

BUTTERIEIES OF TAMIENADU









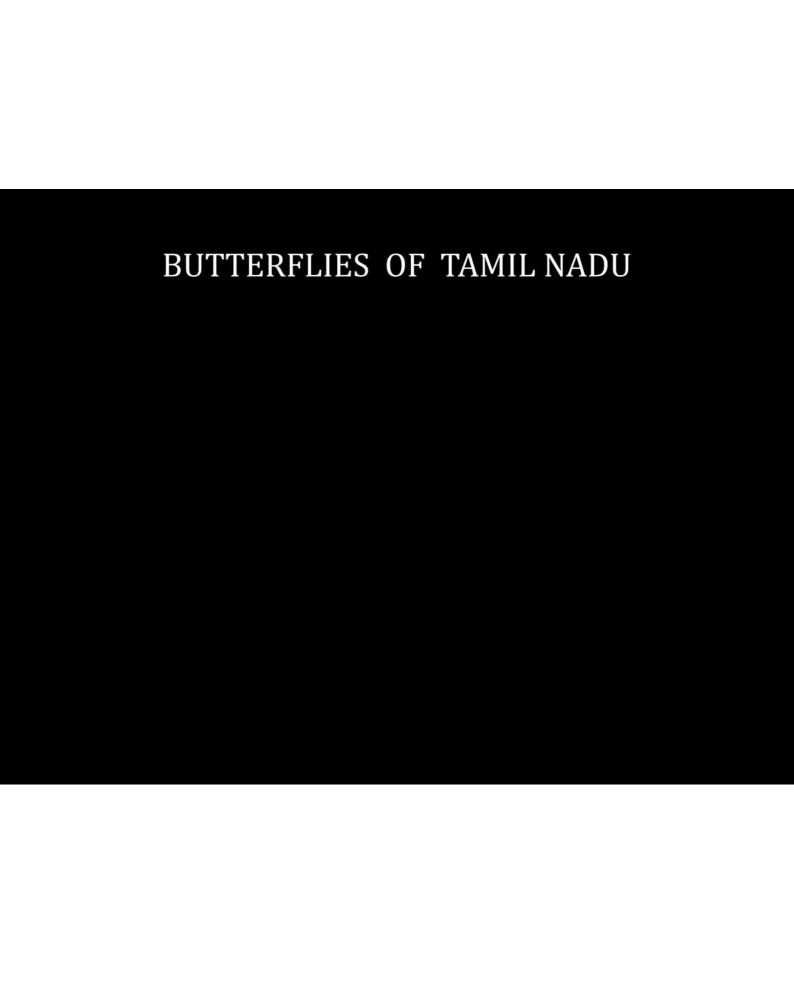




Butterflies are realtime bio-indicators of a healthy environment and a healthy ecosystem. In Tamilnadu, the forest cover stands at 17.59% as of 2015 and over 323 species of butterflies were recorded during the British era. Our current recorded species is 312 out of which around 32 are endemic and these are spread out across different habitats of the state mainly in the Western and the Eastern Ghats. 'Butterflies of Tamilnadu' is the maiden effort by Tamilnadu Forest Department in association with Act for Butterflies.

We need butterflies more than they need us.

Let them fly!



BUTTERFLIES OF TAMIL NADU

Published April 2018

TAMILNADU FOREST DEPARTMENT In association with ACT FOR BUTTERFLIES

Authors:

Mohan Prasath. P Satheesh, N

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Common Jezebel (Delias eucharis) - M.Siva kumar Blue Oakleaf (Kallima horsfieldii) - K.G.Gauthaman Common Pierrot (Castalius rosimon) - Firos A.K Orange Awlet (Burara harisa) - Mohanprasath.P

About the Book

Butterflies are real time bio-indicators of a healthy environment and a healthy ecosystem. Areas rich in butterflies are generally rich in other invertebrates and they provide a wide range of environmental benefits including healthy pollination. A world without these pollinators will not survive, and over 75% percent of our flowering plants rely on bees and butterflies with the rest carried out by other insects such as wasps, flies, moths, beetles, etc along with birds and bats which also help move pollen from one plant to another. Bees & butterflies are the most important pollinators and undoubtedly have a major role in saving our native plants which directly increase forest cover.

In Tamil Nadu, the forest cover stands at 17.59% as of 2015 and over 323 species of butterflies were recorded during the British era. Our current recorded species is 312 out of which around 32 are endemic and these are spread out across different habitats of the State mainly in the Western and Eastern Ghats.

Out of over 1000 native larval host and nectar plants out of which a few are endemic to support these beautiful creations of Nature. A Few noted endemic & scheduled such as: Crimson Rose, Tamil Catseye, Nilgiri Clouded Yellow, Nilgiri Grass yellow, Malabar Banded Peacock, Malabar Tree Nymph, Palni Four Ring and Blue Oakleaf.

Butterflies of Tamil Nadu is the maiden effort by Tamil Nadu Forest Department (TNFD) in association with 'Act for Butterflies', the Environment Arm of the Registered NGO – ACT.

Highlights of the book:

- 1. The first book from Tamil Nadu Forest Department covering 312+ Species with Tamil Name.
- 2. Advanced Digital QR Technology used and directly linked to top Butterfly Database.
- 3. Guide to 32 important butterfly hotspots of Tamil Nadu with map.
- 4. Pictorial field guide for beginners.
- 5: Basic Guide for butterfly conservation.

Butterflies are widely used by ecologists to study healthy environment and the impact of habitat loss, fragmentation and climate change.

We wish you a pleasurable reading.

Acknowledgement

Act for Butterflies thank Mr. Satheesh, DFO of Trichy District for the confidence bestowed on us and the constant encouragement and freedom to work on the book. Our sincere thanks to all the photo contributors who readily agreed to provide their pictures. Our Heartfelt thanks to the major photo contributors of the book Mr.Jeevan Jose, Mr.VKChandrasekaran, Mr.Balakrishnan Valappil, Mr.Gowthaman Ganesan, Mr. Sagar sarang and Mr.Firos.A.K. We also thank the experts in the butterfly fields, especially, helping us out with their expertise in the identification process. Special thanks to Dr.Gunathilakaraj, Dr.Pramod, Mr. Peter Smetacek, Mr. Isaac Kehimkar, Dr. Kalesh Sadasivan and Mr.Ashok Sengupta. We also thank Act for Butterflies team members Mr.Mohanprasath, Mr.Rajkumar, Mr. Rangarajan, Mr. Kishore Kumar and Mr.V.S.Kaarthi and their tireless support. Last but not least, we also thank many people who worked for this book day and night to bring the best output. We also specially thank Mr. Balachandran, Dr. Kalesh Sadasivan and Mrs. Ambika Seetharaman who Proof read, supported us, encouraged us, and constantly motivated for completion of the book, and our special thanks to Hi-Tech Printers who made this dream into reality by making an excellent book.

When the spirit of nature touches us, our hearts turn into a butterfly! - Mehmet Murat ildan

Butterflies have always been considered as the epitome of beauty and grace. They not only brighten up our world but also remind us the fleeting nature of life. Poets have waxed eloquently about butterflies. To watch a pretty butterfly flutter its wings and settle down on a flower to drink its nectar is a sight of pure joy to us. Scientifically speaking, the butterfly plays an important role in our ecosystem; hence it is significant to preserve and sustain these beautiful creatures. They are indicators of a healthy environment. Unfortunately, the human-induced loss of natural habitats rings the death of knell of butterflies along with other species.



This wonderful book highlights various fascinating features of the species of butterflies that exist in the state of Tamil Nadu. Through learning about butterflies and their ecology, we can still hope to reverse the trend of nature loss. Spreading awareness of these beautiful insects is of great contribution to nature conservation.

This book is a must-read for the scientifically-inclined, as well as for anyone who has a deep concern for conserving nature and protecting the endemic species and their habitats. My special words of appreciation for the efforts of the Editorial Team, Tamil Nadu Forest Department, and to all who have contributed directly or indirectly in bringing out this invaluable book. It is hoped that many such books will be published in future to enlighten the public about the importance of nature conservation.

- Dr. H. BASAVARAJU IFS
Principal Chief Conservator of Forest and Head of the Department
PCCF Office
Panagal Building, Saidapet,
Chennai - 600 015

The butterfly counts not months but moments, and has time enough! - Rabindranath Tagore

The most striking and enchanting nature of the fellow creatures that share this world with us, butterflies are close to our hearts. They bring joy to us and also form an integral part of nature. From the point of view of survival of life on earth, it is a matter of great importance that these fragile creatures are capable of warning us of the threats to our environment. Habitat loss and chemical pollution of the elements have taken many to the verge of extinction; many might be already extinct. By learning about butterflies and their role in the larger drama of life, we not only understand the world around us better but it would also compel us to act for nature conservation.

The book on Butterflies of Tamil Nadu would greatly enhance public interest, scientists and students of nature involved in the study of insects. It is a laudable effort to bring out a book on these special, colorful creatures about which we can read at leisure in our coffee table. The high quality photographs and informative text in the book would contribute greatly to the popularization of Lepidopeterology - the branch of science that studies butterflies and moths. My best wishes to the creators of this masterpiece.

- Mr. T. P.RAGHUNATH IFS
Principal Chief Conservator of Forest and Chief Wildlife Warden
PCCF Office
Panagal Building, Saidapet,
Chennai - 600 015

What caterpillar calls the end of the world, the Master calls a butterfly! - Richard Bach.

We live in an era of unprecedented, catastrophic changes in nature. Climate change, man-induced natural calamities, habitat destruction and pollution of air and water have created irreversible changes in our environment. The soil is poisoned and forests all over the world are rapidly decreasing. Increasing human population and uncontrolled exploitation of natural resources threaten the very survival of life forms. The fundamental reason for all this is the alienation of mankind from his environment. We have lost respect for nature, we do not love and care for our fellow-beings. This alienation is due to our ignorance of our natural world. So, it is highly vital that we educate people about nature conservation. The best path to this is through introducing different animal lives that share Earth with us. Butterflies and moths are some of the most beautiful of them.



Character and Beauty are two things that add value to a human being. It is a fact that the two are built only in times of great adversity. A calm, routine life doesn't speak of anything greatly achieved! While the Caterpillar has to fight its way out of its own cocoon flying out in unimaginable combination of spots and colors, the enchanting butterfly has to wing its way to the edges of a wild rock, a shrub, a tree or a stone near a rivulet avoiding the bewitched eyes and hands of the onlookers.

There are approximately 20,000 species of butterflies in the world. But there are still many thousands of butterflies and moths undiscovered or undescribed by scientists. India, with its tropical climate and a variety of landscapes attracts a substantial species of butterflies particularly during the rainy season. The biodiversity hotpots include the Western Ghats, the Himalayan ranges, and the hilly ranges bordering Myanmar. Brigadier William Harry Evans identified nearly 1439 species in British India.

Tamil Nadu is home to more than 300 species of butterflies. With Western Ghats Mountains on one side and the Eastern Ghats on the other, our repertoire is rich. Act for Butterflies and the Forest Department of Tamil Nadu deserve to be lauded for their great effort in publishing this book with excellent illustrations and information. I am sure the book will contribute to the conservation efforts of the Department as well as nature lovers of Tamil Nadu. I look forward to many more publications of this kind.

- Mr. P.C. TYAGI IFS

Rtd. Principal Chief Conservator of Forest and Chief Wildlife Warden PCCF Office, Panagal Building, Saidapet, Chennai - 600 015

TAMILNADU FOREST DEPARTMENT

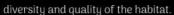
Tamil Nadu has an area of 22877 sq. kms under forests which constitute 17.59% of the geographical area of the State as against 33.33% required under the National Forest Policy, 1988. The variability in climate, topography, soil, water resources, altitude and biotic influences has resulted in formation of different forest communities, commonly known as forest types.



The State has a spectrum of forest vegetation types ranging from wet evergreen forests to moist deciduous, dry deciduous, sholas, grass lands and scrub forests. Invaluable trees like Sandal, Teak and Rosewood and wildlife like Tiger, Elephant, Lion-tailed Macaque, Grizzled Giant Squirrel and numerous rare species of fauna and innumerable species of flora including important medicinal plants are found in the forests of the State. Tamil Nadu therefore, has adopted a compelling vision to inspire people to protect wilderness, the ecological diversity and species richness. The Tamil Nadu State Forest Act, 1882, The Wildlife Protection Act, 1972, Forest Conservation Act, 1980 and a host of regulations formulated under these Acts are being implemented by the Forest Department. Adhering to the best scientific principles and accommodating traditional knowledge, new socioeconomically and ecologically sound paradigms for managing forests and wildlife have been incorporated in the management strategies adopted by Forest Department.

Tamil Nadu Forest Department (TNFD) comprises dynamic and dedicated forest officials working 24/7 to protect our forests, its flora and fauna. The forest cover can neither be maintained nor improved without their contribution, sacrifice and tireless efforts. TNFD System is like a pyramid with Anti-poaching Watcher at the bottom, next come Watcher, Forest Guard, Forester, Forest Ranger Officer, District Forest Officer/Wildlife Warden/Deputy Director, Assistant Conservator, Conservator, Chief Conservator and Principal Chief Conservator at the apex.

Butterflies are one of the most conspicuous species of Earth's biodiversity and are recognized as useful bio-indicators, being extremely responsive to changes in environment namely temperature, humidity, sun light, rainfall and others. Studying these beautiful insects will thereby definitely throw light on impact of Climate Change as the life of a Butterfly, its breeding, nectaring and behavior is directly in sync with the





The Butterflies of Tamil Nadu is the first publication of its kind from TNFD. This book contains around 312+ Photographs with relevant information from across the state.

We believe this book should inspire many people to watch, record, and conserve butterflies.

Tropical Butterfly Conservatory, Tiruchirappalli

"Conserving butterflies will improve our whole environment for wildlife and enrich the lives of people now and in the future."



Tropical Butterfly Conservatory' was conceived by the Tamil Nadu Forest Department to propagate the importance of butterflies. Our honorable former Chief Minister laid the foundation stone and inaugurated on 13th November, 2015 and dedicated the Conservatory to the general public. The mission of the conservatory is to create awareness amongst the people and to help them understand butterfly ecology and its importance. The Conservatory will also help to interpret and conserve the biological diversity of Tiruchirappalli district along with awareness initiatives and environmental education.

The Conservatory is at Srirangam in the Upper Anicut Reserve Forest covering over 27 acres. The Butterfly Park consists of an outdoor conservatory, indoor conservatory, a Nakshatravanam and a Raasivanam. It also have breeding lab for non-scheduled species, an open air theatre, a plant nursery, shade houses, ponds and fountains, models and signage's along with a children infotainment park and an eco-shop. The conservatory has 98 species of butterflies and 298 species of plants. Most of the plants are larval host plants, nectar plants for butterflies providing them with the sustenance they need.



Mr. N. Satheesh IFS TROPICAL BUTTERFLY CONSERVATORY

ACT FOR BUTTERFLIES

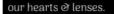
Act for Butterflies is an initiative of Aeon Charitable Trust (ACT), an environmental NGO in Tamil Nadu. We have been working for over a decade to promote environmental awareness about India's most pressing environmental problems. We started the systematic documentation of butterflies in the state in 2012. We continue to conduct butterfly-related programs. Some of our recent activities were:



- May 2015 Butterfly Walk in Kovai Kutrallam, Validated 103 species.
- August 2015 Butterfly Walk in Kallar Reserve Forest, 36 members who contributed 138 butterfly species.
- September 2016 Annual Butterfly Survey at Pachamalai Hills. Validated 105 species and recorded Emigrants migration from Pachamalai hills to the plains.
- September 2016 Annual Butterfly Walk at Siruvani Hills & Vellingiri Hills in which 36 members participated from all over Tamil Nadu and neighboring states; sighted 138 species.
- · June December 2017 Regular Bi-monthly Survey conducted at TBCT Park, Trichirapalli and validated 98 Butterfly Species.
- June 2017 One Day Certificate Course on Butterfly Conservation was started with Tropical Butterfly Conservatory, Tiruchirappalli.
- July 2017 Annual Butterfly Survey & Butterfly Race conducted at Kallar Reserve Forest with 42 members sighting 85 butterfly species.
- February 2018 First official systematic Butterflies & Dragonflies Survey was conducted in Coimbatore District with 7 ranges. 120 members
 participated and contributed 197 butterfly species, 38 species of dragonflies and damselflies. As a part of the survey: Butterfly Race, Dragonfly Race
 and Photography contest was conducted and given awards.

We regularly train children for butterfly awareness and conservation activities. We are motivating and encouraging more and more butterfly lovers to watch record and conserve Butterflies in their locality.

We are extremely happy and grateful to Mr. Satheesh, IFS, District Forest Officer of Trichy, who gave this opportunity to work on Butterflies of Tamil Nadu Coffee Table Book. We thank him for the confidence, constant encouragement and freedom he gave us to work on the book. We have tried to share the joy we had in the field watching, observing, running behind, worshipping and capturing these flying angels through





We hope you all would like this book and get motivated an active involvement in butterfly watching which would eventually lead into the conservation, not only butterflies but also nature as a whole. Together we can strive for a greener planet where all life co-exists harmoniously.

We need butterflies more than they need us.

Let them fly!

Mohanprasath.P Act for Butterflies

EXPERT VIEW

I am truly delighted to see that the Tamil Nadu Forest Department in association with the Act for Butterflies have together put efforts to bring out this excellent book on butterflies seen in Tamil Nadu. This is really a very healthy beginning to see that the younger generation of Tamil Nadu taking keen interest to study and protect their natural heritage. Now we are witnessing a renewed interest in studying insects like butterflies, moths and dragonflies all over India, and I am glad that the Tamil Nadu Forest Department along with Act for Butterflies has taken a good lead in this pursuit.



Tamil Nadu has around 323 species of butterflies seen across the different habitats ranging from wet evergreen forests to moist deciduous, dry deciduous, sholas, grass lands and scrub forests. These habitats have some endemic species like the Nilgiri Clouded Yellow, Southern Birdwing, Malabar Banded Peacock, Nilgiri Tit and several more. In this book 320 butterfly species are described with colour photographs.

I am sure this book will draw attention towards the need to conserve and protect such habitats which has a rich biodiversity of fauna, including insects. India is one of the 12-mega diverse countries of the world, and Western Ghats is one of the hotspots for butterflies too. Butterflies like other wildlife are protected under the Wildlife Protection Act of India, 1972.

I must congratulate both the Tamil Nadu Forest Department and the Act for Butterflies for bringing out such an excellent book on nature's flying jewels. After reading this book, people are surely going to fall in love with nature. And once they start appreciating nature, they will surely strive hard to protect nature, which is now the need of the hour.

Isaac Kehimkar,

Deputy Director (Natural History), BNHS Joint Editor, Hornbill magazine, BNHS

EXPERT VIEW

I am extremely happy to give the foreword to the book on BUTTERFLIES OF TAMIL NADU

Though designed as a coffee table book, it will enthuse all nature lovers by its beauty, namely the images. Images were contributed both by doyens like Kalesh Sadasivan and many amateur photographers. Visuals convey many things that words cannot and this book typifies it. It speaks volumes and volumes on the features of butterflies without the aid of words. I compliment the authors for bringing out a region-specific book and the sponsors, the Forest Department for supporting this venture. I wish and trust that such



bringing out a region-specific book and the sponsors, the Forest Department for supporting this venture. I wish and trust that such sponsorship may come for books on other faunal volumes also.

Dr. K. GUNATHILAGARAJ Butterfly Expert

Butterflies attract everyone. Due to their close association with the larval food plants, butterflies of an area indicate the diversity and richness of plant community as well. I am happy to see this wonderful Coffee Table book, a visual treat to all. This is a great attempt by the authors which will promote the love for butterflies to many more nature lovers in the coming years.



This book comes up with the first authentic comprehensive checklist of Butterflies of Tamilnadu. An excellent photograph of 320 species of butterflies of Tamil Nadu is the highlight. The authors have meticulously added many scientific details also to it.

Another unique highlight of this book is the inclusion of hotspots of Butterflies in Tamil Nadu - information not available anywhere else at present.

This book is going to help all butterfly lovers and naturalists, who are interested in the butterflies of Tamil Nadu. I congratulate the authors of Butterflies of Tamilnadu, Act for Butterflies and Tamil Nadu Forest Department for coming up with this excellent work.

Dr. P. Pramod Principal Scientist Salim Ali Centre for Ornithology & Natural History, Coimbatore

About the Authors

P. Mohanprasath is a Professional Psychiatric Social Worker, he was completed his PG- Master of Social Work and Specialized in Medical & Psychiatry. He is a Butterflier, Birder, Photographer and Trekker. His interest in Nature & Society: he started a NGO: Aeon charitable Trust in 11.11.2011. As a part of Project Butterflies, he started a group called Act for Butterflies and documenting Butterflies in Tamilnadu & South India for the last 7 years. His keen interest on teaching and children, he started educating schools, colleges and common public on Butterflies and various nature related topics. He has been a member and core committee member in Salim Ali Naturalist Forum (SANF- SACON) from 2004 onwards. He also completed NCC Officer Lieutenant - Training in Officers Training Academy, Kamptee. Very recently he was recognized as Youth Active Citizenship Award by Arigauto International organized by Shanthi Ashram.



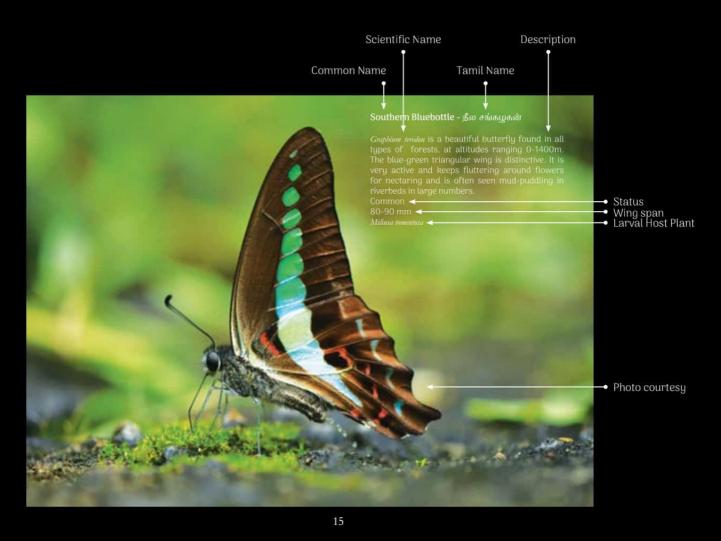
N. Satheesh is an Indian Forest Service officer of the 2003 batch, presently working as District Forest Officer Coimbatore District. He is a Post graduate in Forestry from Tamilnadu Agricultural University, Coimbatore. He has demonstrated his academic excellence by winning a gold medal in the university. He has also bagged a medal in Wildlife management course during his IFS training in Dehradun. He has co-authored the book on Prey predator relationship study at Sathyamangalam and Forest Management in Tamilnadu: A Historical Perspective and the human dimensions in forest fire both at Sathyamangalam Tiger Reserve. He has worked as a District Forest Officer at Gudalur, Sathyamangalam and Trichy. Tropical Butterfly Conservatory (Butterfly Park) at Srirangam, Trichy, is his major contribution.



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HOW TO USE THE BOOK



INTRODUCTION

Butterflies are beautiful creatures of nature with great importance as pollinator. Butterflies are found all over the world. There are approximately 20,000 species worldwide. Butterflies and moths are winged insects that belong to the order Lepidotera. The name Lepidoptera comes from the Greek lepis meaning scale and pteron meaning wing. The wing colours and patterns are made up of thousands of these small dust-like scales. Butterflies vary from small to large sized, brightly coloured and have a conspicuous, fluttering flight.

Butterflies development is closely related to the evolution of flowering plants since both adult butterflies and caterpillars feed on food plants. There is an evidence from the five stunning amber

Tamil Lacewing specimens in 2004 that suggests it is possible butterflies may have even fluttered around the heads of dinosaurs, which wiped out 65 million years ago. "It was just incredible Voltinia dramba's, their closest relative (Voltinia danforthi- Ancient Metalmark) are now living in Mexico.

India has extremely diverse terrain, climate and vegetation, which comprises extremes of heat and cold, desert and jungle, of low-lying plains and the highest mountains, of dryness and dampness, islands and continental areas, widely varying flora, and sharply marked seasons. India forms a large part of the Indo-Malayan bio geographical zone; many of the floral and faunal forms show Malayan affinities with some taxa being unique to the Indian sub-region. Accordingly, India's diverse and varied fauna include a rich variety of butterflies and moths. Brigadier William Harry Evans recorded approximately 1439 species of butterfly from British India, including Ceylon and Burma. After 1947, the rise of several new nations led to a reduction of the area forming part of India proper, and the number of species dropped to an estimated 1318 species. Tamil Nadu is home to 323 plus species and the tentative check-list are prepared for Tamil Nadu for their occurrence.

Butterflies are grouped into 5 families- Papilionidae, Pieridae, Nymphalidae, Lycaenidae (Riodinidae is treated as a part of Lycaenidae) and Hesperiidae. Butterflies typically have a four stage life cycles (Egg - Caterpillar - Pupae - Adult). Some butterflies, especially in the tropics, have many generations in a year, while others have only one, and a few that live in cold regions may take a few years to pass through their whole life cycle. Butterflies are often have different forms (polymorphic), and many species make use of camouflage, mimicry and warning signals (aposematism) to escape from predators. Some, like the Monarch and the Painted Lady, migrate over long distances. Some butterflies have parasitoidal relationships with organisms including protozoans, flies, ants, and other invertebrates. Some species are considered as a pest because in their larval stages they can damage domestic crops or trees; other species are agents of pollination of some plants. Caterpillars of most species are herbivorous, but not all; some (about 1%) are insectivorous, even cannibalistic.

ANATOMY OF A BUTTERFLY

Butterflies are beautiful creatures of nature with great importance as pollinator. Butterflies are found all over the world. There are approximately 20,000 species worldwide. Butterflies and moths are winged insects that belong to the order Lepidotera. The name Lepidoptera comes from the Greek lepis meaning scale and pteron meaning wing. The wing colours and patterns are made up of thousands of these small dust-like scales. Butterflies vary from small to large sized, brightly coloured and have a conspicuous, fluttering flight.

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Head Antenna Forewing

Compound eye Hind wing

Thorax

Abdomen

Legs-underside (4 long, 2 short)

incredible Voltinia dramba's, their closest relative (Voltinia danforthi- Ancient Metalmark) are now living in Mexico.

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BUTTERFLY FACTS



Antarctica is the only continent on which no Lepidoptera have been found.



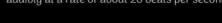
A butterfly tongue is called as proboscis. Some sip flower nectar, tree sap, or salts and minerals from damp patches. Others may drink the liquid from decaying fruit and even animal droppings.

Butterflies are able to see light wavelengths from 254 to 600 nm, this includes ultraviolet light, a light that we are unable to see. Humans can see only 450 to 700 nm.





Butterflies can fly up to 30 miles per hours; Skippers have the fastest wing beats. Their wings were audibly at a rate of about 20 beats per second,





Butterflies cannot fly if their body temperature is less than 86 °C/ 55 °F (Fahrenheit)





Butterflies don't have lungs, but breath through openings on their abdomen called spiracles (white spots in abdomen).

Butterflies have chemoreceptors at the ends of their antennas and on the bottoms of their feet, they helps butterfly to smell and Feel. Butterflies can't hear, but they can feel vibrations.



Butterflies live from a few days to a year maximum. Some butterflies hibernate during the winter in caves, under leaves, inside houses, and other safe places.

BUTTERFLY FACTS



The egg is small, caterpillars grow faster, and they are also called as eating machine.

Butterfly's Colour is important in many ways. It functions as camouflage, to absorb heat, aids in finding a mate, serves as warning, and in many more ways.





Butterfly's wings are covered with tiny scales; these scales help the butterfly to fly and they are responsible for the colors on their wings. There can be 600 individual scales per square millimeter of wing surface, giving the wings a translucent appearance.



For protection, different butterflies use different defense mechanisms: camouflage, bad taste and smell, mimic the look of those eye spots terrible. Some caterpillars even have spots that make them look like snakes.



In some butterfly larvae (especially of blues), tentacular organs secrete a sugar-rich solution that attracts ants to feed on secretion. Ants in return tend to help caterpillar's needs and protect them from a variety of natural predators and parasitoids.



Monarch butterflies fly long distance of approximately 10,000 miles from Canada to Mexico.



Southern Bird wing is the largest Indian butterfly wing span is 190mm and Grass jewel is the smallest Indian butterfly wing span is 12mm in size.



BUTTERFLIES & MOTHS



Active during the day (diurnal) Bright Colours Wings rest together and upright Straight and Clubbed Antennae Thin body



Active at night (nocturnal) Dull Colours Wings rest at their sides Feathered or Pointed Antennae Thick body

There are some exceptions

FAMILY TREE



Swallowtails (Family Papilionidae)

Swallowtails are easy to recognize large butterflies that usually have "tails" on their hind wing, frequently with some combination of black, yellow or blue markings. When landing on flowers for nectar, Swallowtails continue beating their wings instead of resting all their weight on it. Only Swallowtail caterpillars have a Y shaped gland called an osmeterium just behind their head that they can inflate when alarmed. Some species practice Batesian mimicry, in which the butterflies' appearance closely resembles that of distasteful species. Target species: 19



Whites and Yellows (FamilyPieridae)

These small to large butterflies are easy to separate into their two main subfamilies: the Whites and the yellows. Pieridae are moderately or fairly small sized butterflies in which majority of these are white or shades of yellow and orange with black. Pieridaes are sun loving insects and males congregate at damp patches during hot weather to sip mineral moisture. Target species: 33.



Brush-footed Butterflies (Family Nymphalidae) Brush foots are the most diverse butterfly family and can be divided into twelve distinct subfamilies. Black, brown and orange are prominent colors here. Nymphalidae are medium to large sized butterflies and are also called as Brush-footed or Four-footed butterflies as their forelegs are modified and reduced to brush-like stumps. Some species look duller remarkably like dead leaves. The single character common to all Brush foots is their greatly reduced forelegs, giving the appearance of having only two pairs of legs. Some adults specialize in feeding on tree sap, rotting fruit, carrion or even dung. Non nectar feeding butterflies often have relatively short proboscises. The famous Migrants from our state, the Tigers and Crows belong to this family. Target species: 95



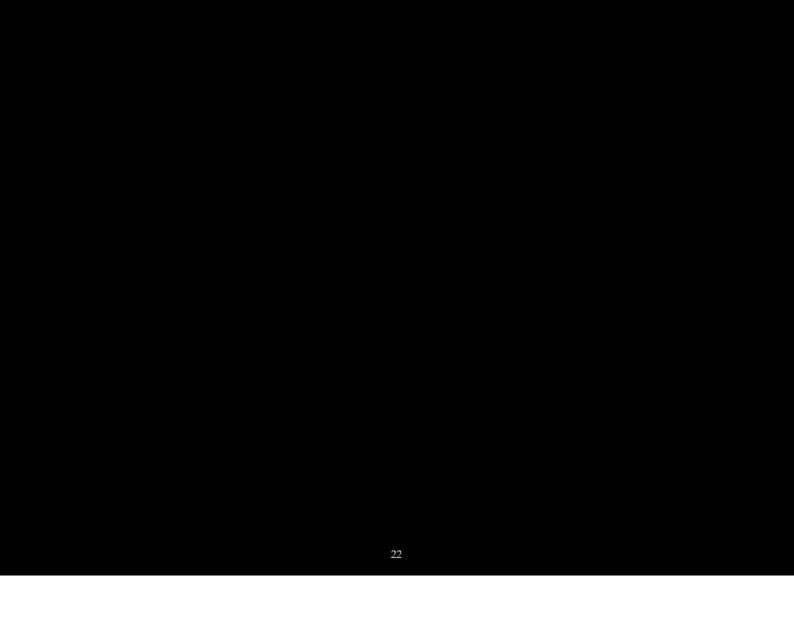
Blues (Family Lycaenidae)

The Blues are named for the blue scales on the upper surface of their wings. Adults are usually small with a wingspan of up to 50 mm and are brightly coloured with a metallic gloss. These small gray butterflies usually perch with their wings closed. The antennae are dark with conspicuous rings around the shafts. The tails and dots in the tails are believed to mimic a false head to confuse predators. The caterpillars of most species are (myrmecophiles) having a parasitic, beneficial or symbiotic association with ants. Riodinidae which is sometimes treated as full family is treated here as sub family of Lycaenidae. Target species: 96



Skippers (Family Hesperidae)

Skippers are usually small to medium sized brown butterflies. Some Skippers resemble moths, but unlike moths, Skippers have clubbed antennae. They land with their wings closed or only partially opened, somewhat resembling a tiny jet airplane. Larvae and pupae protect themselves in a shelter made by folding over a leaf of their food plant. Most Skippers have long proboscises enabling them to feed at a wide variety of flowers. Due to their large muscle mass to wing area ratio, Skippers tend to be strong flyers. Skippers are small to medium sized butterflies with orange, brown, black colors, though a few have iridescent scales. The flight is swift and close to the ground. Large numbers of skippers are crepuscular (early morning and late evenings) in nature. They appear to be sisters to the rest of the true butterflies. Target species: 80



Scanned with CamScanner



Swallowtails - Family Papilionidae

Swallowtails are large, colorful and attractive butterflies of the family Papilionidae, and include over 550 species worldwide. Though the majority of them are tropical, members of the family inhabit all continents except Antarctica. 107 species have been recorded in India of which 19 are found in Tamil Nadu. Papilionidae is the smallest family of butterflies.

The common name Swallowtail is based on the forked shape of its hind wings, which can be seen when the butterfly is resting with its wings spread. The spectacular species such as Kaiser-i-Hind, Bhutan Glory, Peacocks, Apollos of the Greater Himalayas, and the Dragon-tails of North-East India count among Swallowtails. The largest butterfly in the world, Queen Alexandra's Birdwing, (wingspan 250mm) and Southern Birdwing, the largest butterfly in India and the State Butterfly of Karnataka (wing span 190mm) are also Swallowtails. Southern Birdwing is common in Tamil Nadu forests. It is endemic to Western Ghats. Another beautiful species, the Blue Mormon, is the second largest butterfly in India as well as the State Butterfly of Maharashtra.

Swallowtails have many distinctive features; for example, most Swallowtails lay eggs in tender shoots. Eggs are spherical, broad, smooth or pitted and lay singly except in the case of Malabar Banded Swallowtail and Lime Butterfly. The Papilionidae caterpillar has a repugnatorial organ called the Osmeterium on its prothorax. The osmeterium normally remains hidden, but when threatened, it everts outward and emits a pungent smell, mainly to repulse ants, parasitic wasps and flies. The caterpillar is spindle-shaped, blunt ended with large head. The pupae are variable in shape, angular and supported head upwards by tail hooks. Adults of some species practise Batesian mimicry, a behaviour in which the butterfly's appearance closely resembles that of species distasteful to predators.

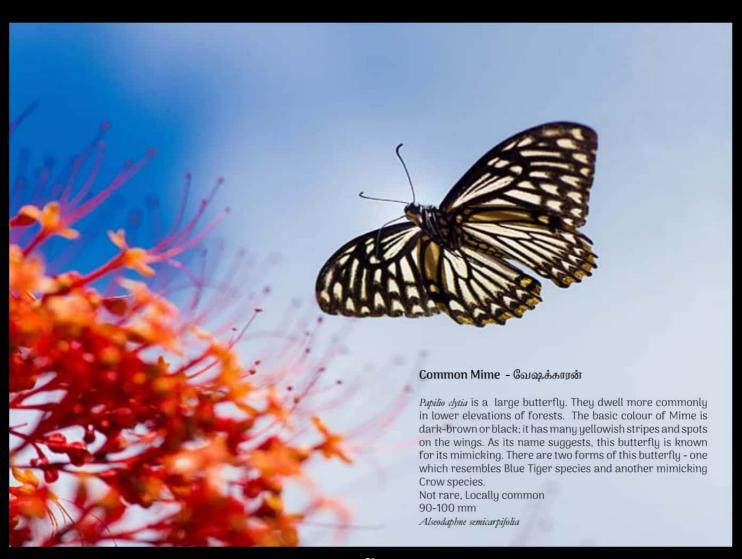












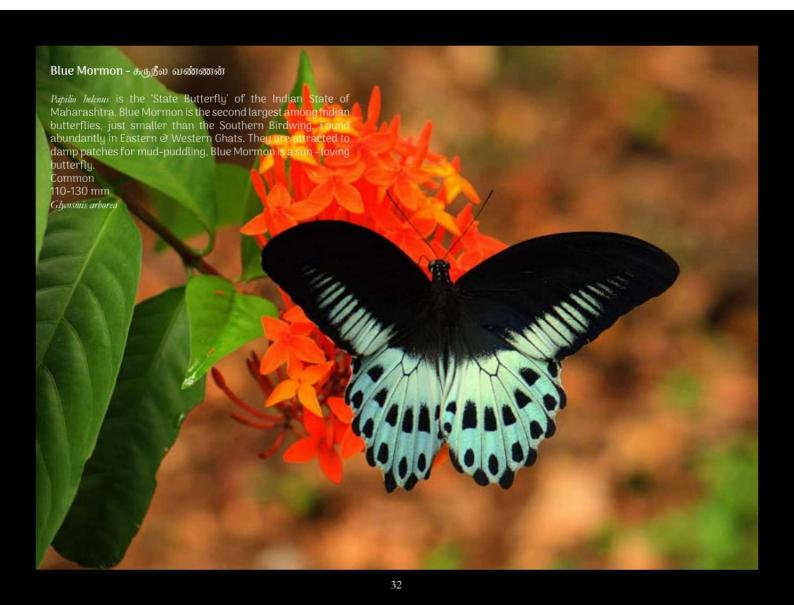


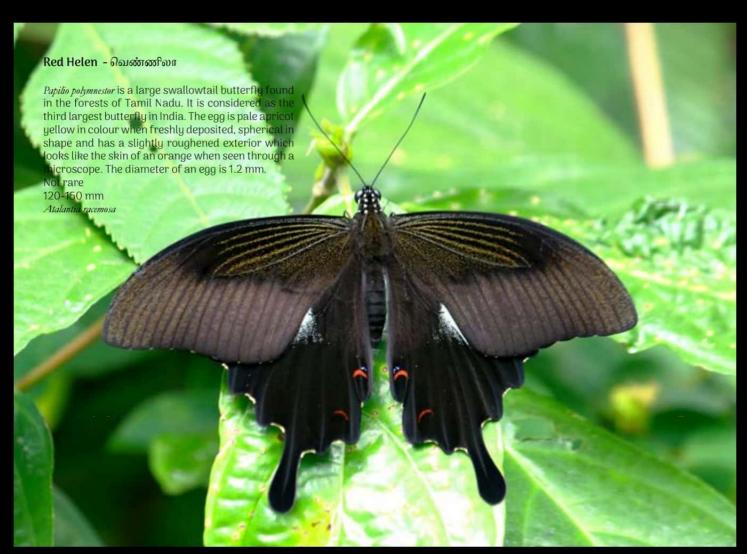


Common Mormon - forms

Cyrus form Stichius form Romulus form







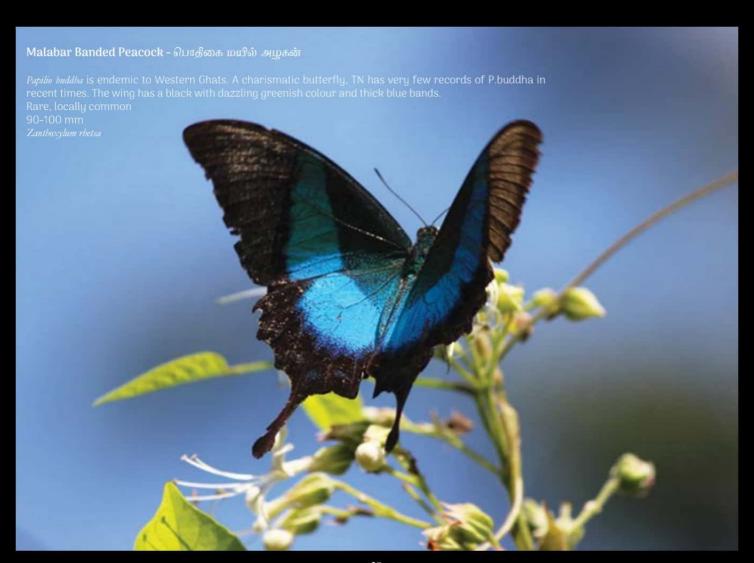






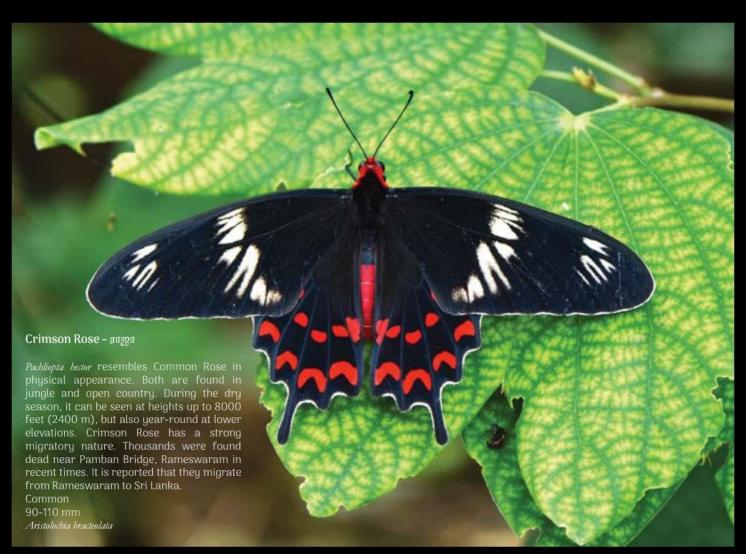




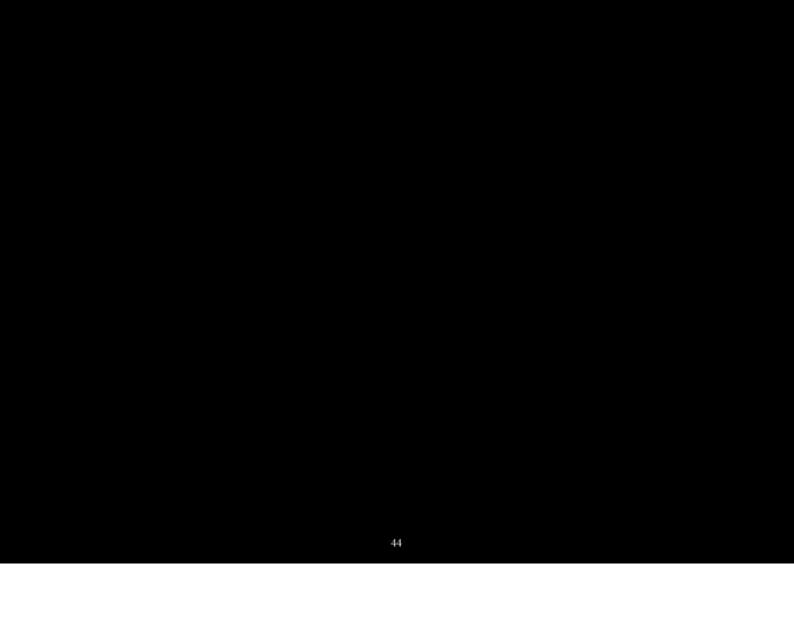














WHITES & YELLOWS PIERIDAE

The Pieridae are the largest family of butterflies with approximately 76 genera containing about 1,100 species, mostly from tropical Africa and tropical Asia with some varieties in the more northern regions of North America. 109 species have been reported in India with 32/33 in Tamil Nadu.

Most pierid butterflies are white, yellow, or orange in coloration, often with black spots. The pigments that give the distinct coloring to these butterflies are derived from waste products in the body and are a characteristic of this family. The name 'butter-fly' is in fact derived from the Brimstone members of pieridae, due to their yellow or butter-like wing colour. The sexes usually differ, often in the pattern or number of the black markings. The eggs are tall, bottle shaped, ribbed, and colored white to yellow or orange and red. The larvae are smooth and cylindrical, usually covered with hairy ended tubercles. Pieridae are sun loving insects with males can often be found in large congregations on river banks or on damp patches. Males of many species exhibit gregarious, mud-puddling behavior when they imbibe salts from moist soils. And the reward is better reproductive success.

The Pieridae are well known for their large-scale migration. Migrating in millions, the Emigrants, Albatrosses and Cabbage Whites can be seen extensively in Tamil Nadu & Kerala. Some species are more specific to certain areas, such as Nilgiri Clouded Yellow, Nilgiri Grass Yellow and Painted Jezebels.





1. One-spot Grass Yellow - ஒரு புள்ளி மஞ்சளாத்தி Enrema anderson's a small butterfly of lowland forests. It is also known as Anderson's Grass Yellow. The name Grass Yellow is derived from the fact that most species are found to fly around grass. They have only one spot in the forewing. Not rare, 38-45 mm, Data deficient

2. Common Grass Yellow - மஞ்சளரத்தி

Enrema becabe is a small and very common butterfly which is broadly distributed in TN. They are found flying close to the ground, open grass lands and scrub habitats. The female is larger and a paler yellow, with broader black but diffused markings on the upper sides of both wings. The color of body is dull green with white during the larval stage. Common, 40-50 mm, Cassia fistula

3. Three-spot Grass Yellow - முப்புள்ளி மஞ்சளாத்தி Eurema blanda is a small butterfly, found in grasslands. The upper-side of this butterfly is bright yellow in colour; the forewing outer border is black, underside has a reddish brown patch and 3 small black spots in the cell. It resembles the Common Grass Yellow, but the cell spots can be differentiated.

Common, 40-45 mm, Delonix regia





1. Small Grass Yellow - சிறு மஞ்சளாத்தி Eurema brigitta, is smaller compared to other Grass Yellows occurring in TN; There are two seasonal variations; the hind wing has a dark grey marking in wet season form and in dry season form they have a pinkish orange border. Common, 30-40 mm, Cassia kleinii

2. Spotless Grass Yellow - புள்ளியில்லா மஞ்சளாத்தி

Eurema laeta is a small butterfly of the family Pieridae, which is found in India, Sri Lanka and onwards to Australia. Adults fly closely to the ground and grasslands. Different from other Grass Yellows, their wings are pale yellow with no spots. Common, 30-45 mm, Cassia pumila

3. Nilgiri Grass Yellow - நீலகிரி மஞ்சளாத்தி

Eurema nilgiriensis is a common butterfly, which is found only in specific areas with 800-1200 meter elevations. In 1990 recorded and described by Yata in Nilgris, after which no records for more than 26 years. Rare, locally common, 38-45 mm, Data deficient

Mottled Emigrant - அவரை வெள்ளையன்

Catopsilia pyranthe is a medium sized butterfly that resembles Common Emigrant. The butterfly gets its name due to the presence of wings with greenish white and the forewing has a black apical border and a black cell-end spot, which gives this species a 'mottled' look. They migrate in large numbers along with Common Emigrants. The host plant of both emigrants is Cassia Species.

Common, 50-70 mm Cassia auriculata



Common Emigrant - കொன்னை வெள்ளையன்

Catopsilia pomona is a very common medium sized butterfly found in TN. They are known for their strong migratory behaviour. The species gets its name from its habit of migration. During these migrations the males, can be observed congregating in large groups on riverbanks where they settle for long periods to drink minerals and salt moisture. Common Emigrants exists in 6 different forms namely f. alcmeone, f. crocale, f. jugurtha, f. hilaria, f. pomona and f. catilla. Identification of Emigrant species requires expertise. Common, 55-80 mm

Bauhinia racemosa

Common Emigrant Different Forms - கொன்னை வெள்ளையன்











1. Plain Orange-tip - ஆரஞ்சு நுனிச்சிறகன் Coloiis aurora is also known as the Sulphur Orange Tip. This sun and nectar loving butterfly is found in dry habitats.

Locally common, 40-45mm

Cadaba fruticosa(Capparaceae)

2. White Orange-tip - வெண் ஆரஞ்சு நுனீச்சிறகன் Ixias Marianne is a medium sized butterfly, common in Tamil Nadu. They frequently visit gardens and hedgerows, the males are unmistakable; white with orange tips on wings, mostly seen in dry habitats. Common, 40-50mm

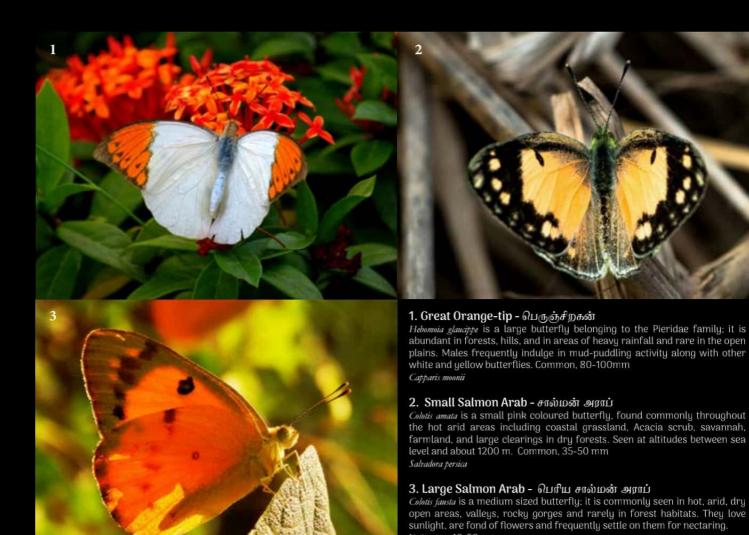
Salvadora spp. (salvadoraceae)

3. Yellow Orange-tip - மஞ்சள் ஆரஞ்சு நுனிச்சிறகன்

Lias pyrene is a medium sized butterfly of yellows and whites and abundant in South India. Males have orange wingtips and broad dark brown margins, on either a yellow or white ground colour, depending on the species. Females are similar but have more extensive dark markings.

Common, 50-70mm

Capparis deciduas



Not rare, 40-50mm Maerua oblongifolia

Dark Wanderer - கருநீல நாடோடி

Pareronia ceylanica are attractive and confined to higher elevations with heavy rainfall areas. The male of dark wanderer are pale blue in colour with thick black borders.

Common 65-80mm Capparis rheedii (Capparaceae)

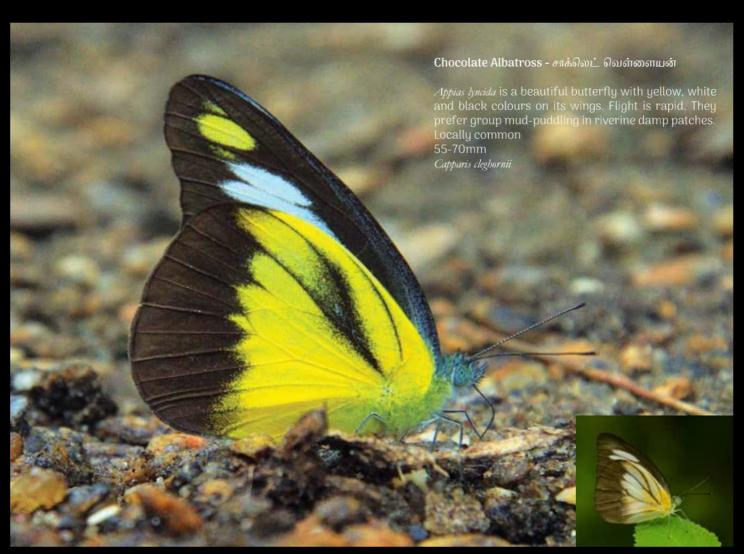


Common Wanderer - நீல நாடோடி

Pareronia valeria is a beautiful blue coloured butterfly, mostly seen in lower elevations. The female of common wanderer mimics Blue Tiger. Common Wanderer is occasionally seen in a special yellow form named Philomela.

Common 65-80mm Capparis rheedii



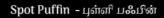




Plain Puffin - பஃபின்

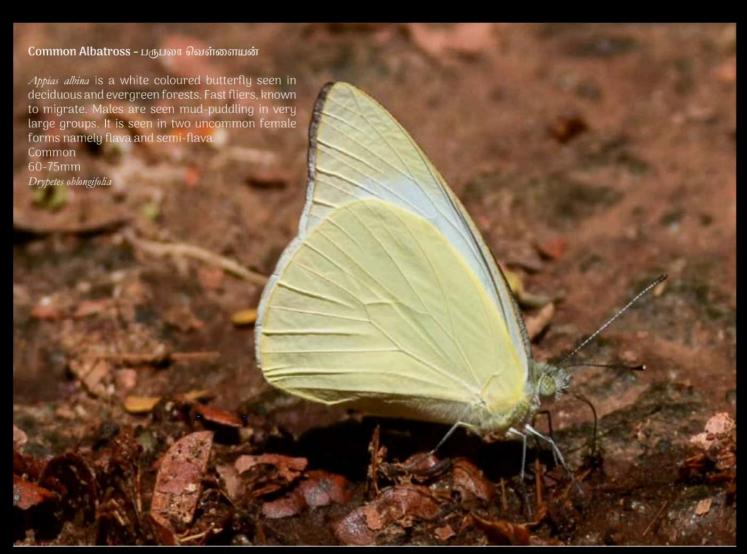
Appias indra is a small pale yellow colour butterfly, seen during monsoons in moist forests. Rare in south India. 60-70mm

Drypetes oblongifolia



Appias lalage is a small butterfly, which is found in moist evergreen forests and hilly regions of TN. They are rare and males are fond of settling on flowers. Not rare 55-80mm Data deficient









1. Lesser Albatross - மங்கிய மஞ்சாடை

Appias wardii is a small butterfly found in hilly regions of TN. Swift and strong flier, the upper side of the male has a dull colour white with upper black border markings. Uncommon, 55-75mm Capparis rheedii

2. Common Gull- மஞ்சாடை

Cepora nerissa is the most common butterfly seen throughout the year. It is most active after sunrise; large numbers of Common Gulls are seen mud puddling. The species lives up to 4,000 feet. Common, 40-65mm, Cadaba fruticosa

3. Pioneer - ஹாக்கி மட்டை மஞ்சாடை

Belenois aurota is a small to medium-sized butterfly, commonly seen in open areas. They also called as African Caper White, Hockey Stick Butterfly because of its thick hockey stick like marking on the upper side of the wing. Common, 40-55mm, Cadaba fruticosa





Common Jezebel - இச்சைமஞ்சள் அழகி

Delias eucharis is a medium-size butterfly found in many parts of South India. It's quite attractive & colorful butterfly. It has a bright coloration to indicate the fact that it is unpalatable due to toxins accumulated by the larvae from the host plants. They spend much of their lives high in the treetops, come down only for nectaring. Common

66-83mm

Dendrophthoe falcata

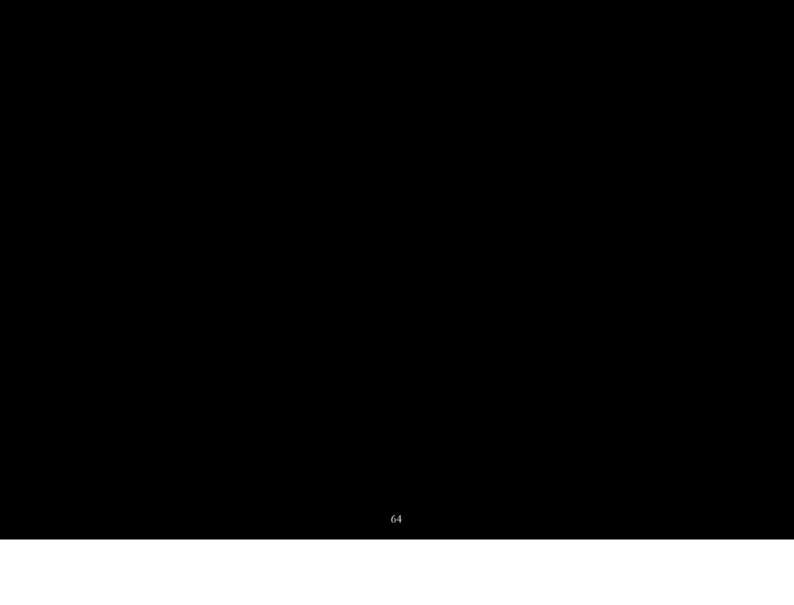
Painted Sawtooth - இச்சைமஞ்சள் வரி அழகி

Prioneris sita is a small butterfly. They mimic common jezebel butterfly because of their unpalatable due to toxins accumulated by the larvae from the host plants. They can be differentiated by the presence of orange red spots and a broader hind wing.

Not rare 80-90mm Capparis tenera









Brush-footed Butterflies Nymphalidae

The Nymphalidae are the largest family of butterflies with about 6,000 species distributed throughout the world. There are 521 species In India of which 95 species are found in Tamil Nadu.

These are usually medium-sized to large, robust-bodied butterflies, occurring in almost every shape and colour. Most species have a reduced pair of forelegs and many hold their colourful wings flat when resting and are poor in walking. They are also called brush-footed butterflies or four-footed butterflies, because they are known to stand on only four legs while the other two are curled up; in some species, these forelegs have a brush-like set of hairs, which gives this family its other common name. Many species are brightly coloured and include popular species such as Rajahs, Admirals and Fritillaries. However, the under wings are, in contrast, often dull and in some species look remarkably like dead leaves, or are much paler, producing a cryptic effect that helps the butterflies blend into their surroundings. They are often coloured in bright brown or orange.

Nymphalid eggs are dome-shaped, eggs and caterpillars are very similar to White and Yellow Butterflies, generally Green or Brown. The body of the caterpillar is covered with short bristles and the shiny brown head is comparatively smaller. Pupae are elongate and angular with gold or silver spots. Adults of most species are strong fliers and love to bask in the sun. Males of species such as Chocolate Pansy engage in territorial fights. Many visit flowers but Rajahs, Nawabs imbibe tree sap and fluid from dead crabs and animal droppings.

Modern taxonomists have classified the Brown and the Milkweed butterflies as sub-families of the Nymphalidae family. Tigers and Crows are Milkweeds known for their migratory nature.



Lobed Beak - மூக்கு வண்ணத்தி

Libythea lains is the southern subspecies now called as Lobed Beak. Small sized butterfly having a dark chocolate brown with orange-red streak on the Upper forewing. Beaks are characterized by having very long beak-like labial palpi. They are found on relatively higher elevations of the Western Ghats.

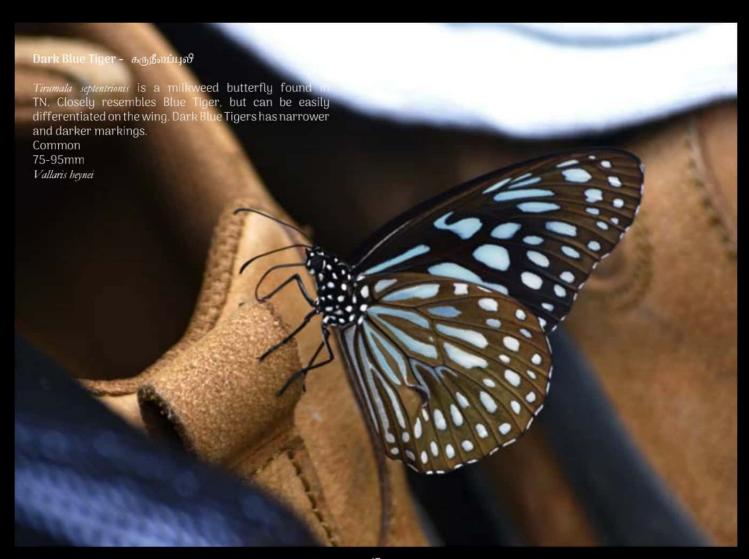
Common 45-50mm Gossypium herbaceum

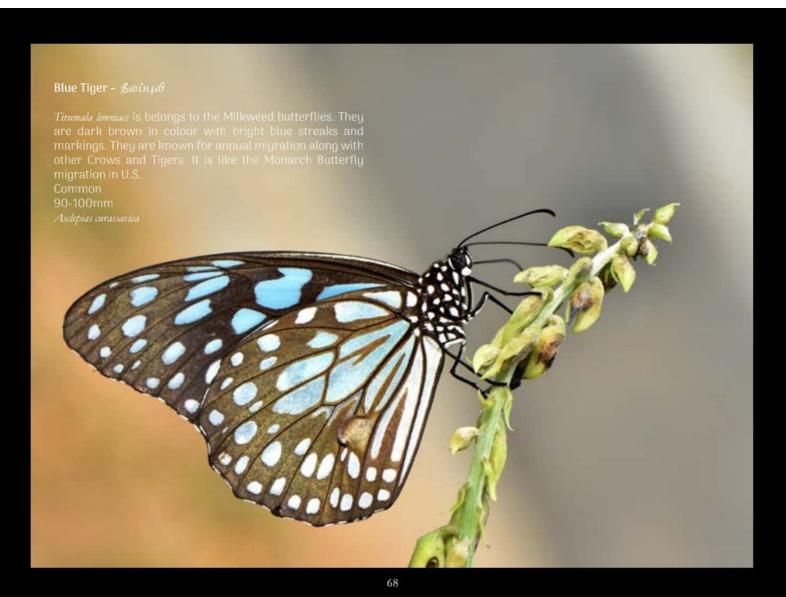
Club Beak - இணைந்த மூக்கு வண்ணத்தி

Libythea myrrha is a very active butterfly. They regularly visit flowers and damp patches. Variable in the extent and breadth of the orange-yellow markings and in the mottling and ground colour of the underside.

Common 45-55mm Celtis australis











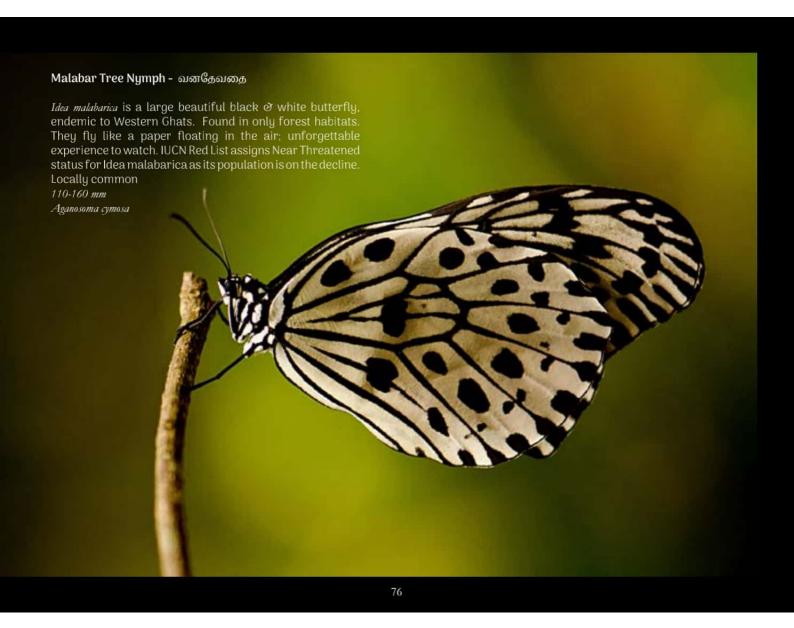












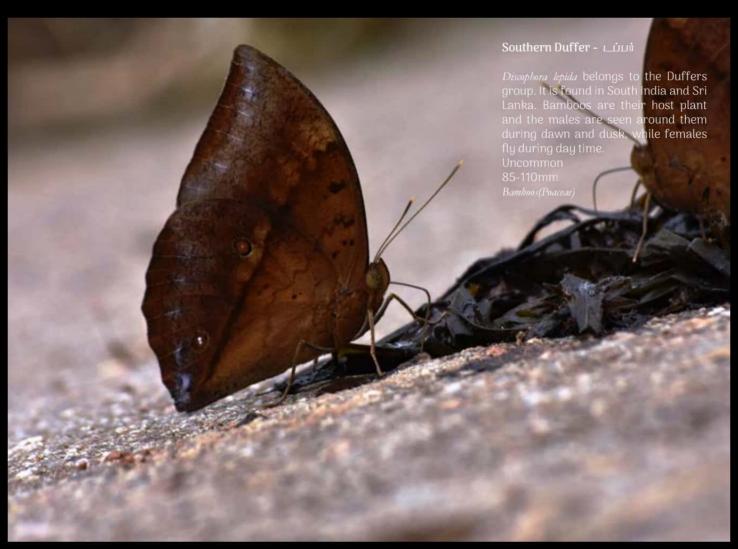


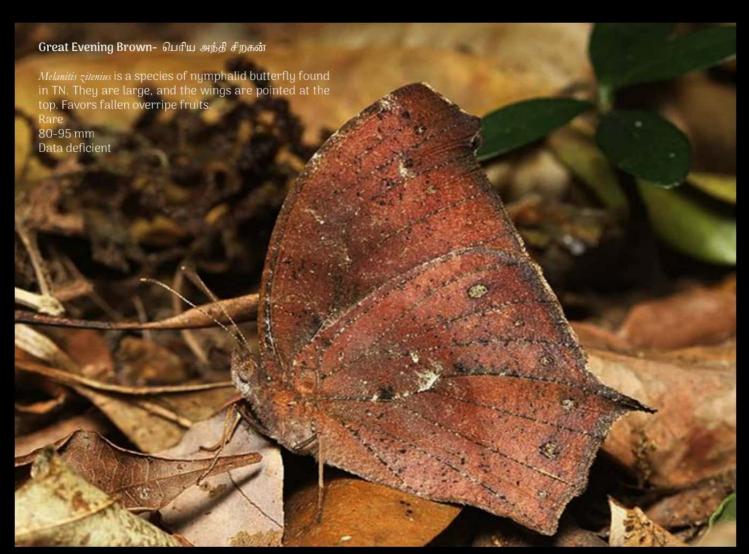


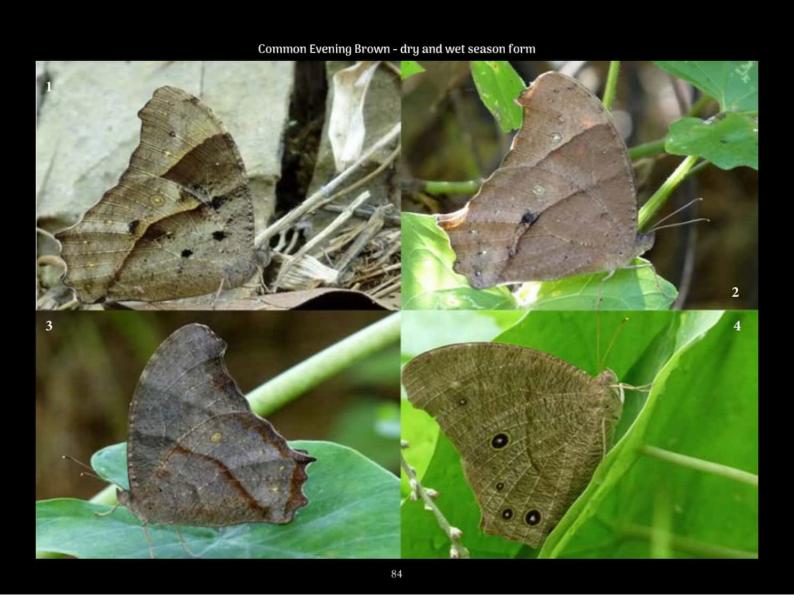


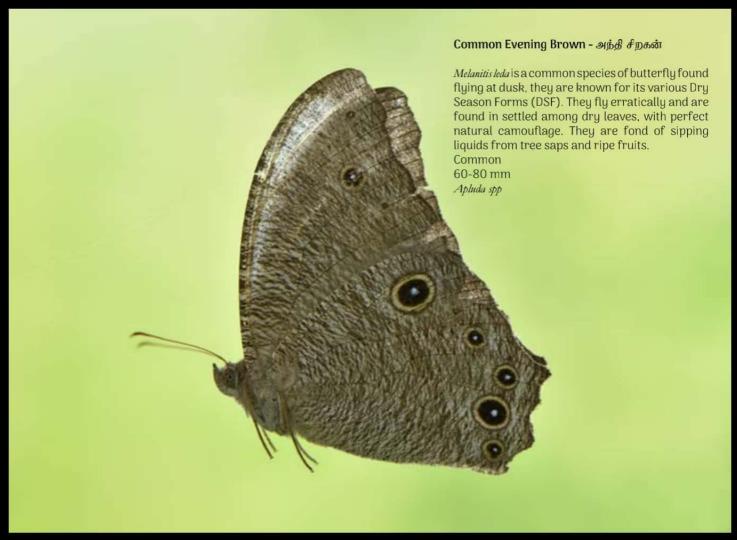




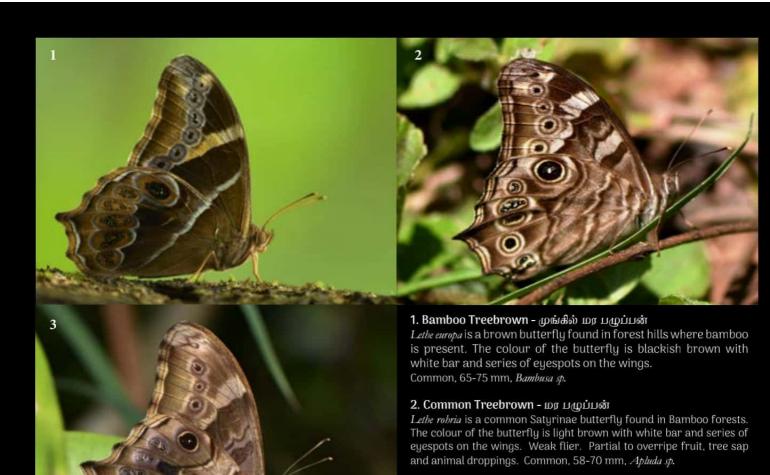






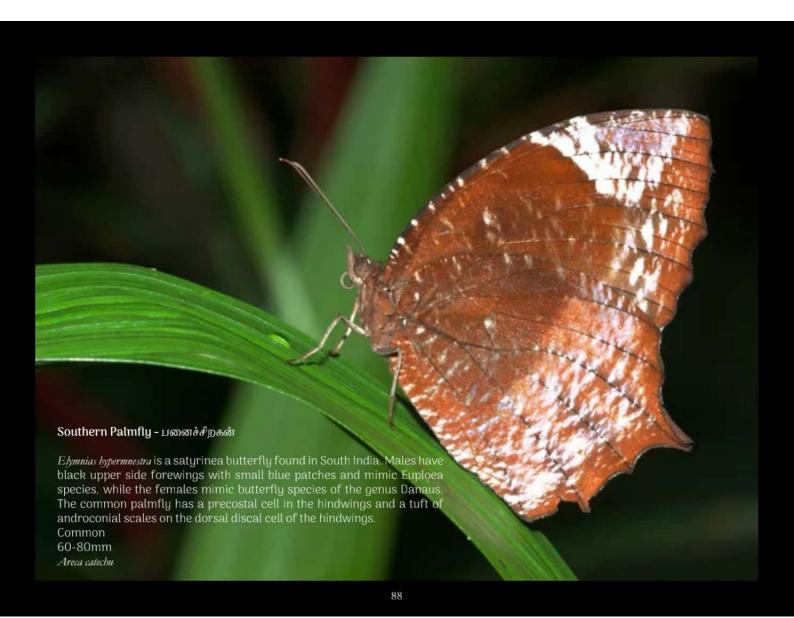


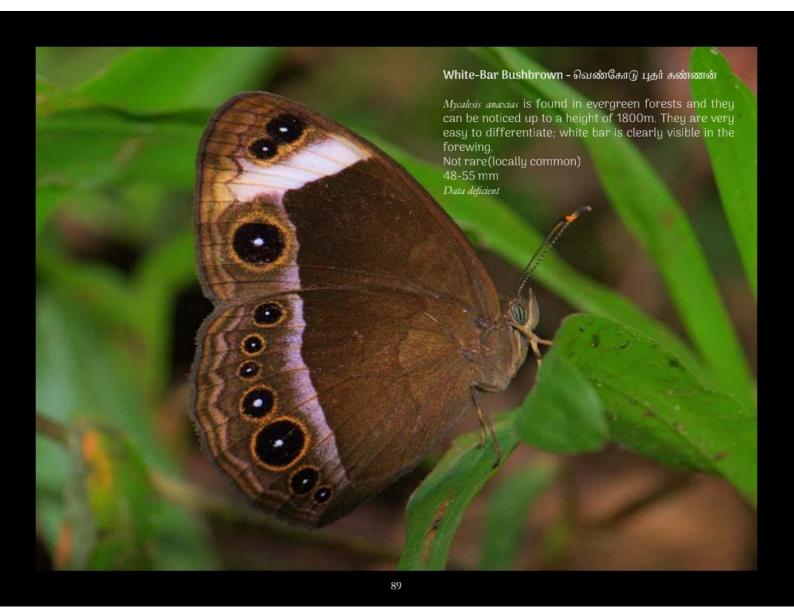




3. Tamil Treebrown - தமிழ் மர பழுப்பன்

Lethe drypetis is a species of Satyrinae butterfly found in moist deciduous forests where bamboo is abundant. On the hindwing the brown transverse discal band very pronounced between veins 4 and 5. They are similar to Common Tree brown but differ by two big eye spots in wings of the same size. Common, 65-70mm, Bambusa arundinacea











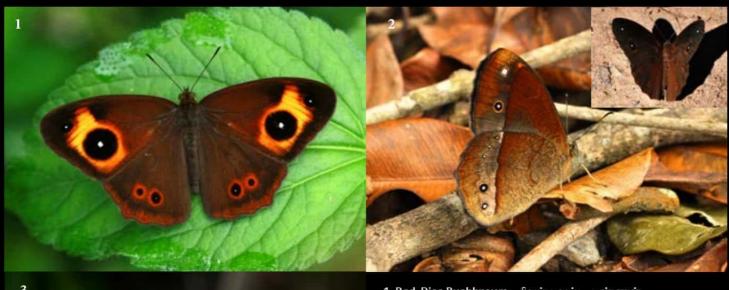


Tamil Bushbrown - தமிழ் புதர் கண்ணன்

Mycalesis subdita is a subspecies of Long-Brand Bushbrown, they are found in Eastern Ghats and Western Ghats. It can be easily differentiated from other Bush browns. Underwing is brown with thick white bands. Common 45-55 mm
Data deficient

Palni Bushbrown - பழனி புதர் கண்ணன்

Heteropsis darisoni is a found in Chinnar Wildlife sanctuary and limited areas in the Western Ghats. Underwing is dark brown, with white central bands. Uncommon 45-50 mm Data deficient



3

1. Red-Disc Bushbrown - சிவப்பு வட்ட கண்ணன்

Telinga oculusis is endemic to Western Ghats. It is similar in markings to red-eye bushbrown but distinguished by the reddish band around the large apical spots on the upper forewings. They are fond of sun basking & sip liquids from overripe fruits & animal droppings.

Common, 45-60 mm. Data deficient

2. Red-eye Bushbrown- சிவப்பு கண்ணன்

Telinga adolphei is endemic to Western Ghats and found in TN. The butterfly is generally seen in the hilly regions, shola forests, especially very common in Lamb's Rock and Longwood shola of Nilgiris. They are known for sun-basking; the red-eyes are quite distinctive.

Locally common, 50-55 mm, Data deficient

3. Glad-eye Bushbrown - பெருங்கண்ணன் Mycalesis patina is endemic to Western Ghats. Preferred habitats include deciduous forests with bamboo groves. Common, 40-45 mm, *Data deficient*









1. Common Three-ring - 3 வட்டன்

Ypthima asterope is found in most dry areas, grass lands of TN. It has a weak flight and flies close to the ground. The butterfly has small brown striations and three eyespots on the wings. Common, 30-37mm *Cynodon spp*

2. Common Four-ring - 4 வட்டன்

Ypthima aranta is found in most of the places, wetlands, and grass lands forest clearings of TN. It flies close to the ground. The butterfly has small brown striations and four eyespots on the wings. Locally common, 30-45mm Data deficient

3. Common Five-ring - 5 வட்டன்

Ypthima baldus is a small sized butterfly; they have a very strong flight. They have 6 rings on the wings, but the last two rings are considered as one, they have two seasonal forms. Common, 32-48mm Data deficient





Ypthima striata is a very rare butterfly; they are reported in Megamalai Wildlife Sanctuary and Anamalai Tiger Reserve. Under wing has whitish colour with dark long streaks, besides eyespots with broad yellow rings. Uncommon, 33-45 mm

2. Southern Baby Five-Ring - குட்டி 5 வட்டன்

Ypthima tabella is a species of Satyrinae butterfly found in South India. Usually no bands along under margin, and double eyespot with broad yellow ring on underforewing.
Uncommon, 23-25 mm, Data deficient

3. Palni Four-Ring - பழனி 4 வட்டன்

Ypthima ypthiomoides is a rare butterfly: Under forewing has one double-pupilled eyespot. Underside of wing has one small apical eyespot and four rings, out of which two smaller eyespots are together at lower tip. Uncommon, 33-45mm



1. White Four-ring - வென் வட்டன்

Ypthima ceylonica is a small butterfly, abundantly found in dense forests of Western Ghats. They can be easily differentiated by the white colour on the hind wing. Locally common, 30-35mm, Data deficient

2. Small Jewel Five-ring - நகை வட்டன்

Ypthima Singala is a very rare satyrinae butterfly found in TN. The specimen is recorded only in of Megamalai Wildlife Sanctuary. Rare, 30-45 mm, Data deficient

3. Nilgiri Four-ring - பழனி 4 வட்டன் Ypthima chenni is endemic to Western Ghats, but recently recorded in Eastern Ghats. The butterfly has shining dark bands with whitish background on the wing. They are confined to high altitude grasslands of 1200 -1800 meters.

Common, 36-46 mm, Data deficient









Nilgiri Fritillary - நீலகிரி ப்ரிட்டில்லரி

65-85mm

Argynnis hybrida is rare butterfly locally common in Nilgiri Hills of TN. These fritillary butterflies were earlier treated as subspecies to Indian Fritillary (Argynnis hyperbius) and are now treated as separate species.

Rare, Locally common

Palni Fritillary - பழனி ப்ரிட்டில்லரி

Argynnis castetsi is found in the hills beyond Palghat gaps and especially in Palni Hills in Tamil Nadu. They are fond of flowers. Sexually dimorphic (Male & female are different). Male mimic Common Leopard and the females look similar to Plain Tiger.

Rare, Locally common 65-85mm







Vindula erota is seen in moist deciduous, semi-evergreen and evergreen forests. The male is tawny yellow, and the female is bigger with bluish green. They are fond of sipping fluids from dead crabs.

Not rare, 72-110 mm, Adenia bondala (Passifloraceae)

2. Tamil Yeoman - தமிழ் மறவன் Cirrochroa thais is endemic to Western Ghats. They occur in moist deciduous, evergreen forests and streams. The lay eggs one above the other. Locally common, 60-75 mm, Hydnocarpus wightiana (Flacourtiaceae)

3. Rustic - செற்மன் சிறகன் *Cupha erymanthis* is a medium sized widespread butterfly, it occurs only in heavy rainfall areas. They fly around water streams infringe forest and on tree tops. Male is territorial. They have short life span of 3 weeks. Common, 50-60 mm, *Flacourtia indica*





Small Leopard - குட்டி சிறுத்தை

Phalanta alcippe is a small butterfly and found only in dense forests of Western Ghats. It is fond of flowers and visits damp patches.

Locally common, 35-50 mm

Alsodeia zeylanica

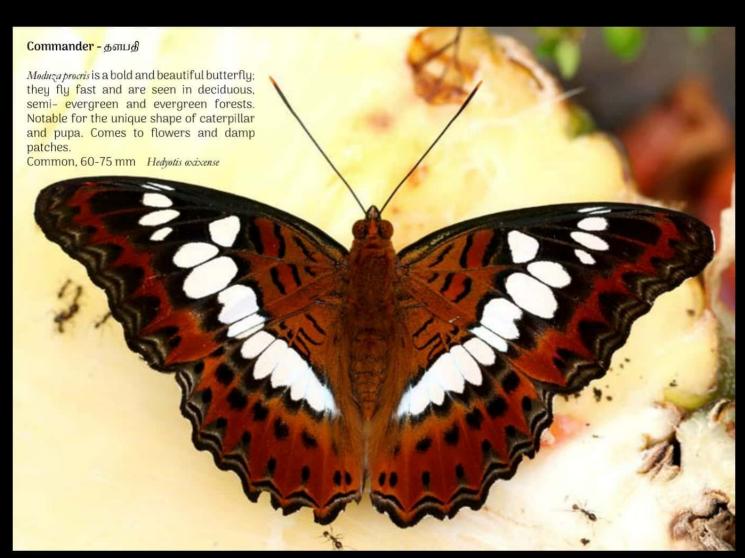
Common Leopard - சிறுத்தை

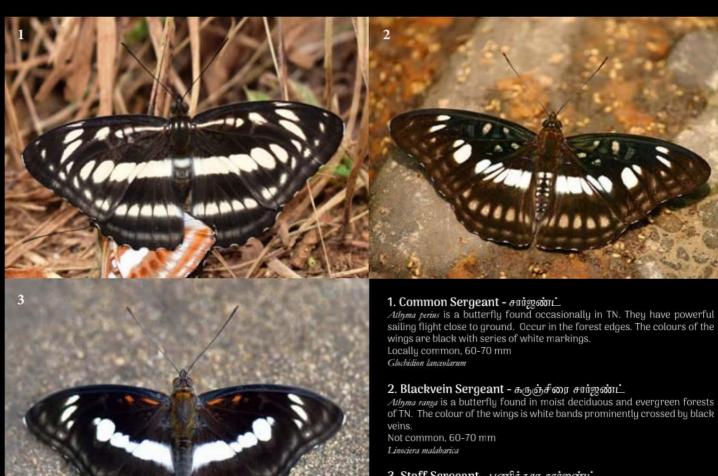
Phalanta phalantha is a medium sized widespread butterfly; the colour of the butterfly is tawny colour with black spots. It is a fast flier, nectar and sun loving.

Common, 50-60 mm

Flacourtia Montana







3. Staff Sergeant - பணிக்கார சார்ஜண்ட் Athyma selenophora is a butterfly found occasionally in TN, usually in evergreen forests. The male has a black base with prominent white band on the upper. The female upper has velvety brownish black with white and pale markings. Not common, 55-75 mm Haldina cordifolia(Rubiaceae)





1. Colour Sergeant - வர்ண சார்ஜண்ட் Alhyma nefte inara is found occasionally in TN. They love visiting flowers and damp patches. The colour of the butterfly is black with white band and orange markings.

Not rare, 55-70 mm

2. Common Lascar - லஸ்கர் Pantoporia hordonia is widespread in TN. The flight pattern is similar to sailers but weaker. The colour of yellow and orange bands looks so elegant.

Acacia concinna

3. Extra Lascar - ஏக்ஸ்ட்ரா லஸ்கர்

Pantoporia sandaka inara is very common in Kallar, TN. The species looks similar to Common Lascar but the white patch on the hindwing which is normally covered by the forewing is the clear key. Uncommon, 45-50 mm

Acacia concinna







1. Clear Sailer - க்னியர் கப்பலோட்டி

Neptis jumbah is a medium sized butterfly found in evergreen and deciduous forests. They look similar to other sailers but smaller than a Common Sailer and markings are different. Upper hindwing bands are broad and prominent.

Common, 60-70 mm, Bombax ceiba

2. Yellow Jack Sailer- எல்லோ ஜாக் கப்பலோட்டி Lasippa viraja is a rare butterfly found in South India. They feed on dalbergia species.

Common, 60-70 mm

3. Short Banded Sailer - குறுகிய பட்டை கப்பலோட்டி

Phaedyma columella is a butterfly found in evergreen and deciduous forests. They look similar to other sailers but bigger than a common sailer and markings are different.

Not rare, 60-70 mm, Dalbergia spp



Chestnut Streaked Sailer - வெண்கருப்பு கப்பலோட்டி

Neptis jumbah is found very common and occurs in gardens and forest edges of TN. It is bigger than the Common Sailer and the upper is black with white markings and bands. Common 60-70 mm

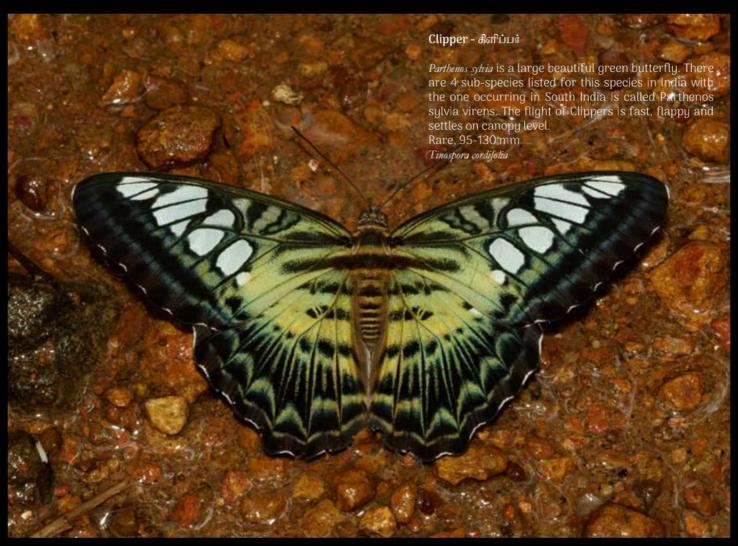
Bombax Ceiba

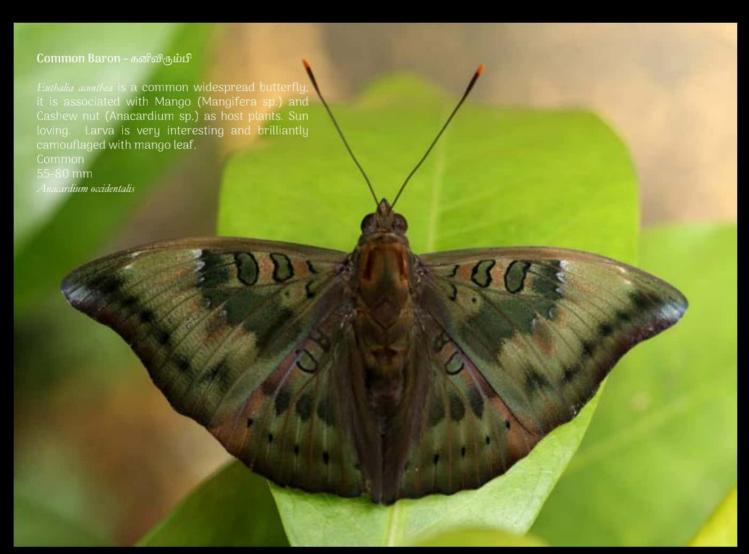
Palni Sullied Sailer - கறை கப்பலோட்டி

Neptis nata found in evergreen and deciduous forests. They look similar to other sailers but smaller than a Common Sailer and markings are different. Upper forewings twospots below cell streak outwardly rounded.

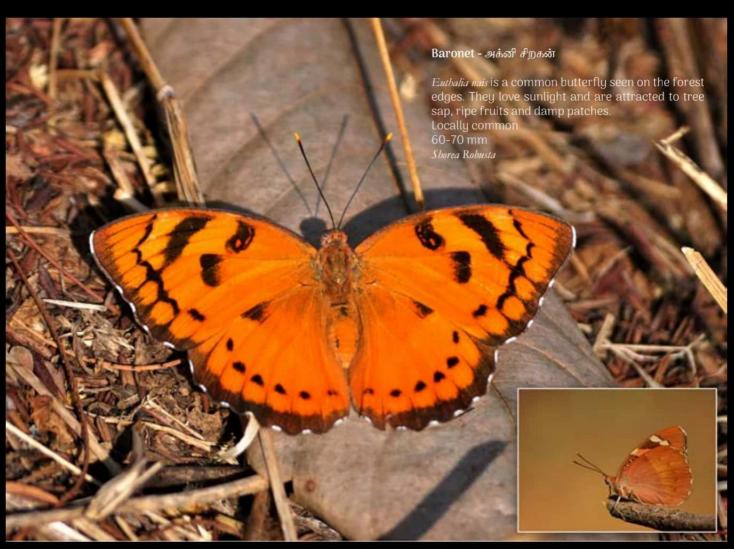
Uncommon 45-60 mm

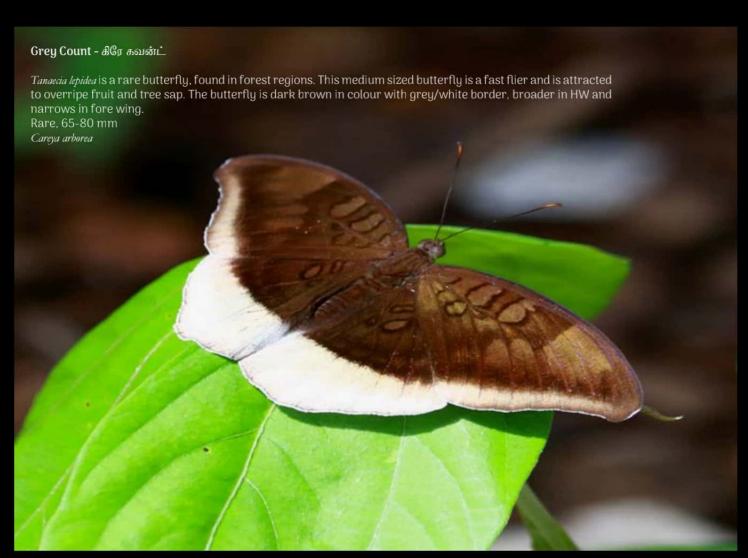


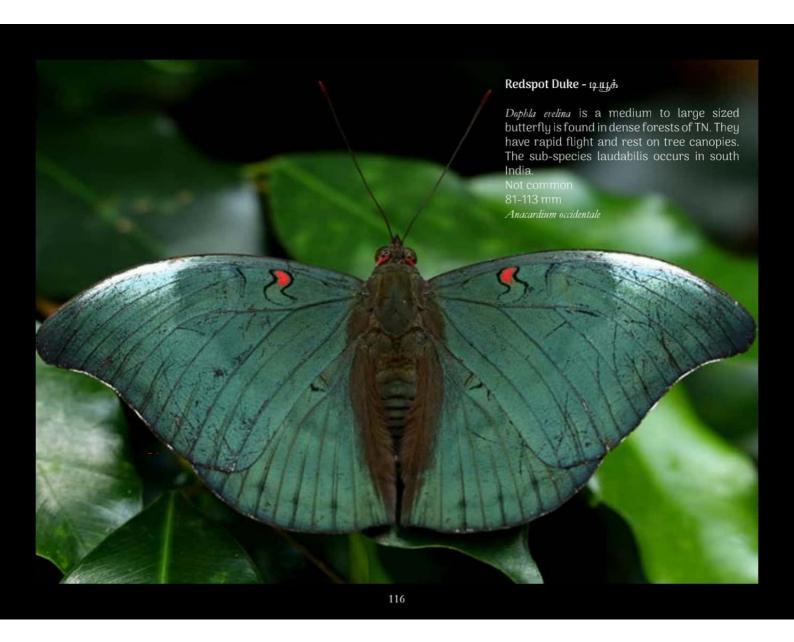
















1. Common Castor- ஆமணக்குச்சிறகன்

Ariadne merione is of medium size. They can be seen in the vicinity of Castor plant (Ricinus communis). Wing colour is orange brown colour with irregular wavy lines.
Common, 45-60 mm, Ricinus communis

2. Angled Castor - வரி ஆமணக்குச்சிறகன்

Ariadne ariadne is a medium size common butterfly wherever the Castor plant Ricinus communis is abundant. The colour of this butterfly is orange brown colour with uniform wavy lines. Uncommon, 45-60mm, *Ricinus communis*

3. Joker- கோமாளி

Byblia ilithyia is medium sized. The name is derived from its upper portion. The colour is bright tawny colour with black spots. They are nectar loving. Weak, fluttering, sailing flight. Short life span. Locally common, 45-55 mm, Tragia involucrata







1. Black Prince - கருப்பு இளவரசன்

Rohana parisatis is a smaller to medium size butterfly, the name derived from the colour; velvet black wing and occurs only in evergreen jungles. The male is a fast and strong flier.

Not rare, 45-50 mm, Celtis cinnamomea

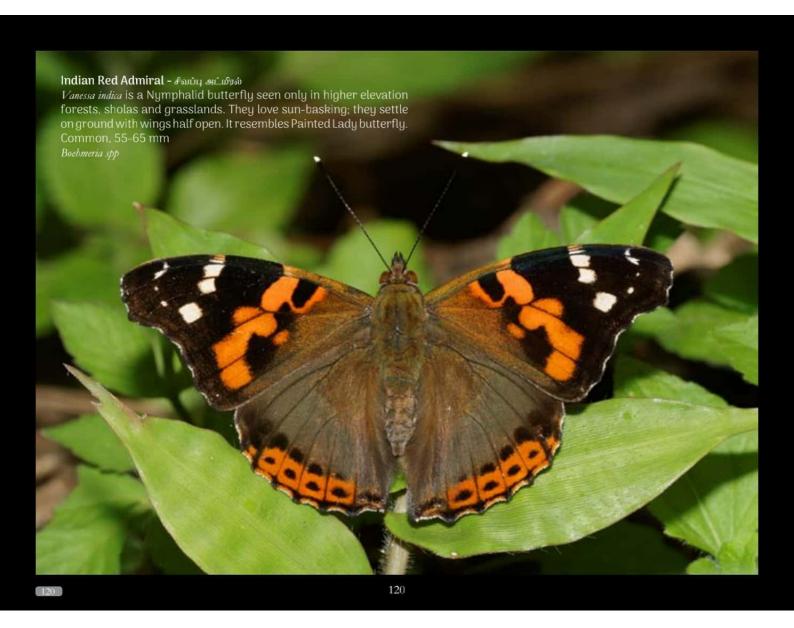
2. Painted Courtesan - வண்ண கோர்ட்டீசியன்

Euripus consimilis is a medium size rare butterfly, it occurs only in heavy rainfall areas and evergreen forests and keeps to treetops except when feeding near the ground.

Rare, 60-85mm, Trema orientalis

3. Painted Lady - ஓவிய அழகி

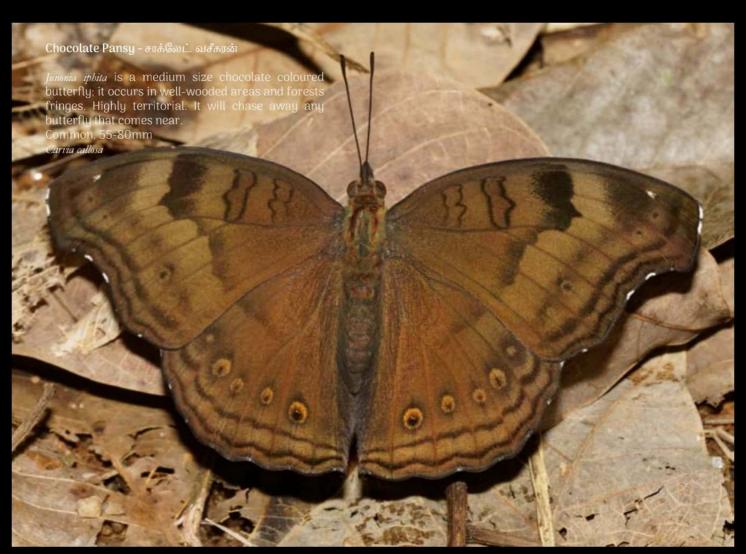
Vanessa cardini is widespread in the world. They migrate long distance - Africa to Europe. They can be seen in all elevations and open grass lands. The colour of the butterfly is orange with black and white spots. Common, 55-70 mm. Artemisia spp

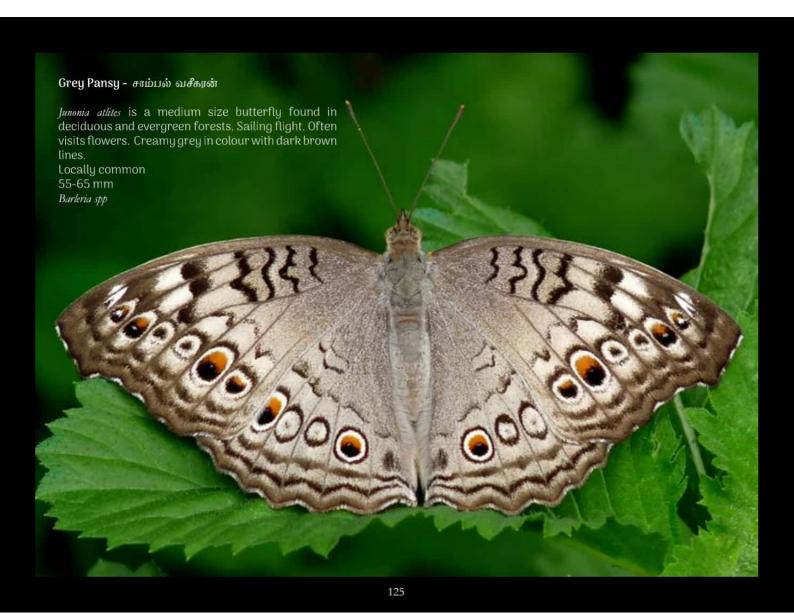


















Great Eggfly - பெரிய பசலைச்சிறகன்

Sida rhombifolia

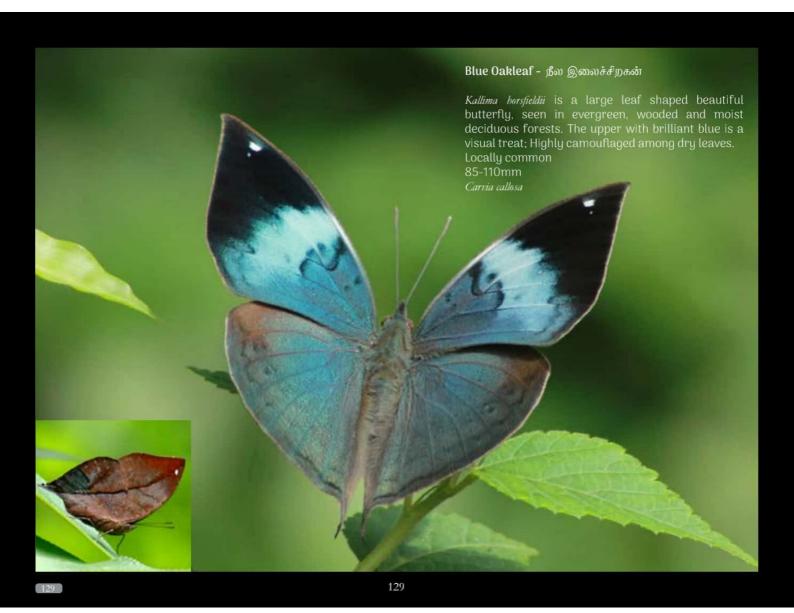
Hypolimnas bolina is a widespread butterfly: it is seen in both moist forest areas as well as plains. The male looks similar to Danaid Eggfly Males but distinguishable by the white rings with purple colour, and the female mimics Common Crow Butterfly. Common 70-110 mm

Danaid Eggfly - பசலைச்சிறகன்

Hypolimnas misippus is a medium sized butterfly occurring in plains & forest fringes of TN. Males are territorial and sexually dimorphic. Female exhibits polymorphism with majority of them mimicking Plain Tigers. Two more female forms namely inaria and alcippoides exist but are rare.

Common 70-85 mm Asystasia lawiana









BLUES LYCAENIDAE

Lycaenidae is the second-largest family of butterflies with over 6000 species worldwide. These are also called Blues. Blues make up about 30% of the known butterfly species. There are 443 species in India and Tamil Nadu has 96 species. A majority of these butterflies have blue upper-sides, and few have other colours. Few species have long tails at their hind wings that also support their flight patterns.

Eggs are almost spherical, but flattened at both ends to appear turban shaped. The caterpillars have a flattened shape rather than cylindrical. The most remarkable fact about the caterpillars of Blues is their association with ants. Certain glands secrete a sugary solution that ants like. In return, the ants constantly surround the caterpillars and protect them from other predators. Larvae are capable of producing vibrations and low sounds that are transmitted through the substrates they inhabit. They use these sounds to communicate with ants. Most of the larvae are herbivorous and few feed on aphids, scaly insects and ant larvae. Adult individuals often have hairy antenna-like tails complete with black and white ringed appearance. Many species also have a spot at the base of the tail and some turn around upon landing to confuse potential predators from recognizing the true head orientation. This causes predators to approach from the true head end resulting in early visual detection.

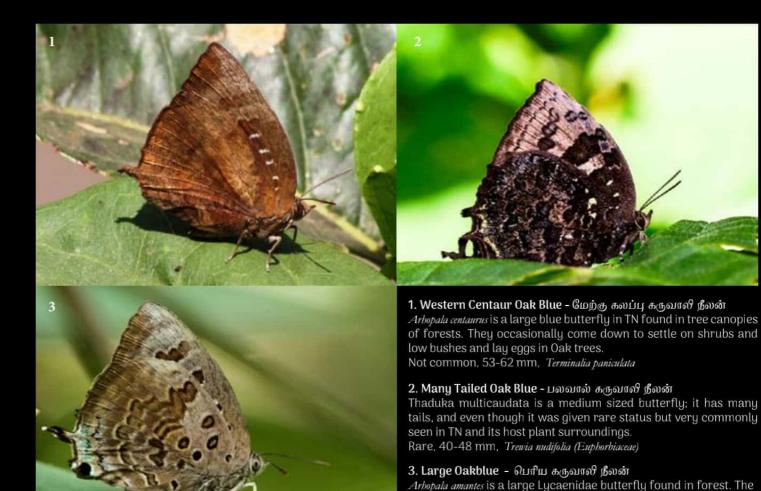
Blues are found in open meadows, grasslands, bushes and forest clearings.





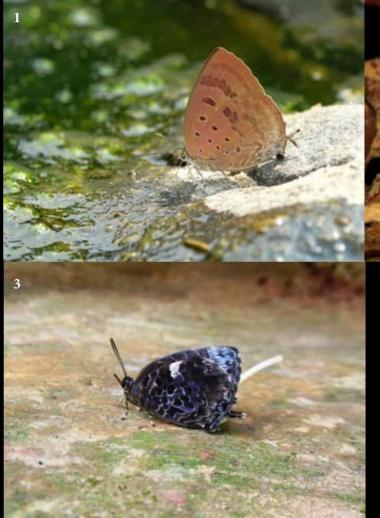






bright brilliant metallic blue marking on its upper side is very easy to differentiate with other oakblues. The eggs are laid on the leaves of Syzygium sp. The larvae and pupae are always attended by red

ants. Locally common, 45-57 mm, Terminalia alata





1. Kanara Oakblue – இந்திய கருவாலி நீலன் Arhopala alea also called as Rosy Oakblue is seen in hilly forest areas. The underwing is purplish in colour. The male upper wing is dark shining violet-blue with black borders. Locally common, 44-45 mm, Data deficient

2. Tamil Oak Blue - தமிழ் கருவாலி நீலன்

Arbopala bazaloides is a medium sized butterfly with many tails; under wing has wavy marginal line overlaid with white scales. The upper wing has dark purple-blue colour with dark border. Very rare, 44-47 mm, *Data deficient*

3. Aberrant Oak Blue - பிறமும் கருவாலி நீலன்

Arhopala absens is a medium sized butterfly with two short spikes under wing has two round spots in the cell. The upper wing has dull purple-blue colour with broad border.

Not rare, 32-35 mm, Shorea robusta (Dipterocarpaceae)





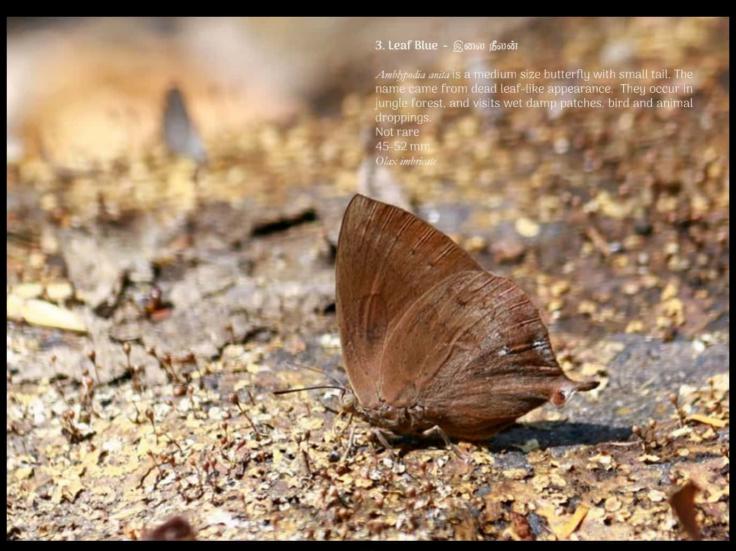
1. Common Acacia Blue - கருவேல் நீலன்

Surendra quercetorum is a small sized common butterfly, found in hilly forests. The under wing is brown with thin silver markings: and the upper wing dark brown, purple blue in central area. Locally common, 30-40 mm, Acacia torta

2. Silver Streak Acacia Blue - வெள்ளிக்கோட்டு கருவேல்நீலன் Zinaspa todara is a striking butterfly with silver lines on under wing, seen in hilly forests. They always share their space with ants and they rests in Bamboos, and their food plant is Acacia species. Rare, 34-38 mm, Acacia pennata

3. Silver Streak Blue - வெள்ளிக்கோட்டு நீலன்

Iraota timoleon is a small brown colour butterfly with irregular silver streak in wings. Found in woody regions. They love wet patches and visits flowers, male has one tail and female has two with reddish brown upper wings. Locally not rare, 40-48 mm, Ficus benghalensis



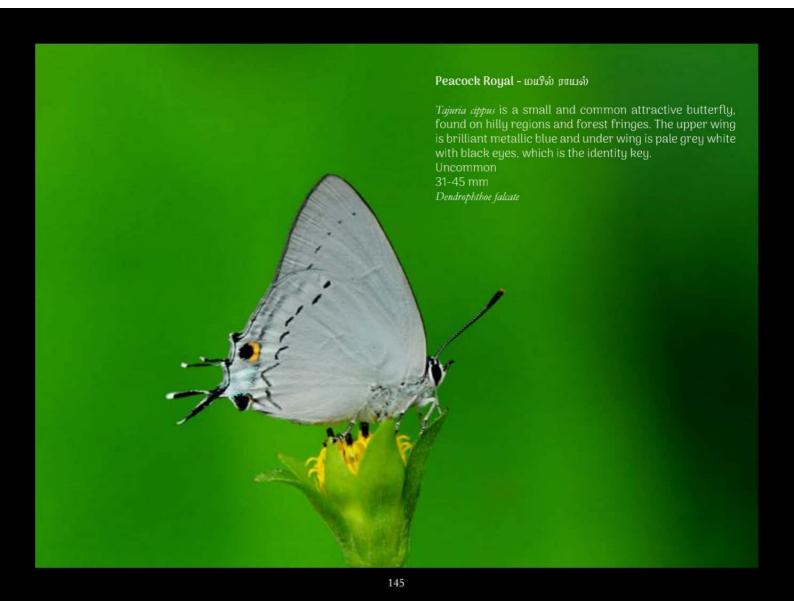




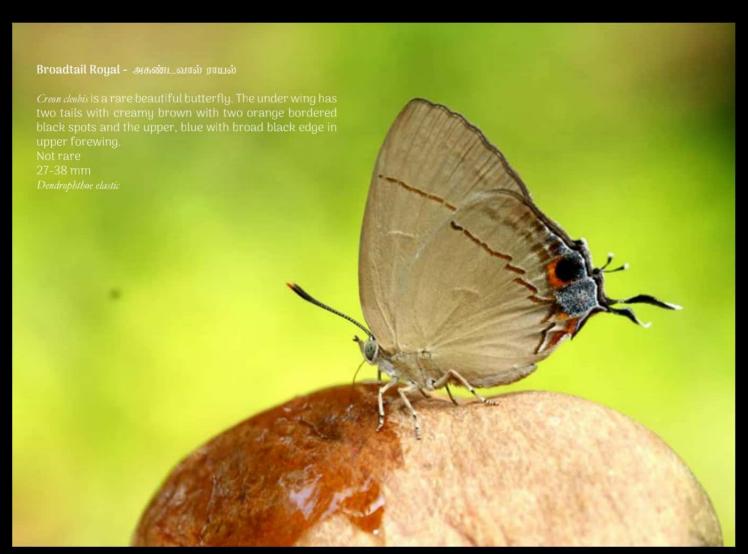
















1. Tufted White Royal - வெண்ணிற ராயல்

Pradapa deva is an attractive butterfly; seen in hilly regions wing has shining sky blue on the upper and greyish blue on under with pale white green colour eyes.

Not rare, 30-37 mm, Dendrophthoe spp (Loranthaceae)

2. Broadtail Royal - அகலவால் ராயல்

Crean cleabis is a rare beautiful butterfly. The under wing has two tails with creamy brown with two orange bordered black spots and the upper, blue with broad black edge in upper forewing.

Not rare, 27-38 mm, Dendrophthoe elastic

3. Branded Royal - அகண்ட பட்டை நாயல்

Rachana jalindra is a rare butterfly found on tree tops and hilly regions. The wing has a broad chocolate brown band on the under and deep violet blue/dark brown on the upper. Rare to very rare, 36-44 mm. Dendrophthoe elastica



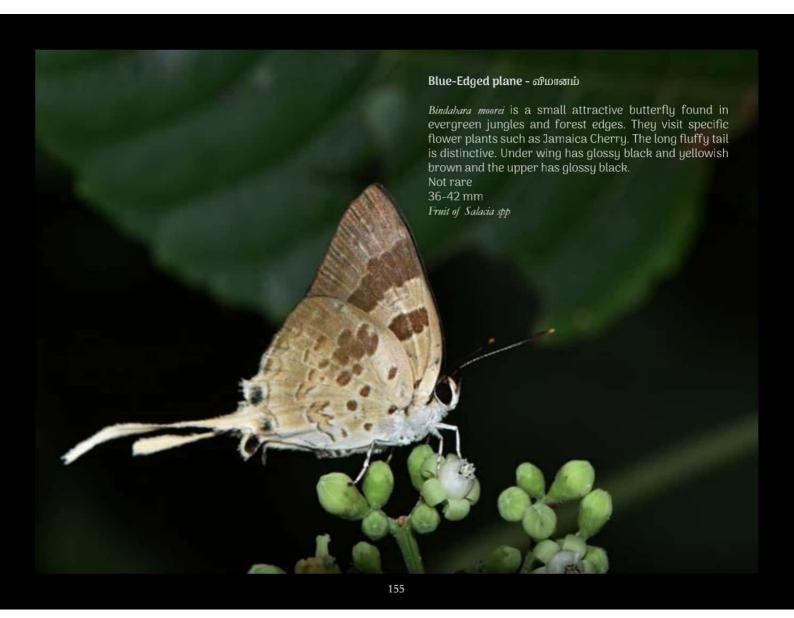


















1. Cornelian - கார்னிலியன்

Deudorix epijarbas is a small butterfly. They are found in forests and plains of TN. The underside is brown with dark brown discal bands. Sometime confused with Red flash, but the under wing is dark brown with broad white bands easy to differentiate.

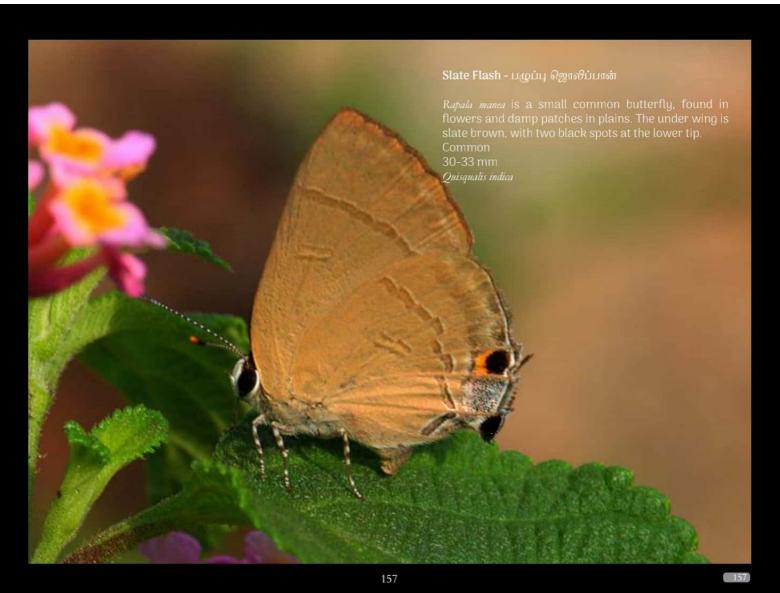
Not common, 34-44 mm, Connarus wightii

2. Indian Red Flash - சிவப்பு ஜொலிப்பான் R*apala iarbus* is a small common butterfly seen in plains and forests. The name comes from their red flashy bright wings on upper. Common, 33-41 mm, Ougeinia dalbergioides

3. Indigo Flash - அடர் நீல ஜொலிப்பான்

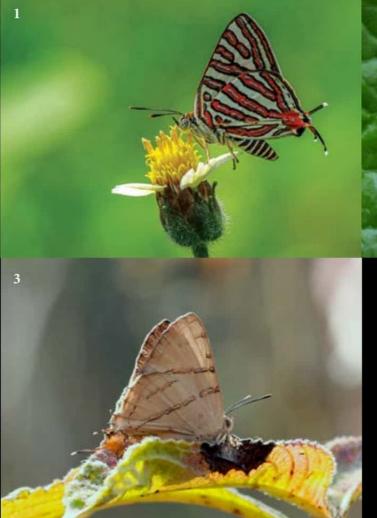
Rapala varuna is a small butterfly seen in plains and forests. Fast flier and seen among flowers and damp patches. The under wing colour is dark/pale shining blue. Not rare, 28-29 mm, *Quisqualis indica*

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1. Common Silverline - வெள்ளிக்கம்பி

Spindasis vukanus is a small, common dry habitat species occurs in plains and forest edges of TN. The name is derived from silver marking on their wings.

Common, 26-34 mm, Cadaba fruticosa

2. Long-Banded Silverline - நீலப்பட்டை வெள்ளிக்கம்பி

Spindasis lohita is a forest species found in heavy rain fall jungles. The long bands are easy to differentiate, the under wing bands touches the wing base.

Common, 30-42 mm, Dioscorea spp

3. Abnormal Silverline - அடர்பழுப்பு வெள்ளிக்கம்பி

Spindasis abnormis is a very rare species, found only in evergreen and dense forests, the under wing is dull brown with very narrow markings. They regularly visit on damp patches and wet areas for mud-puddling.

Rare, 40-45 mm





Common Shot Silverline - அடர்பழுப்பு வெள்ளிக்கம்பி

Spindasis ictis is a small butterfly found more in the drier and open areas. The upper wing colour is dark brown with purple-blue and under wing has khaki silver bands without black edges.

Locally common 27-35 mm Dendrophthoe sp

Scarce Silverline - அரைகுறை வெள்ளிக்கம்பி

Spindasis elima is a similar to the common shot silverline. Found in plains, hills and forest habitats. The colour of the butterfly is Reddish brown with silver stripes.

Not common 28-42 mm Data deficient









1. Angled Pierrot - கொக்கி நீலன்

Caleta caleta is a small butterfly seen in evergreen forest and deciduous forests. They are fond of mud-puddling and visit flowers and bird droppings.

Not rare, 26-32 mm, Zizyphus rugosa

2. Banded Blue Pierrot - பட்டை நீலன்

Discolampa ethion is a small butterfly occurring in dense, evergreen forests. They are generally seen around forest clearings and streams. Their flight is weak and close to the ground. Locally common, 26-30 mm, Zizyphus spp

3. Rounded Pierrot - வரி நீலன்

Tancus nara is a small butterfly, and they occur in grasses, dry areas and shrubs in TN. The colour of this pierrot is cream yellow with black spots. Not rare, 23-28 mm, Zizyphus sp



Dark Pierrot - அடர் நீலன்

Tarneus ananda is a small, attractive butterfly found in wet areas and hilly forest regions. The larval stage of the butterfly is in association with Acrobat ants and they lay eggs in Indian jujube plant.

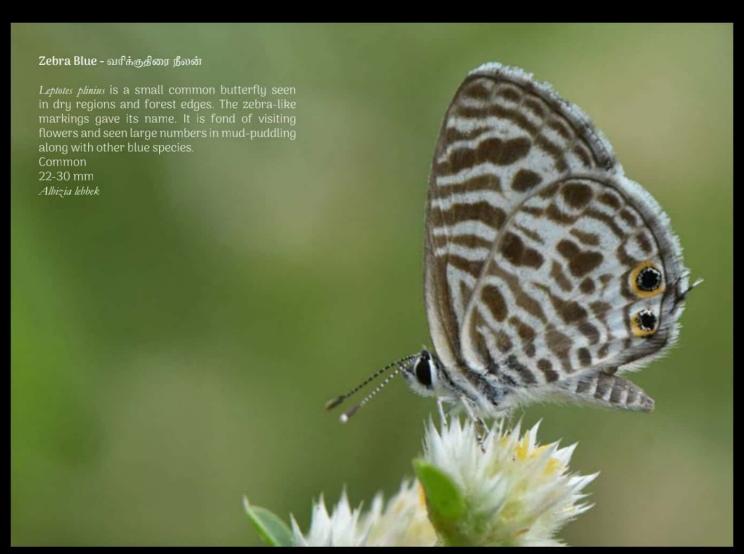
Not common 22-28 mm Dendrophthoe sp

Black-Spotted Pierrot / Balkan - பல்கான் நீலன்

Tarucus balkanicus is a small attractive butterfly and they found in wet areas and wetland habitats. They resemble Striped Pierrot that can be easily differentiated by their dark black-spots on under hind-wing.

Rare 16-28 mm Zizyphus sp











1. Common Lineblue -வரி நீலன்

Prosotas nora is a small butterfly and found in forest regions. They can be seen in large numbers assembled during mud-puddling and animal droppings.

Common, 18-25 mm, Acacia catechu

2. Tailless Lineblue - வாலில்லா வரி நீலன்

Prosotas dubiosa is a small common butterfly and found in forest regions. They look very similar to common line blue but they don't have tail. They visit flowers, bird droppings and damp patches. Common, 22-26 mm, *Acacia spp*

3. Dingy Lineblue - வாலில்லா வரி நீலன்

Petrelaea dana is a small common butterfly and found in forest regions. They look very similar to tailless line blue but they don't have tail. The under wing white lines are dull and faint; the upper wing has dull violet blue.

Common, 24-28 mm





1. Large Four Lineblue -பெரிய 4 வரி நீலன்

Nacaduba pactolusis a small and rare butterfly, found in rain forest. The colour of the butterfly is dark blue in upper and dark brown in female. The under fore-wing has two pairs of yellowish lines. Rare, 27-38 mm, Data deficient

2. Pale Four Lineblue -வெளிர் 4 வரி நீலன்

Nacaduba hermus is a small and rare butterfly, found in rain forests. The colour of upper is greyish blue violet in upper and in the female is pale blue with dark border. The under fore-wing has two pairs of white conjoined lines. Rare, 30-35 mm, Data deficient

3. Rounded Six Line Blue - வட்டவடிவ 6 வரி நீலன்

Nacaduba berenice are found in deciduous forests and the forewing is rounded. The markings on under wing are not zigzagged in outer central crescents. The upper is frosted violet blue for males and pale purple blue with no white in females.

Not rare, 22-30 mm, Data deficient





1. Opaque Six-Lineblue - ஒலி புகா 6வரி நீலன் Nacaduba beroe is a small butterfly. There are three pairs of lines on under fore wing. They are tailless and can be seen along with other lineblues. The under wing colour is brownish grey and upper wing is darker violet blue. Not rare, 28-34 mm, Moullara spicata

2. Dark Ceylon Six-Lineblue - இலங்கை 6 வரி நீலன் Nacaduba calauria is a very rare and the males have dark shining upper blue and the female have purple bases wing marginal lines are zig-zagged and the markings, narrow and well-defined. Rare, 30 mm. External appearance

3. Transparent Six-Lineblue - ஒலிபுகும் 6 வரி நீலன் Nacaduba kurava is a fast flier. The marking on under wing is regular and transparent. Male upper is pale shining violet-blue. Three pairs of lines on under fore wing. Not rare, 30-38 mm, Ardisia humilis



Pointed Lineblue - கூரான வரி நீலன்

Landyce belican is a small, rare butterfly can found in thick forests. They have very pointed forewing and the upper wing is dark violet blue and female has brown.

Rare 22-25mm Data deficient

White Tipped Lineblue - வெண் ஓர வரி நீலன்

Prosotas noreia is a small common butterfly and found in forest regions and scrub jungles. It flies fast and is seen with other lineblues during mud-puddling. The name came from its forewing tip; it's pointed with white colour.

Rare 22-28mm Data deficient



Common Ciliate Blue - பிசிருயிர் நீலன்

Anthene emolus is a small rare butterfly occurring in hilly forests of TN. The hind wing has 3 small tufts and dark spots near the inner edge. The colour is dark purple with thin black borders on the upper and brown with thick white bands on the under wing.

Rare 28-35mm

Pointed Ciliate Blue - கூரான பிசிருயிர் நீலன்

Anthene bycaenina is a small butterfly occurring in hilly forests. They are fond of mud-puddling and visits flowers and bird droppings. The name comes from the pointed tip in the forewing, and the hind wing has 3 small tufts. Uncommon 24-29mm





1. Common Cerulean - புங்க நீலன் Jamides celeno is a small common attractive butterfly; they lay eggs in Pongamia species. The colour is pale blue upper and under wings greyish brown. Common, 27-40 mm, Saraca asoca

2. Dark Cerulean - அடர் புங்க நீலன்

Jamides bochus is a small blue butterfly found in both plains and forests. The butterfly has a dark iridescent blue on the upper wing and the under wing has dark plain brown. Common, 25-34 mm, Butea monosperma

3. Metallic Cerulean - உலோக புங்க நீலன்

Jamides alecto is an attractive blue butterfly, they found in hilly forest regions of TN. The upper wing colour is metallic violet blue and under wing colour is pale yellowish brown. Locally common, 30-44 mm, Elettaria cardamomum



Forget-Me-Not - பருப்பு நீலன்

Catochrysops strabo is a common butterfly found in plains and forest edges. The colour of this butterfly is pale blue with thin black line borders in the upper and is dull brown with white edge and white spots.

Common

25-35mm

Ougeinia dalbergiodes

Pea Blue - பட்டாணி நீலன்

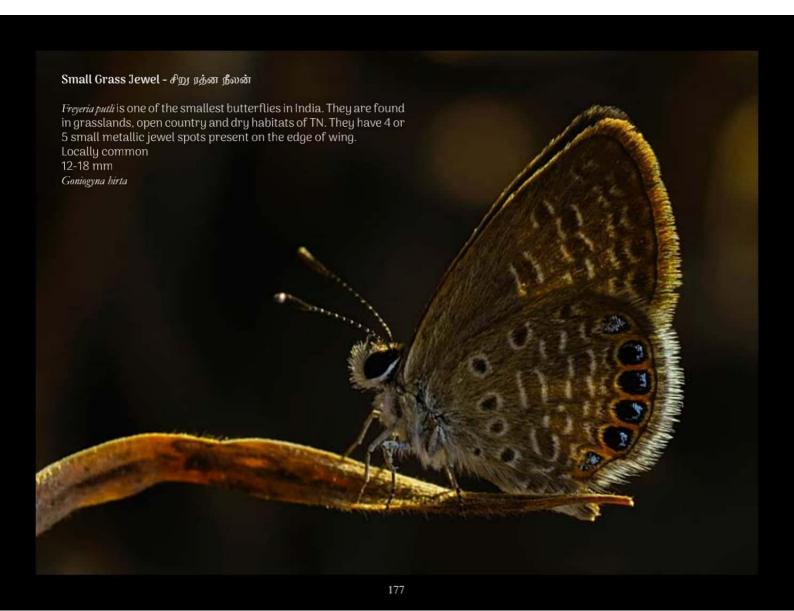
Lampides boeticus is a small common butterfly, found among peas and beans family. They visit flowers and damp patches. The upper colour is dark violet blue with two black spots at lower tip and under wing are yellowish, orange black spots. Common

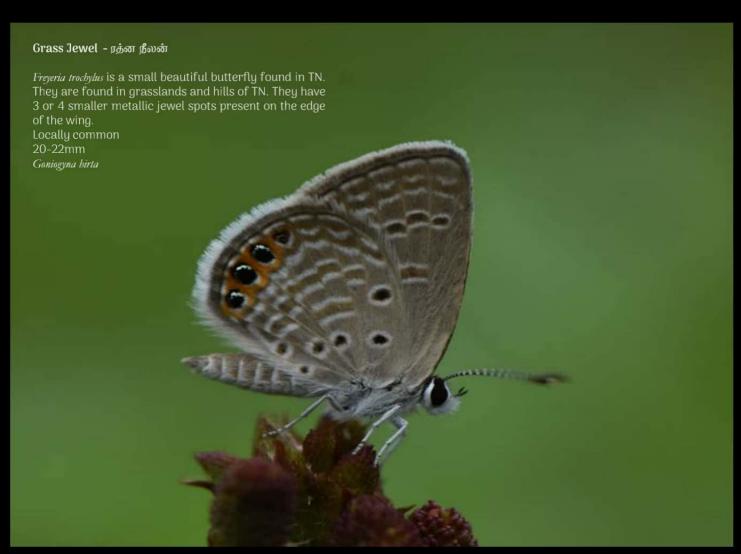
24-36mm

Butea monosperma











Bright Babul Blue - அடர் பபுல் நீலன் (Azanus ubaldus) African Babul Blue - கருவேல் பபுல் நீலன் (Azanus jesous) Dull Babul Blue - பபுல் நீலன் (Azanus uranus)

Babul Blue is a tiny tailless active beautiful butterfly. They are very common in plains, scrubs and grasslands. Their host plants are Acacia species, which is called Babul. They lay eggs on Acacia flowers.

Common 20-25mm, Common 21-26mm, Rare 20-25mm Acacia Arabica











1. Plains Cupid - நாட்டு குப்பீட் Chilades pandara is a small butterfly, found in plains and jungle fringes. The upper wing is lavender-blue in colour and under wing is brown with four dark spots near under wing base. Locally common, 25-35 mm, Cycas revolute

2. Small Cupid - சிறு குப்பீட் Chilades parrhasius is a small beautiful butterfly found in forest edges. They look similar to plains cupid, but only 3 spots near the under hind wing base; and they fly close to the ground. Common, 20-25 mm

3. Lime Blue - ஏலுமிச்சை நாட்டு நீலன் *Chilades lajus* is a small blue butterfly, seen more in open and drier habitats. Visit flowers and damp patches. The wing is brownish grey in colour. Common, 26-30 mm, Atalantia racemosa











Suffused Double-Banded Judy -

இரு பட்டை ஜுடி

Abisara bifasciata is a small, striking Riodinae butterfly. The common name "metalmarks" refers to the small metallic-looking spots commonly found on their wings. The wing is purple brown in male and brown in female. Only 2 species are found in Tamil Nadu.

Common 40-50mm Embelia robusta

Straight Plum Judy - பிளம் ஐுடி

Abisara echerius is a small, striking Riodinae butterfly found in forests and gardens; the colour is reddish brown with green eyes on the under, and the upper is purple brown. They are found abundantly in jungles, where the host plant Maesa Indica is available. Central band on the under fore wing is straight.

Common 40-50mm Embelia robusta



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SKIPPERS HESPERIIDAE

The Skippers are small, dark brown in colour and generally spotted with white or yellow, or orange and green, the markings very often being semi-transparent. Skippers earned their common name from the characteristic way they dart from flower to flower, in quick, rapid flight. They were previously placed in a separate super family, Hesperioidea; however, the most recent taxonomy places the family in the super family Papilionoidea. Skippers are a large, primitive group.

All the six legs are perfect and the antenna tip modified into a narrow hook like projection. They frequently lack butterfly style clubs on the antennae. Skippers can be recognized by their large head, stout bodies, and short triangular shaped forewings. Eggs are dome shaped and are laid singly or in small batches. The caterpillars are cylindrical in shape, narrow at the neck and tail and have a flat belly. They roll leaves or bind grass stems with silk to live concealed within them. In some species pupa is covered with white powder, possibly to repel moisture. They feed on seeds with 1 or 2 embryonic leafs, grasses, palms, ginger and bamboos. Most caterpillars feed at night. Pupation may take place in new or old cell. This group has more spectacular species such as pale Green Awlet, Orange Awlet, Awlking and other species. They are forest insects and some maybe found on open plains especially in grassy meadows.

Worldwide, more than 3500 species of skippers are recognized with the greatest diversity in the Neo-tropical regions of Central and South America. Majority of the 300 skippers found in India are located in the hills of North-east India. Tamilnadu has an estimated number of 80 species.





1. Orange Striped Awlet - ஆரஞ்சு நாமத்தாவி

Burara jaina is an orange coloured butterfly, the southern sub species is fergusonii,. The colour of the upper wing is pale brown and orange stripes under wing. Locally not rare, 40-50 mm, Hiptage benghalensis

2. Orange Tail Awl - ஆரஞ்சு வால் நாமத்தாவி

Bibasis sena is a most attractive butterfly with yellowish orange legs, strong flight, nocturnal in nature. The orange colour is visible in the hind wing tail.

Not common, 42-50 mm, Combretum latifolium

3. Pale Geen Awlet - பச்சை நாமத்தாவி

Burara gomata is a rare butterfly found only in the thick rain forests of Western Ghats. Abdomen has dark yellowish bands and white streaks at the base through cell on under wing.

Rare, 50-65 mm, Heptapluron venulosum





1. Common Banded Awl - பட்டை நாமத்தாவி

Hasora chromus is a very common Awl. They feed nectar in small flowers especially Pungamia sp. The white band is very thin on the under hind wing.

Common, 45-50 mm, Ricinus communis

2. White Banded Awl - வெண் பட்டை நாமத்தாவி

Hasora taminatus is a forest butterfly and has a fast flight, like other Awls. The white band is thicker on hind wings and basal are dull indigo colour is present. Not rare, 45-55 mm, *Derris scandens*

3. Common Awl - நாமத்தாவி

Hasora badra is a uncommon Awl. They feed on nectar of small flowers especially Pungamia sp. The colour is bluish white spot in the under hind wing cell. Uncommon, 45-50 mm, Ricinus communis



1. Plain Banded Awl - சிறிய நாமத்தாவி Hasora vitta is a uncommon Awl. They feed on nectar of small flowers especially Pungamia sp. The under hind wing has bluish white band and outwardly diffused.

Uncommon, 45-50 mm, Ricinus communis

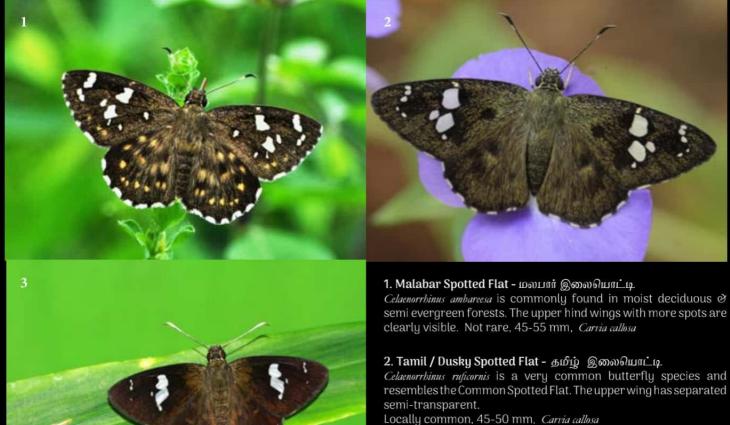
2. Brown Awl - பழுப்பு நாமத்தாவி

Badamia exclamationis is a very common species in the thick forests of Tamilnadu. Long narrow wings with brown colour is unmistakable. Not rare, 50-55 mm, Combretum albidum

3. Indian Awlking - நாஜ நாமத்தாவி Choaspes benjaminii is an attractive butterfly found only in jungles. They are fond of visiting flowers, animals and bird droppings. Not rare, 50-60 mm, Meliosma pungens







semi evergreen forests. The upper hind wings with more spots are

resembles the Common Spotted Flat. The upper wing has separated

3. Common Spotted Flat - வெண்புள்ளி இலையொட்டி

Celaenorrhinus leucocera is a common butterfly rest under leafs, they found in the river streams and forest fringes. The upper wing has semi-transparent joined together.

Common, 45-55 mm, Asystasia gangetica



Spialia galba is a very common butterfly, they visits small flowers for nectar especially Tridax Species and other small flowers. Black

Gomalia elma is a small butterfly, resembling Indian Grizzled Skipper, but can be easily differentiated on the basis of upper wing. White spot at the cell base with narrow dark central bands across the

3. Fulvous Pied Flat - சிறு பழுப்பு இலைபொட்டி. Psendocoladenia dan is a common butterfly is found in forest habitats, fond of visiting flowers and bird droppings. Upper wing has dark brown, overlaid with rufous scales and large central spots not conjoined. Common, 40-46 mm, Achyranthes aspera



Tapena twaithesi is very rare butterfly. Regular visitor to mudpuddling. Breed on Dalbergia plant species. The upper pale brown with dark brown spots. Rare, 40 mm, Data deficient

Tagiades litigiosa is a common butterfly found in forest paths and water streams. The upper hind wing has white with dark marginal

Coladenia indrani is a common butterfly is found in forest habitats. Rapid flight. Resembles Fulvous Pied Flat. The wing colour is yellow in male and white in female; dark upper wing with central spots more conjoined.
Common, 40-46 mm, Mallotus philippinensis







1. Common Yellow Breasted Flat- மஞ்சள் மார்பு இலையொட்டி Gerosis bhagara is a very rare butterfly, 3 semi-transparent white spots on wings, two of them large. Yellow breast and broad white bands are very clearly visible. Not rare, 35-45 mm. Dalbergia lanceolaria

2. Spotted Small Flat - சிறுபுள்ளி இலையொட்டி Sarangesa purendra is a small butterfly, prefers drier habitats, and seen regularly with horizontal wings during basking. Forewing has small semi-transparent white spot in central area. Not rare, 25-35 mm, Asystasia spp

3. Alida Angle - அலிடா கோணத்தானி *Caprona alida* is a very rare beautiful butterfly, regularly seen in Saptur village, Tirunelveli. Reddish brown with transparent markings with yellow orange spots.





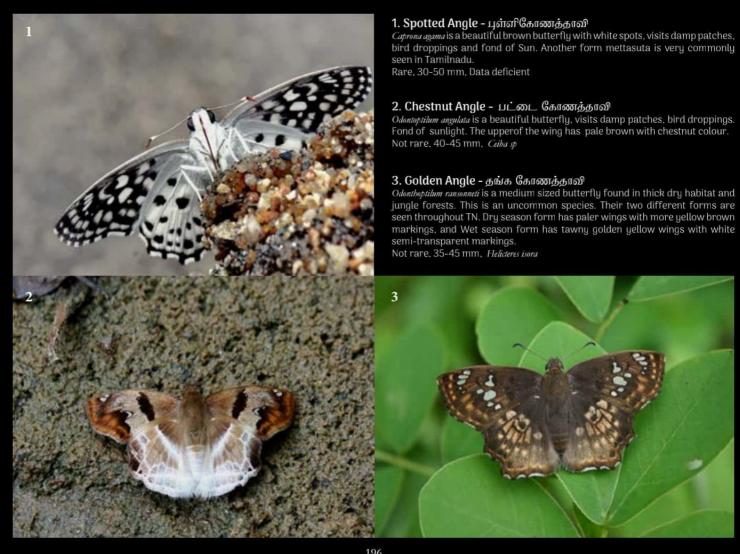
1. Common Small Flat - சிறிய இலையொட்டி.

Sarangesa dasabara is a small butterfly found in forest and water rich habitats. Fond of bird droppings and flowers. 2 cell spots separated or joined, outwardly concave. 3 spots in straight line. Common, 26-35 mm, Asystasia spp

2. Common Snow Flat - ചെഞ്ഞ്ഥങ് இலைபொட்டி Tagiades japetus is a hesperid butterfly. Highly territorial. Two central spots in the middle are out of line. Not rare, 45-50 mm, *Dioscorea oppositifolia*

3. Suffused Snow Flat - தெளிந்த இலையொட்டி

Tagiades gana is a brown coloured butterfly. Sun loving; often basks on tall shrubs and trees at the forest edges. Suffused outer edges. Not rare, 45-50 mm. Dioscorea oppositifolia

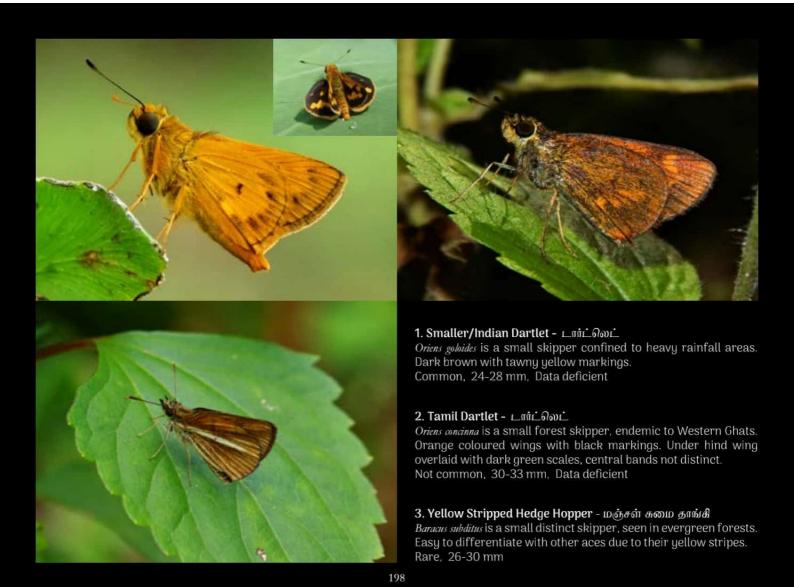




Taractrocera maerius is a small skipper found in open areas and hills of Western Ghats. Continuous white spots in the both wings cell

3. Hampsons Hedge Hopper - ஹேம்சண் சுமை தாங்கி

Barucus hampsoni is seen in heavy rainfall areas. They fly close to the ground. Common during rainy season. Not rare, 26-32 mm, Data deficient





Telicota colon is a small skipper found in dry and open areas; fast flier. Dark brown in colour similar to dark palm dart, but yellow colour extends through the dark border of the wing edges. The under wing with pale green and defined band in WSF.

Not rare, 32-36 mm, Saccharum officinarum

3. Plain Palm Dart - பனைத்துள்ளி

Cephrenes acalle is a small forest habitat butterfly. Visit flowers and are active in early morning and evening. The yellow or orange markings with black spots on under wing and upper looks similar to dark palm dart.





1. Oriental Straight Swift - பனரா வேகத்துள்ளி

Parnara bada is a small brown butterfly. The white dots in the wings and short antennae make it easy to identify. Upper spots are small, irregular, often one or two spots are absent. Common, 32-38 mm, Saccharum officinarum

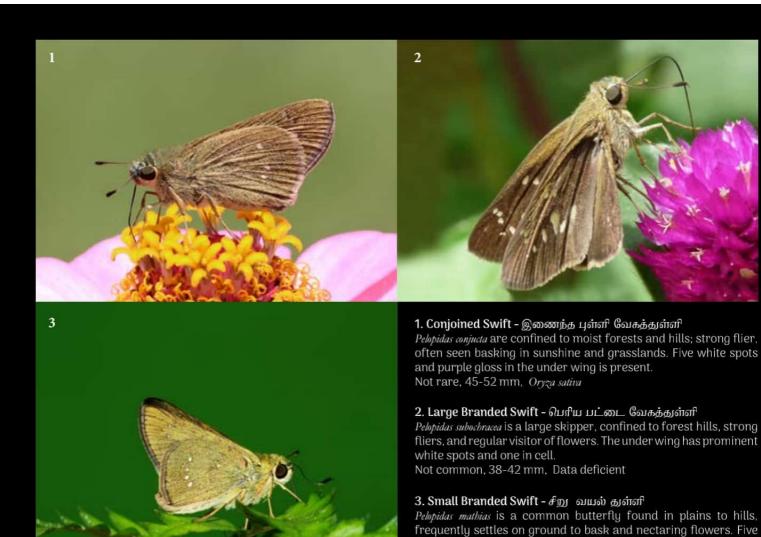
2. Rice Swift - அரிசி வேகத்துள்ளி

Borbo cinnara occurs in grasslands, scrubs, deciduous and semi evergreen forests. Wing colour is grey brown with white spots. Common, 30-36 mm, Andropogon spp

3. Bevan's Swift - பேவான் வேகத்துள்ளி

Borbo berani is a small butterfly widely distributed in plains and hills, golden brown wings broader than Rice Swift. Hind wing outer edge is rounded.

Locally common, 32-36 mm, Imperata cylindrical



small spots usually present in the hind wing. Common, 32-38 mm, *Cymbopogon nardus*



Paintbrush swift - வர்ண தூரிகை துள்ளி

Baoris farri is a skipper prefers moist ever green forests. The under wing has pale silky brown and upper wing and the name derived from black paintbrush-like tuft of androconial scales on upper hindwing.

Not rare 43-48 mm Data deficient

Contiguous Swift - தொடரி வேகத்துள்ளி

Polytremis lubricans is a forest butterfly, often seen in forest clearings; the colour of the butterfly is golden brown. Two cell spots on upper fore wing is almost merged, transparent pale yellowish spots in the central area. Not common

36-42 mm

Imperata spp



1. Blank Swift - வெற்றிட வேகத்துள்ளி

Caltoris kumara is a common butterfly, prefers moist forested hills only. They have a rapid flight and feed on grasses. The upper wing has no cell spot and is unmarked. Common, 42-46 mm, *Grasses*

2. Kanara Swift - கனரா வேகத்துள்ளி

Caltoris Canaraica is a rare skipper butterfly, the wing colour is paler brown with dull white spots. Dry season A broad bluish white central band and two white spots near the lower end of the band. Rare, 41 mm

3. Wax Dart - மெழுகுத்தாவி

Cupitha purreea is a small forest butterfly; the wing has thick wax like yellow in color.

Rare, 28-33 mm, Combretum spp





1. Vindhyan Bob - விந்தியன் வேகத்தாவி

Arnetta vindbiana is a rare butterfly, endemic to Western Ghats. The preferred habitat is wetlands. Fond of visiting flowers, damp patches and bird droppings. The upper wing has dark brown with yellowish brown edge. Not rare, 25-32 mm, Data deficient

2. Indian Palm Bob – இந்திய வேகத்தாவி

Suastus gremius is a common butterfly found in lower elevation. Fond of visiting flowers, damp patches and bird droppings. Grey brown with semi-transparent white spots in fore wing. Common, 32-45 mm, Caryota urens

3. Small Palm Bob – சிறிய வேகத்தாவி

Suastus minutus gets its name from its fast dipping flight. The south-Indian subspecies bipunctus has two spots in the lower central area. Under wing has a dark brown fainted marking with dull small black cell spots. Not uncommon, 30-32 mm, *Palms*

2







1. Tree Flitter - வர்ண தூரிகை துள்ளி

 ${\it Hyarotis\, ad rastus} \ is \ a \ rare\ butterfly\ confined\ to\ hills\ and\ forests\ where$ their food plant, the palm, grows. The wing has dark chocolate brown with yellow.

Not common, 38-48 mm, Phonenix acualis

2. Golden Tree Flitter – தங்க மரப்பினிட்டர்

Quedara basiflara is a rare skipper endemic to south India confined to wet evergreen forests. The wing under base has yellow with dark brown.

Not common, 38-48 mm

3. Maculate Lancer – மாக்குலேட் லேன்சர்

Salaoeemia sala is a rare skipper, confined to forested hills and Endemic to Western Ghats. The wing has pale yellowish brown with purple wash, black spots. Rare, 38-48 mm, *Calamus sp*







1. Madras Ace - மெட்ராஸ் ஏஸ்

Thoressa honorei is a rare butterfly, endemic to Western Ghats; found in thick rainy forests. The wing has yellow with central apical spots. Not common, 30-38 mm, Bamboo

2. Philippine Swift - பிலிப்பைன்ஸ் வேகத்துள்ளி

Caltoris philippina is a small butterfly, prefers evergreen forests, dense bamboo forest. The caterpillars feed on bamboo spp. and live in folded leaf shelters. Wings elongated, outer edge of fore wing is slightly curved and under fore wing with two spots near inner edge. Not rare, 43-44 mm, Bamboo

3. Obscure/Dark/Little Branded Swift - அடர் வேகத்துள்ளி

Pelopidas agna is a skipper butterfly: the colour is olive brown with very smaller white spots. An imaginary straight line through two cell spots touches lower end brand in male and female has 4 diffused spots on upper.









1. Chestnut Bob - கருஞ்சிவப்பு தாவி Lambrix salsala is a common small butterfly with chestnut color. They are found in hills and forests. Common, 26-30 mm, *Grasses*

2. Coon / Dusty Partwing - கரும் பழுப்பு தாவி Psolos fuligo is a small common butterfly, abundant in the evergreen regions during and after Monsoon. Common, 36-46 mm, Stachyphrynium spicatum

3. Grass Demon - புல் தாவி Udaspes folus is a small to medium size butterfly. Prefers forest

edges. Wing colour is black with white spots. Not uncommon, 40-48 mm, *Curcuma aromatic*





Common Banded Demon - பட்டை தாவி

Notocrypta paralysos is a common butterfly. Prefers dense, moist evergreen forests. Black with white band. Locally common 33-40 mm Plants related to ginger

Restricted Demon - கருப்பு தாவி

Notocrypta currifascia is a common skipper, found in moist, evergreen forests; visits damp patches and flowers. Common 38-50 mm Costus speciosus



1. Indian Ace - இந்தியன் ஏஸ்

Halpe hindu is a common bamboo butterfly, seen in both lower and higher altitude. They are regular visitors of damp patches and bird droppings.

Common, 30-36 mm, Bamboo

2. Moore's Ace - மூர் ஏஸ்

Halpe porus is a small forest butterfly, flies very fast, confined only to thick evergreen bamboo forests. The wing is dark brown with irregular white bands continuous to the apex.

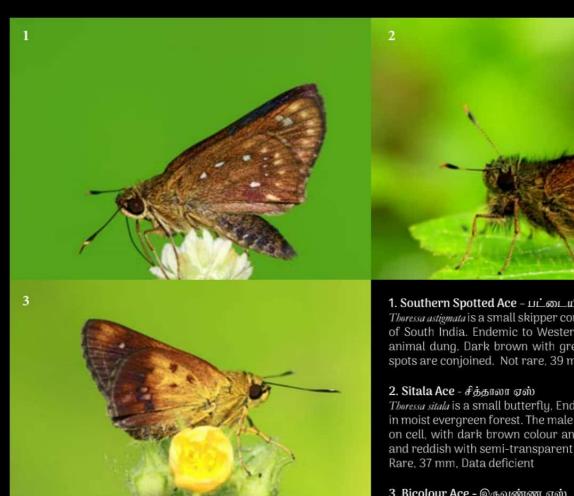
Not rare, 32 mm, Bamboo

3. Evershed's Ace - எவர் செட் ஏஸ்

Thoressa Evershedi is a small butterfly, endemic to Western Ghats, found only in bamboo forests. The upper wing with two white central spots and two cell spots are separate.

Rare, 37 mm





1. Southern Spotted Ace – பட்டையில்லா ஏஸ்

Thoressa astigmata is a small skipper confined to wet ever green forest of South India. Endemic to Western Ghats, swift flier, comes to animal dung. Dark brown with greenish yellow scales, and cell spots are conjoined. Not rare, 39 mm, Data deficient

Thoressa sitala is a small butterfly, Endemic to Western Ghats, found in moist evergreen forest. The male upper has two white cell spots on cell, with dark brown colour and the under wing is yellowish and reddish with semi-transparent white spots.

3. Bicolour Ace - இருவண்ண ஏஸ்

Sovia byrtacus is a rare butterfly, endemic to Western Ghats; the butterfly was recently sighted in Siruvani forests of TN. Rare, 36 mm, Bamboo





Dart Species (Potanthus) - துள்ளிகள்

There are 19 species of Potanthus in India. Their species-level identification is based largely on structures of the male genitalia. Hence, they cannot be identified easily based on external traits such as wing patterns. In Tamil Nadu previous studies mentioned about these 5 species may be still exist. They are Pallid Dart (Potanthus pallida), Pseudonaesa/Indian Dart (Potanthus psedomaesa), Confucian Dart (Potanthus Confucius), Pava Dart (Potanthus pava) and Palni Dart (Potanthus palnia).

BUTTERFLY CONSERVATION

A core value of most butterfly enthusiasts is the desire for butterflies, continue to fly.

Butterflies conjure up images of colour, warmth and nature teaming up with activities. They are not just beautiful insects, but excellent indicators of a good environment and indicators of biodiversity. Their fragile nature makes them quick to react to environmental changes. They are threatened by unprecedented environmental changes, habitat destruction in massive scale to the needy human and unpredictable pattern of climate and weather due to pollution levels. Conserving butterflies will improve the whole environment. The values that butterfly bring in are enormous. The eco-system value of butterflies can best to be understood by the pollination, and an important element of food chain to the prey of bird, and other insectivorous animals. Butterflies are part of life on Earth and they have been around at least for 65 million years and they have every right to fly forever!

- * The foremost thing of conservation is creating awareness to the young kids and common public.
- * Watch butterflies regularly and get involved with local and state butterfly conservation agencies.
- * Start your own small butterfly garden in your home, school, work place and public parks.
- * Learn more about butterfly Host plants and Nectar plants.
- ★ Educate farmers to use of more native trees and non-use of pesticides.
- * Participate in butterfly walks, surveys and support Forest Department Activities.

When we see more wings on the air, it is an indication that our environment has good eco systems.

Butterflies are the excellent indicators a Healthy Environment & healthy Eco-systems.

Let them fly!









- 1. Agasthiyar Malai Biosphere, Kanyakumari
- 2. Alagar Hills, Madurai
- 3. Amirthi Forest, Vellore
- 4. Anamalai Tiger Reserve, Pollachi
- 5. Aringar Anna Zoological Park, Chennai
- 6. Berijam Lake, Kodaikkanal
- 7. Chinnar Wildlife Sanctuary, Tiruppur
- 8. Connor, Nilgiris
- 9. Courtallam, Tirunelveli
- 10. Devala Butterfly Park, Gudalur
- 11. Guindy National Park, Chennai
- 12. Kalakkad Mundanthurai Tiger Reserve, Tirunelveli
- 13. Kallar, Coimbatore
- 14. Kolli Hills, Salem
- 15. Kolukkumalai, Theni
- 16. Kotagiri, Nilgiris
- 17. Megamalai Wildlife Sanctuary, Theni
- 18. Melagiri Hills, Dharmapuri
- 19. Mudumalai Tiger Reserve, Nilgiris
- 20. Pachamalai, Trichy,
- 21. Palani Hills, Dindigul
- 22. Saptur, Tirunelveli
- 23. Sathuragiri, Madurai
- 24. Sathyamangalam Tiger Reserve, Erode
- 25. Sirumalai Reserve Forest, Dindigul
- 26. Srivilliputtur Grizzled Squirrel Wildlife Sanctuary, Tirunelveli
- 27. Tirupuli Vanam, Kanchipuram
- 28. Tropical Butterfly Conservatory, Trichy
- 29. Vandaloor Zoo, Chennai
- 30. Vellingiri Hills, Coimbatore
- 31. Walayar Reserve Forest, Coimbatore
- 32. Yercad, Selam

BUTTERFLIES OF TAMILNADU CHECK LIST

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www.flutters.org

GLOBE:

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http://en.butterflycorner.net/

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