*, *Setaria palmifolia* (Poaceae).

Sub Family: Satyrinae

Description: Wingspan 65-80 mm. North easter sub species Ganapati WSF: UNH outer edge with rich reddish brown margin, eyespots smaller than northern subspecies bela. DSF:UN similar to northern species. UP dark brown, area along outer edge from apex greyish with two almost indistinct whitish spots near UPF apex.

Habitat: Flies in the Himalaya up to 130m from April to December. Distributed in Western Ghats [Maharashtra southwards], Madhya Pradesh, Jammu & Kashmir to Arunachal Pradesh, NE.

Habit: Weak flier, usually confined to forested areas where bamboo is dense. Unlike Common Evening Brown, it is not attracted to lights.

Larval Host Plant: *Microstegium ciliatum*, *Setaria palmifolia* (Poaceae)..



Dark Evening Brown

Melanitis Phedima ganapati

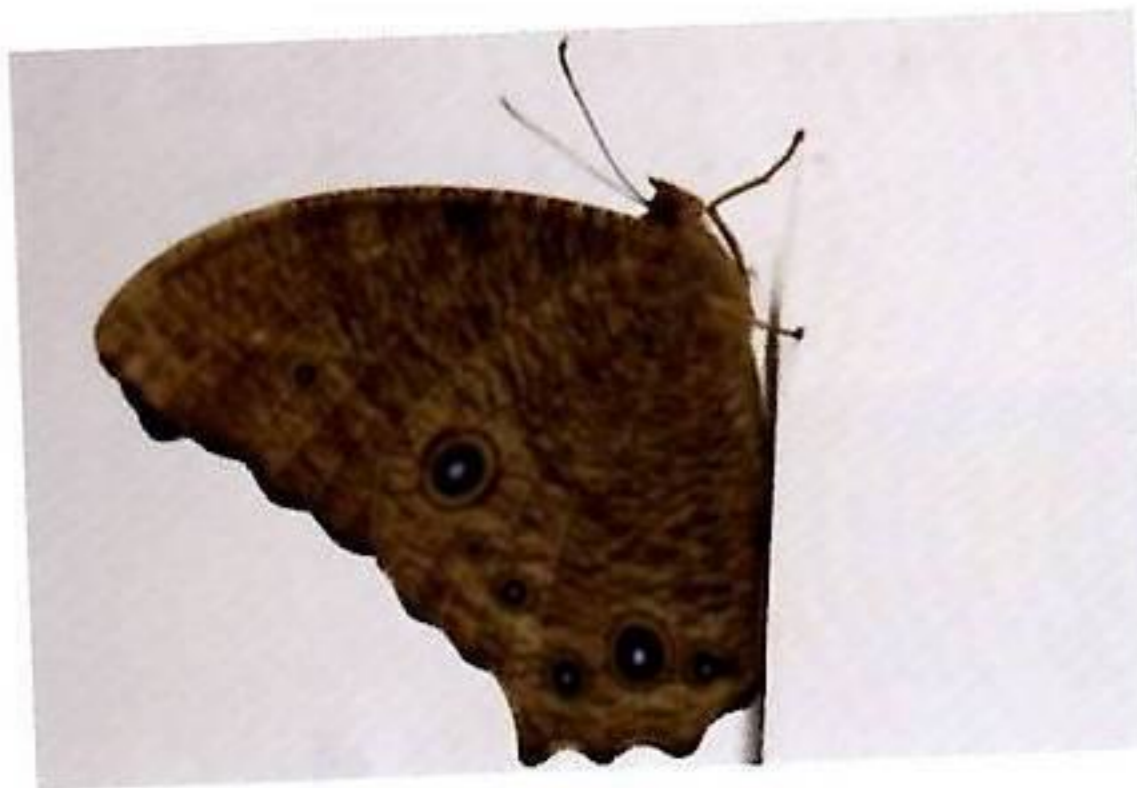


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Common Evening Brown

Melanitis leda



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Sub Family : Satyrinae

Description : Wingspan 60-80. Large Brown . WSF dull dark brown on UP with two prominent black eyespots surrounded by orange patches near UPF apex , each with a large white pupil .

Habitat : . Common , found in various habitats except desert . Flies in the hills up to 2,100 m On the wing throughout the year .

Habit : Prefers overripe fallen fruit , decomposing land crabs and fresh cow dung . Flight jerky , close to the ground . Active at dusk and comes indoors attracted to light .

Larval Host plant : *Bambusa spp . , Microstegium ciliatum spp . (Poaceae) . Apluda spp . , Cyrtococcum spp . , Eleusine spp .*



Common Evening Brown

Melanitis leda



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Sub Family : Satyrinae

Description: Wingspan 60-80. DSF rich brown on UP with dark spots inwardly edged with a narrow yellow band and having a dark yellow bar above them . Eyespots on UN reduced and obscure.

Habitat : . Common , found in various habitats except desert . Flies in the hills up to 2,100 m On the wing throughout the year .

Habit : Prefers overripe fallen fruit , decomposing land crabs and fresh cow dung . Flight jerky , close to the ground . Active at dusk and comes indoors attracted to light .

Larval Host plant : *Bambusa spp . , Microstegium ciliatum spp . (Poaceae) . Apluda spp . , Cyrtococcum spp . , Eleusine spp .*



Nigger

Orsotrioena medus



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Sub Family: Satyrinae

Description: Wingspan 45-55 mm. Dark UN has straight white central band across both wings with prominent eyespots along the wing margin. In the northern parts of its range, DSF is almost unmarked on UN.

Habitat: Found in the Forest at elevations of up to 1600 m in the month of January to December. Its distribution ranges from India (southern India up to Madhya Pradesh, Sikkim-Arunachal, NE), Myanmar and Sri Lanka.

Habit: It is a butterfly that can be seen flying even early in the morning on overcast days, and late into the evening.

Larval Host Plant: The caterpillar is believed to feed on grasses, particularly, Lallang.



Common Palmfly

Elymnias hypermnestra

Sub Family: Satyrinae

Description: Wingspan 40-48 mm, both sexes with greenish gloss on brown upper, Coastal streak on upper hindwing ochreous yellow in male, the streak less prominent in female. Short, brownish white fringe along both wings. Dark brown body with greyish bands on abdomen; head, legs and anal tuft ochreous yellow.

Habitat: Recorded in the terai forests of the Himalayan foothills up to 960m, found in North-East India. The small green awlet ranges from India, (Sikkim eastwards through Assam), to Myanmar, Thailand, Laos, Hainan and south Yunnan. It is also found in the Andaman Islands.

Habit: Seen on wing in may, june and august. Active in the early morning and at dusk. It is crepuscular.

Larval Host Plant: data deficient.



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© FAHIM KHAN (ifb)



Spotted Palmfly

Elymnias malelas



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Sub Family: Satyrinae

Description: Wingspan 80-100 mm. Dull brown UN, outer half white streaked, bright white spots near wing bases, a spot in UNF cell. Male has fewer faint white striations and less white spots. UPF dark brown with bluish white streaks, a spot in cell, two or three central spots, apex with blue gloss. Blue reduced on Female UPF. UPH with long white streaks.

Habitat: Confined to forest at the elevation upto 1500m , seen predominantly from March—November. Distributed in India(Uttarkhand—Arunachal , NE), Nepal, Bhutan, Myanmar.

Habit: Flies in low speed and generally settles in the leaves of trees near the ground level.

Larval Host Plant: Data Deficient

Sub Family: Limenitinae

Description: Wingspan 80-90 mm. UP dark brown. Pointed FW with straight termen. UPF has three rows of bluish white spots. Small yellowish spots on UPH. All spots more prominent in female. Female has a bluish apical band on UPF. Male has a large prominent central black band (not pale-edged) on UPH.

Habitat: Inhabits thick hilly forests up to 1,400 m, as well as plains where bamboos grow. Flies between April—October. Distributed in India (West Bengal, Sikkim to Arunachal , NE)

Habit: Flight quick, up and down, similar to Browns. Female less active. Keeps to shady undergrowth during the day; flies during dusk and dawn and may fly at night. Males visit damp patches, but never seen on flowers.

Larval Host Plant: *Dendrocalamus sp.*, *Saccharum sp.* (Poaceae).



Common Duffer

Discophora sondaica



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PAPILIONINAE

SWALLOWTAILS

This spectacular group of butterflies has some of the most exquisite species, ranging from the Kaiser-i-Hind, Bhutan Glory, Peacocks, translucent Apollos of the Himalaya and restless Swordtails, to the dainty little Dragontails of the North-east. The largest butterfly among all Indian butterflies is the female of the Southern Birdwing. Around the world, there are 573 known species of Swallowtails, and 101 species are found in the Indian region.

Though most Swallowtails occur in the tropical regions, some are also found in the temperate regions of the Himalaya. Most of the species among this group have tailed hindwings, hence the popular name Swallowtail, though some like the Lime Butterfly or the Blue Mormon do not have tails on the hindwings. Swallowtails are strong fliers and some like the Crimson Rose are known to migrate from India to Sri Lanka, across the sea.

All Indian Swallowtails are known to lay eggs singly, except for the Malabar Banded Swallowtail. Their food plants range mainly from lemons, limes, and curry leaf to magnolias and custard apple, to birthworts, carrots, and Sedum in the Himalaya. All Swallowtail caterpillars have a forked organ known as osmeterium, situated at the base of the head on the back. When the caterpillar is alarmed, the osmeterium pops out to give off a pungent smell of butyric acid, mainly to ward off ants, parasitic wasps, and flies.



Common Bluebottle

Graphium sarpedon



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Sub Family : Papilioninae

Description: Wingspan 80-90 mm. UP greenish blue central band from FW apex almost to HW inner edge. Green crescents on UPH along outer edge. UN with blue band paler, a few red spots. Female paler.

Habitat: prefers wetter, well wooded regions, Forests with the elevation Up to 2,740 m from January-December. Distributed in India (J&K-Arunachal, NE), Nepal, Bhutan, Bangladesh, Myanmar.

Habit: Swift, restless flier, rarely settling at one place, momentarily pausing to hover over a flower before flitting to the next. Strong, rapid, skipping flight. Avid mudpuddler, seen in large groups on damp patches .

Larval Host Plant: *Polyalthia longifolia*, *Cinnamomum campora*



Common Rose

Pachliopta aristolochiae



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Sub Family : Papilioninae

Description: HW tailed. UNF black with pale greyish strips between veins. UNH has large white patch of five elongate spots around end-cell, series of bright red or brownish red spots on outer edge. Body red.

Habitat: Seen in grasslands, scrub and forest edges throughout the year. Altitudinal range from the foothills up to 2,400 m

Habit: Slow but straight fluttering flight, usually 3 to 4 m. above ground, can fly higher. Fond of flower nectar and water. Foul smelling and bitter testing to predators. Males do mud-puddling.

Larval Host Plant: Climbers and Creepers of *Aristolochia* genus, like *Aristolochia indica*, *Aristolochia bracteolata*, *Aristolochia elegans*.



Common mime

Papilio clyta



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Sub Family: Papilioninae

Description: It mimics common crow. Dark brown on UP with cream markings. UPH has a series of arrowhead—shaped streaks and a series of crescents and narrow yellow or white spots between veins.

Habitat: Seen in wooded area with flower, prefers gardens, forest edges and forest tracks. Altitudinal range from the foothills up to 2,500 m.

Habit: More abundant during pre-monsoon and monsoon period. Normal flight, like Sailing with fluttering, but flight fast on alarmed condition. Feeds on flower nectar. Mud- puddling by males.

Larval Host Plant: *Cinnamomum zeylanicum*, *Litsea sp.*, *Alseodaphne semecarpifolia*



Common mime

Papilio clyta



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Sub Family: Papilioninae

Description: Wingspan 90—100mm. Yellow marginal spots on UNH. mimics Blue Tiger. UP black with creamy white broad stripes. UPF has dark cell streaks and four spots near end cell.

Habitat: Seen in wooded area with flower, prefers gardens, forest edges and forest tracks. Altitudinal range from the foothills up to 2,500 m.

Habit: More abundant during pre-monsoon and monsoon period. Normal flight, like Sailing with fluttering, but flight fast on alarmed condition. Feeds on flower nectar. Mud- puddling by males.

Larval Host Plant: *Cinnamomum zeylanicum*, *Litsea sp.*, *Alseodaphne semecarpifolia*



Golden Birdwing

Troides aeacus



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Sub Family: Papilioninae

Description: Wingspan 199—188 mm. Female UPF white-grey inside margin in half of cell, or often the entire cell white-grey. UPH with a row of large wedge-shaped black spots, black dusting between the spots and marginal border deeply incised with black.

Habitat: More common from May to June in the warmer forested valleys of the Himalayan foothills up to 1,065 m.

Habit: Seen sailing slowly around flowering trees and shrubs. Seen in open patches of forest, sailing 4-5 m above ground, but often comes down to feed on flowers.

Larval Host Plant: *Aristolochia griffithi* (Aristolochiaceae).

Sub Family: Papilioninae

Description: Wingspan 199—188 mm. Male UPH golden with small areas of black dusting around cone-shaped black marginal markings.

Habitat: More common from May to June in the warmer forested valleys of the Himalayan foothills up to 1,065 m.

Habit: Seen sailing slowly around flowering trees and shrubs. Seen in open patches of forest, sailing 4-5 m above ground, but often comes down to feed on flowers.

Larval Host Plant: *Aristolochia griffithi* (Aristolochiaceae).



Golden Birdwing

Troides aeacus



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Red Helen

Papilio helenus



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Sub Family: Papilioninae

Description: Wingspan 110-130 mm. HW tailed. UNH marginal row of dull red crescents, and a white patch, divided by black veins.

Habitat: Prefers evergreen forests of heavy rainfall areas, but visits nearby gardens for food plants like citrus. Seen from March to November up to 2,100 m, and is one of the most common Swallowtails of the forested hills.

Habit: Rapid, weaving flight. Visits flowers and also settles on wet patches.

Larval Host Plant: *Evodia sp.*, *Glycosmis arborea*, *Toddalia asiatica*, *Zanthoxylum acanthopodium*, *Z. rhetusa* (Rutaceae).

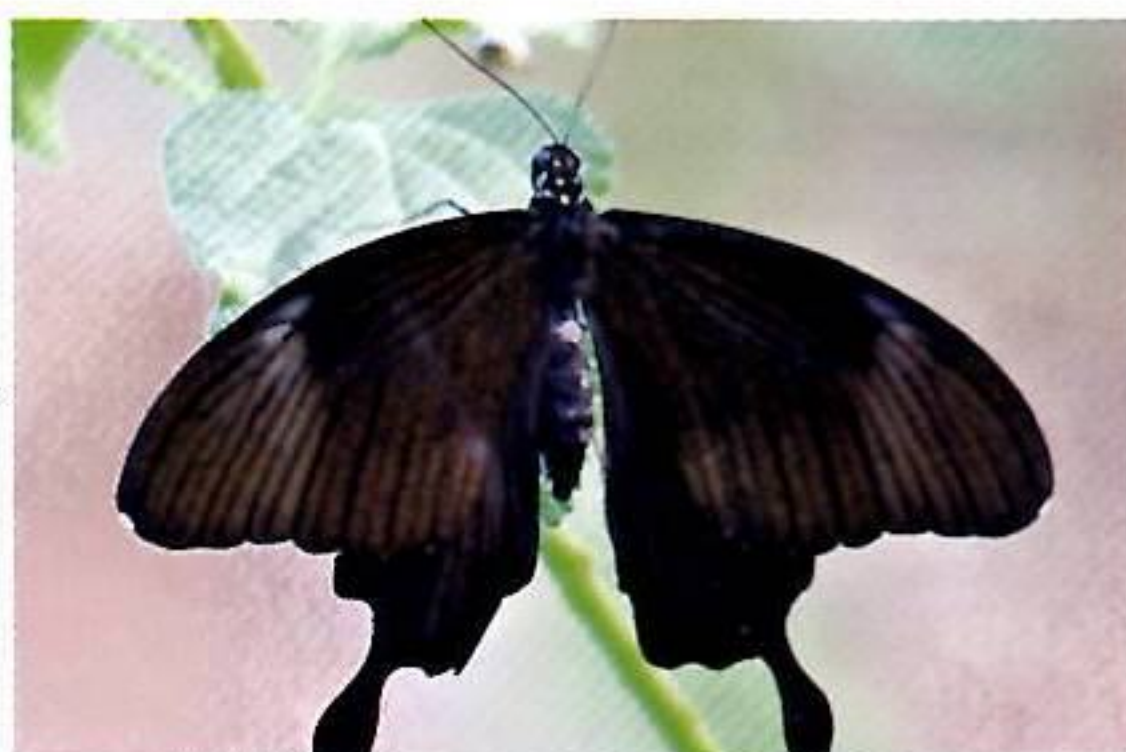


Yellow Helen

Papilio nephelus



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Sub Family: Papilioninae

Description: Wingspan 115- 130 mm. Similar to Red Helen, being large, black-bodied, tailed, but differs in having UNH with marginal series of crescents greyish yellow instead of red.

Habitat: Keeps to wooded hills, common in lower country, as it does not ascend to higher hills as much as the Red Helen. Seen predominantly from February—November.

Habit: A swift flier, seen on the wing from February to October. Comes to flowers and damp patches.

Larval Host Plant: *Toddalia asiatica*, *Zanthoxylum ailanthoides*, *Zoalifolium* (Rutaceae).



Common Jay

Graphium doson



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Sub Family: Papilioninae

Description: Wingspan 70-80mm. A short black, red-centered bar at leading edge on UNH not joined to dark basal band. Extreme end-cell brown. Abdomen black on upper side.

Habitat: Forests and gardens, Up to 1,200 m. January-December. Distributed in India (southern India up to W. Bengal, Uttarakhand Arunachal, NE), Nepal, Bhutan, Myanmar, Sri Lanka.

Habit: Swift flier, hovers over flowers while probing for nectar. Males seen mudpuddling in tight groups.

Larval Host Plant: *Polyalthia longifolia*, *Michelia champaca*, *Magnolia grandifolia*, *Miliusa tomentosa*.



Tailed Jay

Graphium agamemnon



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Sub Family: Papilioninae

Description: Black with green spots and streaks on wings. UN pale brown with black, suffused with lilac or violet-grey and green spots. Tail longer in female.

Habitat: Forests and gardens, Up to 1,800 m. January-December. Distributed in India (southern India up to Gujarat & W. Bengal, Uttarakhand-Arunachal, NE, A&N Is.), Nepal, Bhutan, Bangladesh, Myanmar, Sri Lanka.

Habit: Restless flier, flits from flower to flower. Extensive planting of its larval foodplants like mast tree, champa and custard apple has brought this forest dwellers into urban areas.

Larval Host Plant: *Polyalthia cerasoides*, *P. longifolia*, *Michelia champaca*, *M. doltsopa*, *Magnolia grandifolia*, *Miliusa tomentosa*.



Lesser Batwing

Atrophaneura adioneus



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Sub Family: Papilioninae

Description: Wingspan 112-162 mm. Male UP bluish black. HW black-brown; dorsal scent fold rounded. Female brown on UP, large whitish to greenish grey patch on UPF lower region. Female UPH metallic blue. Broad white abdominal stripe on sides, head pinkish.

Habitat: Found in the forest up to 1.500 m. seen from April—November. Distributed in India (Uttarakhand—Arunachal, Assam, Meghalaya), Nepal, Bhutan, Myanmar.

Habit: Slow, graceful flight, keeps to shade in the forest. Often visits flower.

Larval Host Plant: Aristolochia spp. (Aristolochiaceae)



Lime Butterfly

Papilio demoleus



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Sub Family: Papilioninae

Description: Wingspan 80-100 mm. FW with large irregular spots and patches. Marginal rows of yellow spots on both wings on UP.

Habitat: Commonest among the Swallowtails, and also the most widely distributed in India. Prefers open plains, but seen in lightly wooded regions up to 2,130 m in the hills.

Habit: Swift, but rather jerky flight at eye-level. n the wing throughout the year. Often seen mud-puddling in large numbers on damp patches in summer. Known to migrate.

Larval Host Plant: *Aegle marmelos*, *Citrus medica*, *Glycosmis arborea*, *Limonia crenulata*, *Murraya koenigii*, limes, lemons and other Rutaceae.



Common Mormon

Papilio polytes



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Sub Family: Papilioninae

Description: Wingspan 90-100 mm. HW tailed. Three different forms of females. Form stichius mimics Common Rose. Differs from Common Rose in having body without red markings.

Habitat: Found throughout the Indian subcontinent. Occurs on the hills up to 1,830 m. seen predominantly during pre- monsoon and monsoon period.

Habit: Males have fast flight, while females fly slowly in a leisurely manner just like Common Rose and Crimson Rose whom they mimic. Fond of flowers, males visit damp patches and dung. Seen on the wing throughout the year.

Larval Host Plant: *Aegle marmelos*, *Citrus medica*, *Glycosmis arborea*, *Murraya koenigii*, limes, curry leaf plant and other related plants (Rutaceae).

Sub Family: Papilioninae

Description: Wingspan 90-100 mm. HW tailed. Three different forms of females. Form stichius mimics Common Rose. Differs from Common Rose in having body without red markings.

Habitat: Found throughout the Indian subcontinent. Occurs on the hills up to 1,830m. seen predominantly during pre- monsoon and monsoon period.

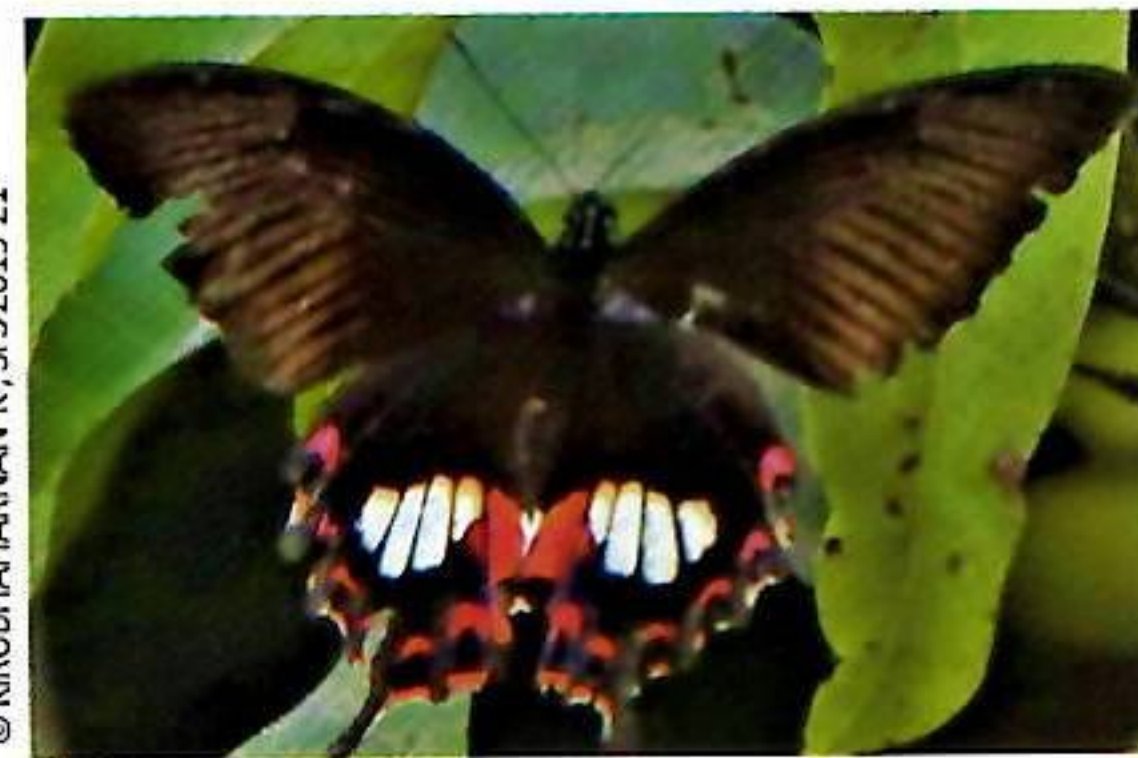
Habit: Males have fast flight, while females fly slowly in a leisurely manner just like Common Rose and Crimson Rose whom they mimic. Fond of flowers, males visit damp patches and dung. Seen on the wing throughout the year.

Larval Host Plant: *Aegle marmelos*, *Citrus medica*, *Glycosmis arborea*, *Murraya koenigii*, limes, curry leaf plant and other related plants (Rutaceae).



Common Mormon

Papilio polytes



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Great Mormon

Papilio memnon



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Sub Family: Papilioninae

Description: Wingspan 120-150 mm. Tailed female form alcanor. UPF greyish-brown with veins, streaks between them black; cell red at base. UPH black, cell partly white broad white streaks. A row of red spots along border between veins.

Habitat: Seen in forests, and near open human habitation areas, females more often seen near flowers and food plants, and males while mud-puddling. On the hills up to 1,800 m from March to October. Females seem to prefer higher altitudes than males.

Habit: Closely related to Blue Mormon, this strong flier is very common in its range. Highly mimetic and polymorphic, with four male and nine female forms.

Larval Host Plant: *Citrus spp.*, *Paramigyna scandens* (Rutaceae)



Great Mormon

Papilio memnon

Sub Family: Papilioninae

Description: Wingspan 120—150 mm. Female form, tail less butterfly. Resembles male form of butterfly, with both wings dark.

Habitat: Seen in forests, and near open human habitation areas, females more often seen near flowers and food plants, and males while mud-puddling. On the hills up to 1,800 m from March to October. Females seem to prefer higher altitudes than males.

Habit: Closely related to Blue Mormon, this strong flier is very common in its range. Highly mimetic and polymorphic, with four male and nine female forms.

Larval Host Plant: *Citrus spp.*, *Paramigyna scandens* (Rutaceae)



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Spangle

Papilio protenor



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© KUMUDGHOSH (ifb)

Sub Family: Papilioninae

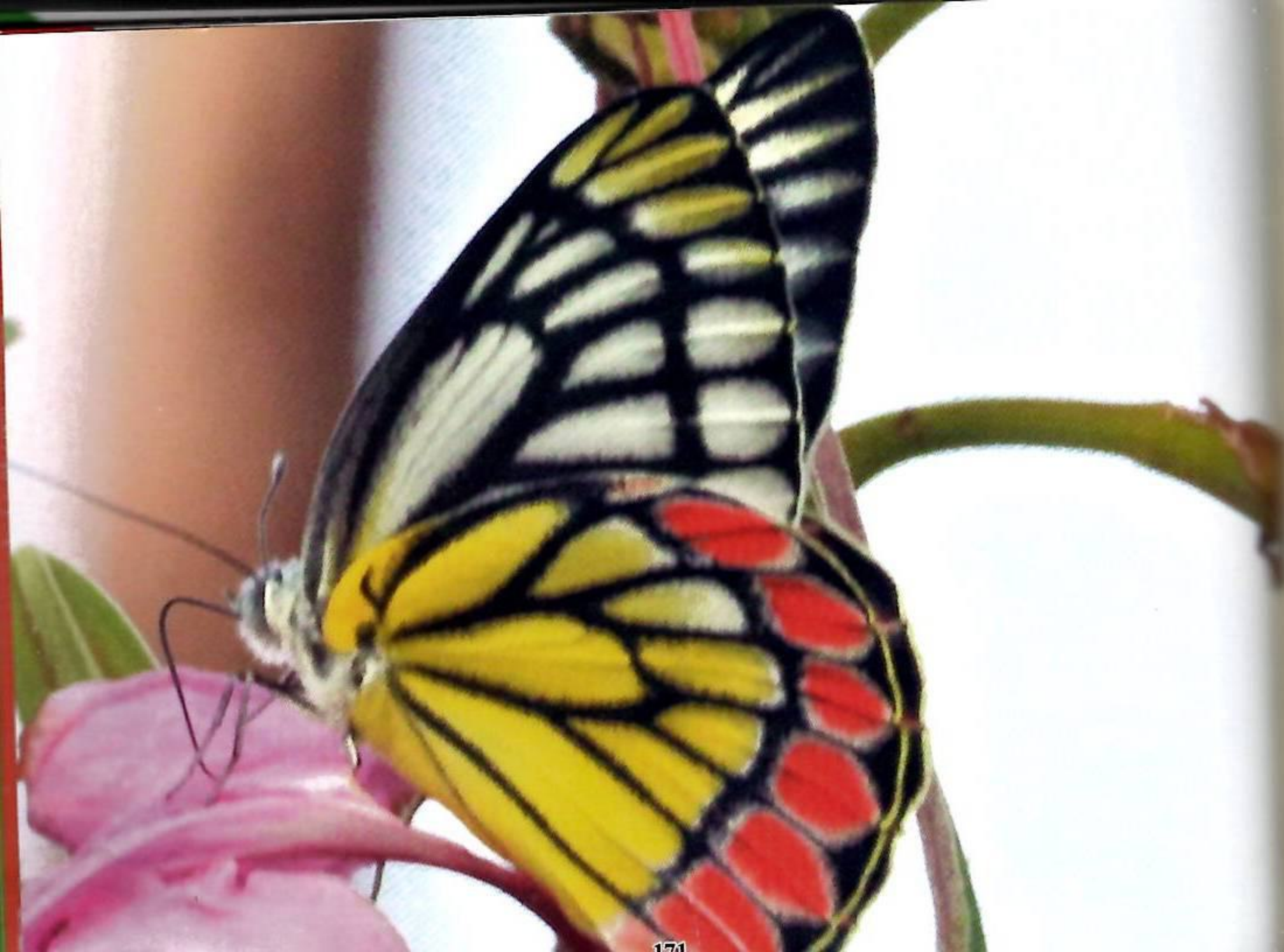
Description: Wingspan 100-130 mm. Male UPH has a black-centered red spot at lower tip and blue dusting. Female similar, with additional black-centered red spot on UPH, and blue dusting dense on middle region.

Habitat: Dense forest as well as in semi-open country. Found at elevations up to 2,600 m. March-November. Its distribution ranges from India (J&K-Arunachal, NE, W. Bengal [northern hills]), Nepal, Bhutan, Bangladesh and Myanmar.

Habit: Prefers mudpuddling near hilly streams and keeps to undergrowth, often visits gardens for food plants. Flight usually leisurely, erratic and rapid when alarmed.

Larval Host Plant: *Murraya koenigii*, *Zanthoxylum alatum*, *Citrus spp.*





PIERIDAE

WHITES AND YELLOWS

Most of the butterflies in this group have white or yellow wings and are therefore named Whites and Yellows. The undersides of the wings of some of these butterflies have cryptic coloration. When at rest, in some species, the forewing is covered by the hindwing that has cryptic markings, with only the tip or apex of the forewing visible.

About 92 species occur in India. Sexual dimorphism occurs in most of the species. Male butterflies of most species congregate on wet patches near rivers or streambeds for mudpuddling, while females are of retiring habits and therefore less seen. The majority of them are seen in open country from sea level to Himalayan meadows.

They are often seen basking in the sun with their wings partially open. The eggs are typically tall and spindle-shaped, laid either singly or in batches. The caterpillars of these butterflies feed mainly on capers (Capparaceae), cabbage and other related Cruciferae, mistletoe-like parasitic plants *Dendrophthoe spp.*, Salvadoraceae, clover and other legumes (Fabaceae), and Cassias (Caesalpiaceae).



Common Emigrant

Catopsilia pomona



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© BABY KUNNIKULANGARA (iftb)

Sub Family: Coliadinae

Description: wingspan 55-80 mm, Both sexes vary from yellow to translucent greenish white. Markings variable. Female has more markings. UN unmarked or with red-ringed silver spots in center; additional markings on both wings.

Habitat: India (incl. A&N Is.), Pakistan, Nepal, Bhutan, Bangladesh, Myanmar, Sri Lanka. Forests and habitations. Seen up to 4,000 m mainly in January-December.

Habit: Seen on wing in sunny time period. Its flies in a rapid speed . Generally it wont flicker its wings during nectar collecting.

Larval Host Plant: *Cassia fistula* (Amaltas), *C. siamea* (Kashod), *C. tora* (Chakunde) and *C. sophera* (Kalkasunde).



Mottled Emigrant

Catopsilia pyranthe



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© MILIND BHAKARE (iftb)

Sub Family: Coliadinae

Description: Wingspan 80-100 mm. Female similar, but apical patch slightly smaller and paler, and markings darker. An additional row of prominent central spots on UPH.

Habitat: recorded in the Forests. Up to 1,370 m in north. Up to 2,100 m in south. Seen from February-December.

Habit: Fairly strong, jerky, erratic flight. Common visitor to gardens and city roads, where its favoured food plants. Seen to flowers and damp patches. Migrate in large swarms.

Larval Host Plant: *Cassia auriculata*, *C. fistula*, *C.tora*, *Sesbania bispinosa*



One Spot Grass Yellow

Eurema andersoni



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© KRUSHNAMEGH KUNTE (ifb)

Sub Family: Coliadinae

Description: Wingspan 38-45 mm. Dark streaks at apex, single cell spot and a bar at cell - end on UNF. A long streak at UNH leading edge stretching towards bar at cell—end, central streaks form chain like band. Markings faint in WSF. Female paler.

Habitat: Confined to forest at low elevation, seen predominantly from March—December. Distributed in India (S. India up to S. Maharashtra, Uttarakhand, Sikkim—Arunachal, NE, Andaman Is), Bhutan, Myanmar, Sri Lanka.

Habit: prefers shade to sunlight. Visit flowers and damp patches.

Larval Host Plant: Data Deficient



Scarce Grass Yellow

Eurema simulatrix

Sub Family: Coliadinae

Description: Wingspan 40-50 mm. Rusty markings on UN of both wings variable. UNF has two irregular black spots in cell and an irregular black spots in cell and an irregular mark on end cell bar. FW apical dark brown patch variable in size and density or completely absent.

Habitat: Confined to forest at low elevation, seen predominantly from March—December. Distributed in India (Sikkim—Arunachal, NE), Myanmar.

Habit: Generally prefers to ground level. Often visit to flowers.

Larval Host Plant: *Cassia spp*, *Delonix regia*, *Moulluva spicata*, *Albizia spp*, *pithecolobium dulce*.

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Three Spot Grass yellow

Eurema blanda



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Sub Family: Coliadinae

Description: Wingspan 40-45 mm. Markings are variable. Three unmistakable black spots in cell always on UNF. DSF has rusty Markings on UN. Male has much less prominent, narrow sex brand near base of UNF.

Habitat: Confined to forest at low elevation, seen predominantly from March—December. Distributed in India, Bhutan, Myanmar, Sri Lanka.

Habit: Females flies at canopy level around the food plant. Male are generally prefers to ground level

Larval Host Plant: *Cassia spp, Delonix regia, Moulluva spicata, Albizia spp, pithecolobium dulce.*



Chocolate Albatross

Appias lynceida



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Sub Family: Pierinae

Description: Wingspan 55-70 mm. WSF: Male UPF outer edge with inwardly toothed black border. DSF: UNF brownish black border along leading and outer edge, a yellow spot in apical area. UNH yellow, with broad chocolate-brown border at outer edge. Female UP dusky black, four white central streaks on UPF. UPH has whitish central area. UNH whitish or yellowish with broad dusky outer edge area. DSF: Female UP with extensive white markings

Habitat: Distributed in India (S. India up to Mumbai, Uttarakhand-Arunachal, NE, Odisha, Nicobar Is.), Bhutan, Myanmar, Sri Lanka. Forests. Below 1,500 m. March-December.

Habit: Flight strong and swift. Males visit damp patches. Seen on flowers.

Larval Host Plant: *Capparis cleghornii, Crataeva adansonii.*



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Black Veined Albatross

Appias olferna



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Sub Family :Pierinae

Description: Wingspan 55-65 mm. WSF: Male UP white with marginal black stripes extended in apical area and along outer edge on UPF. UPH veins darkened towards outer edge. DSF: Dark markings reduced in both sexes. Male UN white with dusky black veins. UNH has narrow dark central stripe through cell-end, beyond which all veins are darkened. Female UNH veins darkened, often yellow dusted; darkened central stripe may be broadly yellow.

Habitat: Distributed in India (Assam-Arunachal, NE, W. Bengal, Odisha), Nepal, Bangladesh, Myanmar. Forests. Up to 700 m. Commonly seen in April-October

Habit: Often seen on flowers and damp patches

Larval Host Plant: data deficient.



Black Veined Albatross

Appias olferna

Sub Family:Pierinae

Description: Wingspan 55-65 mm. WSF: Female UPF has white or yellow spots on apex and outer edge. DSF: Dark markings reduced as in male.

Habitat: Distributed in India (Assam-Arunachal, NE, W. Bengal, Odisha), Nepal, Bangladesh, Myanmar. Forests. Up to 700 m. Commonly seen in April-October.

Habit: Prefers to the ground level predominant on bushes and flowers

Larval Host Plant: data deficient.

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Stripped Albatross

Appias libythea



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Sub Family: Pierinae

Description: Wingspan 50-60 mm. WSF: Male pure white on UP, with dusky black apical shading; outer edge markings produced inwardly along veins on UPF, DSF: UPF black markings reduced. Male UP white with marginal black stripes extended in apical area and along outer edge on UPF. UPH veins darkened towards outer edge. DSF: Dark markings reduced in both sexes.

Habitat: Distributed in India (southern India up to Gujarat, A&N Is.), Pakistan, Sri Lanka. Forest edges, scrub, and grasslands. Up to 500 m from April-October. Migratory.

Habit: Flight strong. Males seen in large numbers on damp patches, but not females. Fond of flowers. Migratory.

Larval Host Plant: *Capparis cleghornii*, *C. sepiaria*, *C. zeylanica*, *Crataeva adansonii*



Great Orange Tip

hebomoia glaucippe

Sub Family: Pierinae

Description: Wingspan 80-100 mm. large white butterfly with orange wing patches. Apical half of white UPF with large black edged orange patch. In Female, apical patch slightly smaller and paler and markings darker. An additional row of prominent central spots on UPH.

Habitat: Distributed in India (peninsular India, Sikkim-Arunachal, NE), Nepal, Bhutan, Myanmar, Sri Lanka. Forests. Up to 1,370 m in north. Up to 2,100 m in south. February-December.

Habit: Strong flight. More Common during and immediately after rains. Comes to flowers.

Larval Host Plant: *Capparis moonii*, *C. spinosa*, *C. zeylanica*.



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Indian Cabbage White

Pieris canidia



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Sub Family: Pierinae

Description: Wingspan 45-60 mm. UPF with a black spot, and black apex having toothed inner edge. Female has an additional black spot on UPF. Both sexes have unmarked UNH with base of leading edge yellow.

Habitat: Distributed in India (J&K-Arunachal, NE, Uttar Pradesh, W. Bengal, Punjab), Pakistan, Nepal, Bhutan, Bangladesh, Myanmar. Forests and farmlands. 1,500-3,660 m in Himalaya. Up to 1,800 m in south. January-December. Migratory.

Habit: Flies weakly, low in open places, around bushes and shrubs. Comes to flowers and damp patches on hot, dry days.

Larval Host Plant: *Nasturtium spp*, *Rorippa dubia*, *Sisymbrium spp*, *Cabbage plants*.



Common Jezbel

Delias eucharis



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© UPASANA CHATTOPADHYAY (ifb)

Sub Family: Pierinae

Description: Wingspan: 66-83 mm. UNH yellow with black veins, black border with white-ringed red spots pointed towards the outer edge. Male UP white with black veins. Female UP white, tinged with yellow and pink. Mimicked by Painted Sawtooth.

Habitat: Distributed in India (except arid regions), Pakistan, Nepal, Bhutan, North Myanmar, Sri Lanka. Gardens and forests. Low elevations. January-December

Habit: They have a fairly slow fluttering flight. It is Commonly seen in gardens. The females flying amongst the trees in search of its foodplants, while the males are visiting flowers for nectar or mud-puddling. It rests with its wings closed exhibiting the brilliantly coloured underside.

Larval Host Plant: *Dendrothoe falcate (Baramanda)*, *Helicanthus elastic (Kulekhara)*.



Red Base Jezbel

Delias pasithoe



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Sub Family: Pierinae

Description: Wingspan 70-90 mm. Differs from Red-breast Jezbel in having outer half of cell yellow on UNH and no red base on UPH. UNH yellow with black veins and margin and black-edged red basal area extending from leading edge to inner edge in both sexes.

Habitat: Distributed in India (Sikkim-Arunachal, NE), Nepal, Bhutan, Myanmar. Confined to Forests with an elevation up to 1,340m from February-December.

Habit: Prefers to fly near the canopy level. Fast flier. Rarely open its wings.

Larval Host Plant: *Dendrophthoe spp.*



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Red Spot Jezbel

Delias descombesi

Sub Family: Pierinae

Description: Wingspan 65-90 mm. Both sexes yellow on UNH, with a long basal red patch along leading edge and a black border having large yellow spots. Male UNH rich chrome-yellow, female UNH dull yellowish white.

Habitat: Distributed in India (Sikkim-Arunachal, North-east), Nepal, Bhutan, Myanmar. Forests. Up to 1,500 m. March-December.

Habit: Flight weak. Fond of flowers.

Larval Host Plant: Data deficient.



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 **Spot Puffin**
Appias lalage



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Sub Family: Pierinae

Description: Wingspan 55-80 mm. UNH variable with faint wavy central lines or plain yellow in both sexes. DSF: Both sexes lightly marked. Male often with no spots or border along UPH outer edge. Female similar to WSF male.

Habitat: Found in the forests at elevations from 600-2,600 m in the month of February to November. Its distribution ranges from India (Himachal-Arunachal, W. Ghats [Kerala, Tamil Nadu]), Nepal, Bhutan and Myanmar.

Habit: Males frequents mud-puddle and several dozen may congregate on a good patch, either forming their own species group or joining congregations of other Appias.

Larval Host Plant: Data Deficient

Sub Family: Pierinae

Description: Wingspan 35-50 mm. Both sexes white on UP; UPF with black apex and large black central spot. UNH streaked with fine greenish lines.

Habitat: Distributed in India (including Andaman Is.), Pakistan, Nepal, Bhutan, Myanmar, Sri Lanka. Scrub and forests. Up to 1,900 m. February-December.

Habit: Soft bouncy flight. Keeps to scrub and jungle flies close to ground, never rising above knee level.

Larval Host Plant: *Cleome viscosa* (*Hurhuria*), *Capparis sepiaria* (*Kaliakara*) and *C. zeylanica* (*Bakhnai*).

 **Psyche**
Leptosia nina



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RIODINIDAE

JUDIES AND PUNCHES

Only one species of this group occurs in southern India, while all other species are found in north and north-east India. There are 20 species in the Indian region. Punches are sun-loving brown butterflies with tawny or white spots and bands. Their hindwings are lobed and may have a narrow tail.

Males are territorial. While Punches can close their wings over the back, Judies can never close their wings completely over the back, as the plane of their wings is slightly curved. Judies are more often seen in undergrowth, busy probing bird droppings or an overripe fruit. Some species of this group prefer to lay eggs on plants from the Sunflower family (Asteraceae), Pea family (Fabaceae), Myrsine family (Myrsinaceae), Eucalyptus family (Myrtaceae), and grasses and hill bamboos (Poaceae).

The white, dome-shaped eggs are small. Unlike Lycaenid caterpillars, the head of Riodinid caterpillars is not hidden under the body, and there is no dorsal honey gland. The male's foreleg is non-functional, and is much smaller than the rest. The foot (tarsus) is fused into a single segment and rarely has claws. Males lack scent scales.



Punchinello

Zemeros Flegyas



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Sub Family: *Riodininae*

Description: Wingspan 35-40 mm. UP purplish brown with small white spots, each occupied by a black spot on the inner side. UN similar to UP purplish brown with small white spots, each occupied by a black spot on the inner side, but ground colour paler.

Habitat: Distributed in India (Uttarakhand Arunachal, NE), Nepal, Bhutan, Bangladesh, Myanmar. Forests. 300-2,300 m. Seen commonly from February-November.

Habit: Perches with wings only half open. Visits flowers and damp patches.

Larval Host Plant: *Maesa chisia*, *Maesa Montana*

GLOSSARY

Abdomen: the last of the three major body divisions of an insect larva, pupa, or adult, it contains the digestive and reproductive organs.

Antennae: a pair of long-stalked, jointed sensory organs coming forward from the head of an insect, with an enlarged club at or near the tip in butterflies.

Anterior: towards the head.

Apex: tip of the wing.

Apical area: the area at or adjacent to the tip of a wing or other structure.

Basal area: the area near the base of the wing.

Batesian mimicry: the acquired resemblance of an edible butterfly species (the mimic) to a distasteful or poisonous butterfly species (the model) for protection from predators.

Cell: an area of the wing enclosed by veins.

Cilia: hairy fringe along the wing margins

Claws: terminal hooks at the end of the tarsus (foot).

Compound eye: a group of hundreds of small eye units called ommatidia, each with its own lens, and sensory cells.

Costa: the leading edge of the wing, joining the base and the apex.

Costal area: area of the wing along the costa (leading edge).

Courtship: the behavioural sequence of male and female actions prior to copulation or mating.

Coxa: basal segment of a leg, next to the body.

Dimorphism: occurrence of an animal in two forms.

Discal: the central area of the wing:

Disocellulars or disocellular veins: the short and transverse veins that form the distal margin of a cell in the wing.

Distal: away from the base or point of attachment.

Dorsal: relating to the upper surface.

Dorsum of wings: the inner edge or trailing edge of the wings.

Endemic: that which is peculiar to a particular locality or region.

Exoskeleton: skeleton covering the outside of the body, or situated in the skin.

Facet: a single, six-sided unit in the butterfly's compound eye.

Femur: the third segment of an insect leg, often the longest.

Food plant: the host plant on which the larva of a butterfly feeds.

Genitalia: the external reproductive organs.

Ground colour: dominant colour of the wing contrasted with the colour of the pattern.

Hibernate: to pass the winter in a dormant state.

Hill-topping: mate location behaviour by certain species of butterflies when they congregate on hill-tops or other elevated locations.

Lateral: on the sides

Metamorphosis: the series of developmental stages through which a butterfly passes, from the egg to larva to pupa to adult.

Micropyle: an opening at the top of an egg through which the sperm passes to fertilize the egg.

Migration: periodic movement of individuals or groups between two geographic regions.

Mimicry: the resemblance of one individual to another or to a natural object, usually an aid to survival.

Moulting: shedding the exoskeleton during growth.

Mudpuddling: seeking moisture (and dissolved salts) from damp soil, mainly to flush out body wastes. Often an exclusively male activity to ingest salts

Mullerian mimicry: the acquired resemblance of several distasteful butterfly species to each other, all of which are avoided by predators.

Nomenclature: scientific names applied in a system of classification.

North-east (India): region comprising the states of Assam, Meghalaya, Nagaland, Manipur, Mizoram, Tripura, and Arunachal Pradesh (southern region).

Pheromone: a chemical substance secreted by an insect to attract mates.

Peninsular India: the region south of Tapti river.

Posterior: towards the rear.

Proboscis: the sucking tube coiled under the adult butterfly head, used for drinking fluids.

Pupa: the chrysalis, an inactive, mummy-like stage with appendages tightly appressed to the body and enclosed in a puparium. In this stage, the larval structures are drastically reorganized into those of the adult.

Scales: highly modified flattened hairs which form a tiled roof-like covering on the membranous wings.

Segment: a ring-like or tubular division of the body or of an appendage like a leg or antenna, bounded by sutures.

Sexual dimorphism: a striking difference in colour and form between the male and female of the same species.

Silk gland: a gland that produces silk threads through a spinneret.

Simple eye: a single eye on the head of a caterpillar; composed of a lens and sensory unit.

Sphragus: a hard horny structure secreted by the male Apollo onto the abdomen of the female during copulation; it prevents the female from mating with other males.

Spiracles: respiratory openings or pores in the sides of insect larvae, pupae, and adults.

Subfamily: taxonomic rank below family, containing a group of related genera within a family.

Superfamily: a group of related families. There are two superfamilies of butterflies, the Hesperoidea (Skippers) and the Papilionoidea (true butterflies).

Tail: a slender, scale-covered, membranous projection from the posterior lateral edge of the hindwing, found in certain Skippers, Swallowtails, Whites & Yellows, Blues, and Nymphalids.

Tarsus: the fifth division or foot part of the leg, usually with five subdivisions and a terminal pair of claws.

Terminal area: area of the wing along the termen (outer edge).

Thorax: the second of the three major divisions of the Insect body, bearing three pairs of legs and two pairs of wings.

Tibia: fourth segment of the leg, between the femur and tarsus. It is usually long and slender, and is undivided.

Tornal area: area of the wing near the tornus (lower tip)

Trachea: thin-walled respiratory tubes in insects.

Tubercle: a small projection on the skin of a caterpillar or the surface of an egg, often with spines.

Ventral: lower or under surface.

Wingspan: the straight distance between the apices of the two forewings of a preserved specimen that has the dorsum of the forewings at right angles to the body.

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