



BUTTERFLIES OF

Pench Tiger Reserve, Maharashtra



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PENCH TIGER RESERVE, MAHARASHTRA

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Government of Maharashtra

Foreword

Pench Tiger Reserve is playing a very crucial role in biodiversity conservation. Different studies conducted by the Pench involving the institutions and research scholar have added value to the plethora of knowledge pertaining to biodiversity. Recently conducted citizen science surveys in Pench, Maharashtra has proved very important tool in enriching this knowledge and preparing the future generation for the arduous task of biodiversity conservation which is vital for survival of mankind.



Butterfly which are very important component of the ecological sustainability and crop productivity has amazed human kind since a long back. However, the diversity of this kaleidoscopic group of animal kingdom is under threat. Considering the importance of the species diversity and entailing species identification, the present book brought by the Pench Tiger Reserve would be very vital for the staff, researchers, students and people at large.

Best wishes for the endeavour.

Date : 14th June, 2024

(Shailesh G. Tembhurnikar)

Principal Chief Conservator of Forests
(Head of Forest Force),
Maharashtra State



Government of Maharashtra

Foreword

Butterflies conjure up images of sunshine, the warmth and colour of flowery meadows and grasslands, and summer gardens teeming with life. Butterfly which are one of the most amazing creatures in the nature also play very important role in pollination. They come after honey bees by pollinating around 3/4 part of staple crops in world, and more than 75% of flowering plants.



Butterflies are also an indicator of environmental health and pollution. However, anthropogenic pressure, ecosystem degradation, floral biodiversity loss and climate change has adversely affected their population. It is imperative to arrest the biodiversity loss of butterfly through bringing all the stakeholders, their skill upgradation and ensuring their joint action. Recently conducted citizen science surveys in Pench, Maharashtra has proved very important tool in enriching the data collection regarding butterfly diversity in Tiger Reserve. Painsstaking efforts in compiling the data in current pocket guide obtained during citizen science surveys is a treat to nature enthusiast, watchers, researchers and community all alike. The current pocket guide for the field staff and amateurs is a great effort by Pench Tiger Reserve in identifying the butterflies vital for preparing any conservation plan and its implementation.

Kudos to the Pench Tiger Reserve for their efforts in bringing this book.

Date : 18th June, 2024

(Maheep Gupta) IFS

Principal Chief Conservator of Forests
(Wild Life),
Maharashtra Forest Department

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1. INTRODUCTION

The Pench Tiger Reserve (PTR) is situated in the Nagpur district of Maharashtra. Situated adjacent to the Pench Tiger Reserve of Madhya Pradesh, the area is pivotal of the Central Indian tiger landscape. The reserve consists of two protected areas Pench National Park and MansinghDeo Wildlife Sanctuary notified in 1975 and 2010 respectively and forming core of the reserve along with buffer area which was notified in 2010. Harboring more than 41 tigers as per the 2022 phase IV census, area is rich in floral and faunal diversity. Consisting of 7 ranges, area is spread into 741 sq. km. Pench river bifurcates the entire area into almost equal halves and is the lifeline of the reserve.

1. Bio Geographic Classification

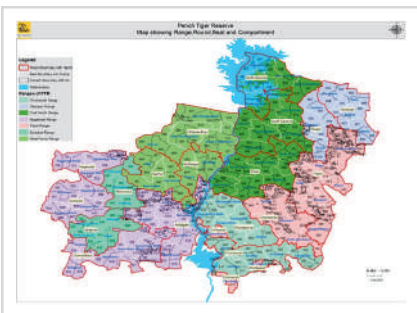
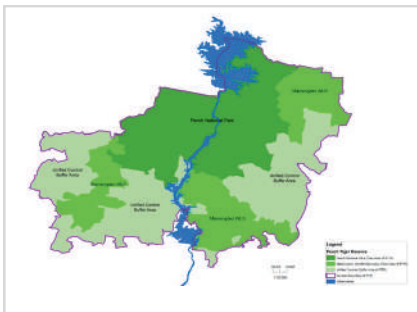
As per the Bio-geographic classification proposed by the Wildlife Institute of India (WII), Dehradun, area of Pench Tiger Reserve is classified as below:

- a) Bio-geographic Kingdom - Paleotropical
- b) Sub Kingdom - Indomalaysian
- c) Bio-geographic Zone 6 - Deccan Peninsula
- d) Biotic Province - 6 E - Central Highlands
- e) Sub Division or Region - Satpuda Maikal Sub Division

2. Value of the Area

Ecological Values : The PTR, in its Bio-geographic location, is a true representative of the Central Indian highland which comes under the Deccan Peninsula. The biogeography sub-division or region which it represents is Satpuda - Maikal division.

It inhabits in itself the rich biodiversity with plenty of floral and faunal representatives of this area. This area acts as lungs for the Nagpur and adjoining areas. Big water bodies, reservoirs and lakes work as recharging points for groundwater table and support the wide variety of floral and faunal diversity. Table-Faunal diversity of the Pench Tiger Reserve, Maharashtra.



Floral Value : The Pench Tiger Reserve is very rich in floral diversity. The forest type is "Southern Tropical Dry Deciduous Forest" and is grouped as 5AC3 under the revised classification of the forests by Champion and Seth (1968). The diverse vegetation type ranges from climax forests as Dry Teak forests and Southern dry deciduous mixed forests to edaphic types such as Boswellia forest, Mowai forest, Garari forest, and primary seral stages like dry tropical Riparian forests. PTR carried out a floral survey during 2023 (Kolganai et al, 2024 Chandramohan et al, 2023). During the said survey, 863 plant species belonging to 554 genus and 117 families were reported. Out of the reported species, 294 herbs, 157 are natural trees, 131 are climbers, 131 belong to grasses, 52 belong to shrubs and the remaining are avenue trees and epiphytic plants. The higher rate of biodiversity found in grass spp is very interesting as Pench does not have extensive grasslands and most of the grasses are under canopy. Out of the entire reported species, 46 species are indigenous to India while 32 plant species are of rare distribution and 6 plant species are strictly endemic to the Indian subcontinent. Thus, the floral diversity of the Pench represents around 5.8% of the floral diversity of the entire country, which consists of 45000 plant species representing about 7% of the world's flora. The team discovered a new plant species named *Polygonum chaturbhujanum* at Gol Pahadi in Totladoh reservoir area (Kolganai et al, 2024).

Faunal Value : The faunal diversity of the reserve is also very rich. During 2024, the discovery of the Eurasian otter in Pench which is the 1st record

from Maharashtra and the Leopard cat which is the 1st record in central India is testimony to the rich faunal diversity the tiger reserve is blessed with.

Sr. No.	Group	Number of Species
1.	Mammals	73
2.	Aves	367
3.	Reptiles	53
4.	Amphibian	7
5.	Fishes	33
6.	Molluscus	37
7.	Crustaceans	21
8.	Insecta	273
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Table- Faunal diversity of the Pench Tiger Reserve, Maharashtra.

Value as a Conservation Unit : Strategically, the Tiger Reserve is located in the heart of the Central Indian Tiger landscape which contributes almost 1/6th of the total tiger population of the country. The Pench corridor forms a crucial link between the two Tiger Reserves in the north, two Tiger Reserves in the south, one on the eastern side and one on the Western side. The tiger reserves to the north of PTR are Pench (MP) and Kanha TR (MP). The tiger reserves to the south of PTR are Tadoba Andhari, and Bor TR and to the east is Navegaon Nagzira TR connected through the Mogarkasa conservation reserve and Bawanthadi forest area. It is also connected with important tiger bearing

areas like the Umred - Karhandala sanctuary and the Bramhapuri forest division.

3. Butterfly Diversity in Central India

Butterflies are a vital part of the ecosystem, acting as pollinators, prey, and vital members of the food chain. They provide food for animals such as birds, reptiles, amphibians, and caterpillars, and their loss could potentially break ecosystems.

A diverse butterfly population indicates a healthy terrestrial ecosystem as butterflies are considered excellent indicators of environmental conditions, reflecting the overall health of a specific habitat. It also indicates a stable ecosystem with a variety of plant species supporting them. Butterfly diversity is influenced by local habitat characteristics such as canopy cover, tree density, and ground cover. Monitoring and interpreting butterfly diversity can offer valuable insights into the overall ecological well being of a habitat and guide conservation strategies to protect these delicate insect populations. The biggest threats to butterfly diversity are habitat degradation, climate change, invasive plants, and forest fires.

a) Butterfly diversity in areas adjoining to Pench

In Central India, the butterfly diversity was reported earlier by Forsayeth (1884); Swinhoe (1886); Betham (1890, 1891) & Witt (1909). Subsequent works include reports of several species from Madhya Pradesh and Chhattisgarh (Evans, 1932; Talbot, 1939, 1947; Wynter-Blyth, 1957). D'Abreu (1931) documented a total of

177 species occurring in the erstwhile Central Provinces (now Madhya Pradesh and Vidarbha). In the recent past, several workers have studied butterflies from urban, rural and protected areas of Vidarbha (Tiple & Khurad, 2009). The butterfly fauna of Vidharbha, Maharashtra is well-documented with 167 species (Tiple, 2011), but a few spatial gaps still remain. However, few additions have been made to the checklist of the Vidarbha region recently (Deokar & Shukla, 2015; Tiple, 2018; Tiple, 2019; Tiple & Bhagwat, 2023; Tiple & Deokar, 2024).

b) Butterfly diversity in Pench, Maharashtra

There has been no detailed study of butterfly diversity in Pench. Singh (2004) reported 45 species of butterfly. Later on, 65 species were reported by Sharma & Radhakrishnan (2004). They were spread in Later report enlisted 65 species, 52 genera and 5 families. A citizen science survey in Pench during 2023 reported 131 sp. (Amit et al, 2023) Later on study by Deokar and Tiple (2024) enlisted 124 sp. During 2024, one more species, Peacock Royal was reported by Mandar Pingale from the Kiringisarra area which was the range extension for the species.

Citizen science survey in Pench during 2022 to 23

The survey was designed by Tinsa Ecological Foundation, technical partner of Pench. Protection camps were taken as centre, and 3 sampling trails covering major beat areas lowest administrative unit in forest department were selected for the survey. Trails selected were those PTR

uses for the carnivore survey during All India Tiger Estimation (AITE). Survey used proportional random sampling method across 7 ranges of PTR. Each team covered a minimum of 3 survey trails (samples) or a maximum of 4. Participants used Pollard's Walk Method, a type of modified line transect method in which an observer imagines a cube of 5m and records butterfly observations in that space. The database was collected on KoboCollect, a free data collection toolset developed by Harvard Humanitarian Initiatives.

1) Summer survey - During the summer 2023 survey (Amit et al., 2023), 133 species of butterflies were observed. They belonged to 6 families. The maximum number of butterflies belonged to the Nymphalidae family (47 sp), followed by Lycaenidae (38 sp), Pieridae (17 sp), Hesperidae (19 sp) and Papilionidae (10 sp). The results suggested that Common Grass Yellow was the most frequent species, followed by Common Sailor, Chocolate Pansy, Common Rose, and Common Pierrot. The least frequent species were Dull Babul Blue, Pointed Ciliate Blue, Common Blue, Brown Awl, Rice Swift, and Red Pierrot. Common Grass Yellow had the highest density per trail, followed by Common Sailor, Chocolate Pansy, and Bush-Brown. Common Grass Yellow was the most abundant species, followed by Dark Grass Blue, Common Sailor, Common Baron and Common Bush Brown.

he observed species richness was highest in the East Pench range with 84 butterfly species followed by Saleghat and Chorbahuli Ranges with 80 butterfly species each. The lowest

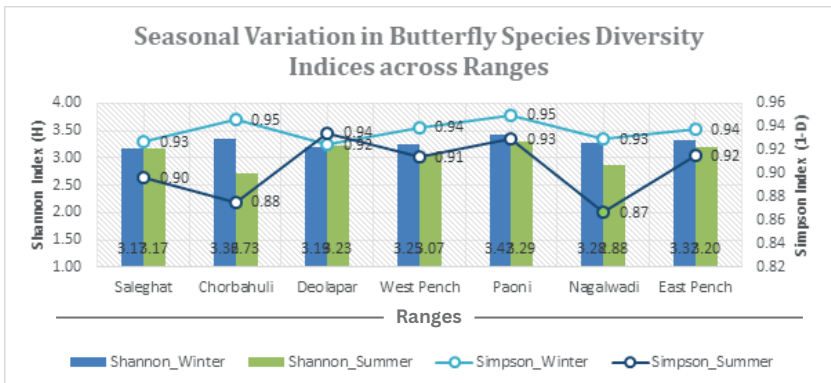
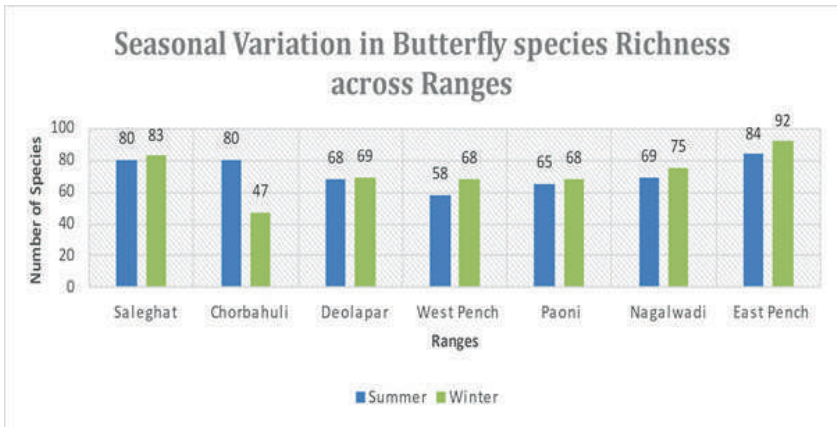
butterfly species richness was observed in the West Pench Range with 58 species. Species diversity measured by the Shannon index, ranged from 1.5 to 4, and the Simpson index ranged from 0 to 1. The results showed that all the ranges of Pench have a good species diversity of butterfly.

2) Winter survey - During the winter survey, 134 species of butterflies were observed. The survey found that Common Grass Yellow was the most frequent species, followed by Chocolate Pansy, Common Sailor, Lemon Pansy, and Baronet. A total 33 species were found to be the least frequent species. Common Grass Yellow had the highest density at trail level, followed by Chocolate Pansy, Common Sailor, and Common Crow. Common Grass Yellow was the most abundant species, followed by Chocolate Pansy, Small Grass Yellow, Common Crow, and Three-spot Grass Yellow. Range level analysis of species richness, diversity, and rarefaction revealed that the observed species richness was highest in the East Pench range with 92 butterfly species followed by Saleghat with 83 and Nagalwadi range with 75 butterfly species. The least species richness was observed in Chorbahuli range with 47 species. The results showed that all the ranges had good butterfly species diversity.

3) Overall finding - Overall finding of the citizen science survey (Amit et al., 2023 and 24)- The South Protection Camp camp observed the highest number of species (55 in the summer) while Pathar PC had the highest number of species (54 in the winter). In both seasons, the species richness was highest in the East

Pench Range, followed by Saleghat. The West Pench Range had the lowest observed butterfly richness in the summer. The Chorbahuli Range has the second-highest number of observed species in the summer and the lowest species richness in the winter.

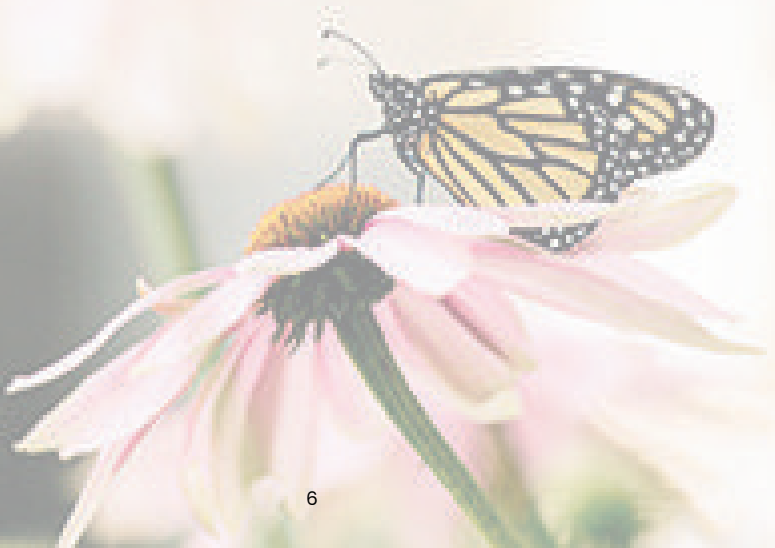
The Shannon Diversity Index has values ranging from 2.72 to 3.42. Paoni Range had the greatest Shannon diversity value in both seasons. Simpson Index was found to be in the range of 0.87 to 0.95. These values of the indices suggest that PTR has a good butterfly population.



Study of Deokar & Tiple, 2024

During the course of a field study from 2008 to 2022, Deokar & Tiple found 124 species of butterflies belonging to six families were recorded. This study added 60 species as new records for PTR, MH. Out of the recorded families, Nymphalidae (43 sp) with 17 new records was the richest family, followed by Lycaenidae with 34 sp with 20 new records, Pieridae (18 sp) with 06 new records, Hesperidae (18 sp) with 12 new records, Papilionidae 10 (sp) with 05 new records and one species recorded from Riodinidae.

Among species reported, about 48% (60) were very common, 26% (32) species were common, 6% (08) were frequently common, 15% (18) were rare and 5% (06) were very rare. Out of the total, 29 species were found throughout the year (January–December), whereas the remaining 95 sp were prominently observed only after June–July till the beginning of summer (April–May).



2. BUTTERFLY SPECIES

Family- Nymphalidae



Family : Nymphalidae

Common Name : Brush-footed or four-footed butterflies

Characteristics : Usually have reduced forelegs, so appear four-legged; often brightly coloured

This is largest family of butterflies in India and is known for its unique adaptation, where adult butterflies of both sexes have reduced forelegs, resembling small hairy brushes. These forelegs, found in the first pair of legs, are not functional for walking and are typically held pressed against the underside of the thorax, giving the appearance of having only four legs. This characteristic earns them the name "brush-footed butterflies." However, in some species, females use these reduced forelegs as sensory organs to detect suitable food plants.

The antennae of these butterflies possess three longitudinal ridges on the ventromesial surface, a distinguishing feature. The pupae of most species lack a silk girdle and are typically suspended freely from the anal hook or cremaster.

Nymphalids, which belong to this family, are generally powerful fliers. They have diverse feeding habits, often consuming animal droppings, urine, and carcasses such as rotten crabs or fish. In addition, they feed on nectar and overripe fruits. These dietary preferences, combined with their strong flying abilities, make them a resilient and widespread family of butterflies across India.



Tawny Coster

Common Name : Tawny Coster

Scientific Name : *Acraea terpsicore*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

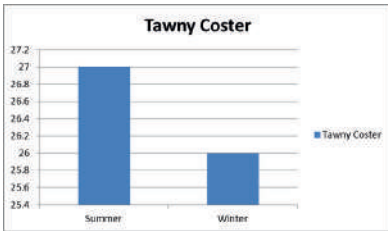
Wingspan : 53–64 mm

Local Name : कृष्णकमलिनी

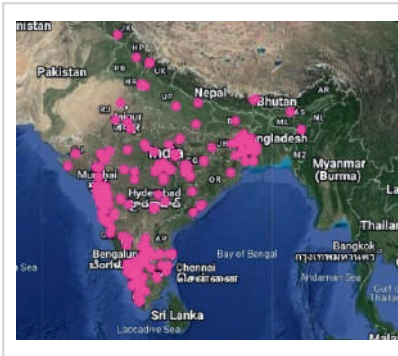
Habitat : Wherever its larval food plant (*Passiflora* species) is found.

Larval Host Plants : *Passiflora foetida* (Wild water lemon), *P. edulis* (Passion fruit).

Nectar Plants : *Tridax procumbens*, *Catharanthus roseses*, *Gaillardia picta*.



Abundance of Tawny Coster in Pench Tiger Reserve, MH.



Distribution Map of Tawny Coster in India.



Distribution Map of Tawny Coster in Pench, MH.

Angled Castor



Common Name : Angled Castor

Scientific Name : *Ariadne indica*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

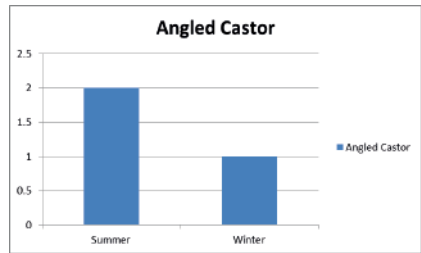
Wingspan : 45-60 mm

Local Name : कोनेरी एरंडक

Habitat : Roadside ditches and the outskirts of urban settings.

Larval Host Plants : *Ricinus communis* (Castor), *Tragia involucrate* (Indian stinging nettle), *Tragia plukentii* (Cannabis leaf nettle).

Nectar Plants : *Tridax procumbens*, *Gaillardia picta*, *Lantana camara*.



Abundance of Angled Castor in Pench Tiger Reserve, MH.



Distribution Map of Angled Castor in Pench, MH.



Distribution Map of Angled Castor in India.

Common Castor

Common Name : Common Castor

Scientific Name : *Ariadne merione*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

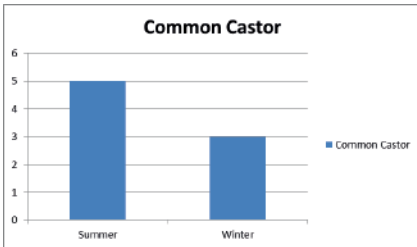
Wingspan : 45-60 mm

Local Name : एरंडक

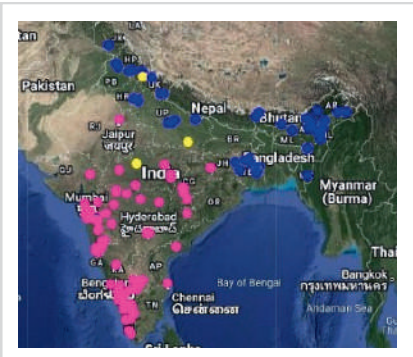
Habitat : Forest.

Larval Host Plants : *Ricinus communis* (Castor oil plant), *Tragia involucrate* (Indian stinging nettle), *Tragia plukentii* (Cannabis leaf nettle).

Nectar Plants : *Tridax procumbens*, *Lantana camara*.



Abundance of Common Castor in Pench Tiger Reserve, MH.



Distribution Map of Common Castor in India.



Distribution Map of Common Castor in Pench, MH.

Tit-Bit

Global Butterfly Diversity

Number of species: There are about **18,000** species of butterflies in the world.

- Superfamilies: Butterflies are divided into two superfamilies which are **Papilionoidea**, which includes true butterflies, and **Hesperidin**, which includes skippers.

- Families: Some butterfly families include:

Papilionidae: Swallowtails

Pieridae: Whites and yellows

Lycaenidae: Small to medium-sized butterflies

Nymphalidae: Four footed butterflies

Satyrinae: Brown and ringlets

Danaidae: Milkweed butterflies/Danaids

- Habitat: Butterfly diversity and abundance are highest in forest edges, while they are lower in dense forests and areas with human habitats.



Common Barons

Common Sergeant



Common Name : Common Sergeant

Scientific Name : *Athyra perius*

Status in PTR, MH : Rare (As per Tiple & Deekar, 2024)

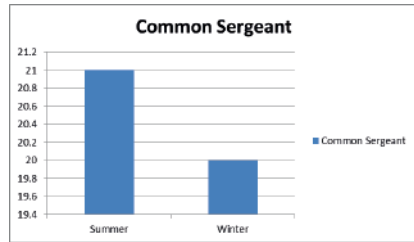
Wingspan : 60–75 mm

Local Name : ऍक्षक

Habitat : Urban gardens, open forest and surrounding secondary growth.

Larval Host Plants : *Phyllanthus spp.*

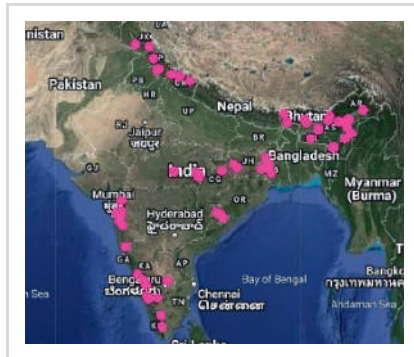
Nectar Plants : *Tridax procumbens*, *Lantana camara*.



Abundance of Common Sergeant in Pench Tiger Reserve, MH.



Distribution Map of Common Sergeant in Pench, MH.



Distribution Map of Common Sergeant in India.

Joker

Common Name : Joker

Scientific Name : *Byblia lithia*

Status in PTR, MH : Very common (as per Tiple & Deokar, 2024)

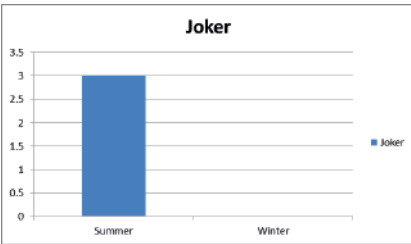
Wingspan : 50–56 mm

Local Name : विदूषक

Habitat : Human habitation as well as natural forest.

Larval Host Plants : *Tragia involucrate* (Indian stinging nettle).

Nectar Plants : *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha panduraefolia*.



Abundance of Joker in Pench Tiger Reserve, MH.



Distribution Map of Joker in India.



Distribution Map of Joker in Pench, MH.

Black Rajah



Common Name : Black Rajah

Scientific Name : *Charaxes solon*

Conservation Status in India : Sch. II of WLP Act, 1972

Status in PTR, MH : Frequent common (As per Tiple & Deokar, 2024)

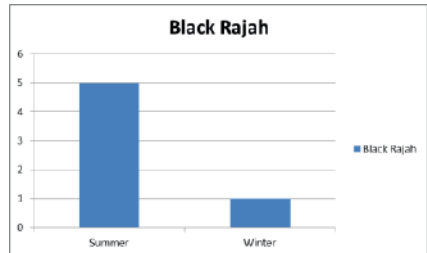
Wingspan : 54–60 mm

Local Name : कृष्ण नरेश

Habitat : Deciduous and scrub forests, and rural and urban woodlands.

Larval Host Plants : *Dalbergia sissoo* (Shisam), *Moullava spicata* (Candy corn plant).

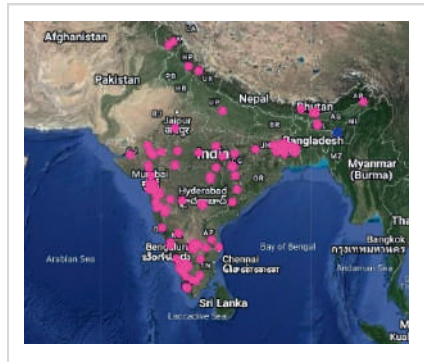
Nectar Plants : *Lantana camara*, *Crotalaria spp.*



Abundance of Black Rajah in Pench Tiger Reserve, MH.



Distribution Map of Black Rajah in Pench, MH.



Distribution Map of Black Rajah in India.

Diversity of Butterfly in India

India is home to a diverse range of butterfly species, with over 1,500 known species. Here are some of the highlights of butterfly diversity in India:

Species richness- The northeastern states and the Himalayas have the highest butterfly species richness. Arunachal Pradesh has highest number of species (745) followed by West Bengal, Manipur, and Sikkim.

Endemic species- 74 species of butterflies are endemic to India.

Family diversity- The most common butterfly families in India are-

- Nymphalidae: Brush-footed butterflies, with 439 species.
- Hesperidae: Skipper butterflies, with 277 species.
- Pieridae: Yellow and white butterflies, with 81 species.
- Lycaenidae: Blues, hairstreaks, and gossamer-winged butterflies, with 318 species.
- Papilionidae: Swallowtail butterflies, with 84 species.



Dark Evening Brown



Dark Banded Bush Brown

Plain Tiger

Common Name : Plain Tiger

Scientific Name : *Danaus chrysippus*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

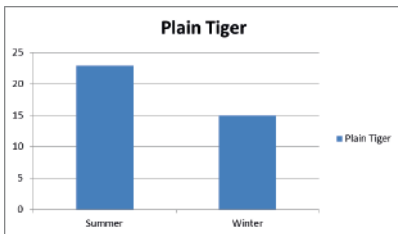
Wingspan : 70-80 mm

Local Name : बिबव्या कडवा

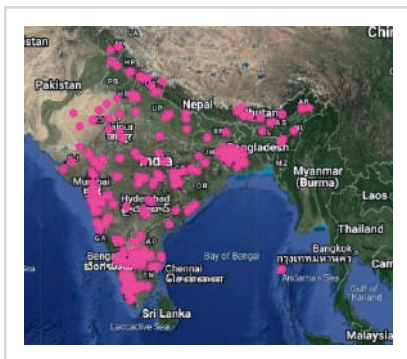
Habitat : Scrub forests, savannahs, agricultural landscapes and urban areas.

Larval Host Plants : *Asclepias currasavica* (Kakatundi), *Calotropis gigantea* (Rui).

Nectar Plants : *Lantana spp.*, *Cosmos spp.* (Cosmea), *Tagetes spp.* (Marigold), *Tridax procumbens*.



Abundance of Plain Tiger in Pench Tiger Reserve, MH.



Distribution Map of Plain Tiger in India.



Distribution Map of Plain Tiger in Pench, MH.

Striped Tiger



Common Name : Striped Tiger

Scientific Name : *Danaus genutia*

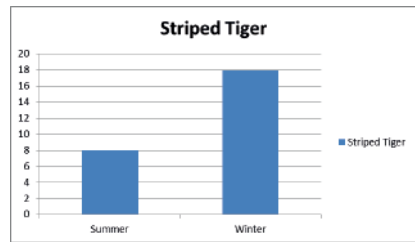
Wingspan : 2-100 mm

Local Name : पेट्टेरी रुईकर

Habitat : Lightly wooded forests and urban woodlands.

Larval Host Plants : *Asclepias curassavica* (Kakatundi), *Cynanchum spp.*

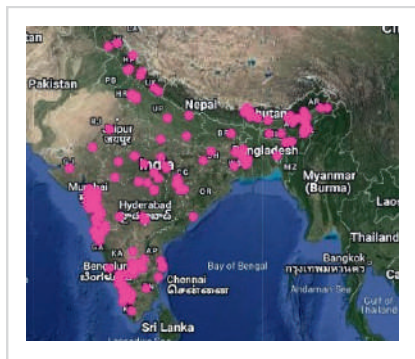
Nectar Plants : *Lantana spp.*, *Cosmos spp.*, *Zinnia spp.*, *Tridax procumbens.*



Abundance of Striped Tiger in Pench Tiger Reserve, MH.



Distribution Map of Striped Tiger in Pench, MH.



Distribution Map of Striped Tiger in India.

Common Palmfly

Common Name : Common Palmfly

Scientific Name : *Elymnias hypermnestra*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

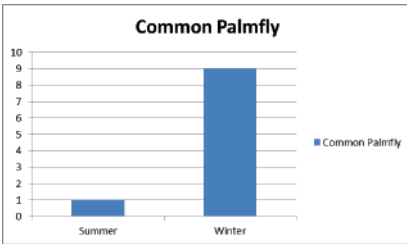
Wingspan : 60-80 mm

Local Name : ताडपरी

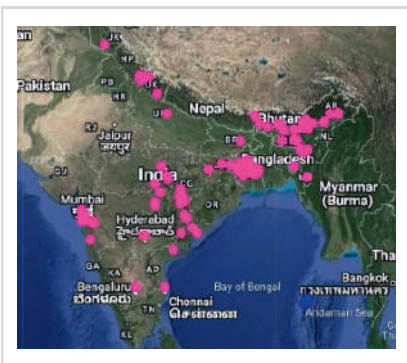
Habitat : Open vegetation throughout the low lands. it is abundant in coconut plantations.

Larval Host Plants : *Areca catechu* (Supari), *Calamus spp.* (Palm).

Nectar Plants : *Lantana camara.*



Abundance of Common Palmfly in Pench Tiger Reserve, MH.



Distribution Map of Common Palmfly in India

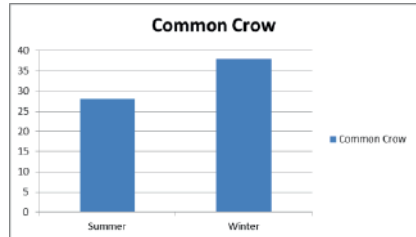


Distribution Map of Common Palmfly in Pench, MH.

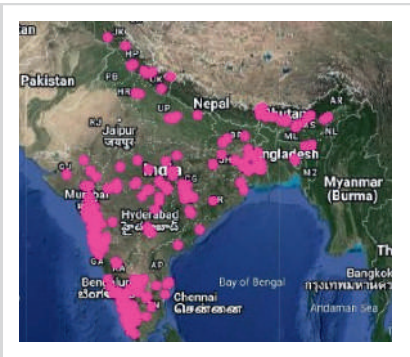
Common Crow



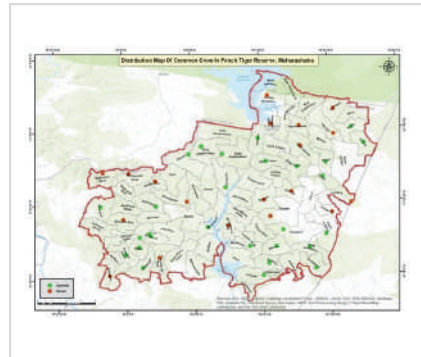
Common Name : Common Crow
Scientific Name : *Euploea core*
Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)
Wingspan : 85-95 mm
Local Name : ह्रबशी
Habitat : Tropical rainforest, dry woodland, Acacia scrub, beach hinterlands, parks and gardens.
Larval Host Plants : *Barleria prionitis*, *Nerium odorum*, *Ficus benghalensis*, *Ficus religiosa*.
Nectar Plant : *Lantana spp.*, *Chromolaena spp.* (Siam weed), *Tridax procumbens*, *Cosmos sulphureus*, *Jatropha panduraefolia*.



Abundance of Common Indian Crow in Pench Tiger Reserve, MH.



Distribution Map of Common Indian Crow in India.



Distribution Map of Common Indian Crow in Pench, MH.

Effect of Climate Change on Butterflies

Climate change has profound impacts on butterflies in several ways. As temperatures rise, butterflies with lighter-colored wings find it increasingly difficult to regulate their body temperature, which can result in stress, disease, and even death. This inability to thermoregulate can lead to reduced activity levels, affecting their ability to forage for food, mate, and escape predators.

The effects of climate change extend beyond rising temperatures; it also leads to more frequent and severe extreme weather events, such as droughts and floods. These events can devastate butterfly habitats and food sources, disrupting the delicate ecosystems on which they rely. For instance, drought can reduce the availability of nectar plants, while floods can wash away caterpillars and pupae.

Additionally, extreme weather can physically damage butterflies, affecting their wings and causing a loss of pigmentation. Wing damage not only impairs their ability to fly but can also make them more vulnerable to predation. Furthermore, the stress caused by climate fluctuations can weaken butterflies' immune systems, making them more susceptible to diseases and parasites.

The timing of life cycles is also affected by climate change. Many butterfly species rely on specific temperature cues to emerge from pupae or to migrate. Altered seasonal patterns can lead to mismatches between butterflies and their food sources, further complicating their survival.

These combined factors threaten the delicate balance of butterfly populations and their ecosystems, underscoring the urgent need for conservation efforts in response to climate change. Protecting and restoring habitats, promoting biodiversity, and reducing greenhouse gas emissions are critical steps to help mitigate these impacts and ensure the survival of these beautiful creatures.

Brown King Crow

Common Name : Brown King Crow

Scientific Name : *Euploea klugii*

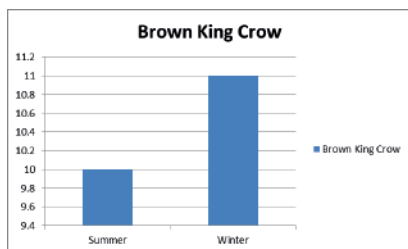
Wingspan : 85-100 mm

Local Name : तपकिरी हबशी

Habitat : Tropical rainforest, dry woodland, Acacia scrub, beach hinterlands, parks and gardens.

Larval Host Plants : *Ficus hispida* (Fig), *Streblus asper* (Tooth brush tree).

Nectar Plants : *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*.



Abundance of Brown King Crow in Pench Tiger Reserve, MH.



Distribution Map of Brown King Crow in India.



Distribution Map of Brown King Crow in Pench, MH.

Common Baron



Common Name : Common Baron

Scientific Name : *Euthalia aconthea*

Conservation Status in India : Sch. II of WLP Act, 1972

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

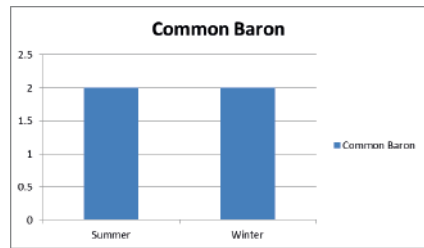
Wingspan : 68–79 mm

Local Name : सरदार

Habitat : Forests, urban areas, wastelands or agricultural land.

Larval Host Plants : *Mangifera spp.* (Mango).

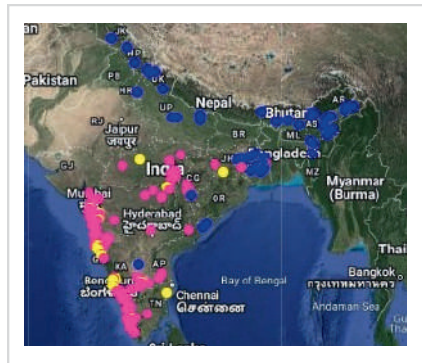
Nectar Plants : *Mangifera Indica spp.* (Mango), *Lantana camara*.



Abundance of Common Baron in Pench Tiger Reserve, MH.



Distribution Map of Common Baron in Pench, MH.



Distribution Map of Common Baron in India.

Gaudy Baron

Common Name : Gaudy Baron

Scientific Name : *Euthalia lubentina*

Status in PTR, MH : Very common
(As per Tiple & Deokar, 2024)

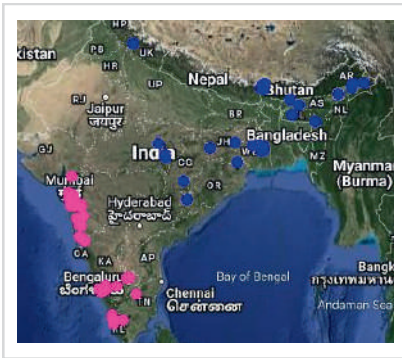
Wingspan : 60–80 mm

Local Name : गडद सरदार

Habitat : Forests, forested area and stream edges, through may be found in fruits orchards.

Larval Host Plants : *Dendrophthoe falcata* (Honey suckle mistletoe.), *D. glabrescens* (Blakeley).

Nectar Plants : *Lantana camara*.



Distribution Map of Gaudy Baron in India.



DID YOU KNOW?

Egg Laying in Butterflies

Female butterflies lay their eggs on plants using a special sticky fluid that works like glue. They carefully choose plants that will provide food for the caterpillars when they hatch.

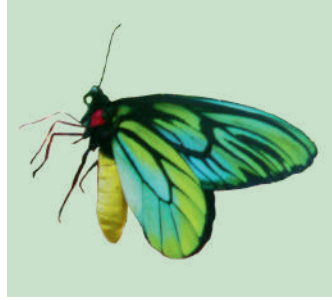


Largest Butterfly Species in The World

1. Queen Alexandra's Birdwing (*Ornithoptera alexandrae*)

With a wingspan of up to 280 mm, this butterfly is primarily found in the forests of the Oro Province in eastern Papua New Guinea. It is named after Queen Alexandra of Denmark and is renowned for its striking colors and size.

(<https://www.sbbt.org.uk/conservation/queen-alexandras-birdwing/>)



2. Goliath Birdwing (*Ornithoptera goliath*)

This butterfly has a wingspan of about 267 mm and is mainly found in New Guinea. It is not only one of the largest butterflies but is also recognized as the second-most poisonous butterfly in the world, using toxins from its diet for protection.

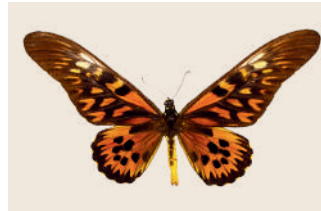
(<https://www.floridamuseum.ufl.edu/exhibits/bloggoliath-birdwing-collection-photo/>)



3. African Giant Swallowtail (*Papilio antimachus*):

With a wingspan of up to 231 mm, this butterfly is the largest in Africa and the third largest in the world. It is predominantly distributed across Central Africa and is known for its impressive size and striking appearance.

(<https://www.inaturalist.org/taxa/108373-Papilio-antimachus>)



These magnificent butterflies are remarkable not only for their size but also for their unique adaptations and ecological significance.

Great Eggfly

Common Name : Great Eggfly

Scientific Name : *Hypolimnas bolina*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

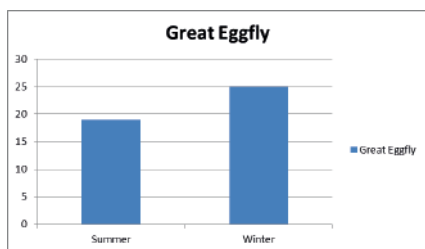
Wingspan : 70–110 mm

Local Name : मोठा चांदवा

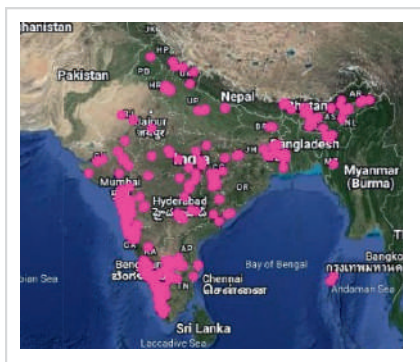
Habitat : Widespread of sp. it is found in openly Indian dense tropical and subtropical forests and scrub forest.

Larval Host Plants : *Barleria prionitis* (Vajradanti), *Abutilon indicum* (Indian mallow), *Hibiscus spp.*

Nectar Plants : *Lantana camara*, *Cosmos sulphureus*, *Jatropha panduraefolia*.



Abundance of Great Eggfly in Pench Tiger Reserve, MH.



Distribution Map of Great Eggfly in India.



Distribution Map of Great Eggfly in Pench, MH.

Butterfly Poaching in India

Butterfly poaching in India poses a significant threat to various species, particularly those that are endangered. Some of the most commonly smuggled butterflies include the Southern Birdwing, Common Blue Bottle, and Malabar Tree Nymph, all of which are listed as endangered.

Smugglers often use clever methods to evade detection by Customs or forest officials. They typically wrap the butterflies in white or tracing paper and conceal them in camera bags or other containers, making it extremely challenging for authorities to catch them.

Certain species, such as the Bhutan Glory, Kaisar-i-Hind, Pale Jezebel, Atlas Moth, and Ladakh Banded Apollo, can fetch prices of up to Rs 20,000 each in the international market. This high demand, coupled with insufficient enforcement against poaching, exacerbates the plight of these beautiful butterflies and threatens their survival.



Danaid Eggfly

Common Name : Danaid Eggfly,
Mimic or Diadem

Scientific Name : *Hypolimnys misippus*

Conservation Status in India : Sch. II of
WLP Act, 1972

Status in PTR, MH : Very common (As
per Tiple & Deokar, 2024)

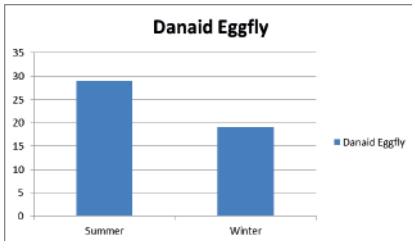
Wingspan : 70-85 mm

Local Name : छोटा चांदवा

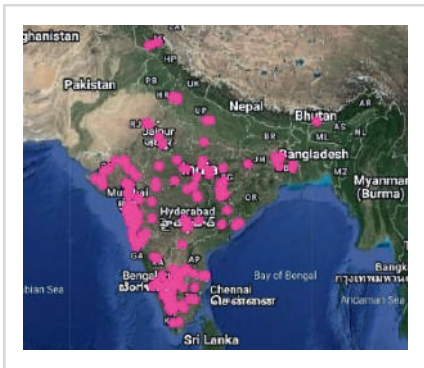
Habitat : Tropical open forest, weedy
areas.

Larval Host Plants : *Barleria prionitis*
(Porcupine flower), *Abutilon indicum*
(Kanghi), *Hibiscus spp.*

Nectar Plants : *Tridax procumbens*,
Lantana camara, *Cosmos sulphureus*,
Jatropha panduraefolia.



Abundance of Danaid Eggfly in
Pench Tiger Reserve, MH.



Distribution Map of
Danaid Eggfly in India.



Distribution Map of
Danaid Eggfly in Pench, MH.

Peacock Pansy



Common Name : Peacock Pansy

Scientific Name : *Junonia almana*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

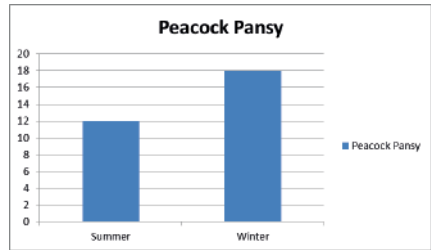
Wingspan : 54–65 mm

Local Name : मयुर भिरभिरी

Habitat : Secondary rainforest, monsoon forest, plantations, rural areas and gardens.

Larval Host Plants : *Acanthus* spp. (Bear's breeches), *Barleria* spp.

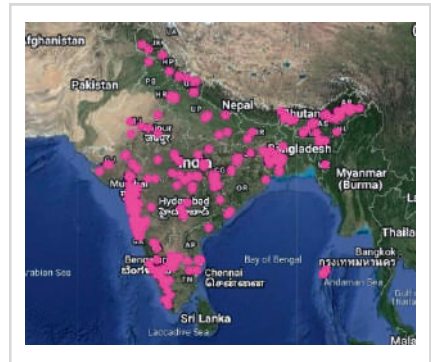
Nectar Plants : *Lantana* spp., *Cosmos* spp., *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha panduraefolia*.



Abundance of Peacock Pansy in Pench Tiger Reserve, MH.



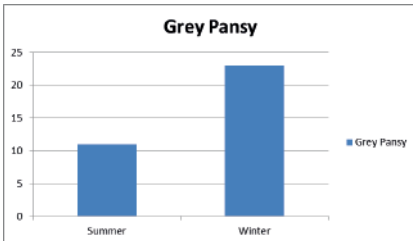
Distribution Map of Peacock Pansy in Pench, MH.



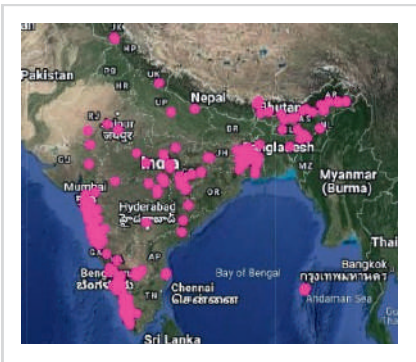
Distribution Map of Peacock Pansy in India.

Grey Pansy

Common Name : Grey Pansy
Scientific Name : *Junonia atlites*
Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)
Wingspan : 55–65 mm
Local Name : राखी भिरभिरा
Habitat : Villages and is commonly seen flying along forest edges.
Larval Host Plants : *Barleria spp.* (Philippine violet), *Hygrophila auriculata* (Gokulakanta).
Nectar Plants : *Lantana spp.*, *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha panduraefolia*.



Abundance of Great Eggfly in Pench Tiger Reserve, MH.



Distribution Map of Great Eggfly in India.



Distribution Map of Great Eggfly in Pench, MH.

Aposematism

Aposematism is a biological defense strategy employed by prey to signal their dangerous nature to potential predators. This is achieved through bright, vibrant colors that serve as a warning of their toxicity or unpleasantness. Prey utilizing this strategy may possess sharp spines, emit foul smells, or contain toxic chemicals, all of which create an unpleasant experience for predators.

Traditionally, it was believed that butterflies acquired their chemical defenses solely through the plants they consumed or by sequestering toxins from their diet. However, recent research has revealed that many butterflies can synthesize toxins independently. This ability enhances their defensive mechanisms, allowing them to effectively deter predators and increase their chances of survival. Aposematism not only illustrates the intricate relationships within ecosystems but also highlights the evolutionary adaptations that help prey thrive in the wild.



PlainTiger



Monarch Butterfly

Yellow Pansy

Common Name : Yellow Pansy

Scientific Name : *Unonia hierta*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

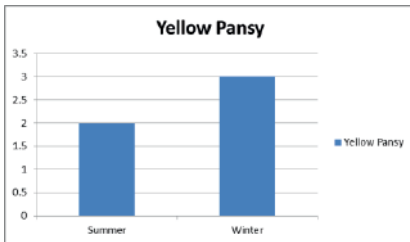
Wingspan : 40–60 mm

Local Name : पित भिरभिरि

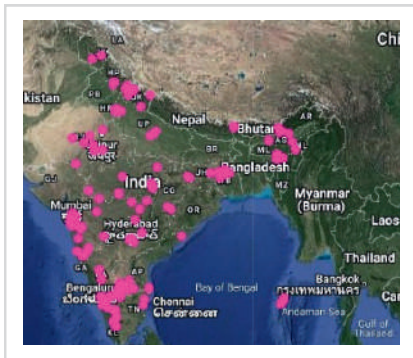
Habitat : Open scrub and grassland habitats.

Larval Host Plants : *Asystasia* spp. (Coromandel), *Barleria* spp.

Nectar Plants : *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha panduraefolia*.



Abundance of Yellow Pansy in Pench Tiger Reserve, MH.



Distribution Map of Yellow Pansy in India.



Distribution Map of Yellow Pansy in Pench, MH.

Nocturnal Butterfly

The approximately 35 species in the family Hedyliidae, commonly known as American moth-butterflies are nocturnal and have long intrigued taxonomists and entomologists alike. These unique insects straddle the line between butterflies and moths, exhibiting characteristics of both groups that have sparked curiosity and debate.



Macrosoma bahiata, a member of Hedyliidae (https://en.wikipedia.org/wiki/Hedyliidae#/media/File:Macrosoma_bahiata.jpg)

American moth-butterflies share several traits with butterflies, such as resting with their wings open and possessing long, slender abdomens. However, their moth-like features, including distinctive, feathered antennae, set them apart. Unlike most butterflies, these nocturnal creatures take to the skies at night, displaying fascinating behaviors that differ from their daytime counterparts.

have provided clarity, firmly placing them within the butterfly lineage. This revelation has opened new avenues for research, prompting scientists to explore the evolutionary pathways that led to such intriguing adaptations.

To adapt to their nighttime lifestyle, American moth-butterflies have developed an advanced vision system that utilizes a range of light-sensitive molecules similar to those in moths. This adaptation allows them to navigate in low-light conditions and makes them particularly drawn to artificial lights, often resulting in mesmerizing displays around street lamps and porches.

Historically, these moth-butterflies were grouped with moths due to their nocturnal habits and physical traits. However, recent advancements in genetic analysis

Chocolate Pansy

Common Name : Chocolate Pansy

Scientific Name : *Junonia iphita*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

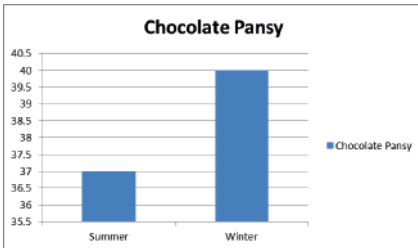
Wingspan : 55-80 mm

Local Name : तपकिरी भिरभिरी

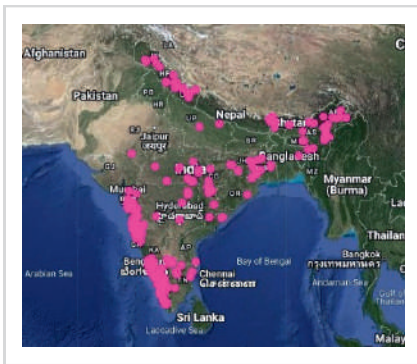
Habitat : Palm plantations, small clearings, and along roadsides and riverbanks, scrublands, parks, roadside vegetation, and forest openings evenly distributed in country.

Larval Host Plants : *Barleria cristata* (Philippine violet), *Dipteracanthus prostrates* (Bell weed).

Nectar Plants : *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha panduraefolia*.



Abundance of Chocolate Pansy in Pench Tiger Reserve, MH.



Distribution Map of Chocolate Pansy in India.



Distribution Map of Chocolate Pansy in Pench, MH.

Lemon Pansy



Common Name : Lemon Pansy

Scientific Name : *Junonia lemonias*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

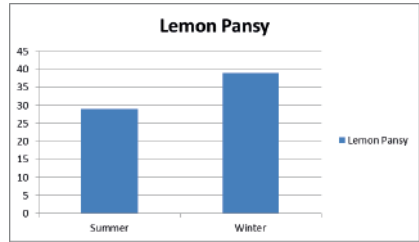
Wingspan : 45–60 mm

Local Name : पितनेत्री भिरभिरी

Habitat : Gardens, fallow land, and open wooded areas.

Larval Host Plants : *Barleria* spp. (Philippine violet), *Hygrophila auriculata* (Gokshura).

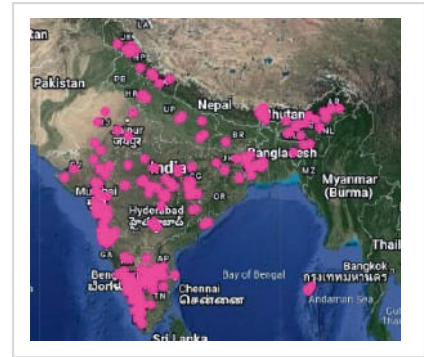
Nectar Plants : *Lantana* spp., *Cosmos* spp., *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha pandurafolia*.



Abundance of Lemon Pansy in Pench Tiger Reserve, MH.



Distribution Map of Lemon Pansy in Pench, MH.



Distribution Map of Lemon Pansy in India.

Blue Pansy

Common Name : Blue Pansy

Scientific Name : *Junonia orithya*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

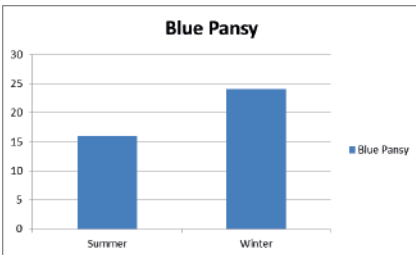
Wingspan : 45–60 mm

Local Name : निल भिरभिरिटी

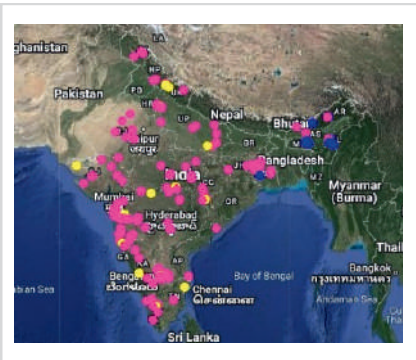
Habitat : Open habitats like fields, gardens, and grassy areas.

Larval Host Plants : *Acanthus spp.* (Bear's breeches), *Barleria cristata* (Philippine violet).

Nectar Plants : *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha panduraefolia*.



Abundance of Blue Pansy in Pench Tiger Reserve, MH.



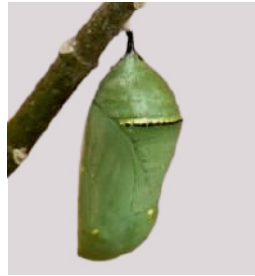
Distribution Map of Blue Pansy in India.



Distribution Map of Blue Pansy in Pench, MH.

Difference Between Butterflies and Moth

Butterflies molt to a chrysalis when pupating while moths spin a silken cocoon. Some exceptions include the hawk moths, that burrow into the ground and molt to a hard chrysalis-like covering, and Parnassius butterflies that spin a cocoon-like web.



Butterfly Chrysalis



Moth Cocoon

Butterflies have slender, clubbed antennae. Moths have either hair like antennae, or in some species males will have feather-like antennae. The only oddity in this grouping are the skippers (Family Hesperidae) of which antennae aren't clubbed at the end, but hooked.



Antennae of Butterfly



Antennae of Moth



Antennae of Skipper

Bamboo Treebrown

Common Name : Bamboo Treebrown

Scientific Name : *Lethe europe*

Conservation Status in India : Sch. I of WLP Act, 1972

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

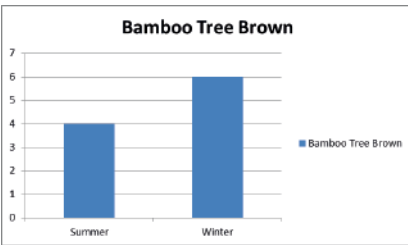
Wingspan : 65-75 mm

Local Name : वेळू तरु छाया

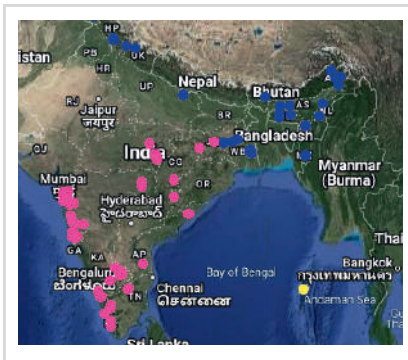
Habitat : Lowlands where its preferred host plant, the bamboo is cultivated.

Larval Host Plants : *Bambusa spp.*

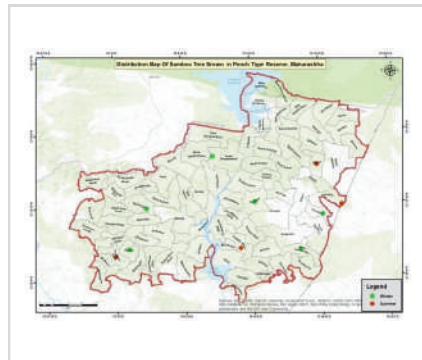
Nectar Plants : *Tridax procumbens*, *Lantana camara*.



Abundance of Bamboo Treebrown in Pench Tiger Reserve, MH.



Distribution Map of Bamboo Treebrown in India.



Distribution Map of Bamboo Treebrown in Pench, MH.

Common Evening Brown



Common Name : Common Evening Brown

Scientific Name : *Melanitis leda*

Status in PTR, MH : Rare (As per Tiple & Deokar, 2024)

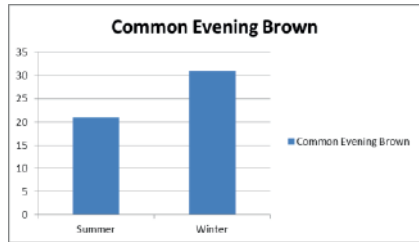
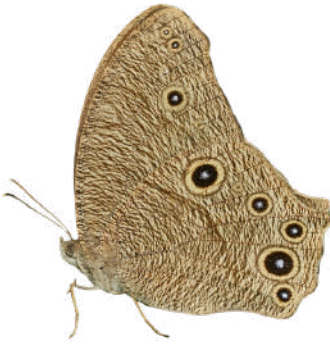
Wingspan : 60-80 mm

Local Name : सांजपरी

Habitat : Ranging from forests to home gardens.

Larval Host Plants : *Sorghum spp.*, Grasses, *Zea mays* (Indian corn), *Apulda mutaca* (Tambat), *Elusine coracana* (Mangal).

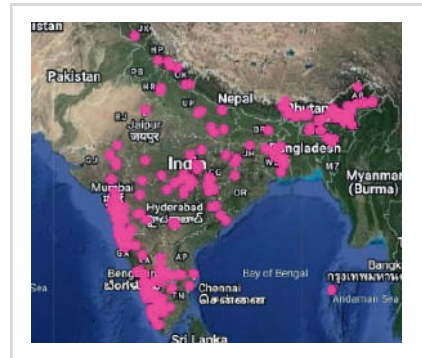
Nectar Plant : *Lantana spp.*



Abundance of Common Evening Brown in Pench Tiger Reserve, MH.



Distribution Map of Common Evening Brown in Pench, MH.



Distribution Map of Common Evening Brown in India.

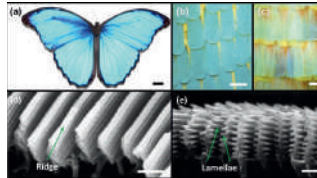
Coloration in Butterflies

Adult butterflies belong to the order Lepidoptera, a name derived from the Ancient Greek words *λεπίς* (*lepís*), meaning "scale," and *πτερόν* (*pterón*), meaning "wing." Their four scale-covered wings are not only essential for flight but also serve as a canvas for their vibrant displays. Butterflies colors are result from a fascinating interplay of pigments and structural coloration.

The scales on butterfly wings contain various pigments that contribute to their coloration. Melanins produce deep blacks and browns, while uric acid derivatives and flavones create bright yellows. However, the most striking hues—such as vivid blues, vibrant greens, fiery reds, and iridescent shades—often stem from structural coloration. This phenomenon occurs at the microscopic level, where the unique microstructures of the scales and hairs interact with light.

These microscopic structures act like prisms, refracting and reflecting light in ways that create dazzling colors. For instance, the blue morpho butterfly (*Morpho peleides*) showcases brilliant blue wings, not because of blue pigments, but due to the precise arrangement of tiny scales that reflect specific wavelengths of light. The result is a mesmerizing, shimmering effect that changes with the angle of view, making these butterflies appear almost magical.

Nanostructure of the Morpho butterfly. a) A photograph of the Morpho didius butterfly showing blue iridescence. b) A magnified image of an *M. rethanor* wing showing the ordered arrangement of its single layer of ground scales. c) A magnified image of an *M. didius* wing illustrating the two distinct types of scales, with the glass scales overlying the ground scales, d) Scanning electron microscope (SEM) images of an oblique view of the male butterfly *M. didius*. e) A cross-section of a ground scale of the male butterfly *Morpho didius* (Butt et al., 2016)



Use of Coloration

Additionally, coloration in butterflies serves multiple purposes beyond mere beauty. Bright colors can signal toxicity or unpalatability to predators, a strategy known as aposematism. Meanwhile, more subdued or camouflaged patterns can help butterflies blend into their surroundings, offering protection from predators.

Dark Evening Brown

Common Name : Dark Evening Brown

Scientific Name : *Melanitis phedima*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

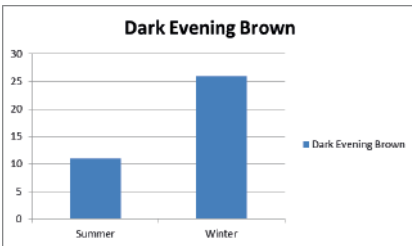
Wingspan : 72–86 mm

Local Name : गडद सांजपरी

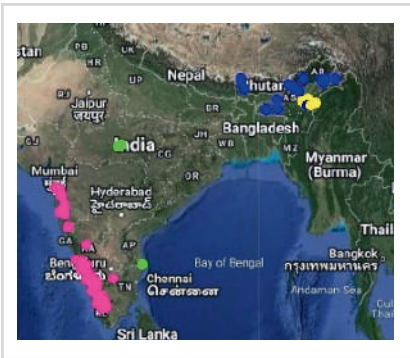
Habitat : Urban forest.

Larval Host Plants : *Andropogon spp.*, *Apluda spp.* (Grass).

Nectar Plants : Not nectar founds.
founds upon plant species.



Abundance of Dark Evening Brown in Pench Tiger Reserve, MH.



Distribution Map of Dark Evening Brown in India.



Distribution Map of Dark Evening Brown in Pench, MH.

Commander



Common Name : Commander
Scientific Name : *Moduza procris*
Conservation Satus in India : Sch. II of WLP Act, 1972

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

Wingspan : 60–75 mm

Local Name : नायक

Habitat : Along watercourses in dry and moist deciduous forests.

Larval Host Plants : *Neolamarckia cadamba* (Kadam), *Cadaba fruticosa* (Kodhab).

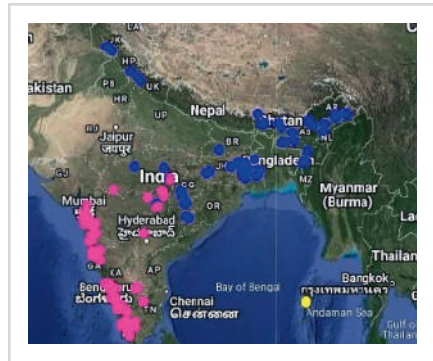
Nectar Plants : *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha panduraefolia*.



Abundance of Commander in Pench Tiger Reserve, MH.



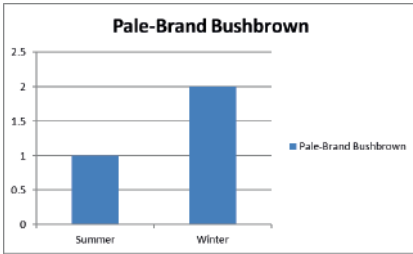
Distribution Map of Commander in Pench, MH.



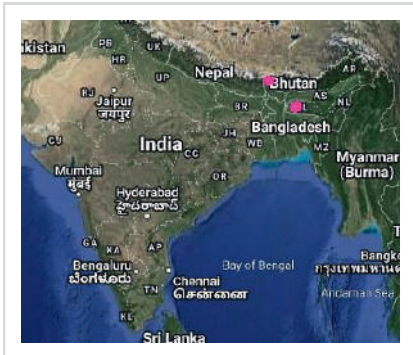
Distribution Map of Commander in India.

Intermediate Bushbrown

Common Name : Intermediate Bushbrown/Pale-brand Bushbrown
Scientific Name : *Mycalesis orcha*
Status in PTR, MH : Rare (As per Tiple & Deokar, 2024)
Wingspan : 42–55 mm
Local Name : फिक्कट छाया
Habitat : Shady places in all over the country except for dense forest.
Larval Host Plants : *Poaceae* (*Grasses*), *Setaria barbata*.
Nectar Plants : *Tridax procumbens*, *Lantana camara*.



Abundance of Intermediate Bushbrown in Pench Tiger Reserve, MH.



Distribution Map of Intermediate Bushbrown in India.



Distribution Map of Intermediate Bushbrown in Pench, MH.

How Disturbances Affect Butterfly Coloration?

In a study in Amazon rain forest, butterflies in the secondary forest and continuous primary forest were found more colourful than those found in early succession and fragments of forests. Individuals occurring in forests of early succession showed higher average values of hue and saturation, but lower brightness. Accompanying changes in colour composition, wing-colour diversity among species was lower in human-disturbed habitats, such as those of early forest succession and secondary forest. High deforestation rates in recent years is linked with negative changes in functional coloration strategies (e.g. camouflage, warning colours), something that has to date been poorly explored or demonstrated for butterflies. Specifically, human interference has apparently placed butterflies under strong selection for lower diversity in their colours and range of defensive strategies. Those species that are most colourful are the first to be locally extinguished, likely due to removal of native vegetation and increased exposure to predators, and more broadly owing to inhospitable environmental conditions.

Reference: Discolouring the Amazon Rainforest: How deforestation is affecting butterfly coloration (Spaniol et al., 2020)



Dark-branded Bushbrown

Common Name : Dark-branded Bushbrown

Scientific Name : *Mycalesis mineus*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

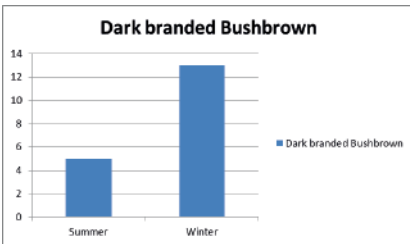
Wingspan : 40–50 mm

Local Name : गडद छाया

Habitat : Shady, but open areas in the vicinity of grassland.

Larval Host Plants : *Poaceae* (Grasses), *Setaria barbata* (Green foxtail).

Nectar Plants : *Tridax procumbens*, *Lantana camara*.



Abundance of Dark-branded Bushbrown in Pench Tiger Reserve, MH.

Distribution Map of Dark-brand Bushbrown in India.



Distribution Map of Dark-branded Bushbrown in India.



Distribution Map of Dark-branded Bushbrown in Pench, MH.

Common Bushbrown



Common Name : Common Bushbrown

Scientific Name : *Mycalesis perseus*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

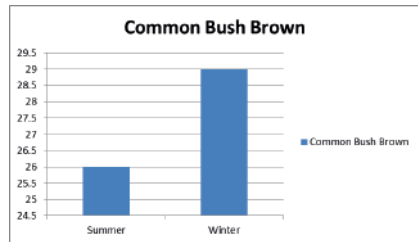
Wingspan : 40–48 mm

Local Name : छाया

Habitat : Shady, but open areas in the vicinity of grassland.

Larval Host Plants : *Oplismenus compositus* (Running mountain grass).

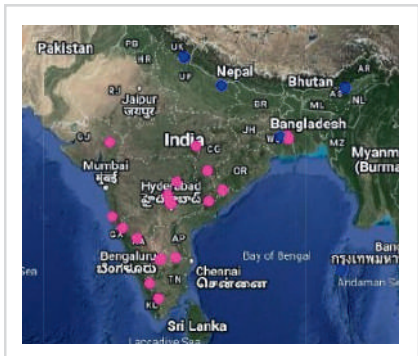
Nectar Plants : *Tridax procumbens*, *Lantana camara*.



Abundance of Common Bushbrown in Pench Tiger Reserve, MH.



Distribution Map of Common Bushbrown in Pench, MH.



Distribution Map of Common Bushbrown in India.

Long-branded Bushbrown

Common Name : Long-branded Bushbrown

Scientific Name : *Mycalesis visala*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

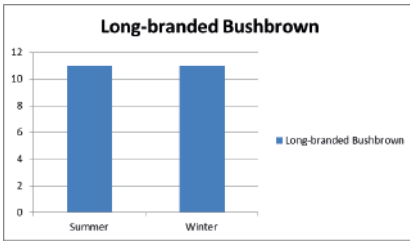
Wingspan : 40–50 mm

Local Name : लंब छाया

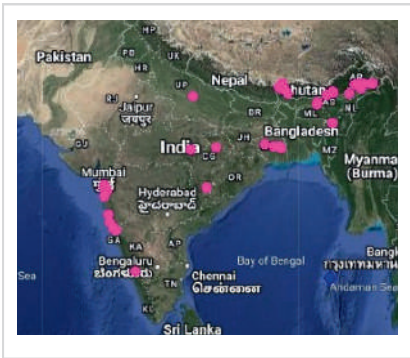
Habitat : Rainforest and deciduous forest.

Larval Host Plants : *Echinochloa colona* (Wild rice), *Oryza sativa* (Rice).

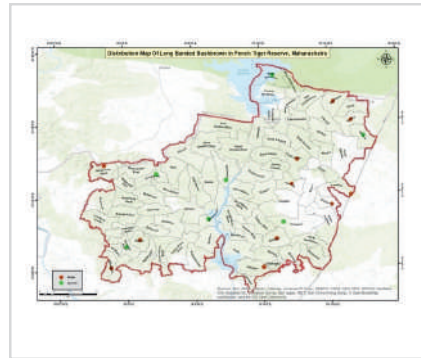
Larval Host Plants : *Tridax procumbens*, *Lantana camara*.



Abundance of Long-branded Bushbrown in Pench Tiger Reserve, MH.

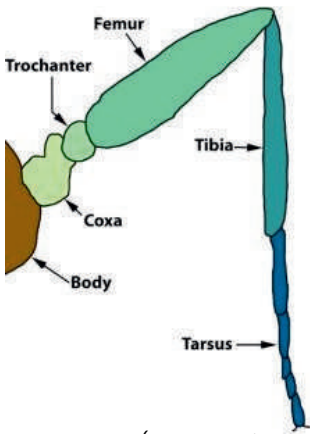


Distribution Map of Long-branded Bushbrown in India.



Distribution Map of Long-branded Bushbrown in Pench, MH.

How Butterfly Tastes Food?



The Insect Leg. (Photo Credit :
Nwbeeson/Wikimedia Commons)

Both butterflies (Lepidoptera) and flies (Diptera) are known as "leg tasters." The chemoreceptors on their legs connect to nerve endings, allowing them to detect chemicals in their environment. In butterflies, these receptors are located on the tarsus, helping them identify food and make decisions about mating and egg-laying. When a butterfly lands on a leaf, it "tastes" it by standing on it. If suitable for their caterpillars, they lay their eggs there. This showcases the intricate ways butterflies interact with their surroundings.

Oriental Grey Pansy



Common Sailer

Common Name : Common Sailer

Scientific Name : *Neptis hylas*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

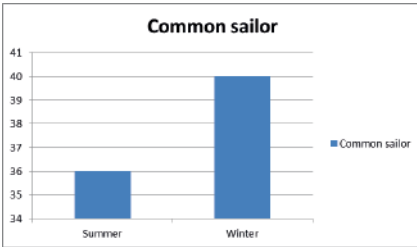
Wingspan : 50-60 mm

Local Name : तरंग

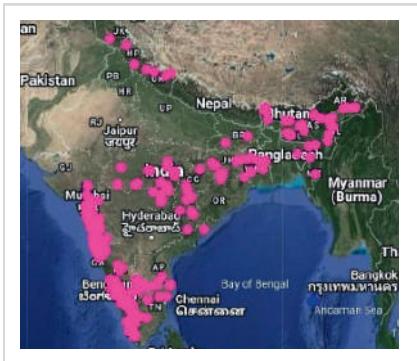
Habitat : Semi-evergreen and moist deciduous forests.

Larval Host Plants : *Dalbergia spp.*, *Pongamia glabra* (Pongame oil tree.)

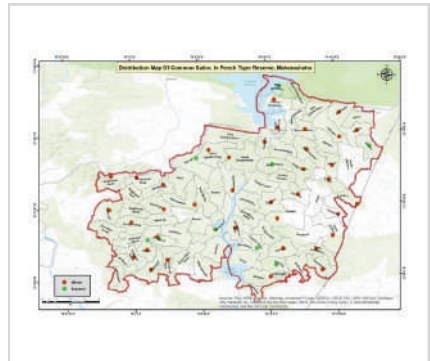
Nectar Plants : *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha panduræfolia*.



Abundance of Common Sailer in Pench Tiger Reserve, MH.



Distribution Map of Common Sailer in India.



Distribution Map of Common Sailer in Pench, MH.

Glassy Tiger



Common Name : Glassy Tiger

Scientific Name : *Parantica aglea*

Status in PTR, MH : Very rare (As per Tiple & Deokar, 2024)

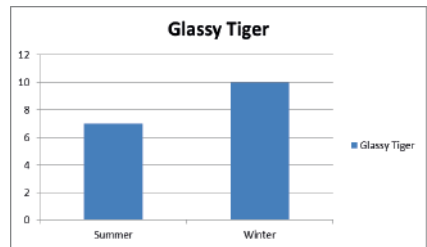
Wingspan : 70-85 mm

Local Name : कंचा रुईकर

Habitat : Scrublands and lush gardens full of flowers.

Larval Host Plants : *Calotropis* spp., *Cryptolepis buchmanii* (Karanta).

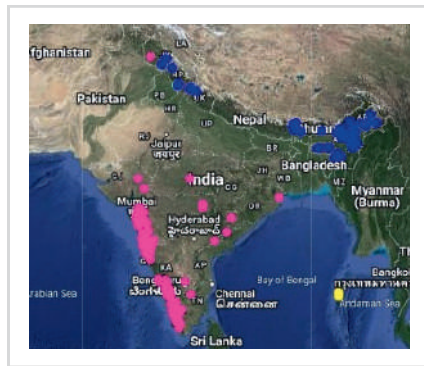
Nectar Plants : *Ageratum conyzoides* (White weed), *Stachytarpheta* spp. (Nilkanthi), *Lantana camara*, *Jatropha panduraefolia*.



Abundance of Glassy Tiger in Pench Tiger Reserve, MH.



Distribution Map of Glassy Tiger in Pench, MH.



Distribution Map of Glassy Tiger in India.

Short-banded Sailer

Common Name : Short-banded Sailer

Scientific Name : *Phaedyma columella*

Conservation Status in India : Sch. II of WLP Act, 1972

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

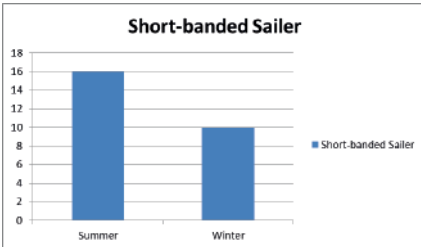
Wingspan : 60-70 mm

Local Name : लघु-पट्ट तरंग

Habitat : Tropical rain forests, mangrove forests, protected areas, parks and cities.

Larval Host Plants : *Dalbergia spp.*

Nectar Plants : *Lantana camara*, *Jatropha panduraefolia*.



Abundance of Short-banded Sailer in Pench Tiger Reserve, MH.



Distribution Map of Short-banded Sailer in India.



Distribution Map of Short-banded Sailer in Pench, MH.

Why Do Moths Have Ears and Butterflies Don't?

The presence of ears in moths and the absence of them in butterflies can be attributed to their differing lifestyles and survival strategies. Moths are predominantly nocturnal and rely on sound and smell to navigate and avoid predators. Their ears have evolved primarily to detect the ultrasonic calls of echolocating bats, allowing them to take evasive action when threatened. This auditory adaptation is crucial for their survival in the dark, where visual cues are limited.

In contrast, butterflies are primarily diurnal, meaning they are active during the day when visibility is high. As a result, they rely heavily on sight and chemical signals for communication and navigation. This visual orientation reduces the necessity for auditory sensing, making ears less beneficial for butterflies overall.

However, there are exceptions within the butterfly family. For example, the Satyridae family, which includes browns and ringlets, has evolved an interesting adaptation: they possess a specialized structure at the base of each forewing that functions as an eardrum. This structure is connected to a swollen vein along the wing's leading edge, which acts as a sound collector, funneling sound waves onto the eardrum. This adaptation allows them to detect sounds, albeit not to the same extent as moths.

Overall, the evolutionary paths of moths and butterflies reflect their distinct lifestyles and environmental adaptations. While moths have developed a sophisticated auditory system to thrive in the dark, butterflies have honed their visual and chemical communication strategies to navigate the vibrant world of daylight.



Baronet

Common Leopard

Common Name : Common Leopard

Scientific Name : *Phalanta phalantha*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

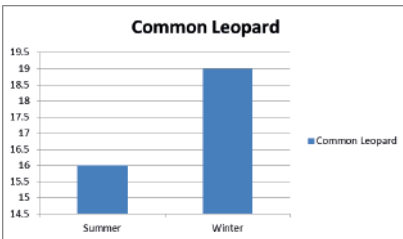
Wingspan : 50–60 mm

Local Name : बिट्टी

Habitat : Evergreen, Moist Deciduous forests & human habitations.

Larval Host Plants : *Flacourtia indica* (Indian plum).

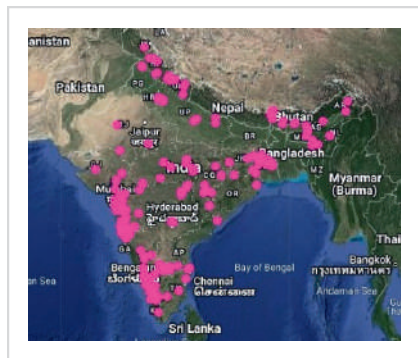
Nectar Plants : *Lantana spp.*, *Meyenia laxiflora* (Aliv).



Abundance of Common Leopard in Pench Tiger Reserve, MH.



Distribution Map of Common Leopard in Pench, MH.



Distribution Map of Common Leopard in India.

Anomalous Nawab



Common Name : Anomalous Nawab

Scientific Name : *Polyura agraria*

Status in PTR, MH : Rare (As per Tiple & Deokar, 2024)

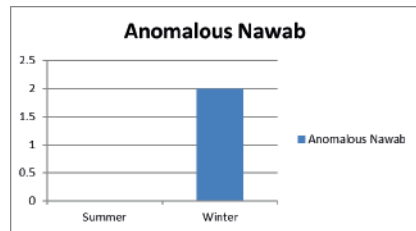
Wingspan : 95-100 mm

Local Name : दोन टिपक्यांची नवाब

Habitat : Considered uncommon and rare due to its specialised habitat.

patchy status says its common while as per the habitat its uncommon distribution or low population density.

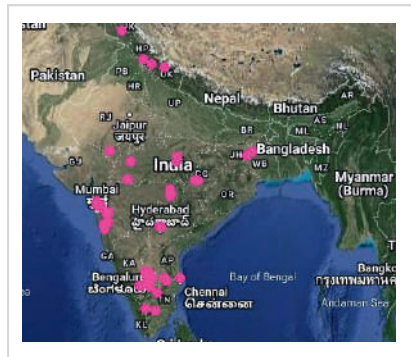
Larval Host Plants : *Acacia caesia* (Black catechu/ Soap bark), *A. nilotica* (Gum arabic tree).



Abundance of Anomalous Nawab in Pench Tiger Reserve, MH.



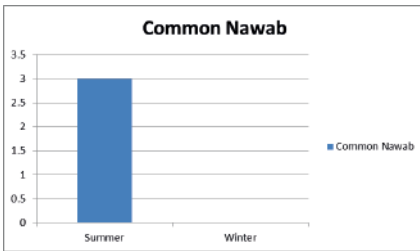
Distribution Map of Anomalous Nawab in Pench, MH.



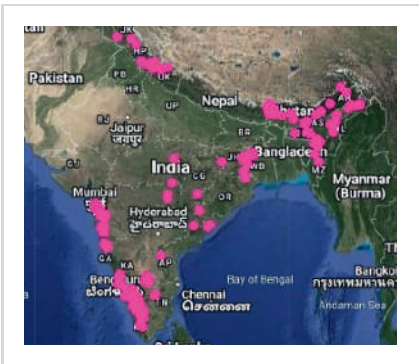
Distribution Map of Anomalous Nawab in India.

Common Nawab

Common Name : Common Nawab
Scientific Name : *Polyura athamas*
Conservation Status in India : Sch. II of WLP Act, 1972
Status in PTR, MH : Common (As per Tiple & Deokar, 2024)
Wingspan : 60-75 mm
Local Name : नवाब
Habitat : Semi-evergreen and moist deciduous forests.
Larval Host Plants : *Delonix regia* (Gulmohar), *Acacia spp.*



Distribution Map of Common Nawab in Pench Tiger Reserve, MH.



Distribution Map of Common Nawab in India.



Distribution Map of Common Nawab in Pench, MH.

Poisonous Butterfly in India

In India, certain butterfly species are known to be poisonous or toxic, primarily as a defense mechanism against predators. Here are some notable poisonous butterflies and the reasons behind their toxicity.

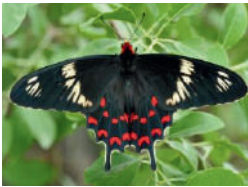


Common Mormon Butterfly (*Papilio polytes*)

While not deadly, it contains compounds that make it distasteful to predators. It mimics the toxic model of the poisonous *Papilio dardanus*, also called Saharan swallowtails, African swallowtails, Mocker swallowtails or flying handkerchief. The toxicity comes from the plants (like citrus) its larvae feed on, which contain toxic chemicals.

Lime Butterfly (*Papilio demoleus*)

Similar to the Common Mormon, it incorporates toxins from the plants it consumes during its larval stage. Its caterpillars feed on citrus plants, which contain toxic alkaloids that are retained in their bodies.



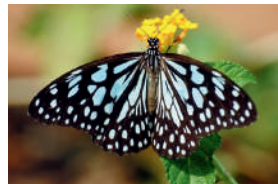
Crimson Roses (*Pachliopta hector*)

It belongs to the swallowtail (Papilionidae) family of butterflies. They're large, visually striking butterflies that lay their eggs on the Indian birthwort plant (*Aristolochia indica*) or similar plants that contain a toxic substance. The butterfly larvae sequester this toxin, making the adult butterfly

inedible to would-be predators. The high-contrast red markings on the black wings are meant to advertise this toxicity.

Blue Tiger Butterfly (*Tirumala limniace*)

This butterfly is not highly toxic but has a distasteful taste due to the compounds it acquires from its food sources. Its caterpillars feed on plants that contain toxic chemicals, which they assimilate and make them less palatable to predators.



Baronet

Common Name : Baronet

Scientific Name : *Symphaedra nais*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

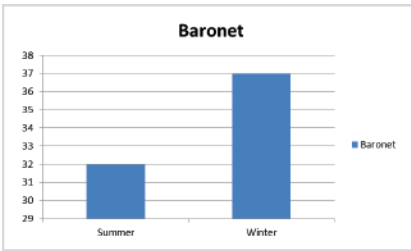
Wingspan : 50-60 mm

Local Name : झिंगोरी

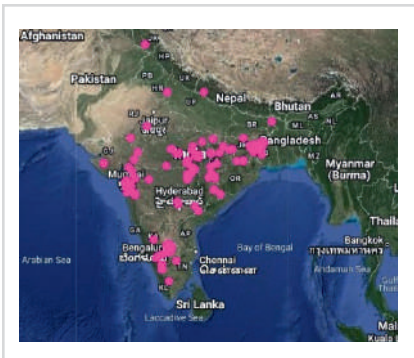
Habitat : Grassland

Larval Host Plants : *Mangifera indica* (Mango).

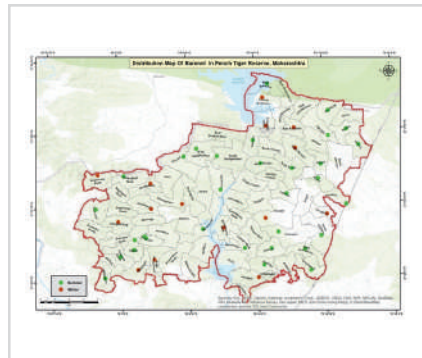
Nectar Plants : *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha panduraefolia*.



Abundance of Baronet in Pench Tiger Reserve, MH.



Distribution Map of Baronet in India.



Distribution Map of Baronet in Pench, MH.

Blue Tiger



Common Name : Blue Tiger

Scientific Name : *Tirumala limniace*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

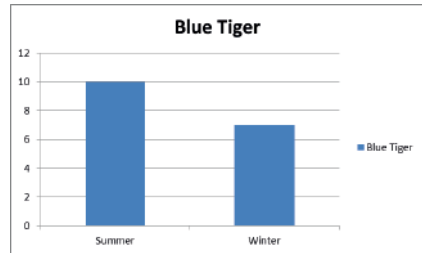
Wingspan : 90–100 mm

Local Name : गिल रुईकट

Habitat : Both in the hills and in the plains.

Larval Host Plants : *Heterostemma* spp., *Holarrhena pubescens* (Kutaja).

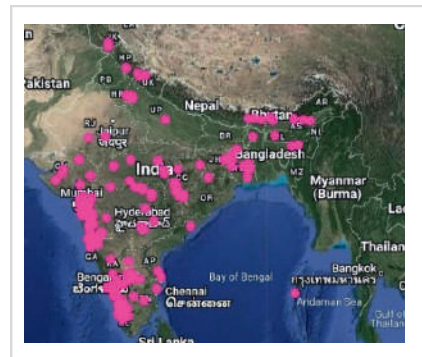
Nectar Plants : *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha panduraefolia*.



Abundance of Blue Tiger in Pench Tiger Reserve, MH.



Distribution Map of Blue Tiger in Pench, MH.



Distribution Map of Blue Tiger in India.

Painted Lady

Common Name : Painted Lady

Scientific Name : *Vanessa cardui*

Status in PTR, MH :

Rare (As per Tiple & Deokar, 2024))

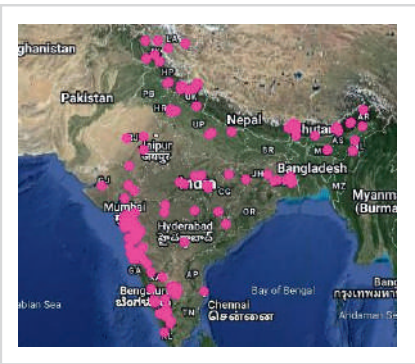
Wingspan : 55-70 mm

Local Name : उर्वशी

Habitat : Fields, parks, meadows, and dunes.

Larval Host Plants : *Anchusa spp.*,
Cynoglossum spp.

Nectar Plants : *Tridax procumbens*,
Lantana camara.



Distribution Map of Painted Lady in India.



DID YOU KNOW?

Butterflies Only Live for a Few Weeks

The average lifespan of an adult butterfly is roughly three to four weeks, however, the entire life cycle can last anywhere between two and eight months.

How Do Butterflies Communicate?

Adult butterflies communicate with one another mostly through chemical cues—the males produce chemicals called pheromones to seduce the females. Additionally, a few species communicate with sound. The male Cracker butterfly (*Hamadryas sp*) can make loud noises with his wings.



Cracker butterfly (source- <https://www.inaturalist.org/taxa/83228-Hamadryas>)

Common Three-ring

Common Name : Common Three-ring

Scientific Name : *Ypthima asterope*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

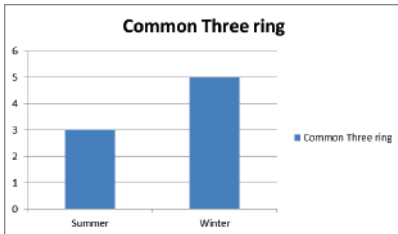
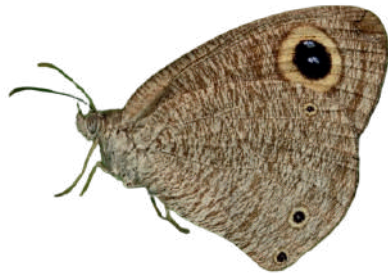
Wingspan : 30–37 mm

Local Name : त्रिमंडल

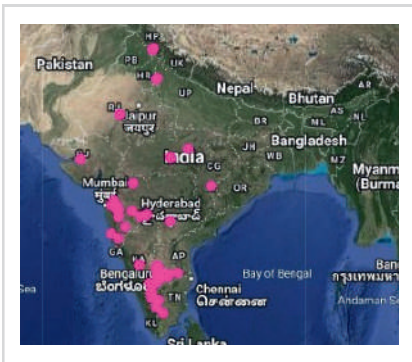
Habitat : Semiarid, most often rocky slopes and garigues, sometimes also stony, dry river beds and other hot places with host plants.

Larval Host Plants : Grasses.

Nectar Plants : *Tridax procumbens*, *Lantana camara*.



Abundance of Common Three-ring in Pench Tiger Reserve, MH.



Distribution Map of Common Three-ring in India.



Distribution Map of Common Three-ring in Pench, MH.

Common Four-ring



Common Name : Common Four-ring
Scientific Name : *Ypthima huebneri*
Status in PTR, MH : Rare (As per Tiple & Deokar, 2024)

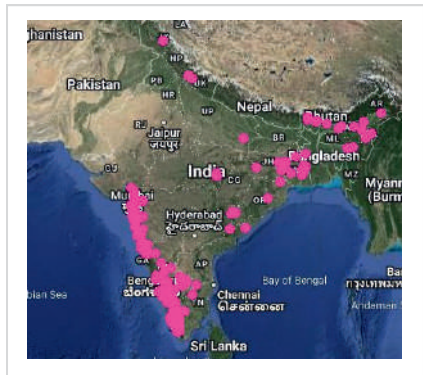
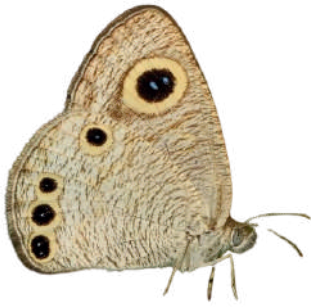
Wingspan : 30–35 mm

Local Name : चतुःमांडल

Habitat : Grassy areas, open woodlands, and edges of forests

Larval Host Plants : *Axonopus compressus* (Cow grass, Blanket grass), and other Grass species.

Necta Plants : *Tridax procumbens*, *Lantana camara*.



Distribution Map of Common Four-ring in India.

DID YOU KNOW?

Butterflies are near sighted, but they can see many colors. Butterflies have good eyesight within 10–12 feet, but any farther, things look blurry.



Common Five-ring

Common Name : Common Five- ring

Scientific Name : *Ypthima baldus*

Status in PTR, MH : Frequent common
(As per Tiple & Deokar, 2024)

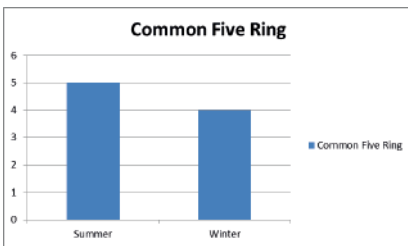
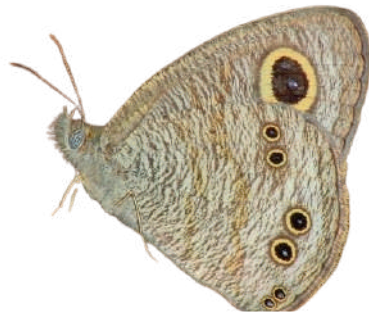
Wingspan : 30-40 mm

Local Name : पंच मंडल

Habitat : Secondary growth and open grassy areas around the fringes of the nature reserves.

Larval Host Plants : *Cynodon dactylon* (Bermuda grass) and other grasses.

Nectar Plant : *Tridax procumbens*.



Abundance of Common Five-ring in Pench Tiger Reserve, MH.



Distribution Map of Common Five-ring in India.



Distribution Map of Common Five-ring in Pench, MH.

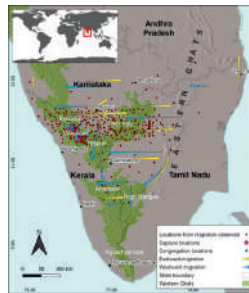
Butterfly Migration in India

Butterfly migration in India is a fascinating phenomenon, primarily influenced by seasonal changes and climate. Here are some key points regarding butterflies.

- **Species Involved:** Notable migratory species include the Common Tiger (*Danaus genutia*), the Blue Tiger (*Tirumala limniace*), and the Milkweed Butterfly (*Danaus plexippus*).
- **Migration Patterns:** Many butterflies migrate to escape unfavorable weather conditions and to find suitable breeding grounds. For example, some species travel from the northern states to the southern regions during winter. Crimson rose migrate to find better breeding spots.
- **Routes:** Common migration routes include the Western Ghats, where butterflies move between states like Maharashtra, Karnataka, and Tamil Nadu, as well as through the northeastern states.
- **Timing:** Migration typically occurs during specific seasons, with many butterflies making their journey between October and March.
- **Habitat Dependency:** Migratory butterflies depend on specific habitats, such as forests and grasslands, for resting and feeding during their journey.
- **Conservation Concerns:** Habitat loss, climate change, and pesticide use threaten migratory pathways, making conservation efforts essential to protect these delicate ecosystems.

Butterfly migration not only contributes to biodiversity but also plays a crucial role in pollination and ecosystem health.

Map showing the locations where migrating butterflies were observed. (Vinayan et al, 2023)

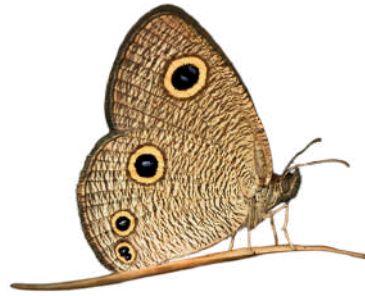


Lesser Three-ring

Common Name : Lesser Three-ring
Scientific Name : *Ypthima inica*
Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)
Wingspan : 30–34 mm
Local Name : छोटा त्रिमंडल
Habitat : Protected forest areas.
Larval Host Plants : *Setaria barbata* (Corn grass), *Poaceae* (Grasses) other grasses.
Nectar Plant : *Tridax procumbens*.



Distribution Map of Lesser Three-ring in India.



DID YOU KNOW?

Butterflies can't fly if it's too cold.

Butterflies need a body temperature between 82 and 100 degrees to fly with ease. Since they are cold blooded animals, they can't regulate their body temperatures. If the temperature goes below 55 degrees, they can't move and won't be able to eat or fly away from their predators.



Blackvein Sergeant



Common Name : Blackvein Sergeant

Scientific Name : *Athyma ranga*

Conservation Status in India : Sch. II of WLP Act, 1972

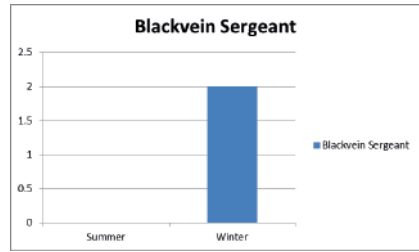
Wingspan : 60-75 mm

Local Name : कृष्णाशिर रक्षक

Habitat : Forested areas.

Larval Host Plants : *Chionanthus mala-elengi* (Malabar fringe tree).

Nectar Plants : *Lantana camara*, *Cosmos sulphureus*.



Abundance of Blackvein Sergeant in Pench Tiger Reserve, MH.



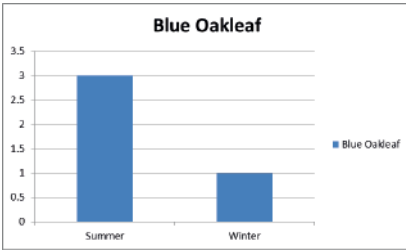
Distribution Map of Blackvein Sergeant in Pench, MH.



Distribution Map of Blackvein Sergeant in India.

Blue Oakleaf

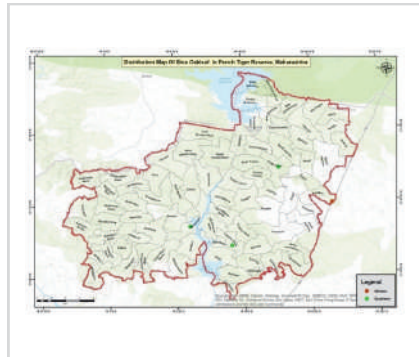
Common Name : Blue Oakleaf
Scientific Name : *Kallima horsfieldi*
Conservation Status in India : Sch. II of WLP Act, 1972
Wingspan : 84-120 mm
Local Name : निलपर्ण
Habitat : Tropical forests.
Larval Host Plants : *Strobilanthes callosus* (Karvi).
Nectar Palms : *Lantana camara*.



Abundance of Blue Oakleaf in Pench Tiger Reserve, MH.



Distribution Map of Blue Oakleaf in India.



Distribution Map of Blue Oakleaf in Pench, MH.

Kaiser-e-Hind

Kaiser-e-Hind which literally means 'Emperor of India' is one of the rarest butterflies in India. Its scientific name is *Teinopalpus imperialis*. This is a rare species of swallowtail butterfly found in small pockets of Nepal, Bhutan, northern Vietnam and in the Sichuan province of China.



In India, it is found along the eastern Himalayas (Arunachal Pradesh, West Bengal, Meghalaya, Assam, Sikkim and Manipur). It has been declared state butterfly of Arunachal Pradesh.

Kaiser-i-Hind (source <https://www.indianarrative.com>)

Chestnut Streaked Sailer

Common Name : Chestnut–Streaked Sailer

Scientific Name : *Neptis jumbah*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

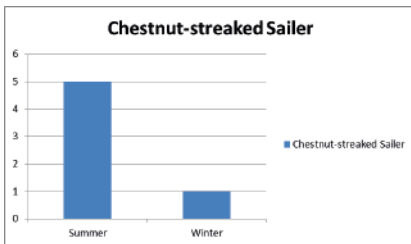
Wingspan : 62–70 mm

Local Name : पट्ट तरंग

Habitat : Forested habitats at elevations between sea level and about 800 metres.

Larval Host Plants : *Dalbergia spp.*, *Pongamia pinnata* (Pongame oil tree, Karanj).

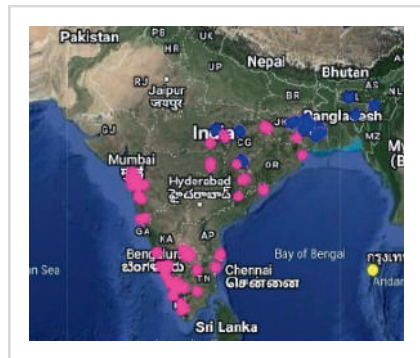
Nectar Plants : *Lantana camara*, *Jatropha panduraefolia*.



Abundance of Chestnut–Streaked Sailer in Pench Tiger Reserve, MH.



Distribution Map of Chestnut–Streaked Sailer in Pench, MH.



Distribution Map of Chestnut–Streaked Sailer in India.

Common Lascar



Common Name : Common Lascar

Scientific Name : *Pantoporia hordonia*

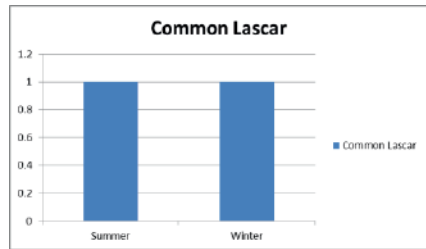
Wingspan : 45–50 mm

Local Name : नाखवा

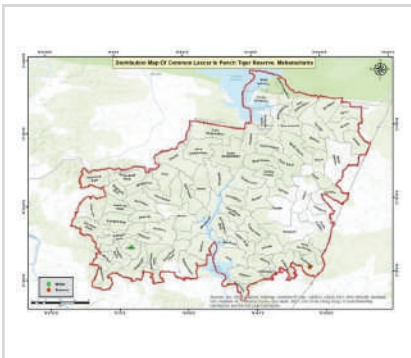
Habitat : Tropical and subtropical forests, including clearings, glades, logging roads and forest-edge habitats.

Larval Host Plants : *Acacia spp.*

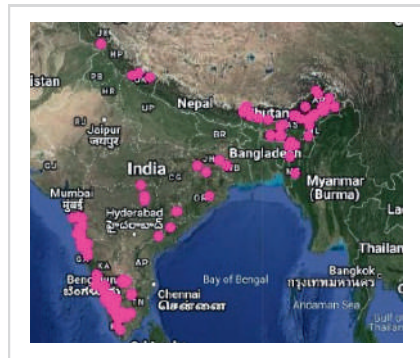
Nectar Plant : *Lantana camara.*



Abundance of Common Lascar in Pench Tiger Reserve, MH.



Distribution Map of Common Lascar in Pench, MH.



Distribution Map of Common Lascar in India.

Tawny Rajah

Common Name : Tawny Rajah

Scientific Name : *Charaxes*

bernardus

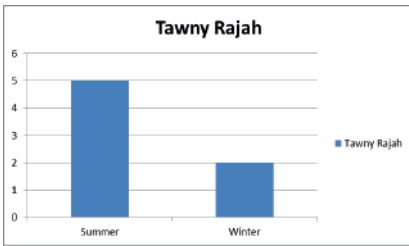
Conservation Status in India : Sch. II of WLP Act, 1972

Wingspan : 85-110 mm

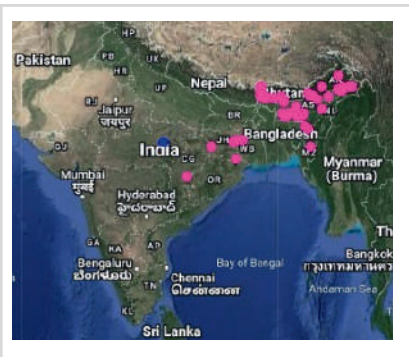
Local Name : तपकिरी नरेश

Habitat : Areas of tropical rain forest and humid deciduous forest.

Larval Host Plants : *Saccopetalum tomentosum* (Domsal), *Tamarindus indica* (Chinch).



Abundance of Tawny Rajah in Pench Tiger Reserve, MH.



Distribution Map of Tawny Rajah in India.



Distribution Map of Tawny Rajah in Pench, MH.

Family- Hesperidae



Family : Hesperidae

Common Name : Skippers

Characteristics : Small, darting flight; clubs on antennae hooked backwards.

Skippers are generally small to medium-sized, with colorful upper wings and often tail-like appendages on the hindwings. Skippers, named for their rapid, bounding flight, they are among the fastest fliers in the butterfly world. They exhibit a mix of traits found in both butterflies and moths. Like moths, skippers have large eyes, a hairy body, and often display crepuscular habits, flying at dawn and dusk. However, many are also active during the day. Their clubbed antennae resemble those of butterflies, typically expanding into a bent club with a short hook at the tip. Skippers have a thick body, short wings, and fully developed legs.

Most skippers possess an epiphysis on the tibia of the foreleg and a notably long proboscis. Their forewing veins arise from the cell or base. They are categorized into two types: those that keep their wings partially closed while basking, and others that hold their wings flat when settled.

Skipper eggs are dome-shaped, and the larvae are leaf rollers or leaf folders, usually feeding at night. The cylindrical larvae have a flat belly and a well-defined head, with few short hairs. Pupation occurs within a leaf fold, with long, tapering pupae often dusted with white powder.



Brown Awl

Common Name : Brown Awl

Scientific Name : *Badamia exclamationis*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

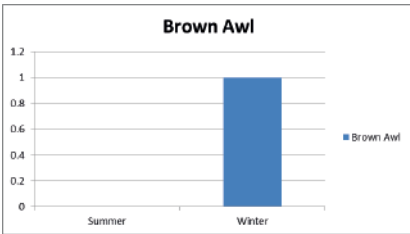
Wingspan : 40-45 mm

Local Name : तपकिरी सुतारी

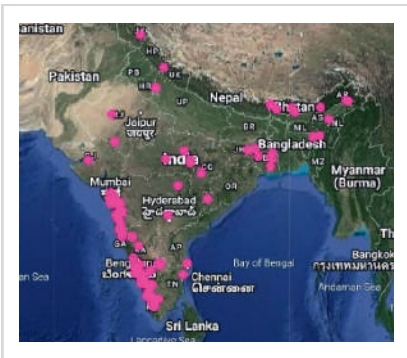
Habitat : Both forests and human habitats.

Larval Host Plants : *Viola spp.*, *V. betonicifolia* (showy violet).

Nectar Plants : *Lantana camara*, *Cosmos sulphureus*, *Jatropha panduraefolia*.



Abundance of Brown Awl in Pench Tiger Reserve, MH.

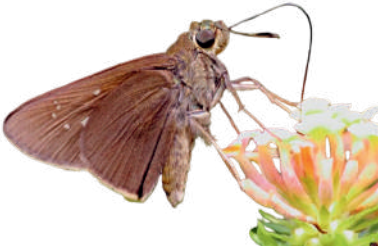


Distribution Map of Brown Awl in India.



Distribution Map of Brown Awl in Pench, MH.

Paintbrush Swift



Common Name : Paintbrush Swift

Scientific Name : *Baoris farri*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

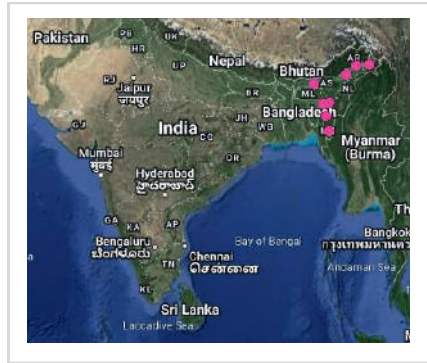
Wingspan : 28–33 mm

Local Name : कुंचल तडतड्या

Habitat : It is found in parks, gardens, and forest areas where clumps of bamboo are growing in the vicinity.

Larval Host Plants : *Bambusa* (Timber bamboo), *B. bambos* (Bambusa), *B. tuldooides* (Punting pole bamboo).

Nectar Plants : *Tridax procumbens*, *Lantana camara*.



Distribution Map of Paintbrush Swift in India.

DID YOU KNOW?

Butterflies don't sleep like humans do, but many types will rest in groups called **"Roosting"**.



Mud Puddling

Mud puddling is a fascinating behavior observed in butterflies and moths (Lepidoptera) as they seek out nutrients from moist substances like rotting plant matter, mud, and even carrion. During this process, they suck up fluids to obtain essential nutrients. While this behavior typically occurs on wet soil, butterflies may also be attracted to sweat on human skin and, more unusually, to sources like blood and tears.

In tropical India, mud puddling is most commonly seen during the post-monsoon season. This activity often involves various species, particularly from the families Papilionidae and Pieridae.



Males benefit from mud puddling by absorbing sodium, which can enhance their reproductive success. The sodium and amino acids collected are often transferred to females during mating through a spermatophore, serving as a nuptial gift that also improves the survival rate of their eggs.



Interestingly, while puddling, many butterflies and moths pump fluid through their digestive tract and may release excess fluid from their anus. In some species, like the male notodontid *Gluphisia crenata*, this can occur in forceful jets at intervals of about three seconds. This unique behavior highlights the intricate ways these insects gather nutrients and contribute to their reproductive strategies.

Rice Swift

Common Name : Rice Swift

Scientific Name : *Borbo cinnara*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

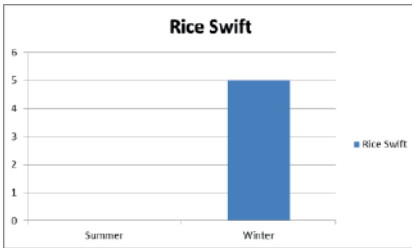
Wingspan : 30–36 mm

Local Name : धान लडतड्या

Habitat : Open grassy areas.

Larval Host Plants : *Oryza sativa* (Dhan), *Andropogon spp.*

Nectar Plant : *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha panduraefolia*.



Abundance of Rice Swift in Pench Tiger Reserve, MH.



Distribution Map of Rice Swift in India.



Distribution Map of Rice Swift in Pench, MH.

Blank Swift



Common Name : Blank Swift

Scientific Name : *Caltoris kumara*

Status in PTR, MH : Frequent common
(As per Tiple & Deokar, 2024)

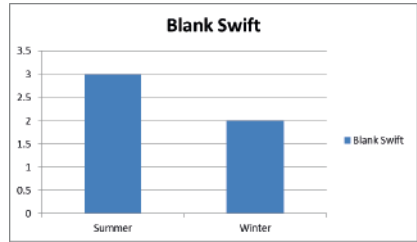
Wingspan : 45-46 mm

Local Name : निरंकर तडतड्या

Habitat : Shrubs, grasslands and gardens.

Larval Host Plants : *Bambusa spp.*, *B. vulgaris* (Common bamboo).

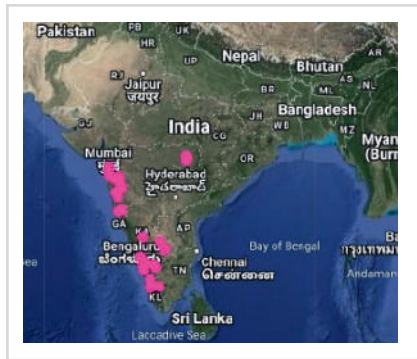
Nectar Plants : *Tridax procumbens*, *Lantana camara*.



Abundance of Blank Swift in Pench Tiger Reserve, MH.



Distribution Map of Blank Swift in Pench, MH.



Distribution Map of Blank Swift in India.

Golden Angle

Common Name : Golden Angle

Scientific Name : *Caprona ransonnettii*

Status in PTR, MH : Rare (As per Tiple & Deokar, 2024)

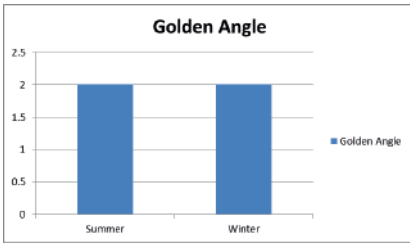
Wingspan : 36–42 mm

Local Name : कनक कोन

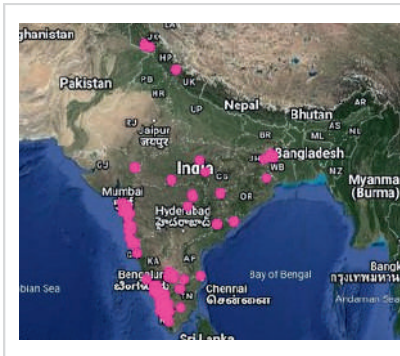
Habitat : Bamboo forest.

Larval Host Plants : *Helicteres isora* (Indian screw tree).

Nectar Plants : *Tridax procumbens*, *Lantana camara*.



Abundance of Golden Angle in Pench Tiger Reserve, MH.



Distribution Map of Golden Angle in India.



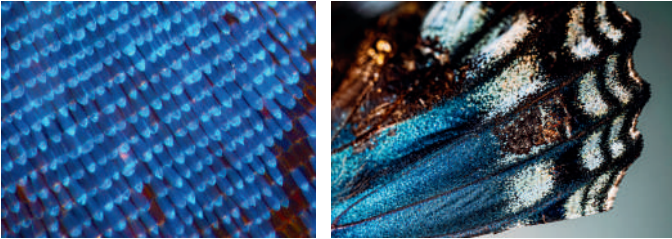
Distribution Map of Golden Angle in Pench, MH.

Scales of Butterflies

Under a microscope, the powdery substance on butterfly wings reveals tiny scales, similar to those on fish or birds. This characteristic gives butterflies and moths their scientific name, Lepidoptera, from the Greek words *lepidō* (scale) and *ptera* (wing).

These scales can vary in color, creating intricate patterns. Some are brightly colored to signal unpalatability (aposematism), while others mimic distasteful species (Batesian mimicry) or feature eye spots to startle predators. Some scales help butterflies camouflage themselves in their environments.

Most colors are produced by pigments that absorb light frequencies and reflect specific colors through tiny holes in the scales. Vibrant hues, especially blues, often arise from structural coloration. This occurs through thin-film refraction or light interference, where certain colors are enhanced or canceled out.



Scales on the wing of *Morpho peleides*. (Nipam Patel / UC Berkeley)

Function of Butterfly Scales

The scales are tiny, about 0.1 millimeters long, and are arranged like roof shingles on the wing. The scales on a butterfly's wings have many functions, including:

Flight: The scales improve flight performance by enhancing lift and boosting climbing efficiency. The scales are angled upward and form microcavities that improve the wing's aerodynamics.

Color and pattern: The scales give butterflies their unique color and pattern variations.

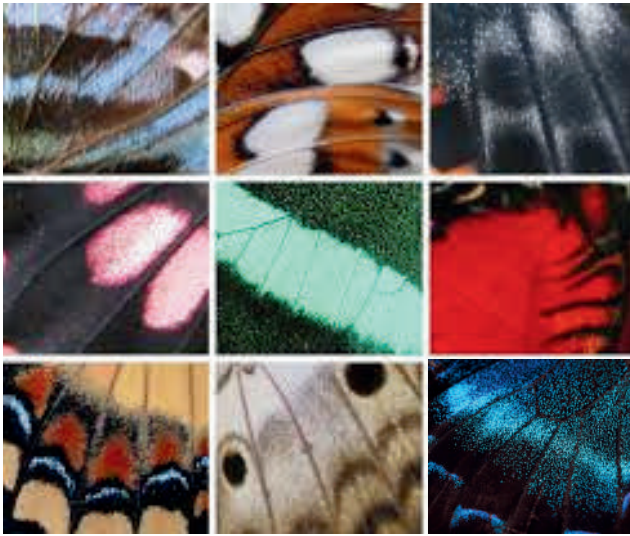
Temperature regulation: The scales help insulate the butterfly as it flies and help it soak up heat and dry out faster. Tiny changes in scale thickness can overall affect the body temperature of a butterfly.

Repel water: The scales repel water.

Avoid predation: The scales help butterflies avoid predation.

Attract mates: The scales help butterflies attract mates.

Reduce skin-friction drag: The scales reduce skin-friction drag by as much as 45%.



Source: https://www.google.com/search?q=butterfly%20scale%20reduce%20skin%20friction&udm=2&tbs=rimg:CSTfV2Bjvba4YyUilHD2gZ05sgIAwAIA2AIA4AIA&c&s=1&riz=ICICHBF_en-GBIN1080IN1080&hl=en&sa=X&ved=0CB4QUilBahgKEwilunKryalAxUAAAAAH0AAAAAQtwO&biw=2133&bih=1021&dpr=0.9#vhid=1a30FE8fj|h6eXM&vssid=mosaic

The powder on your fingers after touching a butterfly's wings is actually tiny scales.

Spotted Angle



Common Name : Spotted Angle
Scientific Name : *Caprona agama*
Status in PTR, MH : Very rare (As per Tiple & Deokar, 2024)

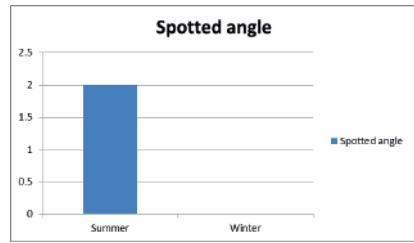
Wingspan : 35–50 mm

Local Name : ठिपकेदार कोण

Habitat : Found along the path or forest clearings of dry deciduous forest.

Larval Host Plants : Data not available.

Nectar Plant : *Lantana camara*.



Abundance of Spotted Angle in Pench Tiger Reserve, MH.



Distribution Map of Spotted Angle in Pench, MH.



Distribution Map of Spotted Angle in India.

Tricolour Pied Flat

Common Name : Tricolour Pied Flat

Scientific Name : *Coladenia indrani*

Status in PTR, MH : Rare (As per Tiple & Deokar, 2024)

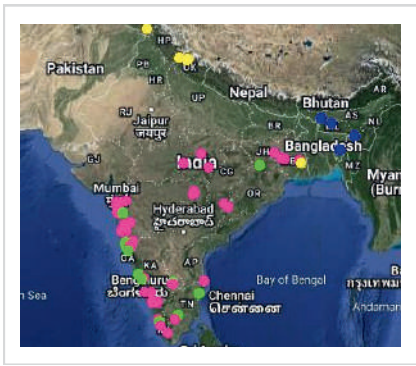
Wingspan : 35-40 mm

Local Name : तिरंगी प्रतल

Habitat : Garden, mixed deciduous forest.

Larval Host Plants : *Terminalia elliptica* (Indian laurel).

Nectar Plants : *Tridax procumbens*, *Lantana camara*.



Distribution Map of Tricolour Pied Flat in India.



DID YOU KNOW?

Butterflies have their skeletons on the outside of their bodies, call the **Exoskeleton**. This protects the insect and keeps water inside their bodies so they don't dry out.



Moore's Ace



Common Name : Moore's Ace

Scientific Name : Halpe porus

Status in PTR, MH : Rare (As per Tiple & Deokar, 2024)

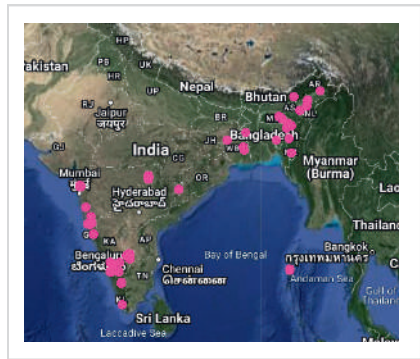
Wingspan : 32 mm

Local Name : बदामी हर्षल

Habitat : Grass field on the fringes of secondary forest.

Larval Host Plants : *Bamboo Bambusa spp.*, *B. tuldoides* (Punting pole bamboo).

Nectar Plants : *Tridax procumbens*, *Lantana camara*.



Distribution Map of Moore's Ace in India.

DID YOU KNOW?

Butterflies have a long tube like tongue called a **Proboscis** that allows them to soak up their food rather than sip it.



How Butterflies Smell

Adult butterflies primarily detect scents through their antennae, which are densely packed with chemoreceptors, particularly at the tips. For example, in monarch butterflies, these chemoreceptors allow them to sense the odors associated with nectar and feeding. They also detect pheromones, which are special chemicals released by males to attract females. This ability to smell is crucial for finding food and mating, showcasing the vital role of their antennae in navigating their environment.



Longest Migration in Butterflies



The painted lady butterfly (*Vanessa cardui*) is renowned for one of the longest migrations among butterflies. Found on every continent except Antarctica and South America, these butterflies migrate from Europe to subtropical Africa each fall, crossing the Sahara Desert. Some travel up to 4,000 kilometers, navigating through the Mediterranean Sea and the mountains of North Africa.

Another notable migratory species is the crimson rose butterfly, which migrates between India and Sri Lanka.

Common Banded Awl

Common Name : Common Banded Awl

Scientific Name : *Hasora chromus*
Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

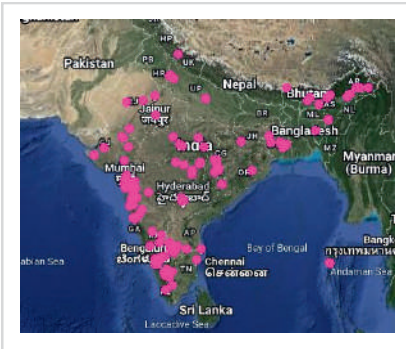
Wingspan : 45-50 mm

Local Name : पट्टेरी सुतारी

Habitat : Common in both forested regions and open grasslands.

Larval Host Plants : *Ricinus communis* (Castor oil plant).

Nectar Plants : *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha panduraefolia*.



Distribution Map of Common Banded Awl in India.



DID YOU KNOW?

Skipper butterflies fly so fast that they could outpace a horse, but most butterflies fly at **speed of 8 to 20 kilometers per hour.**

Common Red Eye



Common Name : Common Red Eye

Scientific Name : *Matapa aria*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

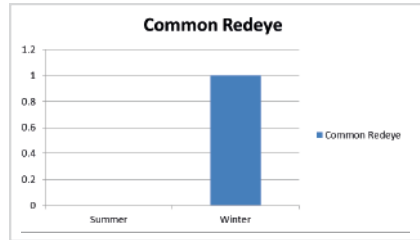
Wingspan : 40-45 mm

Local Name : रक्तलोचन

Habitat : Prefers bamboo forest.

Larval Host Plants : *Bambusa arundinacea* (Giant thorny bamboo).

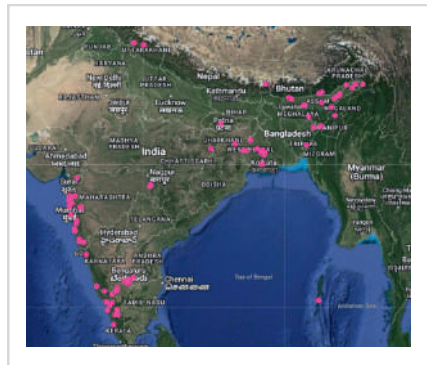
Nectar Plant : *Lantana camara*.



Abundance of Common Red Eye in Pench Tiger Reserve, MH.



Distribution Map of Common Red Eye in Pench, MH.



Distribution Map of Common Red Eye in India.

Large Branded Swift

Common Name : Large Branded Swift

Scientific Name : *Pelopidas subochracea*

Status in PTR, MH : Rare (As per Tiple & Deokar, 2024)

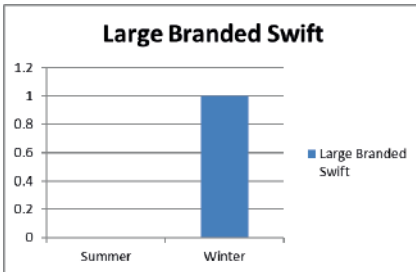
Wingspan : 38–42 mm

Local Name : मोठा तडतड्या

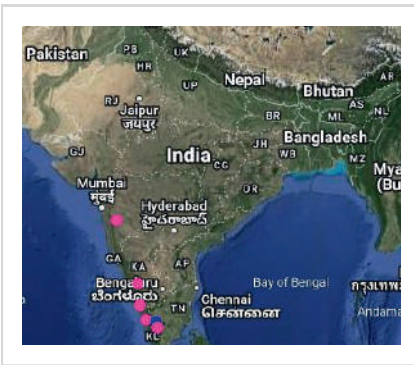
Habitat : Protected area, waste land and grassland.

Larval Host Plants : *Axonopus compressus* (Tropical carpet grass), *Poaceae* (Grasses).

Nectar Plants : *Tridax procumbens*, *Lantana camara*, *Jatropha panduraefolia*.



Abundance of Large Branded Swift in Pench Tiger Reserve, MH.



Distribution Map of Large Branded Swift in India.



Distribution Map of Large Branded Swift in Pench, MH.

Lifespan of Butterflies

Most adult butterflies live only one to two weeks, but some species can hibernate during the winter, extending their lifespan to several months. For instance, the monarch butterfly can live up to eight months when it migrates and overwinters in warmer climates.

Factors influencing a butterfly's lifespan include species, environmental conditions, and predation. Some species may live longer due to favorable conditions, while others face threats from predators, which can shorten their lives.

Additionally, the lifespan can be affected by the butterfly's life stage. Eggs and caterpillars can survive for varying lengths of time depending on environmental factors, and pupae (chrysalises) may also endure for several weeks to months before emerging as adults.

The Brimstone butterfly (*Gonepteryx rhamni*) has the longest lifetime of any adult butterfly 9-10 months.



Hibernating Butterfly

(Source:<https://www.bbc.co.uk/webarchive/https://www.bbc.co.uk/blogs/natureuk/entries/3628386b-2444-4e32-b08a-80768f6b816d>)

Indian Skipper

Common Name : Indian Skipper

Scientific Name : *Spialia galba*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

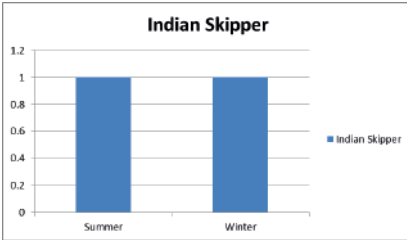
Wingspan : 20-27 mm

Local Name : मैराट

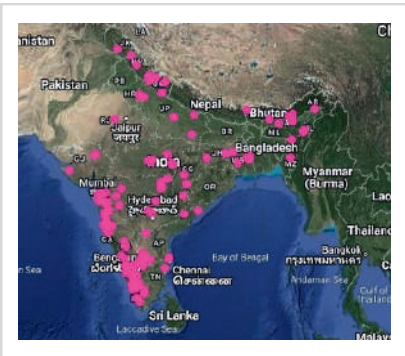
Habitat : Relatively undisturbed prairies and grasslands.

Larval Host Plants : *Hibiscus* spp. (Jaswand), *Sida rhombifolia* (Sahdev).

Nectar Plants : *Dicliptera* spp., *Tridax* spp., *Tridax procumbens*.



Abundance of Indian Skipper in Pench Tiger Reserve, MH.

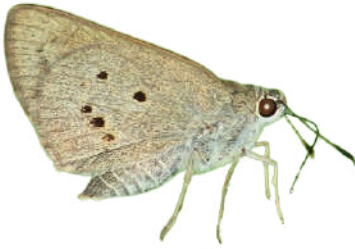


Distribution Map of Indian Skipper in India.



Distribution Map of Indian Skipper in Pench, MH.

Indian Palm Bob



Common Name : Indian Palm Bob

Scientific Name : *Suastus gremius*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

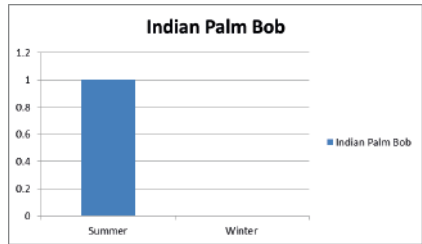
Wingspan : 35-45 mm

Local Name : ताड पिगा

Habitat : Flowers, Damp patches, bird droppings.

Larval Host Plants : *Calamus spp.*, *Phoenix spp.*, *Cocos nucifera* (Coconut).

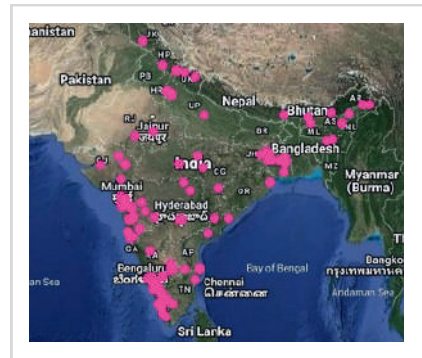
Nectar Plants : *Lantana spp.*, *Tridax procumbens*, *Lantana camara*, *Gaillardia picta*.



Abundance of Indian Palm Bob in Pench Tiger Reserve, MH.



Distribution Map of Indian Palm Bob in Pench, MH.



Distribution Map of Indian Palm Bob in India.

Dark Palm Dart

Common Name : Dark Palm Dart

Scientific Name : *Telicota bambusae*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

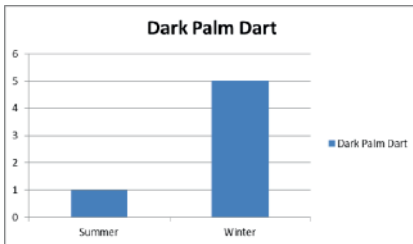
Wingspan : 33–36 mm

Local Name : गडद शर

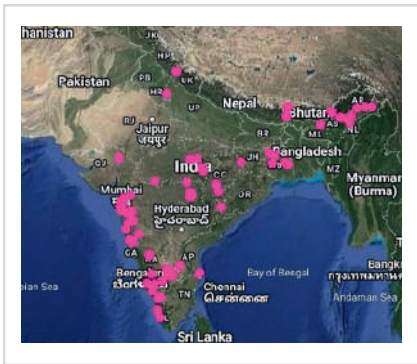
Habitat : Bamboo forests.

Larval Host Plants : *Cocos nucifera* (Coconut), *Saccharum spp.*

Nectar Plants : *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha Panduraefolia*, *Gaillardia picta*.



Abundance of Dark Palm Dart in Pench Tiger Reserve, MH.



Distribution Map of Dark Palm Dart in India.



Distribution Map of Dark Palm Dart in Pench, MH.

India's Largest Butterfly

The Himalayan butterfly named Golden Birdwing (*Troides Aeacus*) with 190-194 mm wingspan is India's largest butterfly.

The female Birdwing was found at Didihat in Uttarakhand and the largest male species was measured in the Wankhar Butterfly Museum situated in Shillong, Meghalaya. The specimen is present at the Butterfly Research Center at Bhimtal.



Golden Birdwing

(Photo source- Sonam Pinto Sherpa)

It broke the 88-year-old record of Southern Birdwing (*Troides Minos*), a specimen recorded by Brigadier William Harry Evans, British military officer, and lepidopterist, during in 1932.



Indian Tiny Grass Blue

(Photo source- ifoundbutterflies.org)

India's Smallest Butterfly

The smallest butterfly in India is Quaker belonging to the lycaenids or blues family. Scientific Name of the species is *Neopithecops Zalmora*.

Pale Palm Dart

Common Name : Pale Palm Dart

Scientific Name : *Telicota colon*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

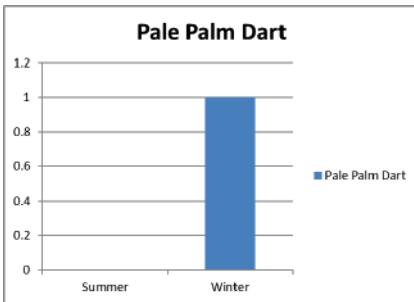
Wingspan : 32-36 mm

Local Name : फिक्कट धर

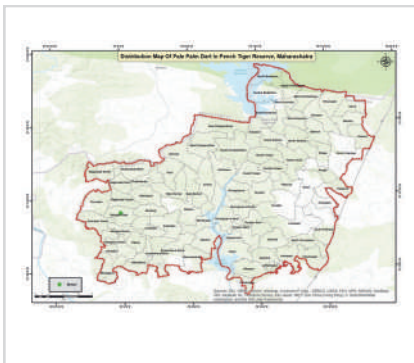
Habitat : Fields, forest edges, meadow, river bank surrounded by thick forests.

Larval Host Plants : *Sugarcane Saccharum officinarum* (Sugarcane).

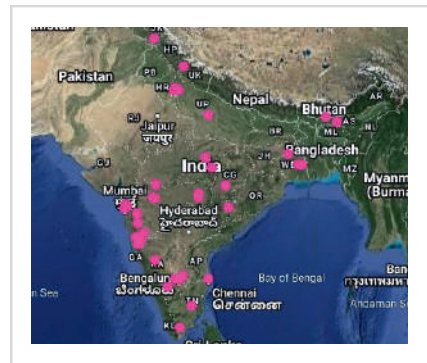
Nectar Plants : *Tridax procumbens*, *Lantana camara*.



Abundance of Pale Palm Dart in Pench Tiger Reserve, MH.

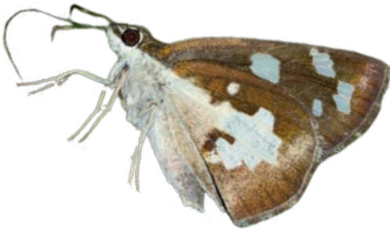


Distribution Map of Pale Palm Dart in Pench, MH.



Distribution Map of Pale Palm Dart in India.

Grass Demon



Common Name : Grass Demon

Scientific Name : *Udaspes folus*

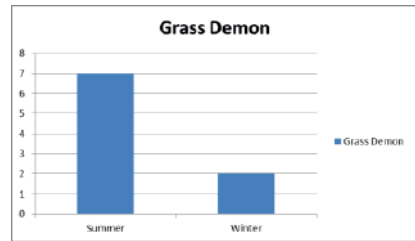
Wingspan : 0-48 mm

Local Name : तृणासूर

Habitat : Deciduous and semi-evergreen forests.

Larval Host Plants : Ginger, turmeric and grasses.

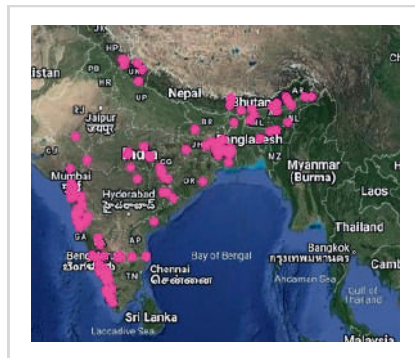
Nectar Plants : *Vinca rosea* (Sadafuli), *Lantana spp.*, *Lantana camara*.



Abundance of Dark Palm Dart in Pench Tiger Reserve, MH.



Distribution Map of Dark Palm Dart in Pench, MH.



Distribution Map of Dark Palm Dart in India.

Conjoined Swift

Common Name : Conjoined Swift

Scientific Name : *Pelopidas conjuncta*

Status in PTR, MH : Frequent common
(As per Tiple & Deokar, 2024)

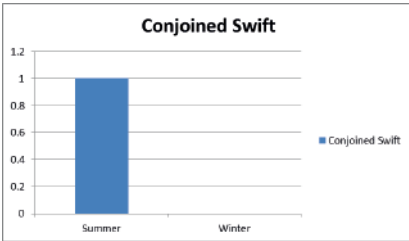
Wingspan : 42-52 mm

Local Name : सुसंगत तडतड्या

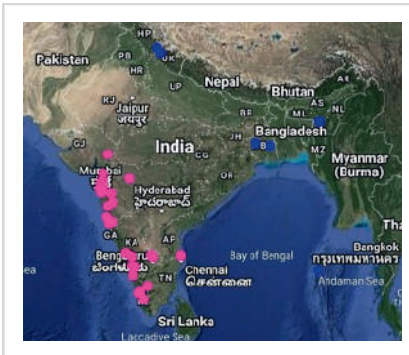
Habitat : Prefers moist forest.

Larval Host Plants : Grasses, *Bambusa* spp.

Nectar Plants : Grasses and *Lantana camara* and *Tridax procumbens*, *Lagasca mollis*, *Celosia argentea*.



Abundance of Conjoined Swift in Pench Tiger Reserve, MH.



Distribution Map of Conjoined Swift in India.



Distribution Map of Conjoined Swift in Pench, MH.

Family- Papilionidae



Family : Papilionidae

Common Name : Swallowtails

Characteristics : Often have 'tails' on wings; caterpillar generates foul taste with osmeterium organ; pupa supported by silk girdle.

This family of butterflies includes many large and brilliantly colored species, known for their striking appearance and unique characteristics. Both male and female butterflies have fully developed forelegs, each with an epiphysis on the tibia—a feature found only in this family and the Hesperidae. Each leg is equipped with a pair of simple, well-developed tarsal claws. The antennae bases are close together, and they possess a long proboscis. The forewing has a short vein, while the hindwing lacks vein, a characteristic unique to this family. The cell is closed on both wings, and most species have a tailed hindwing, although this is not universal. The hindwings cannot fully cover the abdomen. The forked appearance of the swallowtail-like hindwings, visible when the butterfly rests with its wings spread, gives this family its common name, "swallowtail."

Swallowtails typically have black or red bodies, and many species are toxic and unpalatable to predators. Males possess scent brushes and often gather in large numbers for mud-puddling.

Their eggs are large and spherical. The caterpillars have large heads that can retract under the second segment. They also have a forked organ called an osmeterium, which emits a pungent smell when threatened. The pupa is attached by the tail, usually in a perpendicular position, and secured by a silk loop around the middle. Some pupae can wriggle vigorously, while others produce a hissing sound by rubbing segments together to deter predators.



Tailed Jay



Common Name : Tailed Jay

Scientific Name : *Graphium agamemnon*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

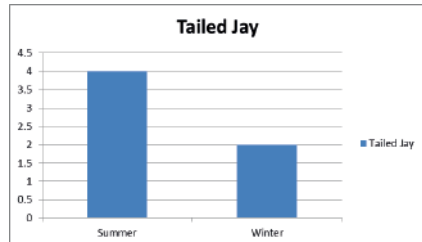
Wingspan : 85-100 mm

Local Name : अशोकासक

Habitat : Evergreen and semi-evergreen forests; now widely adapted to urban environments.

Larval Host Plants : *Michelia champaca* (Champak), *Polyalthia longifolia* (False ashoka tree).

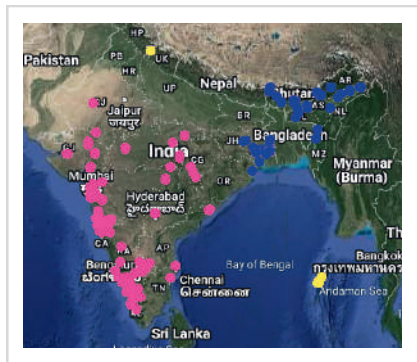
Nectar Plants : *Lantana spp.*, *Ixora spp.*, *Mussaenda spp.*



Abundance of Tailed jay in Pench Tiger Reserve, MH.



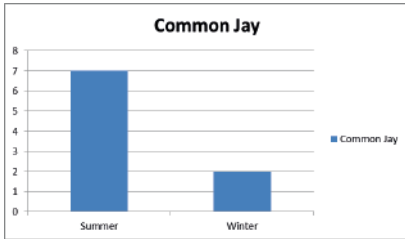
Distribution Map of Tailed jay in Pench, MH.



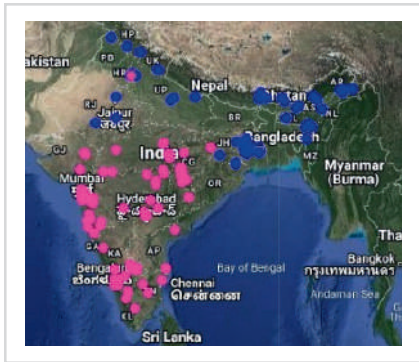
Distribution Map of Tailed jay in India.

Common Jay

Common Name : Common Jay
Scientific Name : *Graphium doson*
Status in PTR, MH : Common (As per Tiple & Deokar, 2024)
Wingspan : 70–80 mm
Local Name : शेवाळी
Habitat : Evergreen and semi-evergreen forests; now widely adapted to urban environments.
Larval Host Plants : *Polyalthia longifolia* (False ashoka tree), *Michelia champaca* (Champak).
Nectar Plants : *Lantana spp.*, *Ixora spp.*



Abundance of Common Jay in Pench Tiger Reserve, MH.



Distribution Map of Common Jay in India.



Distribution Map of Common Jay in Pench, MH.

Spot Swordtail



Common Name : Spot Swordtail

Scientific Name : *Graphium nomius*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

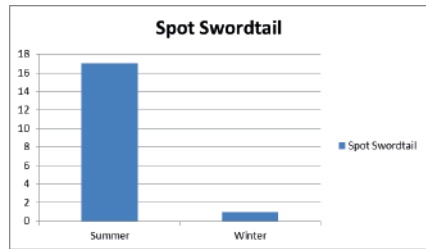
Wingspan : 75–90 mm

Local Name : तलवारपुच्छ

Habitat : Generally found in deciduous forest areas, among bushes with lesser secondary growth.

Larval Host Plants : *Milium tomentosum* (Thoska), *M. velutina* (Velvet pink banana)

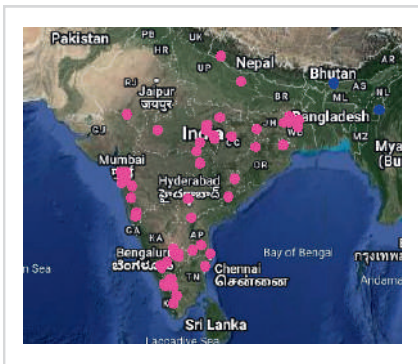
Nectar Plant : *Gmelina arborea* (Shivan).



Abundance of Spot Swordtail in Pench Tiger Reserve, MH.



Distribution Map of Spot Swordtail in Pench, MH.



Distribution Map of Spot Swordtail in India.

Common Rose

Common Name : Common Rose

Scientific Name : *Pachliopta aristolochiae*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

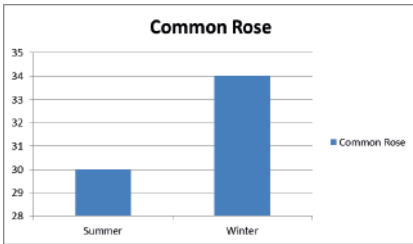
Wingspan : 80–110 mm

Local Name : गुलाबी मदालसा

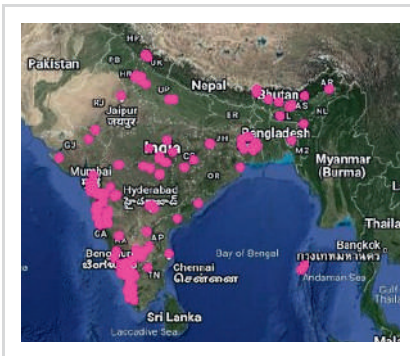
Habitat : Deciduous and thorn forests, farmlands and urban areas.

Larval Host Plants : *Aristolochia bracteolata* (Warm killer).

Nectar Plants : *Lantana spp.*, *Cosmos spp.*, *Zinnia spp.*



Abundance of Crimson Rose in Pench Tiger Reserve, MH.



Distribution Map of Crimson Rose in India.



Distribution Map of Crimson Rose in Pench, MH.

Food for Thought



Holometabolism

Holometabola, derived from the Ancient Greek *holo-* meaning "complete" and *metabolé* meaning "change," is also known as Endopterygota (from *endo-* meaning "inner" and *ptery-* related to "wing"). This superorder of insects, which includes butterflies, undergoes a distinctive life cycle consisting of larval, pupal, and adult stages.

The process is known as holometabolism, or complete metamorphosis, characterized by a radical transformation where the larval and adult forms differ significantly in structure and behavior. In butterflies, for example, the caterpillar (larval stage) has a completely different appearance and lifestyle compared to the adult butterfly, showcasing the remarkable changes that occur during their development.

The process by which a caterpillar magically transforms into a butterfly, aka metamorphosis, is completed in 10 to 15 days, depending on the species.

Holometabolous Development



Source: <https://genent.cals.ncsu.edu/bug-bytes/holometabola/>

Crimson Rose

Common Name : Crimson Rose

Scientific Name : *Pachliopta hector*

Conservation Status in India : Sch. II of WLP Act, 1972

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

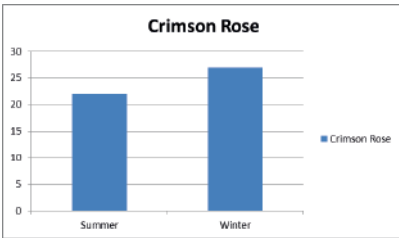
Wingspan : 90–110 mm

Local Name : किरमिजी मदालसा

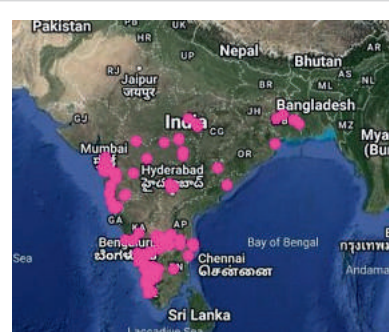
Habitat : Deciduous and thorn forests, farmlands, and urban areas.

Larval Host Plants : *Aristolochia bracteolata* (Ishwar mul).

Nectar Plants : *Lantana spp.*, *Lantana camara*, *Jatropha Panduraefolia*.



Abundance of Crimson Rose in Pench Tiger Reserve, MH.



Distribution Map of Crimson Rose in India.



Distribution Map of Crimson Rose in Pench, MH.

Common Mime



Common Name : Common Mime

Scientific Name : *Papilio clytia*

Conservation Status in India : Sch. II of WLP Act, 1972

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

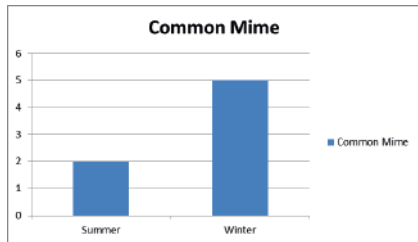
Wingspan : 90–100 mm

Local Name : सोंगाड्या

Habitat : Hilly regions.

Larval Host Plants : *Litsea chinensis* (Chandana).

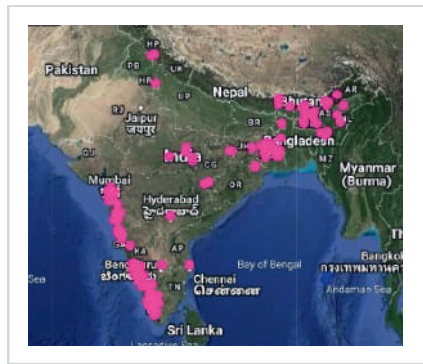
Nectar Plants : *Ixora spp.*, *Lantana camara*.



Abundance of Common Mime in Pench Tiger Reserve, MH.



Distribution Map of Common Mime in Pench, MH.



Distribution Map of Common Mime in India.

Common Banded Peacock

Common Name : Common Banded Peacock

Scientific Name : *Papilio crino*

Conservation Status in India : Sch. II of WLP Act, 1972

Status in PTR, MH : Rare (As per Tiple & Deokar, 2024)

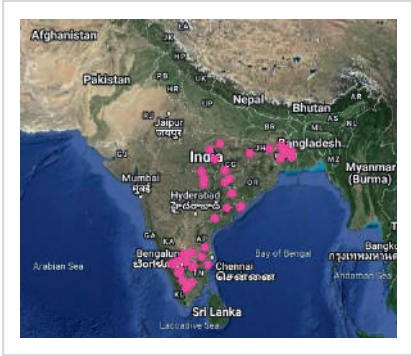
Wingspan : 80-100 mm

Local Name : पट्ट मयूर

Habitat : Moist and dry evergreen forests.

Larval Host Plants : *Chloroxylon swietenia* (East Indian Satinwood).

Nectar Plants : *Chloroxylon swietenia* (East Indian Satinwood), *Lantana camara*, *Jatropha Panduraefolia*.



Distribution Map of Common Banded Peacock in India.



The Very Hungry Caterpillar is Not a Joke

The first meal after a caterpillar hatches is usually the eggshell from which it has just emerged.



Caterpillar feeding upon its eggshell (source:

<http://www.gloucestershire-butterflies.org.uk/hamearis/the-life-cycle-of-the-orange-tip-butterfly/>)

Blue Mormon (*Papilio polymnestor*) declared state butterfly of Maharashtra

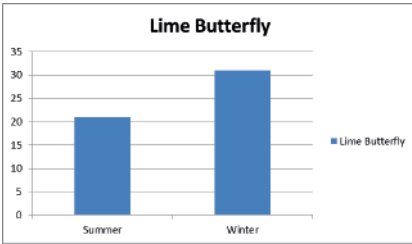


Blue Mormon
(photo by Fahim Khan)

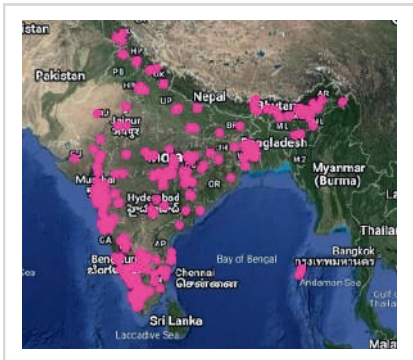
Maharashtra is the first state in India to have a state butterfly. Blue Mormon (*Papilio polymnestor*) with a wingspan of 120–150 mm, is the fourth largest butterfly of India.

Lime Butterfly

Common Name : Lime Butterfly
Scientific Name : *Papilio demoleus*
Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)
Wingspan : 80–100 mm
Local Name : लिंबाळी
Habitat : Evergreen and semi-evergreen forests, Human-altered environment.
Larval Host Plants : *Citrus limon* (Lemon), *Aegle marmelos* (Bel).
Nectar Plants : *Lantana spp.*, *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha Panduraefolia*, *Gaillardia picta*.



Abundance of Lime Butterfly in Pench Tiger Reserve, MH.



Distribution Map of Lime Butterfly in India.



Distribution Map of Lime Butterfly in Pench, MH.

Blue Mormon



Common Name : Blue Mormon

Scientific Name : *Papilio polymnestor*

Status in PTR, MH : Frequent common
(As per Tiple & Deokar, 2024)

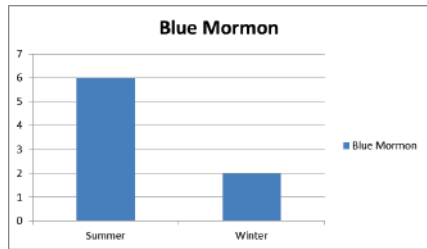
Wingspan : 102-150 mm

Local Name : निलवंत

Habitat : Common in moist deciduous and woody patches of urban, semi urban and reserved area.

Larval Host Plants : *Murraya koenigii* (Curry leaf tree), *Citrus spp.*

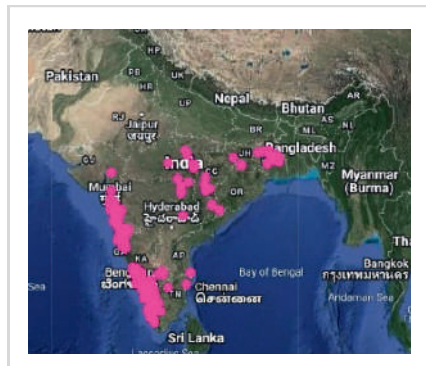
Nectar Plants : *Jasminum spp.*, *Ixora spp.*, *Mussaenda spp.*



Abundance of Blue Mormon in Pench Tiger Reserve, MH.



Distribution Map of Blue Mormon in Pench, MH.



Distribution Map of Blue Mormon in India.

Common Mormon

Common Name : Common Mormon

Scientific Name : *Papilio polytes*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

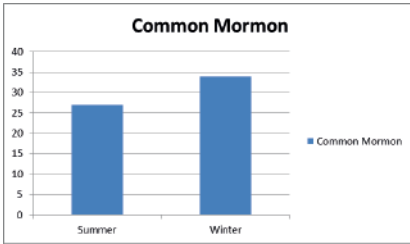
Wingspan : 90-100 mm

Local Name : बहुरूपी

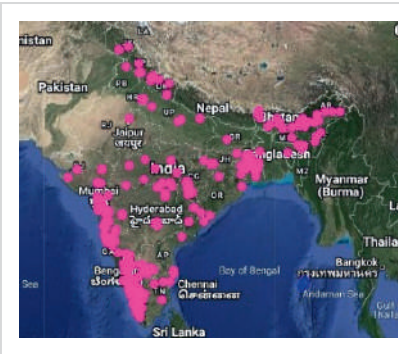
Habitat : Scrubland.

Larval Host Plants : *Aegle marmelos* (Bel), *Citrus spp.*, *Murraya koenigii* (Curry leaf tree), *Ruta graveolens* (Common rue).

Nectar Plants : *Jasminum spp.*, *Ixora spp.*, *Mussaenda spp.*



Abundance of Common Mormon in Pench Tiger Reserve, MH.



Distribution Map of Common Mormon in India.



Distribution Map of Common Mormon in Pench, MH.

Butterfly Eggs

Throughout her life, a female butterfly can lay anywhere from several dozen to several hundred eggs. These eggs may be deposited singly, in clusters, or in large masses, sometimes several layers deep. Some species even scatter their eggs randomly while flying over grasslands.



Eggs of Indian wanderer butterfly

(source: Animish Mandrekar, https://www.jungledragon.com/image/59135/the_indian_wanderer_butterfly_eggs_pareronia_hippia.html)

The shape of butterfly eggs varies significantly between families, but most are typically pale yellow or green. Interestingly, the color may darken as they approach hatching. This diversity in egg-laying strategies and egg characteristics plays a crucial role in the survival of butterfly species, helping ensure the best chances for their offspring.

Family- Pieridae



Family : Pieridae

Common Name : Whites and allies

Characteristics : Mostly white, yellow or orange; some serious pests of Brassica; pupa supported by silk girdle.

Most butterflies in this family are predominantly white or yellow, often adorned with black or orange markings. These colors are produced by unique pigments called pterins, which can absorb or reflect varying amounts of UV light. The term "butterfly" is thought to have originated from the butter-like color typical of this group. These butterflies are found in both low and high elevations and are particularly common in open country. None of the Pieridae species have tails on their hindwings.

Their forelegs are well-developed, featuring conspicuous bifid tarsal claws but lacking a tibial epiphysis, which is present in families like Papilionidae and Hesperidae. The forewing typically has one anal vein and 3-5 radial veins, while the hindwing has two anal veins. Pieridae butterflies are strong fliers, often found in open lands, and males are known to gather in large numbers for mud-puddling. Some species, like emigrants, are known for their large-scale migrations.

The eggs of Pieridae are tall and spindle-shaped, usually white when laid, but they turn red or orange within a day or two. Many species lay eggs in large batches, and the larvae, which are smooth, cylindrical, and often green, feed together in their early stages. The pupae, often characterized by a snout and dorsal ridge, are anchored at the tail end by a cremaster and supported by a silken girdle. Many Pieridae species exhibit seasonal variation.



Common Albatross

Common Name : Common Albatross

Scientific Name : *Appias albina*

Conservation Status in India : Sch. II of WLP Act, 1972

Status in PTR, MH : Very rare (As per Tiple & Deokar, 2024)

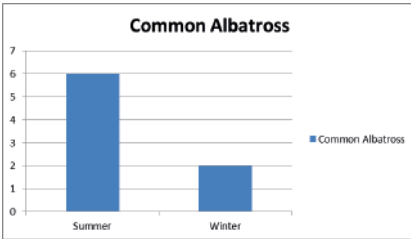
Wingspan : 60–75 mm

Local Name : ढवळ्या

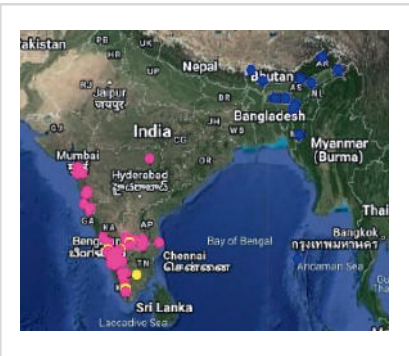
Habitat : Prefers mixed deciduous and evergreen forest.

Larval Host Plants : *Crateva religiosa* (Katarlingad), *Tridax procumbens*, *Lantana camara*.

Nectar Plants : *Tridax procumbens*, *Lantana camara*.



Abundance of Common Albatross in Pench Tiger Reserve, MH.



Distribution Map of Common Albatross in India.



Distribution Map of Common Albatross in Pench, MH.

Striped Albatross



Common Name : Striped Albatross

Scientific Name : *Appias libythea*

Status in PTR, MH : Rare (As per Tiple & Deokar, 2024)

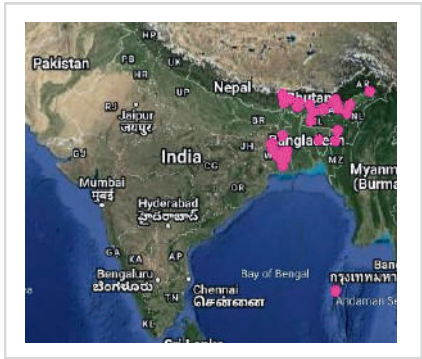
Wingspan : 50–60 mm

Local Name : अभिथेकी

Habitat : Plains as well as dense forests, dry deciduous forests and scrub jungles.

Larval Host Plants : *Capparis brevispina* (Indian caper), *C. cleghornii* (Cleghorn caper).

Nectar Plants : *Tridax procumbens*, *Lantana camara*.



Distribution Map of Striped Albatross in India.

DID YOU KNOW?

Butterfly wings move in a figure “8” motion.



Indian Pioneer

Common Name : Indian Pioneer

Scientific Name : *Belenois aurota*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

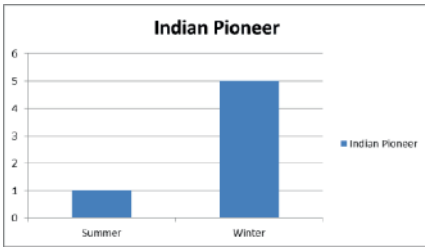
Wingspan : 65–80 mm

Local Name : विमुक्ता

Habitat : Lightly wooded forests and urban woodlands.

Larval Host Plants : *Capparis zeylanica* (Vaghanti).

Nectar Plants : *Plumbago* spp., *Tridax procumbens*, *Lantana camara*, *Jatropha Panduraefolia*.



Abundance of Indian Pioneer in Pench Tiger Reserve, MH.



Distribution Map of Indian Pioneer in India.



Distribution Map of Indian Pioneer in Pench, MH.

Common Emigrant



Common Name : Common Emigrant

Scientific Name : *Catopsilia Pomona*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

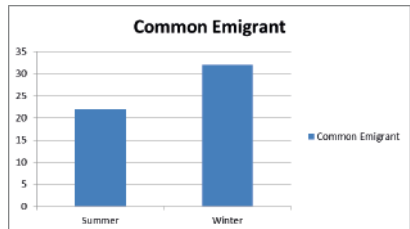
Wingspan : 55–80 mm

Local Name : भटक्क्या

Habitat : Seen throughout the year.

Larval Host Plants : *Cassia fistula* (Golden shower), *Cassia siamea* (Kassod Tree), *Cassia tora* (Chakund), *Bauhinia racemosa* (Bidi leaf tree).

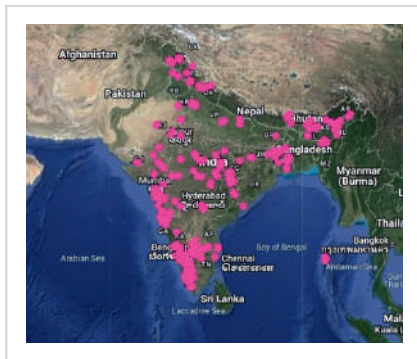
Nectar Plants : *Lantana spp.*, *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha Panduraefolia*, *Gaillardia picta*.



Abundance of Common Emigrant in Pench Tiger Reserve, MH.



Distribution Map of Common Emigrant in Pench, MH.



Distribution Map of Common Emigrant in India.

Mottled Emigrant

Common Name : Mottled Emigrant

Scientific Name : *Appias lyncida*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

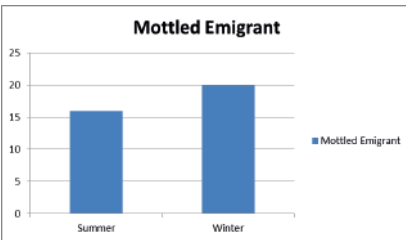
Wingspan : 55-70 mm

Local Name : चट्टेटी भटक्या

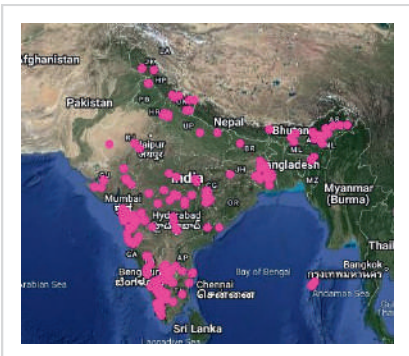
Habitat : Moist forests.

Larval Host Plants : *Cassia fistula* (Golden shower), *Cassia tora* (Pot cassia/Chakund).

Nectar Plants : *Tridax procumbens*, *Lantana camara*, *Cussia siamea*, *Cosmos sulphureus*, *Jatropha Panduraefolia*, *Gaillardia picta*.



Abundance of Mottled Emigrant in Pench Tiger Reserve, MH.



Distribution Map of Mottled Emigrant in India.



Distribution Map of Mottled Emigrant in Pench, MH.

Common Gull



Common Name : Common Gull

Scientific Name : *Cepora nerissa*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

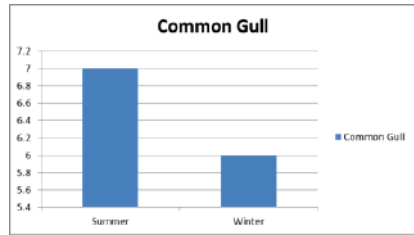
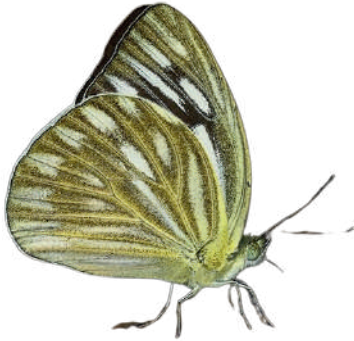
Wingspan : 40-65 mm

Local Name : कवडसा

Habitat : Seen mainly in drier plains, around farmlands and scrub forests.

Larval Host Plants : *Cleome viscosa* (Asian spider flower, Sticky cleome), *Capparis zeylanica* (Ceylon caper).

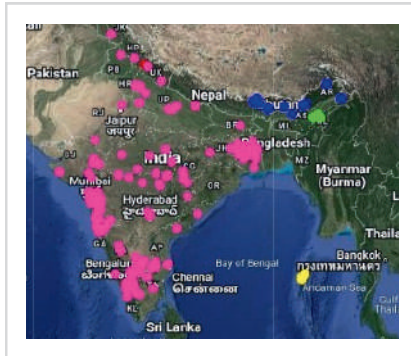
Nectar Plants : *Lantana spp.*, *Ixora spp.*



Abundance of Common Gull in Pench Tiger Reserve, MH.



Distribution Map of Common Gull in Pench, MH.



Distribution Map of Common Gull in India.

Crimson-Tip

Common Name : Crimson-Tip

Scientific Name : *Appias libythea*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

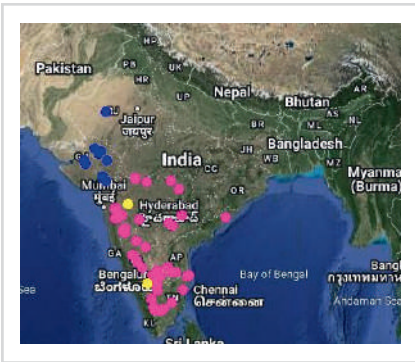
Wingspan : 40-45 mm

Local Name : कशरटोकया

Habitat : Plains and forested areas.

Larval Host Plants : *Cadaba fruticosa* (Indian cadaba), *Maerua cylindrocarpa* (Fruited maerua).

Nectar Plants : *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*, shrubs like *Ziziphus* species and small flowering plants.



Distribution Map of Crimson-Tip in India.

DID YOU KNOW?

Each eye of butterfly is made of **6,000 lenses** and can see ultraviolet light.



Small/Little Orange Tip



Common Name : Little Orange Tip

Scientific Name : *Colotis etrida*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

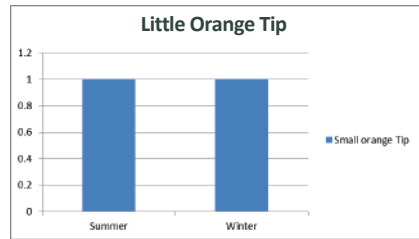
Wingspan : 25-45 mm

Local Name : छोटा शेंदूरटोक्या

Habitat : Dry zone scrublands, especially towards coastal areas.

Larval Host Plants : *Maerua oblongifolia* (Hemkand).

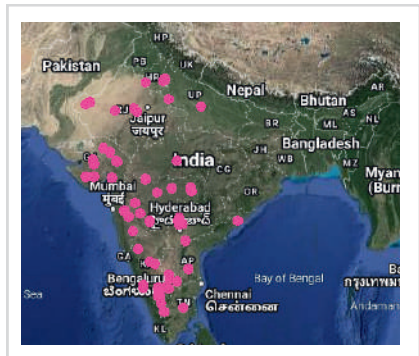
Nectar Plants : *Maerua oblongifolia* (Hemkand), *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*.



Abundance of Little Orange Tip in Pench Tiger Reserve, MH.



Distribution Map of Little Orange Tip in Pench, MH.



Distribution Map of Little Orange Tip in India.

Large Salmon Arab

Common Name : Large Salmon Arab

Scientific Name : *Colotis fausta*

Status in PTR, MH : Rare (As per Tiple & Deokar, 2024)

Wingspan : 45-50 mm

Local Name : मोठा पिलुप्रिया

Habitat : Plains and lowlands.

Larval Host Plants : *Capparis spinosa* (Caper berry), *Maerua cylindrocarpa* (Fruited Marula).

Nectar Plants : *Lantana camara*, *Ixora coccinea*, *Tridax procumbens*, *Jatropha Panduraefolia* and *Capparis* species.



Distribution Map of Large Salmon Arab in India.



Common/Indian Jezebel



Common Name : Common Jezebel/
Indian Jezebel

Scientific Name : *Delias eucharis*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

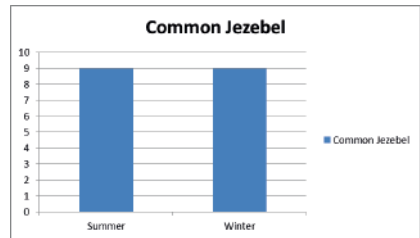
Wingspan : 66–83 mm

Local Name : हळदीकुंक

Habitat : It is commonly seen in gardens.

Larval Host Plants : *Dendrophthoe falcata* (Bandgul).

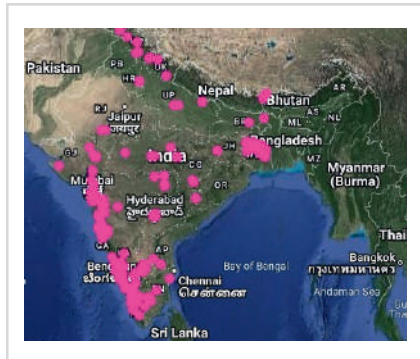
Nectar Plant : *Lantana spp.*



Abundance of Common Jezebel in Pench Tiger Reserve, MH.



Distribution Map of Common Jezebel in Pench, MH.



Distribution Map of Common Jezebel in India.

Small Grass Yellow

Common Name : Small Grass Yellow

Scientific Name : *Eurema laeta*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

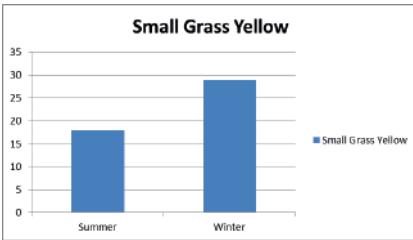
Wingspan : 40-45 mm

Local Name : लघु तृण पिलाती

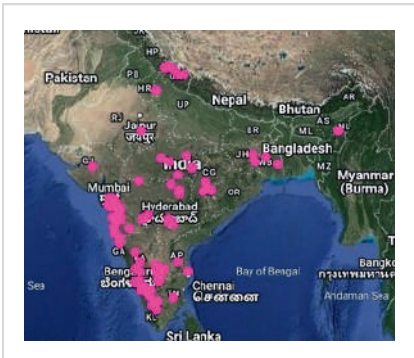
Habitat : Common on hills as well as plains.

Larval Host Plants : *Cassia pumila* (Sarmal).

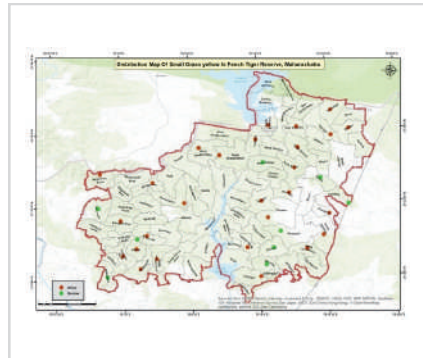
Nectar Plants : *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*.



Abundance of Small Grass Yellow in Pench Tiger Reserve, MH.



Distribution Map of Small Grass Yellow in India.



Distribution Map of Small Grass Yellow in Pench, MH.

Common Grass Yellow



Common Name : Common Grass Yellow

Scientific Name : *Eurema hecabe*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

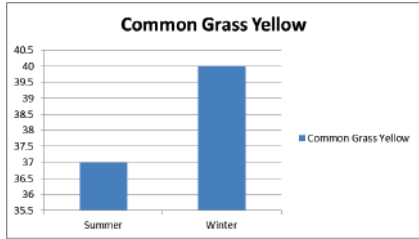
Wingspan : 40-45 mm

Local Name : तृण पिलती

Habitat : Forests, damp patches, bare land.

Larval Host Plants : *Cassia fistula* (Golden shower tree), *Cassia tora* (Pot cassia).

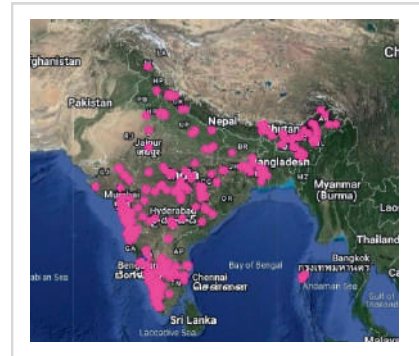
Nectar Plants : *Lantana camara*, *Bidens pilosa*, and *Tridax procumbens*.



Abundance of Common Grass Yellow in Pench Tiger Reserve, MH.



Distribution Map of Common Grass Yellow in Pench, MH.



Distribution Map of Common Grass Yellow in India.

Spotless Grass Yellow

Common Name : Spotless Grass Yellow

Scientific Name : *Eurema brigitta*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

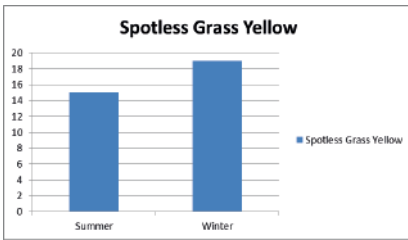
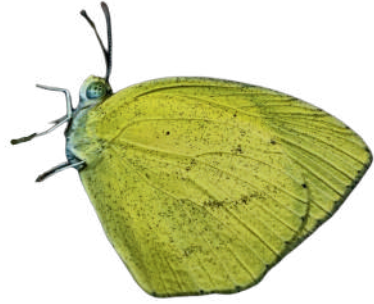
Wingspan : 30-40 mm

Local Name : निरंक वृण पिलाती

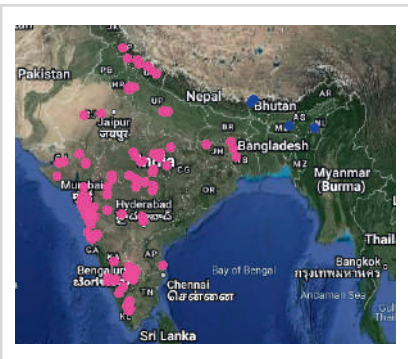
Habitat : Prefer degraded habitats, avoids dense forest.

Larval Host Plants : *Cassia kleinii* (Takla).

Nectar Plants : *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*.



Abundance of Spotless Grass Yellow in Pench Tiger Reserve, MH.



Distribution Map of Spotless Grass Yellow in India.



Distribution Map of Spotless Grass Yellow in Pench, MH.

Three-Spot Grass Yellow



Common Name : Three-Spot Grass Yellow

Scientific Name : *Eurema blanda*

Status in PTR, MH : Rare (As per Tiple & Deokar, 2024)

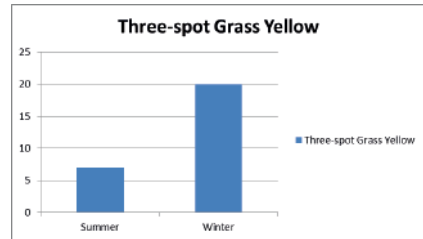
Wingspan : 40–45 mm

Local Name : त्री बिन्दु तृण पिलाती

Habitat : Forest damp patches, bare lands. Unlike other species of Grass Yellows, it flies higher at canopy level, especially females around the food plant.

Larval Host Plants : *Cassia spp.*, *Delonix regia* (Gulmohar/Royal poinciana), *Albizia spp.*, *Pithecolobium dulce* (Jangal jalebi).

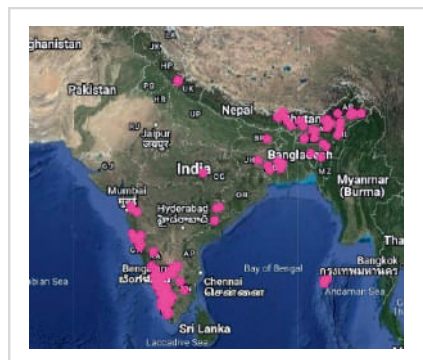
Nectar Plants : *Tridax spp.*, *Bidens spp.*



Abundance of Three-Spot Grass Yellow in Pench Tiger Reserve, MH.



Distribution Map of Three-Spot Grass Yellow in Pench, MH.



Distribution Map of Three-Spot Grass Yellow in India.

One-Spot Grass Yellow

Common Name : One-spot Grass Yellow

Scientific Name : *Eurema andersonii*

Conservation Status in India : Sch. II of WLP Act, 1972

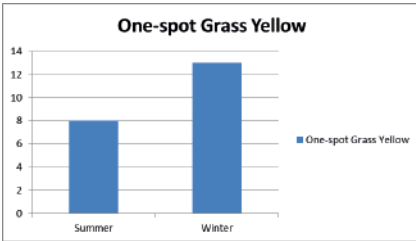
Wingspan : 30-40 mm

Local Name : बिंदू पिलाती

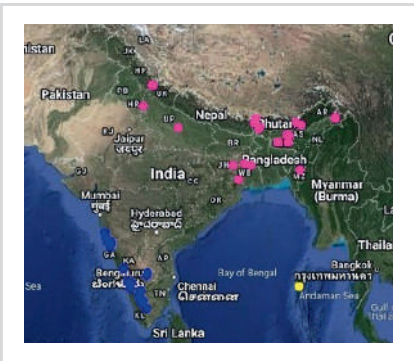
Habitat : Prefer degraded habitats, avoids dense forest.

Larval Host Plants : *Cassia spp.*

Nectar Plants : *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*, and small flowering plants.



Abundance of One-spot Grass Yellow in Pench Tiger Reserve, MH.



Distribution Map of One-spot Grass Yellow in India.



Distribution Map of One-spot Grass Yellow in Pench, MH.

Butterfly Parks in India

India is home to several stunning butterfly parks that highlight the country's rich biodiversity. Here are some notable examples:

- **Bannerghatta Biological Park, Bangalore, Karnataka:** Covering 7.5 acres, this park is one of the largest butterfly parks in India. It offers a dedicated butterfly trail, a museum, and research facilities, providing a comprehensive experience for visitors.
- **Ovalekar Wadi Butterfly Garden, Thane, Maharashtra:** It is an impressive collection of over 130 butterfly species.
- **Asola Bhatti Wildlife Sanctuary, New Delhi.**
- **Tropical Butterfly Conservatory, Goa.**
- **Butterfly Park, Chandigarh.**

These parks not only provide sanctuaries for butterflies but also play a vital role in conservation and education efforts.

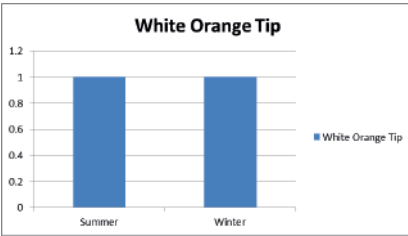


The Butterfly Park enclosure, in Bannerghatta Biological Park, Bengaluru.

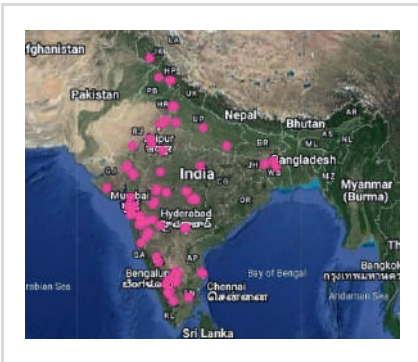
Photo Credit: Murali Kumar K(<https://www.thehindu.com/news/cities/bangalore/jana-vana-five-day-festival-of-forest-wildlife-and-people-from-august-22-to-26/article68550203.ece>)

White Orange Tip

Common Name : White Orange-Tip
Scientific Name : *Ixias marianne*
Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)
Wingspan : 54-56 mm
Local Name : पांढरा शेदूटोक्का
Habitat : Agricultural land and mixed deciduous forests.
Larval Host Plants : *Capparis grandis* (Kandel).
Nectar Plants : *Lantana camara*, *Bidens pilosa*, and *Tridax procumbens*.



Abundance of White Orange-Tip in Pench Tiger Reserve, MH.



Distribution Map of White Orange-Tip in India.



Distribution Map of White Orange-Tip in Pench, MH.

Yellow Orange Tip



Common Name : Yellow Orange-Tip

Scientific Name : *Ixias pyrene*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

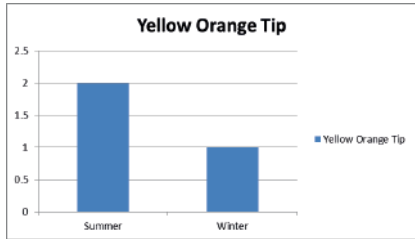
Wingspan : 44–52 mm

Local Name : पिवळा शेंदूरटोक्या

Habitat : Semi-evergreen, deciduous and wetter scrub forests.

Larval Host Plants : *Capparis zeylanica* (Vaghanti).

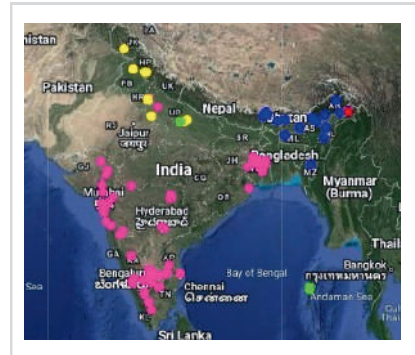
Nectar Plants : *Lantana camara*, *Tridax procumbens*.



Abundance of Yellow Orange-Tip in Pench Tiger Reserve, MH.



Distribution Map of Yellow Orange-Tip in Pench, MH.



Distribution Map of Yellow Orange-Tip in India.

Psyche

Common Name : Psyche

Scientific Name : *Leptosia nina*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

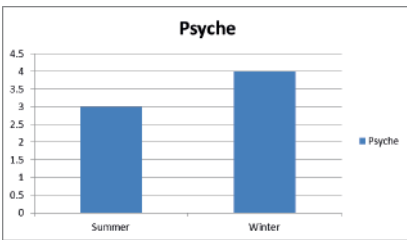
Wingspan : 34–50 mm

Local Name : मनमौजी

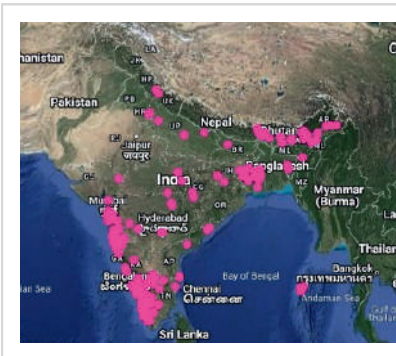
Habitat : Lightly shaded areas in semi-evergreen deciduous forests, and urban woodlands.

Larval Host Plants : *Capparis zeylanica* (Vaghanti).

Nectar Plants : *Tridax procumbens* (Coat buttons), *Bidens spp.*



Abundance of Psyche in Pench Tiger Reserve, MH.

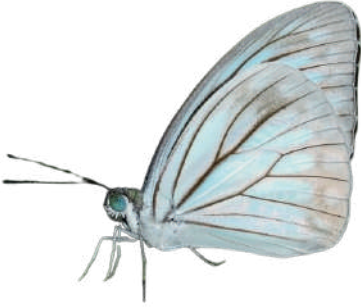


Distribution Map of Psyche in India.



Distribution Map of Psyche in Pench, MH.

Common Wanderer



Common Name : Common Wanderer

Scientific Name : *Pareronia hippie*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

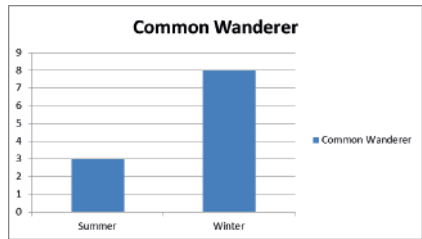
Wingspan : 65–80 mm

Local Name : विमुक्ता

Habitat : Lightly wooded forests and urban woodlands.

Larval Host Plants : *Capparis zeylanica* (Vaghanti).

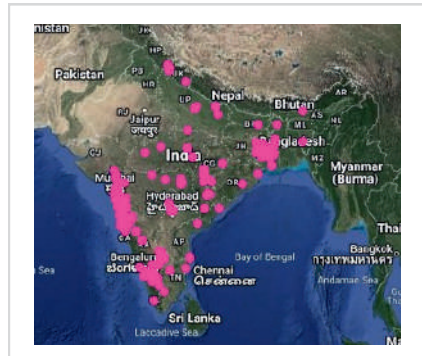
Nectar Plants : *Plumbago* spp., *Tridax procumbens*, *Lantana camara*, *Cosmos sulphureus*, *Jatropha Panduraefolia*.



Abundance of Common Wanderer in Pench Tiger Reserve, MH.



Distribution Map of Common Wanderer in Pench, MH.



Distribution Map of Common Wanderer in India.

Family- Lycaenidae



Family : Lycaenidae**Common Name : Blues, coppers, hairstreaks****Characteristics : Small, brightly coloured; often have false heads with eyespots and small tails resembling antennae.**

Most butterflies of this family are small to medium-sized, with the underside of their wings typically white or brown, while the upper side displays vibrant colors like brilliant blue, green, orange, or violet. Despite their colorful name, not all species possess blue hues. The hindwings of many butterflies have tails or tail-like appendages, ranging from small tufts to long, fluffy tails, and some hindwings even have lobes. A dark spot at the base of the tail often serves as a perfect decoy against predators.

Both male and female butterflies have fully functional forelegs suitable for walking, but in males, the tarsal segments of the forelegs are fused, so they primarily use only four legs. The radial vein in the forewing typically has only three or four branches instead of five. Their antennae are closely set together on top of the head, with bases touching the eyes, which are large and close together.

The eggs are tiny, turban-shaped, or dome-like, with surfaces that are smooth, pitted, or notched like a golf ball. The larvae are oval-shaped with segmented bodies and small retractable heads. Pupae are generally small and rounded, attached to a surface with a silk pad and often secured by a silk girdle. Many species pupate on the ground in leaf litter or tree crevices, and the larvae or pupae of most Lycaenids live in association with ants. The smallest butterfly in India, the grass jewel, belongs to this family.



Common Hedge Blue

Common Name : Common Hedge Blue

Scientific Name : *Acytolepis puspa*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

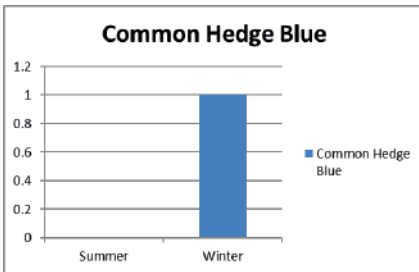
Wingspan : 28–35 mm

Local Name : निलायम

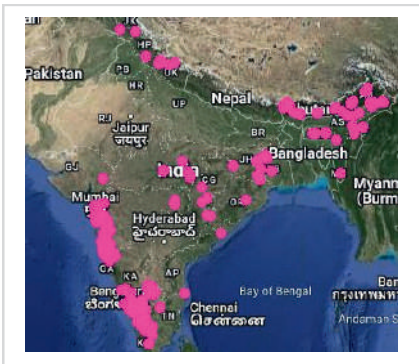
Habitat : Open fields, scrub jungles especially where lower habitation is found.

Larval Host Plants : *Shorea roxburghii* (Sal tree/ Talura lac tree).

Nectar Plants : *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*.



Abundance of Common Hedge Blue in Pench Tiger Reserve, MH.



Distribution Map of Common Hedge Blue in India.



Distribution Map of Common Hedge Blue in Pench, MH.

Plain Hedge Blue



Common Name : Plain Hedge Blue

Scientific Name : *Lampides boeticus*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

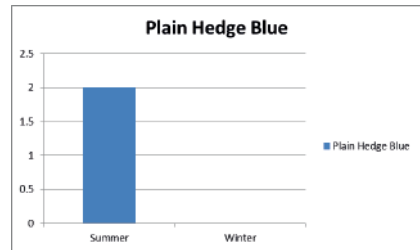
Wingspan : 28-34 mm

Local Name : निलायमी

Habitat : Seen in both forested as well as open country.

Larval Host Plants : *Xylia xylocarpa* (Jamb).

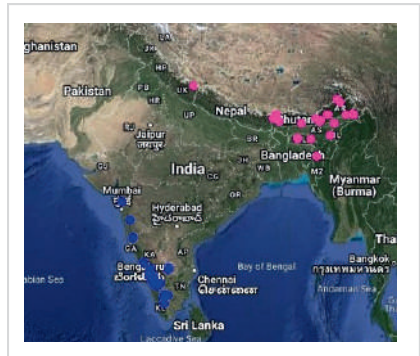
Nectar Plants : *Tephrosia purpurea*, *Lantana camara*, *Ixora coccinea*, and small shrubs.



Abundance of Plain Hedge Blue in Pench Tiger Reserve, MH.



Distribution Map of Plain Hedge Blue in Pench, MH.



Distribution Map of Plain Hedge Blue in India.

Pointed Ciliate Blue

Common Name : Pointed Ciliate Blue

Scientific Name : *Anthene lycaenina*

Conservation Status in India : Sch. II of WLP Act, 1972

Status in PTR, MH : Frequent common (As per Tiple & Deokar, 2024)

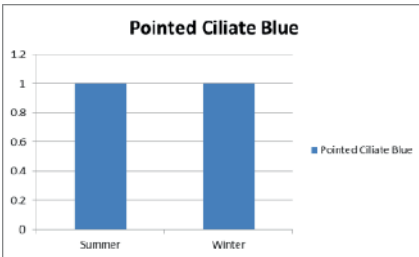
Wingspan : 24-29 mm

Local Name : टोकेरी निलाक्षी

Habitat : Prefers hill forests.

Larval Host Plants : *Leucaena leucocephala* (Subabhu), *Acacia nilotica* (Babhul).

Nectar Plants : *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*, and small flowering plants.



Abundance of Pointed Ciliate Blue in Pench Tiger Reserve, MH.



Distribution Map of Pointed Ciliate Blue in India.



Distribution Map of Pointed Ciliate Blue in Pench, MH.

Large Oakblue



Common Name : Large Oakblue
Scientific Name : *Arhopala amantes*
Status in PTR, MH : Frequent common
 (As per Tiple & Deokar, 2024)

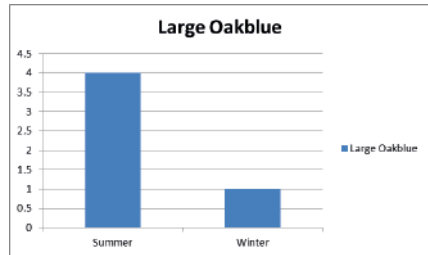
Wingspan : 45–57 mm

Local Name : मोठा निलोक

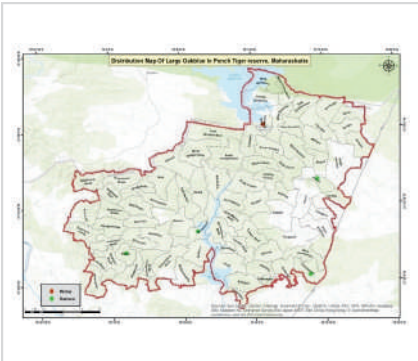
Habitat : Prefers well wooded hilly habitats.

Larval Host Plants : *Terminalia alata* (saj), *Terminalia catappa* (Indian almond tree).

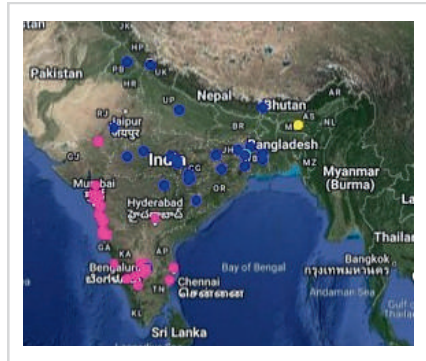
Nectar Plant : *Lantana camara*.



Abundance of Large Oakblue in Pench Tiger Reserve, MH.



Distribution Map of Large Oakblue in Pench, MH.



Distribution Map of Large Oakblue in India.

African Babul Blue

Common Name : African Babul Blue

Scientific Name : *Azanus jesous*

Status in PTR, MH : Common common
(As per Tiple & Deokar, 2024)

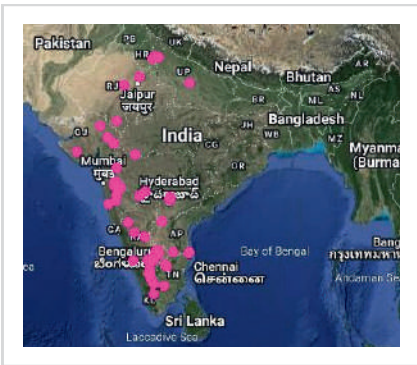
Wingspan : 21–26 mm

Local Name : आफ्रिकन निलभाबली

Habitat : Coastal areas, river valleys, grasslands, stony hillsides, steppe, and semi-desert.

Larval Host Plants : *Acacia farnesiana* (Sweet acacia), *A. leucophloea* (White-bark acacia).

Nectar Plants : *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*, shrubs like *Ziziphus* species and small wild flowering plants.



Distribution Map of African Babul Blue in India.



Bright Babul Blue



Common Name : Bright Babul Blue

Scientific Name : *Azonus ubaldus*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

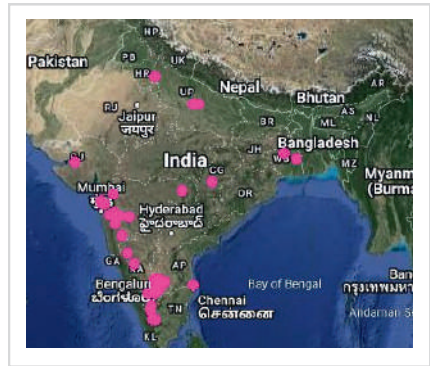
Wingspan : 20-25 mm

Local Name : सतेज निलभाबळी

Habitat : Arid and semiarid regions with acacias.

Larval Host Plants : *Acacia leucophloea* (White-bark acacia), *Acacia nilotica* (Gum arabic tree/ Babul).

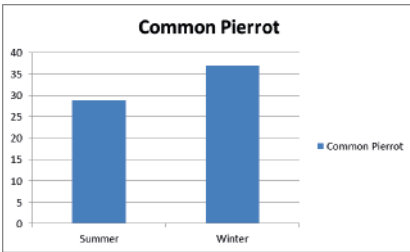
Nectar Plants : *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*, shrubs like *Ziziphus* species and small wild flowering plants.



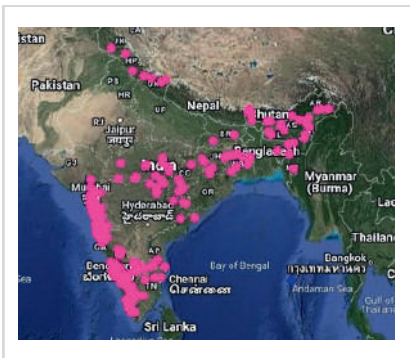
Distribution Map of Bright Babul Blue in India.

Common Pierrot

Common Name : Common Pierrot
Scientific Name : *Castalius rosimon*
Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)
Wingspan : 24–34 mm
Local Name : कवडा
Habitat : Open deciduous forest, scrub, grasslands interspersed with trees and near human habitations.
Larval Host Plants : *Ziziphus jujuba* (Ber).
Nectar Plants : *Sida* spp., *Tridax* spp.



Abundance of Common Pierrot in Pench Tiger Reserve, MH.



Distribution Map of Common Pierrot in India.



Distribution Map of Common Pierrot in Pench, MH.

Forget-Me-Not



Common Name : Forget-Me-Not

Scientific Name : *Catochrysops strabo*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

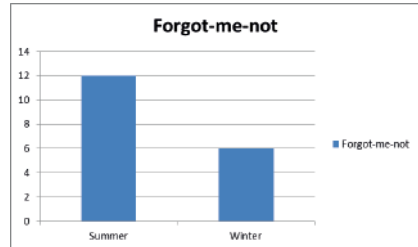
Wingspan : 25–30 mm

Local Name : अविस्मरणीय

Habitat : Gardens, scrubland.

Larval Host Plants : *Tephrosia purpurea* (Common tephrosia), *Ougeinia oojeinensis* (Ujjain desmodium tree/Sandan), *Desmodium spp.*

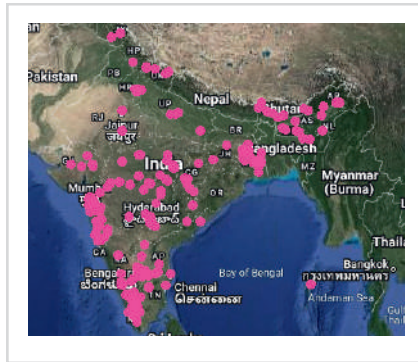
Nectar Plants : *Alternanthera spp.*, *Tridax spp.*



Abundance of Forget-Me-Not in Pench Tiger Reserve, MH.



Distribution Map of Forget-Me-Not in Pench, MH.



Distribution Map of Forget-Me-Not in India.

Lime Blue

Common Name : Lime Blue

Scientific Name : *Caleta decidia*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

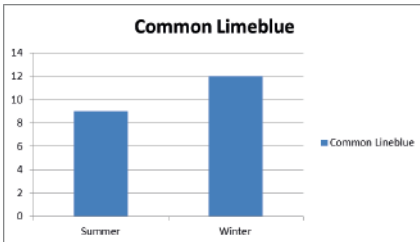
Wingspan : 24–31 mm

Local Name : निलिंब

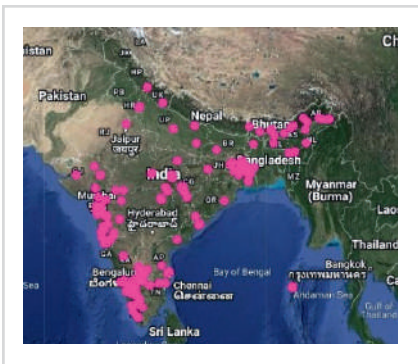
Habitat : Semi-evergreen and deciduous forests, rural landscapes, and urban parks and gardens.

Larval Host Plants : *Atalantia buxifolia* (Makad limbu), *Atalantia racemosa* (Bombay atalantia).

Nectar Plants : *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*, and small flowering plants.



Abundance of Lime Blue in Pench Tiger Reserve, MH.



Distribution Map of Lime Blue in India.



Distribution Map of Lime Blue in Pench, MH.

Small Cupid



Common Name : Small Cupid

Scientific Name : *Chilades parrhasius*

Status in PTR, MH : Rare (As per Tiple & Deokar, 2024)

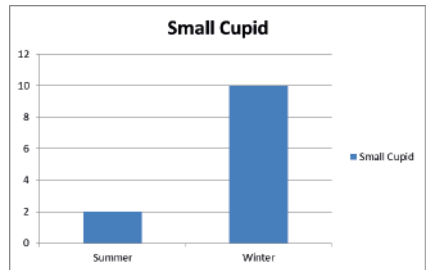
Wingspan : 24–28 mm

Local Name : लघु पांडव

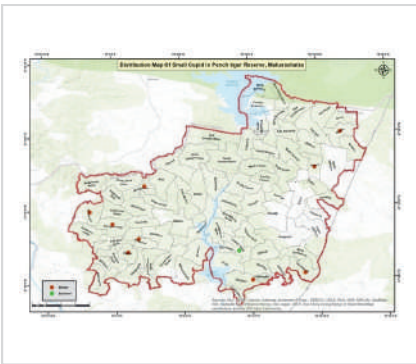
Habitat : Deciduous and scrub forests, and rural landscapes containing fields and grazing lands.

Larval Host Plants : *Acacia nilotica* (Babhul), *Dichrostachys cinerea* (Durangi babhul).

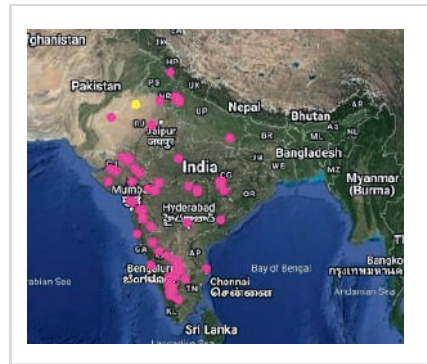
Nectar Plants : *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*, shrubs like *Ziziphus* species and small wild flowering plants.



Abundance of Small Cupid in Pench Tiger Reserve, MH.



Distribution Map of Small Cupid in Pench, MH.



Distribution Map of Small Cupid in India.

Gram Blue

Common Name : Gram Blue

Scientific Name : *Euchrysops cnejus*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

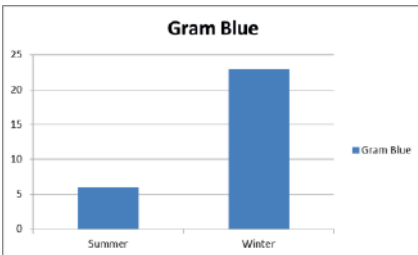
Wingspan : 18–26 mm

Local Name : निलय

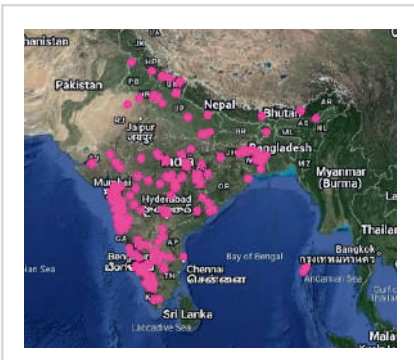
Habitat : Deciduous and scrub forests, and rural landscapes.

Larval Host Plants : *Tephrosia purpurea* (Common tephrosia), *Erythrina indica* (Indian coral tree/ Tiger dlaw), *Albizia lebbbeck* (Saras).

Nectar Plants : *Tridax* spp., *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*, shrubs like *Ziziphus* species and small wild flowering plants.



Abundance of Gram Blue in Pench Tiger Reserve, MH.



Distribution Map of Gram Blue in India.



Distribution Map of Gram Blue in Pench, MH.

Indian Cupid



Common Name : Indian Cupid

Scientific Name : *Cupido lacturnus*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

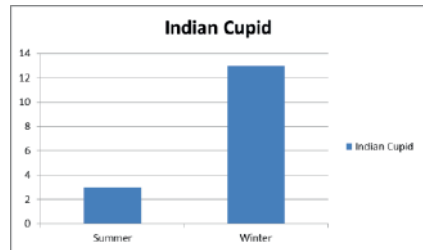
Wingspan : 22–28 mm

Local Name : पांडव

Habitat : Prefers well wooded hilly habitats.

Larval Host Plants : *Lotus corniculatus* (Birdsfoot trefoil).

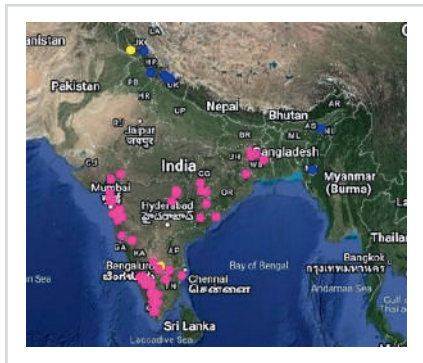
Nectar Plants : *Bidens pilosa*, *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*, and small flowering plants.



Abundance of Indian Cupid in Pench Tiger Reserve, MH.



Distribution Map of Indian Cupid in Pench, MH.



Distribution Map of Indian Cupid in India.

Eastern Grass Jewel

Common Name : Eastern Grass Jewel

Scientific Name : *Freyeria Putli*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

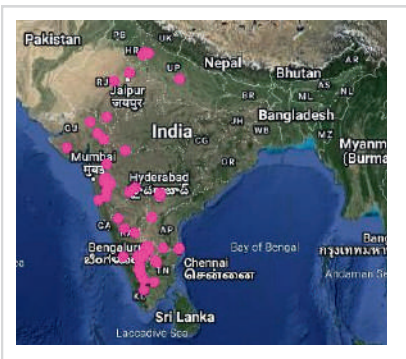
Wingspan : 15–22 mm

Local Name : रत्नमाला

Habitat : Thrives in a variety of grassland habitats.

Larval Host Plants : *Crotalaria hebecarpa* (Fuzzy fruited rattlepod), *Indigofera spp.*

Nectar Plants : *Tephrosia purpurea*, *Tridax procumbens* and small wild flowering plants.



Distribution Map of Eastern Grass Jewel in India.

DID YOU KNOW?

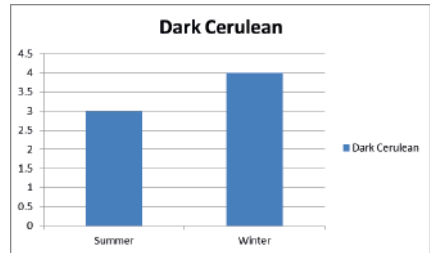
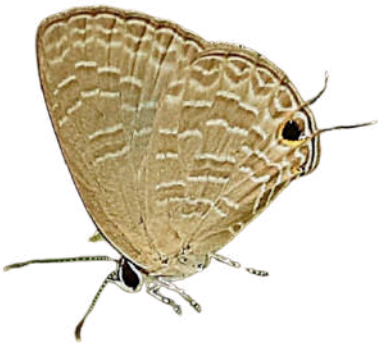
Their large eyes are made of hundreds of tiny lenses. They can't see in detail but can detect shapes, colour and movement.



Dark Cerulean



Common Name : Dark Cerulean
Scientific Name : *Jamides bochus*
Status in PTR, MH : Common (As per Tiple & Deokar, 2024)
Wingspan : 25-34 mm
Local Name : गडद निलांबरी
Habitat : On damp patches.
Larval Host Plants : *Crotalaria spp.*, *Pongamia pinnata* (Karanj).
Nectar Plants : *Lantana camara*, *Tridax procumbens*.



Abundance of Dark Cerulean in Pench Tiger Reserve, MH.



Distribution Map of Dark Cerulean in Pench, MH.



Distribution Map of Dark Cerulean in India.

Common Cerulean

Common Name : Common Cerulean

Scientific Name : *Jamides celeno*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

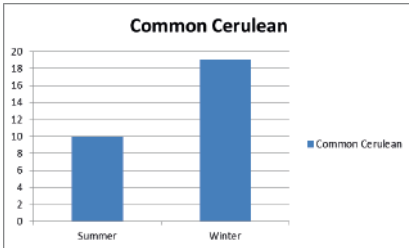
Wingspan : 27-40 mm

Local Name : निलांबटी

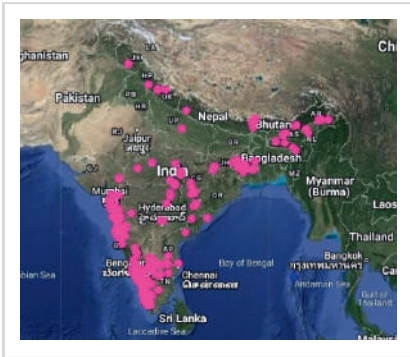
Habitat : Forest, grassland and human habitations. It is more common around water-bodies as its larval host grows there.

Larval Host Plants : *Saraca asoca* (Ashok), *Buteas monosperma* (Palash).

Nectar Plants : *Sida rhombifolia* (Arrowleaf sida), *Tridax spp.*



Abundance of Common Cerulean in Pench Tiger Reserve, MH.



Distribution Map of Common Cerulean in India.



Distribution Map of Common Cerulean in Pench, MH.

Pea Blue



Common Name : Pea Blue

Scientific Name : *Lampides boeticus*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

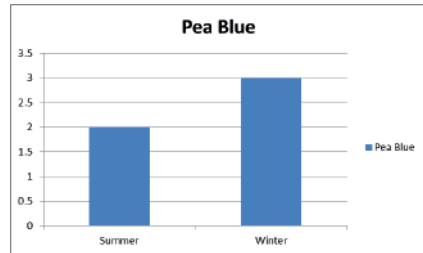
Wingspan : 24–36 mm

Local Name : निलवाटणा

Habitat : Visits flowers and damp patches.

Larval Host Plants : *Erythrina spp.*,
Butea spp.

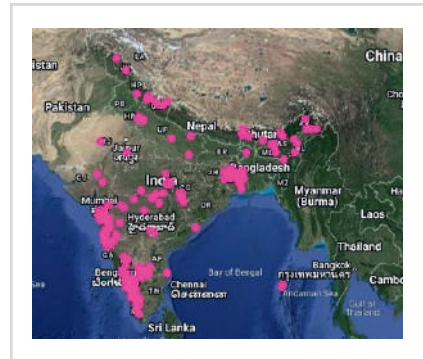
Nectar Plants : *Tephrosia purpurea*,
Lantana camara, *Tridax procumbens*.



Abundance of Pea Blue in Pench Tiger Reserve, MH.



Distribution Map of Pea Blue in Pench, MH.



Distribution Map of Pea Blue in India.

Zebra Blue

Common Name : Zebra Blue

Scientific Name : *Leptotes plinius*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

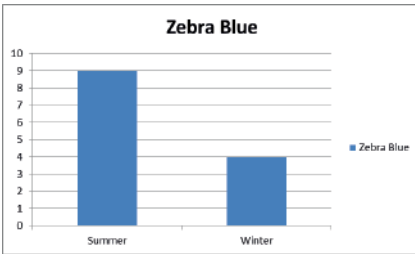
Wingspan : 22-30 mm

Local Name : पट्टनील

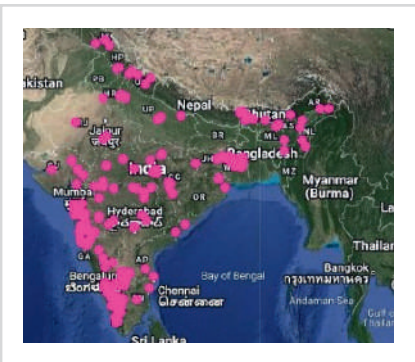
Habitat : Open woodland where they feed on native plants.

Larval Host Plants : *Albizia lebeck* (Sirish).

Nectar Plants : *Alternanthera spp.*, *Bidens spp.*, *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*.



Abundance of Zebra Blue in Pench Tiger Reserve, MH.



Distribution Map of Zebra Blue in India.



Distribution Map of Zebra Blue in Pench, MH.

Butterfly Roosting

Roosting is a behavior where butterflies rest together in groups, usually at night. This behavior is important for butterflies because it helps them conserve energy and protect themselves from predators.

How it works?

- Butterflies roost in a variety of locations, including the underside of leaves.
- They may roost for a single night or for the entire winter.
- Butterflies arrive at their roosting sites a few hours before sunset and leave within a couple of hours after sunrise.
- Roosting butterflies are often of the same species, but sometimes different species roost together.

Why it's important?

- Roosting helps butterflies conserve energy, which is important for long migrations.
- Roosting in groups helps protect butterflies from predators.

Which butterflies roost together?

- Butterflies in the subfamilies Acraeinae, Danainae, Heliconiinae, and Ithomiinae often roost in groups.
- Monarch butterflies are known to roost together during the winter.

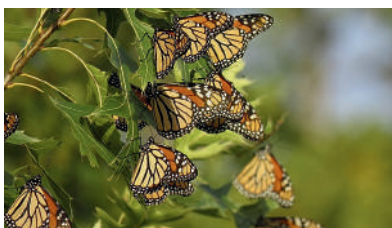


Image Reference:
innaturalist.org

Plains Cupid

Common Name : Plains Cupid

Scientific Name : *Chilades pandava*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

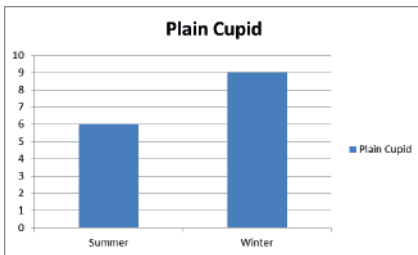
Wingspan : 25-35 mm

Local Name : पठारी पांडव

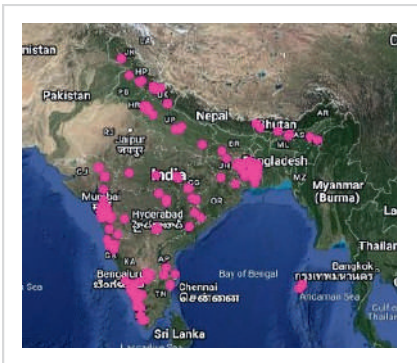
Habitat : Females generally fly around its host plants.

Larval Host Plants : *Cycas spp.*

Nectar Plants : *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*, and small flowering plants.



Abundance of Plains Cupid in Pench Tiger Reserve, MH.



Distribution Map of Plains Cupid in India.



Distribution Map of Plains Cupid in Pench, MH.

Common Lineblue



Common Name : Common Lineblue

Scientific Name : *Prosotas nora*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

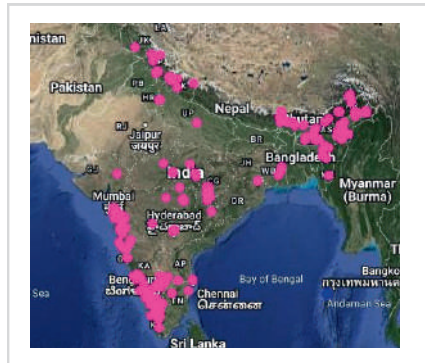
Wingspan : 10-12 mm

Local Name : भुंडी निलरेखा

Habitat : Prefers open grassy areas, more abundant in deciduous forest. It is a specialized flower bud feeder as larva. The larva encloses from the egg laterally and feeds exclusively on inflorescences.

Larval Host Plants : *Acacia catechu* (Kathha).

Nectar Plants : *Tephrosia purpurea* , *Tridax procumbens*.



Distribution Map of
Common Lineblue in India.

**DID
YOU
KNOW?**

Butterflies have taste receptors on their feet to help them find their host plants and locate food.



Tailless Lineblue

Common Name : Tailless Lineblue

Scientific Name : *Prosotas dubiosa*

Conservation Status in India : Sch. II of WLP Act, 1972

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

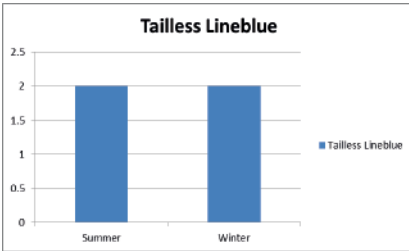
Wingspan : 10–12 mm

Local Name : भुंडी निलटेखा

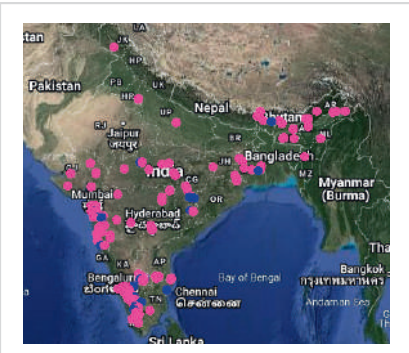
Habitat : Disturbed evergreen forest, deciduous forest.

Larval Host Plants : *Mallotus philippensis* (Kesari).

Nectar Plant : *Tridax procumbens*.



Abundance of Tailless Lineblue in Pench Tiger Reserve, MH.



Distribution Map of Tailless Lineblue in India.



Distribution Map of Tailless Lineblue in Pench, MH.

Butterflies Sperm

Lepidopteran sperm are transferred within a protein-rich ejaculate called a spermatophore. This spermatophore can represent a significant investment by the male; some male monarchs transfer spermatophores that weigh up to 10% of their own mass! But this isn't the lepidopteran record; males in another species (*Pieris napi*) can transfer up to 23% of their mass during mating (Forsberg and Wiklund 1989). The spermatophore is not transferred intact to the female; most of it forms during mating within an organ in the female called the bursa copulatrix. The roundish body of the spermatophore is covered with a tough, white sac, and contains a granular substance. The stem-like structure is called the collum. It forms within the male's aedeagus and is transferred with the sperm at the very end of copulation. The collum has an opening that is positioned next to the opening of a duct in the female that leads to the sperm storage organ. The sperm are contained in a discrete sac in the pointed end of the spermatophore. It takes a long time to transfer all of this material to the female; mating monarchs often remain paired for 16 hours or longer.

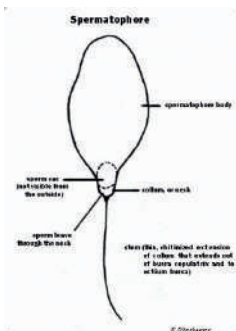


Image of a butterfly spermatophore
Source: <https://monarchjointventure.org/monarch-biology/reproduction>

Dingy Lineblue



Common Name : Dingy Lineblue

Scientific Name : *Petrelaea dana*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

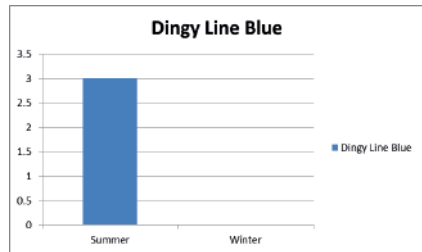
Wingspan : 24-28 mm

Local Name : मलिन निलरेखा

Habitat : Near animal droppings.

Larval Host Plants : *Terminalia catappa* (Badam).

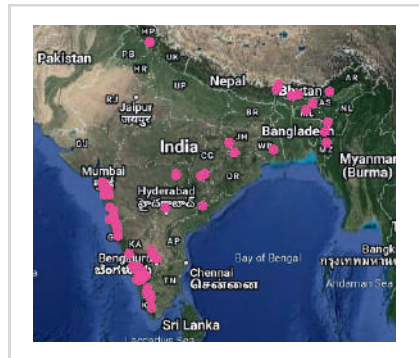
Nectar Plants : *Lantana camara*, *Ixora coccinea*, and *Tridax procumbens*.



Abundance of Dingy Lineblue in Pench Tiger Reserve, MH.



Distribution Map of Dingy Lineblue in Pench, MH.



Distribution Map of Dingy Lineblue in India.

Pale Grass Blue

Common Name : Pale Grass Blue

Scientific Name : *Pseudozizeeria maha*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

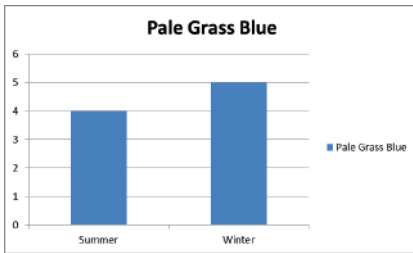
Wingspan : 26–30 mm

Local Name : फिक्कट गवत्या

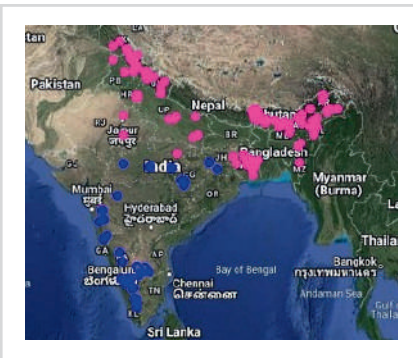
Habitat : Prefers open grassy areas, more abundant on hills.

Larval Host Plants : *Tephrosia purpurea* (Jungle neel), *Lantana camara* (Raimuniya).

Nectar Plants : *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*, and small flowering plants, *Oxalis* species.



Abundance of Pale Grass Blue in Pench Tiger Reserve, MH.



Distribution Map of Pale Grass Blue in India.



Distribution Map of Pale Grass Blue in Pench, MH.

Common/Indian Red Flash



Common Name : Common Red Flash / Indian Red Flash

Scientific Name : *Rapala iarbus*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

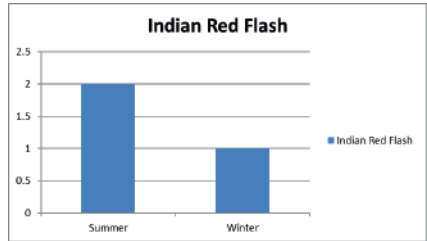
Wingspan : 33-41 mm

Local Name : लाल तेजस

Habitat : Moist evergreen and deciduous forests.

Larval Host Plants : *Terminalia catappa* (Indian almond tree).

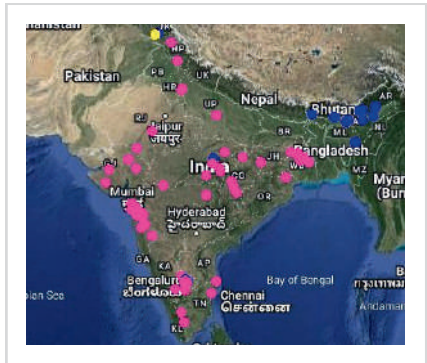
Nectar Plants : *Lantana camara*, *Ixora coccinea*, and *Tridax procumbens*.



Abundance of Common Red Flash in Pench Tiger Reserve, MH.



Distribution Map of Common Red Flash in Pench, MH.



Distribution Map of Common Red Flash in India.

Slate Flash

Common Name : Slate Flash

Scientific Name : *Rapala manea*

Status in PTR, MH : Rare (As per Tiple & Deokar, 2024)

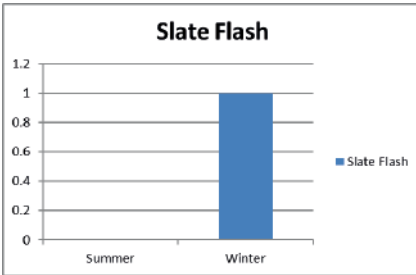
Wingspan : 30–33 mm

Local Name : करडा तेजस

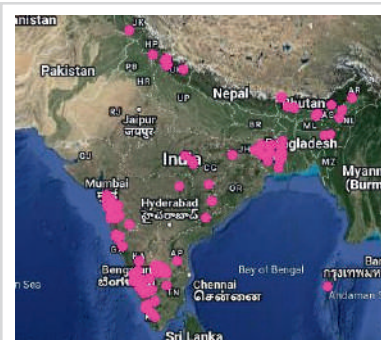
Habitat : Moist evergreen and deciduous forests.

Larval Host Plants : *Mangifera indica* (Mango).

Nectar Plant : *Lantana camara*.



Abundance of Slate Flash in Pench Tiger Reserve, MH.



Distribution Map of Slate Flash in India.



Distribution Map of Slate Flash in Pench, MH.

Scarce Shot Silverline



Common Name : Scarce Shot Silverline

Scientific Name : *Spindasis elima*

Conservation Status in India : Sch. II of WLP Act, 1972

Status in PTR, MH : Rare (As per Tiple & Deokar, 2024)

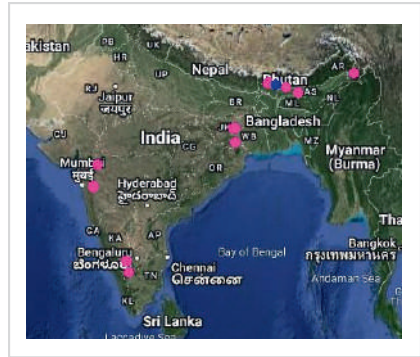
Wingspan : 28-42 mm

Local Name : खंडीत रुपरेखा

Habitat : Open plains, jungle and in the hills to an altitude of 5000 ft.

Larval Host Plants : *Quisqualis spp.*, *Combretum indicum* (Rangoon creeper or Burma).

Nectar Plants : *Lantana camara*, *Tridax procumbens*.



Distribution Map of Scarce Shot Silverline in India.

DID YOU KNOW?

They can see ultraviolet light and so see flowers very differently humans!

Common Shot Silverline

Common Name : Common Shot Silverline

Scientific Name : *Cigaritis ictis*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

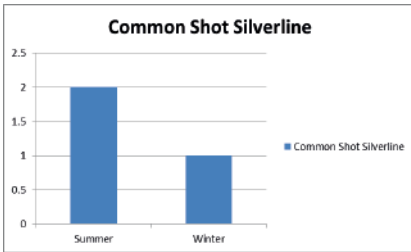
Wingspan : 227–35 mm

Local Name : खंडीत रूपरेखा

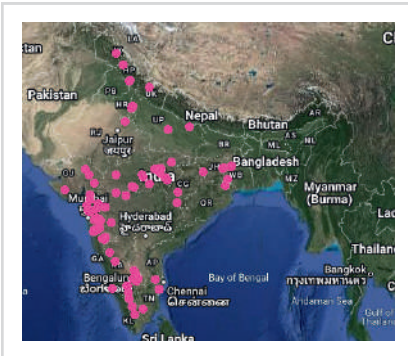
Habitat : Prefers open plains at low elevations.

Larval Host Plants : *Dendrophthoe spp.*

Nectar Plants : *Lantana spp.*,
Chromolaena spp.



Abundance of Common Shot Silverline in Pench Tiger Reserve, MH.



Distribution Map of Common Shot Silverline in Pench, MH.



Distribution Map of Common Shot Silverline in India.

Plumbeous Silverline



Common Name : Plumbeous Silverline

Scientific Name : *Spindasis*

schistacea

Status in PTR, MH : Rare (As per Tiple & Deokar, 2024)

Wingspan : 28-37 mm

Local Name : करडी रुपरेखा

Habitat : Wide range of habitats from edges of evergreen forests to rural landscapes.

Larval Host Plants : *Quisqualis spp.*, *Combretum indicum* (Rangoon creeper).

Nectar Plants : *Lantana camara*, *Tridax procumbens*.



Distribution Map of Plumbeous Silverline in India.

Common Silverline

Common Name : Common Silverline

Scientific Name : *Cigaritis vulcanus*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

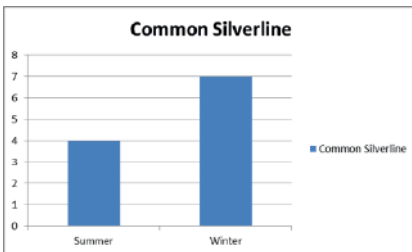
Wingspan : 26–34 mm

Local Name : रूपरेखा

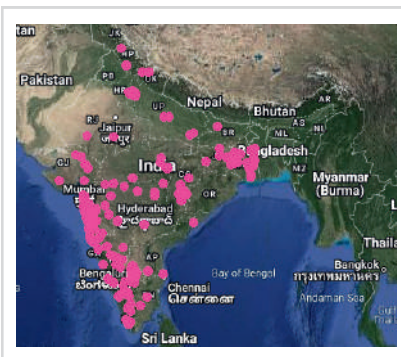
Habitat : Dry deciduous and scrub forests, and rural areas.

Larval Host Plants : *Zizyphus mauritiana* (Indian jujube), *Zizyphus rugosa* (Zunna berry/ Chunna fruit).

Nectar Plants : *Lantana camara*, *Tridax procumbens*, small wild flowering plants.



Abundance of Common Silverline in Pench Tiger Reserve, MH.



Distribution Map of Common Silverline in India.



Distribution Map of Common Silverline in Pench, MH.

Red Pierrot



Common Name : Red Pierrot

Scientific Name : *Talicada nyseus*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

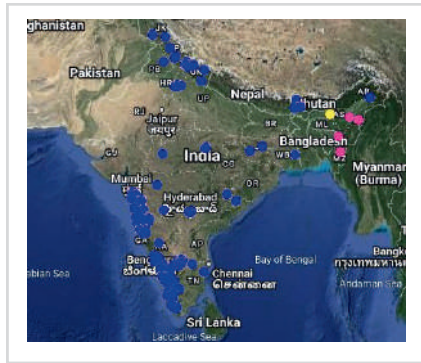
Wingspan : 30-36 mm

Local Name : लाल कवडा

Habitat : Semi-arid plains, degraded patches of evergreen patches, and semi-evergreen forest, gardens, hill stations and forests.

Larval Host Plants : *Kalanchoe* spp., *K. blossfeldiana* (Flaming katy).

Nectar Plants : *Lantana camara*, *Tridax procumbens*.



Distribution Map of Red Pierrot in India.

Spotted Pierrot

Common Name : Spotted Pierrot

Scientific Name : *Tarucus callinara*

Conservation Status in India : Sch. II of WLP Act, 1972

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

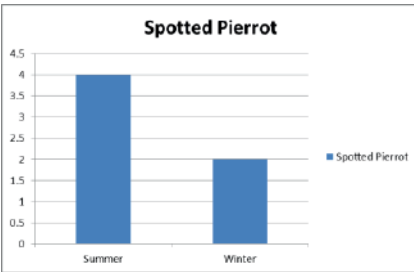
Wingspan : 24-26 mm

Local Name : ठिपकेदार कवडा

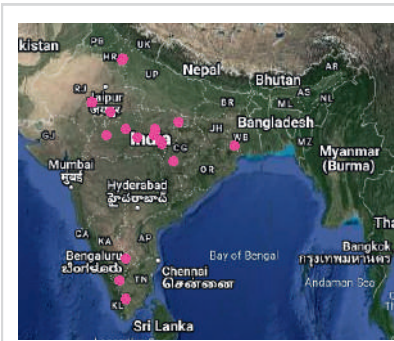
Habitat : On grasses and low-growing flowers.

Larval Host Plants : *Ziziphus jujuba* (Ber).

Nectar Plants : *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*, shrubs like *Ziziphus* species and small wild flowering plants.



Abundance of Spotted Pierrot in Pench Tiger Reserve, MH.



Distribution Map of Spotted Pierrot in India.



Distribution Map of Spotted Pierrot in Pench, MH.

Common Guava Blue



Common Name : Common Guava Blue

Scientific Name : *Virachola isocrates*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

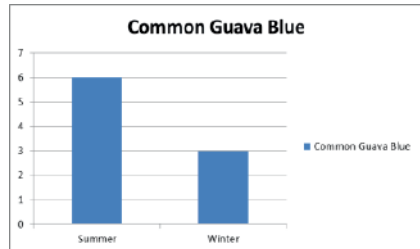
Wingspan : 35-50 mm

Local Name : निलामृद

Habitat : Prefers areas with scattered trees and shrubs, especially those that support its larval host plants.

Larval Host Plants : *Tamarindus indica* (Chinch), *Psidium guava* (Peru), *Punica granatum* (Dalimb).

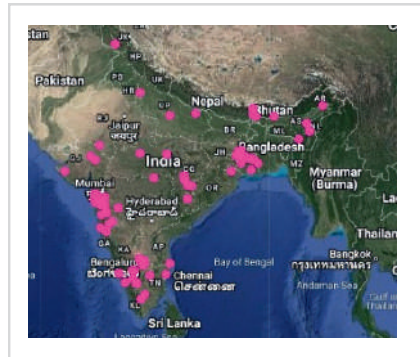
Nectar Plants : *Lantana camara*, *Tridax procumbens*.



Abundance of Common Guava Blue in Pench Tiger Reserve, MH.



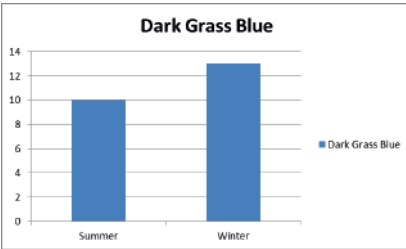
Distribution Map of Common Guava Blue in Pench, MH.



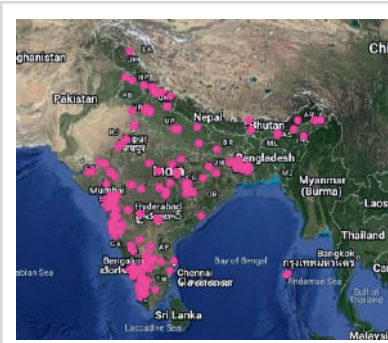
Distribution Map of Common Guava Blue in India.

Dark Grass Blue

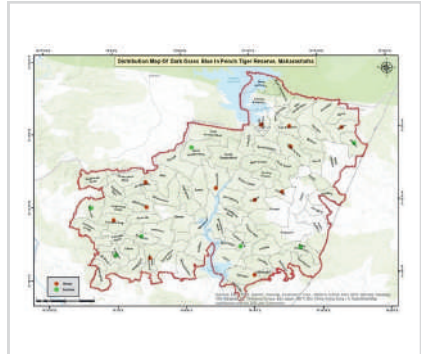
Common Name : Dark Grass Blue
Scientific Name : *Zizeeria karsandra*
Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)
Wingspan : 18–24 mm
Local Name : गडद गवत्या
Habitat : Grassy patches.
Larval Host Plants : *Amaranthus spinosus* (Kante bhaji).
Nectar Plants : *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*, shrubs like *Ziziphus* species and small wild flowering plants.



Abundance of Dark Grass Blue in Pench Tiger Reserve, MH.



Distribution Map of Dark Grass Blue in India.



Distribution Map of Dark Grass Blue in Pench, MH.

Lesser Grass Blue



Common Name : Lesser Grass Blue

Scientific Name : *Zizina otis*

Status in PTR, MH : Very common (As per Tiple & Deokar, 2024)

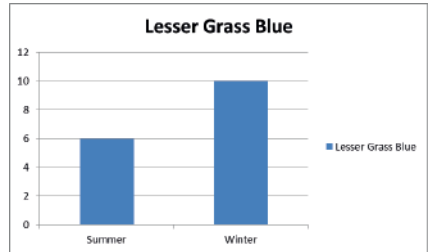
Wingspan : 19–26 mm

Local Name : छोटा गवत्या

Habitat : Urban areas and grasslands.

Larval Host Plants : *Alysicarpus vaginalis* (Alyce clover), *Sesbania bispinosa* (Raan shevari), *Zornia gibbosa* (Grasslike zornia).

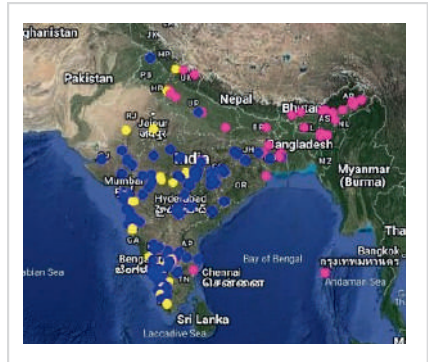
Nectar Plants : *Tephrosia purpurea*, *Lantana camara*, *Tridax procumbens*, shrubs like *Ziziphus* species and small wild flowering plants.



Abundance of Lesser Grass Blue in Pench Tiger Reserve, MH.



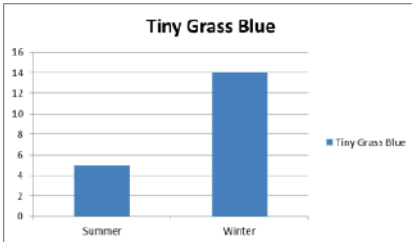
Distribution Map of Lesser Grass Blue in Pench, MH..



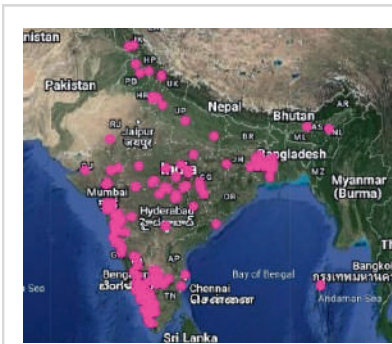
Distribution Map of Lesser Grass Blue in India.

Tiny Grass Blue

Common Name : Tiny Grass Blue
Scientific Name : *Zizula hylax*
Status in PTR, MH : Very Common (As per Tiple & Deokar, 2024)
Wingspan : 16–24 mm
Local Name : चिगी
Habitat : The ground over grassy patches.
Larval Host Plants : *Dipteracanthus prostrates* (Kali dhawani).
Nectar Plants : *Tephrosia purpurea*, *Tridax procumbens*, shrubs like *Ziziphus* species and small wild flowering plants.



Abundance of Tiny Grass Blue in Pench Tiger Reserve, MH.



Distribution Map of Tiny Grass Blue in India.



Distribution Map of Tiny Grass Blue in Pench, MH.

Dull Babul Blue

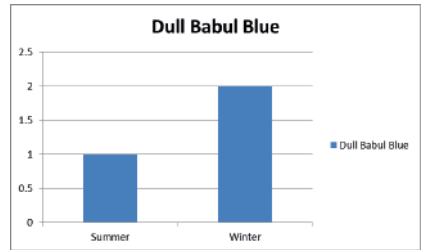


Common Name : Dull Babul Blue
Scientific Name : *Azonus uranus*
Status in PTR, MH : Frequent common
 (As per Tiple & Deokar, 2024)

Wingspan : 20-25 mm
Local Name : फिक्कट निलबाभळी
Habitat : Grass land, crop land, open forest, scrub forest, dense forest and bamboo patch.

Larval Host Plants : *Acacia arabica* (Indian gum arabic tree), *A. catechu* (khair).

Nectar Plants : *Tephrosia purpurea*, *Tridax procumbens*, shrubs like *Ziziphus* species and small wild flowering plants.



Abundance of Dull Babul Blue in Pench Tiger Reserve, MH.



Distribution Map of Dull Babul Blue in Pench, MH.



Distribution Map of Dull Babul Blue in India.

Black Spotted Pierrot

Common Name : Black-spotted Pierrot

Scientific Name : *Tarucus balkanicus*
Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

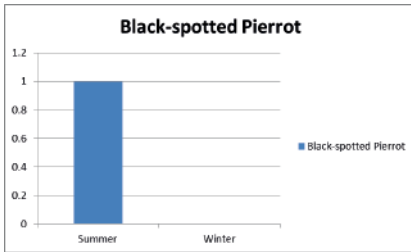
Wingspan : 21–24 mm

Local Name : काळ्या ठिपक्याचा कवडा

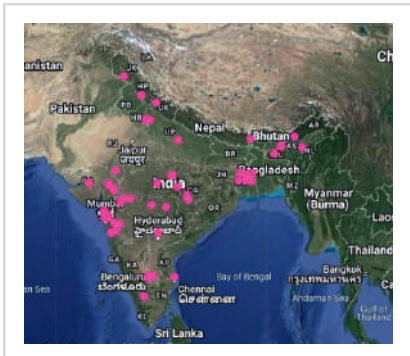
Habitat : Found mainly in the plains.

Larval Host Plants : *Ziziphus jujube* (Ber), *Z. nummularia* (Indian jujube).

Nectar Plants : *Tridax procumbens*, shrubs like *Ziziphus* species and small wild flowering plants.



Abundance of Black-Spotted Pierrot in Pench Tiger Reserve, MH.



Distribution Map of Black-Spotted Pierrot in India.



Distribution Map of Black-Spotted Pierrot in Pench, MH.

Grass Jewel



Common Name : Grass Jewel/Small Grass Jewel

Scientific Name : *Freyeria putli*

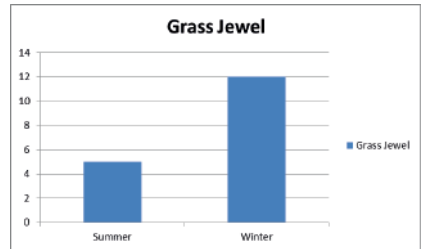
Wingspan : 15-22 mm

Local Name : रत्नमाला

Habitat : Grassy open space next to shrubby secondary vegetation.

Larval Host Plants : *Indigfera spp.*

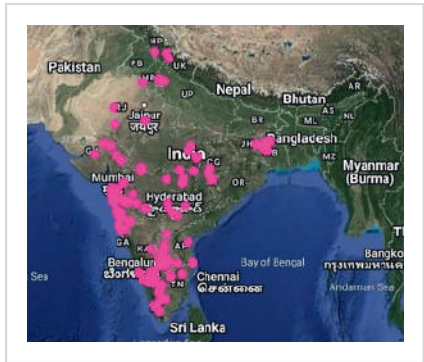
Nectar Plants : *Tridax procumbens* and small wild flowering plants.



Abundance of Grass Jewel in Pench Tiger Reserve, MH.



Distribution Map of Grass Jewel in Pench, MH.



Distribution Map of Grass Jewel in India.

Rounded Pierrot

Common Name : Rounded Pierrot

Scientific Name : *Tarucus nara*

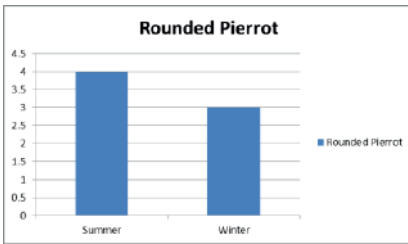
Wingspan : 23-28 mm

Local Name : ट्रेटी कवडा

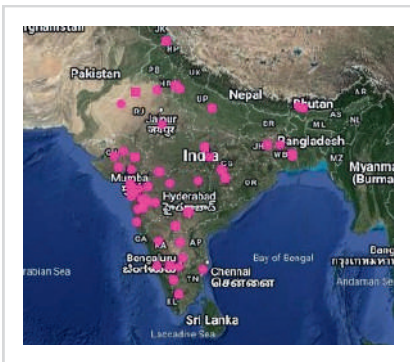
Habitat : Females generally fly around its host plants.

Larval Host Plants : *Cycas* spp.

Nectar Plants : *Tephrosia purpurea*, *Tridax procumbens*, shrubs like *Ziziphus* species and small wild flowering plants.



Abundance of Rounded Pierrot in Pench Tiger Reserve, MH.



Distribution Map of Rounded Pierrot in India.



Distribution Map of Rounded Pierrot in Pench, MH.

Peacock Royal



Common Name : Peacock Royal

Scientific Name : *Telicota colon*

Conservation Status in India : Sch. II of WLP Act, 1972

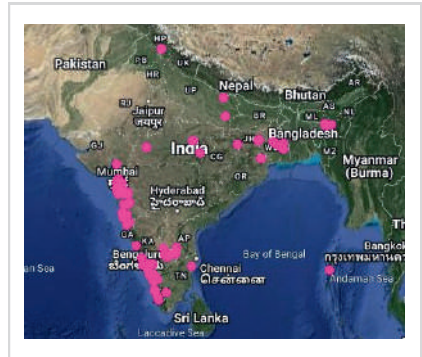
Wingspan : 31–45 mm

Local Name : मयुरेश

Habitat : Parks, garden and forests.

Larval Host Plants : *Dendrophthoe falcata* (Honey suckle mistletoe), *D. glabrescens* (Smooth mistletoe).

Nectar Plant : Lantana camara.



Distribution Map of Peacock Royal in India.

Indian Sunbeam

Common Name : Indian Sunbeam

Scientific Name : *Curetis thetis*

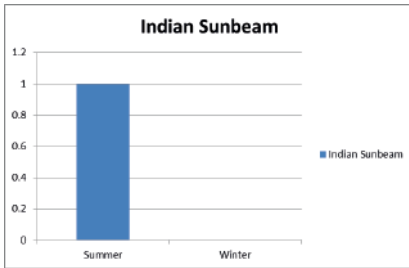
Wingspan : 40-48 mm

Local Name : किरण

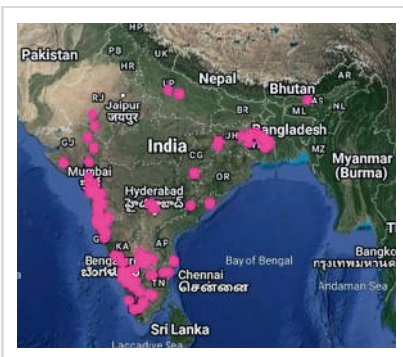
Habitat : Prefers well wooded hilly habitats.

Larval Host Plants : *Lotus corniculatus* (Bird's-foot trefoil).

Nectar Plant : *Lantana camara*.



Abundance of Indian Sunbeam in Pench Tiger Reserve, MH.



Distribution Map of Indian Sunbeam in India.



Distribution Map of Indian Sunbeam in Pench, MH.

Family- Riodinidae



Family : Riodinidae

Common Name : Metalmarks

Characteristics : Often have metallic spots on wings; often conspicuously coloured with black, orange and blue

Recently elevated to family status from its previous classification as a subfamily of Lycaenidae, the Riodinidae family is often referred to as "metalmarks" due to the metallic markings found on the wings of many species. However, members of this family in the Western Ghats lack these metallic markings. Male butterflies in this family have incomplete forelegs that are smaller than the other legs and are not used for walking. The foot (tarsus) of the male is fused into a single segment and rarely has claws, while females have all six legs fully developed. The cells of both wings are closed by veins in both sexes.

Within this family, the subfamily Nemeobiinae includes species like those from the genus *Abisara*, such as *A. bifasciata* and *A. echer*. In these butterflies, the costa of the hindwing up to the origin of the short humeral vein, and the hindwing also has a precostal vein. Male butterflies lack scent scales. These butterflies are small, reddish-brown, and have yellowish-green eyes. They are active flyers that prefer shady, forested areas and exhibit a short, hopping flight. They typically rest on leaves with their wings half open, appearing to walk on the surface. The eggs are round with a smooth surface, and the larvae are covered with hairs (setae) and lack the dorsal honey gland found in Lycaenids.



Two-Spot Plum Judy



Common Name : Two-Spot Plum Judy / Double Banded Judy

Scientific Name : *Abisara bifasciata*

Status in PTR, MH : Common (As per Tiple & Deokar, 2024)

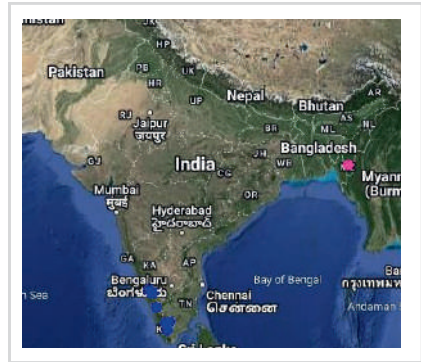
Wingspan : 40-50 mm

Local Name : पिंगोरी

Habitat : Semi-evergreen and moist deciduous forests.

Larval Host Plants : *Ardisia spp.*, *Maesa indica* (Wild Berry).

Nectar Plants : *Lichens* and occasionally nectar from flowering shrubs.



Distribution Map of Two-Spot Plum Judy in India.

“

Interesting Facts

”

Some Butterfly Related Terminology

- A group of butterflies is called a **flutter**.
- **“Puddle clubs”** are groups of butterflies that gather at wet soil to suck up salts and minerals.
- **Lepidopterology:** The scientific study of butterflies and moths. The word comes from the Ancient Greek words *lepídos* (scale) and *pterón* (wing).
- **Lepidopterist:** A person who studies butterflies and moths.
- **Diapause:** A period when an butterfly is relatively inactive.
- **Apiculus:** An extension of the antennal club in skippers.
- **Chrysalis:** A butterfly pupa.
- **Larva:** The caterpillar, the long, worm-like stage of the butterfly or moth.
- **Colonist:** A butterfly that establishes a temporary or permanent population in a new area.
- **Patrolling:** A mate-locating behavior of butterflies.
- **March 14** is celebrated as ‘ World Butterfly Day.’
- **September** is the national month of butterflies celebrated in India.
- **Hilltopping:** The behavior of some insect species to concentrate on or patrol around the summits of mountains or ridges. Males are more likely than females to engage in this “King of the Mountain” behavior, but females do seek out these high points in order to mate. Classic hilltoppers include the Western White and Anise Swallowtail. Hilltopping is one of several “epigamic” behaviors: behaviors that serve to bring the sexes together.
- **Holarctic:** Organisms whose geographic ranges span both North America and Eurasia.
- **Instar:** The stage between molts in the life of larvae. Butterflies belong to the Phylum Arthropoda (which includes other animals like crustaceans, spiders, millipedes, as well as all other insects), and all Arthropods must molt their external skeleton (exoskeleton) because it does not grow continuously like the internal skeleton (endoskeleton) of vertebrates. Most butterfly larvae molt their their exoskeleton about 5 times and therefore have 6 instars, but environmental conditions can alter the number.

- **Lek:** The concentration of males into a small area for the purposes of collectively displaying to females as potential mates. Females are allowed to “choose” the strongest, flashiest, sexiest, etc. Male in the group, and as a result, only a handful of males usually mate. Hilltops are one place where such behavior occurs.
- **Oviposition:** The depositing of egg by a female butterfly is called oviposition.
- **Proboscis:** The tube like organ on the head of butterflies and moths that they use to drink fluids, like flower nectar. Lepidoptera do not have chewing mouthparts as adults and consequently do not consume solid food or grow as adults, but they definitely do as larvae!
- **Puddling:** The attraction, and usually concentration, of individual butterflies at wet, muddy spots to drink water and salts. For the most part, only males mudpuddle because they need salts to facilitate sperm production.
- **Vein:** The thin, rod-like structures in the wings of insects that provide structural support to the wings. The front edge of the forewings contains the strongest and most important vein in the wings since this edge of the wing is responsible for producing the motion needed to create the lift needed for flight. Wing venation patterns can be key means of identifying taxa.
- **Voltinism:** The description of how many broods (generations) per year a particular butterfly species produces at any one location. A butterfly with one generation per year is “univoltine”. Butterflies with two generations per year are called “bivoltine” and those with more than two are generally referred to as “multivoltine”.
- **Chrysalis:** The third stage in Lepidoptera metamorphosis (also called the pupa). The body tissues and organs of the caterpillar are broken down and re-arranged to develop the adult. The chrysalis is the most vulnerable stage because the individual does not have any ability to move if threatened by enemies or adverse environmental conditions.

(From: Art Shapiro's Butterfly

Site([https://butterfly.ucdavis.edu/resources/glossary#:~:text=](https://butterfly.ucdavis.edu/resources/glossary#:~:text=Six%20butterfly%20families%20are%20present,some%20authors)%2C%20and%20Nymphalidae%20)

[Six%20butterfly%20families%20are%20present,some%20authors\)%2C%20and%20Nymphalidae%20](https://butterfly.ucdavis.edu/resources/glossary#:~:text=Six%20butterfly%20families%20are%20present,some%20authors)%2C%20and%20Nymphalidae%20))

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Nymphalidae : Brush-Footed Butterflies



Angled Castor



Baronet



Bamboo Tree Brown



Gaudy Baron



Black Rajah



Blackvein Sergeant



Blue Oakleaf



Blue Pansy



Blue Tiger



Brown King Crow



Chestnut-Streaked Sailer



Chocolate Pansy



Commander



Intermediate Bushbrown



Common Baron



Common Castor



Common Crow



Common Evening Brown



Common Five-Ring



Common Lascar



Common Leopard



Common Three-Ring



Common Nawab



Lesser Three-Ring



Common Sergeant



Common Sailer



Danaid Eggfly



Dark Evening Brown



Tawny Rajah



Anomalous Nawab



Great Eggfly



Dark Banded Bush Brown



Grey Pansy



Joker



Glassy Tiger



Painted Lady



Lemon Pansy



Long Banded
Bush-Brown



Common Four-Ring



Common Sailer



Plain Tiger



Peacock
Pansy



Striped Tiger



Tawny Coster



Common Palmfly



Yellow Pansy

Hesperiidae : Skippers



Conjoined Swift



Brown Awl



Dark Palm Dart



Grass Demon



Blank Swift



Paintbrush Swift



Spotted Angle



Golden Angle



Rice Swift



Tricolour Pied Flat



Moore's Ace



Indian Palm Bob



Common Banded Awl



Common Redeye



Large Branded Swift



Pale Palm Dart

Papilionidae : Swallowtail Butterflies



Common Mime



Blue Mormon



Spot Swordtail



Common Jay



Common Mormon



Common Rose



Crimson Rose



Lime Butterfly



Common Banded Peacock



Tailed Jay

Pieridae : Yellows, Whites and Oranges



Common Albatross



Striped Albatross



Indian Pioneer



Common Emigrant



Mottled Emigrant



Common Gull



Small Orange Tip



Crimson Tip



Large Salmon Arab



India Jezebel



Common
Grass Yellow



Small Grass
Yellow



One Spot
Grass Yellow



Spotless
Grass Yellow



Yellow
Orange Tip



Three Spot
Grass Yellow



White
Orange Tip



Common Wanderer



Psyche

Lycaenidae : Blues



Common
Hedge Blue



Plain Hedge Blue



Large Oakblue



Pointed
Ciliated Blue



African Babul
Blue



Common
Pierrot



Small Cupid



Bright Babul
Blue



Forget-Me-Not



Gram Blue



Lime Blue



Eastern Grass Jewel



Indian Cupid



Dark Cerulean



Pea Blue



Common Cerulean



Zebra Blue



Plain Cupid



Common Lime Blue



Tailless Lineblue



Dingy Lineblue



Pale Grass Blue



Common Shot
Silverline



Plumbeous
Silverline



Scare Shot
Silverline



Common Red Flash



Slate Flash



Red Pierrot



Common Silverline



Spotted Pierrot



Common Guava
Blue



Lesser Grass Blue



Dull Babul Blue



Dark Grass Blue



Small Grass Jewel



Black Spotted
Pierrot



Tiny Grass Blue



Rounded Pierrot



Peacock Royal



Indian Sunbeam

Riodinidae : Metalmarks



Two-Spot Plum Judy





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