



Butterfly Diversity In Different Forest Area Of India: Review

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Abstract: Butterflies are Arthropods belong to the order Lepidoptera, which is the second largest order of class Insecta. Order Lepidoptera includes approximately 1,50,000 species of moths and butterflies. Though very similar, moths and butterflies do differ from one another superficially. Most butterflies fly during the day, as they prefer the warmth of the sun for basking and feeding, whereas a majority of moths fly after sunset. Butterflies are important organism. They are not only good pollinators but also a good indicator. Butterflies are very sensitive to change in the environment and anthropogenic activities. They are almost worldwide in their distribution except near the poles. Among insects, butterflies are the most beautiful and colorful creature on the earth. Butterflies are very important for pollination as they visit different flowers of nectars feeding. They form an important part of food chain of birds, reptiles, amphibians, spiders and predatory insects; transforming and transmitting energy from green plants to the animal. The scales present on the external part of the body and appendages, especially the wings. The scales are modified, flattened 'hairs' and give butterflies and moths their wide variety of colour and patterns. The aim of this paper is to review the available literature of butterfly diversity in different forest region of India. Many parameters have been used by authors to designate composition and species richness of different butterfly families. Some parameters such as very common, common, rare, very rare, moderate, evenness index and other ecological statistical have been used. According to this review, it has been noticed that family Nymphalidae found to be most dominant in number of individuals.

Key words - Butterfly, diversity, national park, sanctuary, forest, dominance, India, etc

I. INTRODUCTION

The word Lepidoptera derives from the Latin word for "Scaly wing" and from the Ancient Greek, 'lapis' meaning scale and 'pteron' meaning wings, refer to prominent feature of adult butterflies (the tiny scale that cover the wings). They are wonderfully diverse in shape, size and colour. Temperature and relative humidity are the important factors in distribution and assemblage of butterfly species (Gupta et al, 2019). Butterflies are classified into two superfamilies, Hesperioidea and Papilionoidea. Hesperioidea consists of a single family of

Hesperiidae (Skippers), whereas Papilionoidea has four families: Papilionidae (Swallowtails), Pieridae (Whites and Yellows), Nymphalidae (Brush-footed butterflies) and Lycaenidae (Blues). There are about 18,000 species of butterflies in the world. India has 1,501 species, of which 321 are Skippers, 107 Swallowtails, 109 Whites and Yellows, 521 Brush-footed butterflies and 443 Blues.

Hesperiidae: The butterflies of this family are commonly known as skippers. They are named for their quick, darting flight habits. More than 3500 species of skippers are occurs throughout the world. The skipper are not considered to be “true” butterflies, but are more closely related to the true butterflies than moths. Many species of skippers bask in the sun with unique posture, the forewings being open only half way and the hind wings open fully. Hesperiidae included six subfamilies.

Papilionidae: These are large colourful insect that are distributed globally. There are over 550 species and most of these are tropical. The name swallowtail refers to a tail like extension of the hind wings of the adults, found in most papilionids. Many swallow tail caterpillars sequester toxic chemicals from their food plants rendering both them and the adults as distasteful and thus protection from predators. Though the majority are tropical, members of the family are found on all continents except Antarctica. The Papilionidae includes the largest butterflies in the world. The family usually classified into three subfamilies i.e. Boroniinae, Parnassiinae and Papilioninae.

Pieridae: It is a large family of butterflies with about 76 genera containing about 1,100 species. They are commonly known as the white and yellows because their wings are mainly white or yellow, with black, red, orange or yellows markings. The undersides of the wings of some of these butterflies have cryptic coloration. When at rest, in some species, the forewings are covered by the hindwings that has cryptic markings, with only the tip or apex of the forewing visible. The ‘Whites’ included in the subfamily Pierinae and the ‘Yellows’ are included in the subfamily Caliadinae also known as ‘Sulphurs’.

Lycaenidae: It is the second largest family of butterflies with over 4,700 species worldwide. They are also called gossamer-winged butterfly. They constitute about 30% of the known butterflies. They are small, delicate butterflies in this family. Most species are brightly coloured in blue, violet or copper and have a metallic sheen. Some species have tiny tail – like extensions on their hindwings. The antennae are conspicuously marked with alternating black and white bands. Many species of this family have a special relationship with ants. Ants rub the larvae of some species with their antennae. This causes the larvae to secrete a sugary fluid that the ant eat. This secretion also protects the larvae from parasites.

Riodinidae: Riodinidae is currently treated as a distinct family within the superfamily Papilionoidea, but past they was held to be the subfamily Riodinidae of the Lycaenidae. It is the family of metalmark butterflies. The common name ‘metalmarks’ refers to the small, metallic looking spots commonly found on their wings. The 1532 species are placed in 146 genera. The family includes small to medium sized species, from 12 to 60 mm wing span often with vibrant structural colouring. The colouration ranges from muted colours in the temperate zone species to iridescent blue and green wings and transparent wings in tropical species.

Nymphalidae: It is the largest family of butterflies with more than 6,000 species distributed throughout the world. They are medium to large size butterflies. Most species have a reduced pair of forelegs and many hold their colourful wings flat when resting. 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. Brown, oranges, yellow and blacks are frequent colours, while iridescent colour such as purples and blues are rare. Common subfamilies are Nymphalinae, Heliconinae and Limenitidinae.

II. LITERATURE REVIEW

Biodiversity of Butterflies in forest region of India

Arun and Azeez (2003) studied Puyankutty forest, Kerala and identified 32 species of butterflies belonging to 26 genera in five families. 17 species were observed from family Nymphalidae. The dominant members of the family were Common Furring, Common Fivering, Common Sailer, Common Lascar, Chocolate Pancy, Rustic and Tamil Yeoman. The high abundance of Satyrid butterflies (Nymphalidae: Satyrinae) due to high abundance of grasses and reeds.

Palot and Soniya (2005) studied butterfly- flower interaction in Keoladeo National Park, Bharatpur, Rajasthan. A total of 15 species of butterflies were recorded, interacting with 7 plant species. The family Pieridae was found dominant with 6 species followed by Nymphalidae with 4 species, Lycaenidae and Danaidae with 2 species and one species of Hesperidae. Of the 7 flowering plants, the *Blumea* sp. was most preferred by butterflies. *Blumea* attracted a total of 8 species of butterflies, followed by *polygonum glabrum* and *Hygrophila auriculata*, which attracted 7 species of butterflies each.

Senthilkumar et al. (2006) surveyed on butterfly of Gibbon Wildlife Sanctuary, Assam. A total of 37 species belonging to 21 genera were recorded. None of the species found to be threatened under any category of IUCN, 2003.

Wadatkar and Kasumbe (2008) studied butterflies of Melghat Tiger Reserve, Maharashtra. A total of 101 species of butterflies from 8 families and 19 subfamilies were found. The family wise occurrence of the species is Papilionidae – 9.09% (number of species (n) = 9), Pieridae- 16.66% (n=16), Danaidae- 6.06% (n=6), Satyridae- 10.01% (n=10), Nymphalidae- 22.22% (n=23) and Riodinidae- 01.01% (n=1), Lycaenidae – 23.23% (n=23) and Hesperidae – 14.14% (n=14). They observed that 22 species of butterflies occurring are very common, 21 species are common, 16 species are not rare/ occasional, 21 species are rare. 17 species are very rare and 4 species are locally common in status. Family Lycaenidae is dominant with a maximum of 23 species reported.

Shamsudeen and Mathew (2010) recorded 73 species from Shendurny Wildlife sanctuary, Kerala. The family Nymphalidae and Papilionidae containing maximum number of species followed by Pieridae and Satyridae. *Papilio Buddha*, *Euthalia lubentina*, *Hypalimnas missipus*, *Mycalis anaxias* and *Castalium rosimon* are Protected species. Some of the butterflies like *Papilio paris tamilana*, *Cyrestic thyodamas*, *Kaniska canace*, *Cupha erymanthis maja*, *Junania iphita pulvialis*, *Cepara nadina* and *Pantoparia ranga* these recorded species are currently rare in distribution.

Bhardwaj and Uniyal (2011) recorded 34 species, 29 genera and five families from Gangotri National Park. The most dominant butterflies in the community were the Indian Cabbage White; *Pieris brassicae* (11.9%), pointed Laby; *Vanessa cardus* (11.5%), Indian tortoiseshell; *Aglaris cashmiriensis* (10.2%), Indian Red Admiral; *Vanessa indica* (8.6%) and common Hedge Blae; *Actyalepis puspa* (7.5%). These five butterflies together account for 50% of the total butterfly abundance recorded.

Kunte et al. 2012, surveyed the Manjeera Wildlife Sanctuary, Andhra Pradesh and found rich butterfly diversity. A total 60 species of butterflies representing five families have been recorded. Kunte et al (2012) studied butterflies of the Garo hills of Meghalaya and recorded 298 species belonging to 156 genera, 22 subfamilies and six families. Out of these, 156 genera represented by single species, 26 genera by two species, 12 genera by three species and two genera by four species. The remaining 14 by four species or more.

Sharma and Ahmed, 2013, recorded 67 species of butterflies belonging to four families and 41 genera from Gir Protected Forest. Maximum number of individuals was observed in the Autumn season with 64 species. The most common species found namely Common Grass Yellow, *Eurema hecabe*, *Eurema laeta*, *Catopsilia crocale*, *Catopsilia Pomona*, *Catopsilia pyranthe*, *Junonia almona*, *Junonia iphita*, *Cartalius rosimon*, *Zizeeria lysimen*, *Calotis danae*, *Colitis euechoris*.

Joshi and Dhyani (2014) recorded a total 105 species of butterfly species belonging to 73 genus and 5 families from Dibru – Saikhowa Biosphere Reserve Assam. The dominant genus is *Priniceps* contributing 8 species, genus *Graphium* contributing 4 species while 3 genera contributing 3 species and 12 genera contributing 2 and remaining 55 genera contributing 1 number of species. Six species of butterflies were recorded from this survey area having protected status under Indian Wildlife (Protection Act, 1972). Dayananda (2014) recorded a total of 115 species of butterflies belonging to 78 genera and 5 families from the Gudavi bird Sanctuary, Sarab, Karnataka. Out of these, Nymphalidae was dominant with 40 species followed by Lycaenidae (25 species), Hesperidae (18 Species), and Papilionidae and Pieridae (16 species each). Narayanankutty et al. (2014) studied diversity of butterflies in the Shendurney Wildlife Sanctuary, Kallon, Kerala. A total 265 species of butterflies belonging to five families including Nymphalidae (81 number), Lycaenidae (72 numbers), Hesperidae (71 number), Pieridae (24 number) and Papilionidae (17 numbers) were recorded. The rare butterflies like *Papilio paris*, *Elymnias hypemenstra*, *Appias indrashiva*, *Limenitis procris*, *Athyma ranga*, *Tanaecia lepidea*, *Junonia atlites*, *J. iphita*, *Kaniska conace*, *Cupha erymanthis*, *Caleta caleta*, *Rapola mahea*, *Charaxes salomon*, *Doleschalia bisaltidae*, *Mycalesis patina* and *Melanitis zitenius gokala* were observed. Narasimmarajan et al (2014) investigated butterfly diversity in Gugamal National Park, Maharashtra. A total 66 species belongs to 16 subfamilies (1 species of Caliadinae, 8 of Nymphalinae, 2 of Biblidinae, 1 of Cyrestinae, 4 of Limenitinae, 2 of Heliconinae, 8 of Satyrinae, 1 of Charaxinae, 6 of Danainae, 1 of Pyrginae, 2 of Hesperinae, 8 of Papilionidae, 4 of Caliadinae, 11 of Pierinae, 3 of Theclinae and 4 of Polymmatinae) were recorded, which are come under 5 families.

Bhandarkar and Paliwal (2015) studied diversity of butterflies from New Nagzira wildlife sanctuary. They observed total 25 species belonging to 5 families. The family Hesperidae, Papilionidae, Pieridae, Lycaenidae and Nymphalidae were reported in which family Nymphalidae were dominant with 14 species under 6 subfamilies. Harsh et al. (2015) studied Kanha- Pench corridor, Madhya Pradesh. A total 59 species of butterfly belonging to 44 genera and 6 families were recorded. Occurrence of maximum number of species was recorded from the family Nymphalidae and Lycaenidae which could be attributed to the presence of their larval and host plants. Kurhade and Wagh (2015), studied butterflies of Nandur Madhmeshwar Wildlife Sanctuary, Maharashtra and recorded 41 species belonging to 31 genera and 5 families. Family Nymphalidae is the most dominant family with 13 species belonging to 9 genera and with 31.70% species followed by Lycaenidae (11 species, 10 genera and 26.82%), Pieridae (6 species 3 genera and 14.63%), Papilionidae (5 species, 5 genera and 12.19%) and Hesperidae (6 species, 6 genera and 14.63%). Sharma (2015) recorded a total of 52 species belonging to 41 genera and five families from Takhni Rehmapur Wildlife sanctuary, Hoshiarpur, Punjab. *Libythea myrrha sanguinalis* Fruhstorfer and *Euploea mulciber mulciber* Cramer these are new species found in Punjab. Kasambe (2015) investigated butterfly fauna of Sanjay Gandhi National Park, Mumbai. A total of 172 species of butterflies belongs to family Papilionidae: 12 species, Pieridae: 22 species, Lycaenidae: 59 species, Nymphalidae: 45 species and Hesperidae: 34 species were recorded.

Sundarraj et al. (2016) studied the diversity of Butterflies in Gudalur forest area, Nilgiri hills, Southern Western Ghats, India. 64 butterfly species recorded, which are belongs to 5 families namely Papilionidae (12), Pieridae (15), Nymphalidae (18), Lycaenidae (11) and Hesperidae (8). Family Nymphalidae and Pieridae are dominant while Hesperidae and Lycaenidae are less in number. Gajbe (2016) conducted survey on butterfly species of Umred-Karhandla wildlife sanctuary. A total of 53 species in 34 genera of 5 families recorded.

Family Papilionidae is represented by 7 species, family Nymphalidae by 23 species, family Pieridae by 10 species. Family Lycaenidae by 10 species and family Hesperidae is represented by 3 species of butterflies.

Suryanarayana et al. (2016) recorded 106 butterfly species in Seshachalam Bio-reserve forest of Andhra Pradesh. The family Nymphalidae was shown in high population and Papilionidae shown in least population. Lodh and Agarwala (2016), assessed the diversity and conservation of butterflies in Rowa Wildlife Sanctuary, Tripura. A total of 53 species from 36 genera and 5 families were observed. Out of these seven species are listed in the threatened category in south Asia. Another species *Troides Helena* is listed by both (ITES and IUCN) as globally threatened. 8 species were reported as new records to the Tripura state. Gogai et al. (2016) recorded 343 butterfly species from Barail Wildlife Sanctuary, Assam. Out of these 30 species belonging to Papilionidae, 8 species of Lycaenidae, 6 species belonging to Pieridae, 24 species of Pieridae, 125 species of Nymphalidae and 75 species of Hesperidae family. Common Clubtail *Losoria coon cacharensis*, Pointed Palmfly *Elymnias penanga*, Sergeant Emperor *Minmathyma clevana*, Redtail Marquis *Bassarona recta*, Silver royal *Ancema blanka*, Dusky Royal *Tajuria thyia*, Malayan Bushblue *Arhopala ammonides elira*, Orange Punch *Dodona egeon*, White Punch *Dodona deodata* and Red vein Lancer *Pyronera callineura* etc were recorded.

Kumar et al. (2016) studied butterfly fauna of Katerniaght Wildlife Sanctuary, Uttar Pradesh and recorded 42 species of 31 genera. Out of 42 species, family Papilionidae has 6 species (14%), Pieridae has 11 species (26%), Lycaenidae has 4 species (10%) and Nymphalidae has 21 species (50%) of butterflies. Ahmad and Chakravarty (2016) recorded 72 species of butterflies from Amchang Wildlife Sanctuary, Assam. Out of these 30% individuals are very common, 10-30% common, 5-10% not rare, 1-5% rare and less than 1% as very rare. Kasambe (2016) studied butterflies of the Karnala bird sanctuary, Raigad, Maharashtra. A total 114 butterfly species belongs to 5 families recorded. Papilionidae: 10 species, Pieridae: 14 species, Nymphalidae: 38 species, Lycaenidae: 33 species wise abundance was found to be abundant: 22 species, Common: 22 species, Uncommon: 27 species, Rare: 22 species and very rare: 21 species.

Singh and Ahmad (2017) recorded 30 species of butterflies under 26 genera from Palkot Wildlife Sanctuary, Jharkhand. Family Nymphalidae with 64% of butterfly species dominated the group followed by Papilionidae (16%), Pieridae (10%), Lycaenidae (6%) and Pieridae (4%). Gangotia and Kumar (2017) studied butterfly fauna of Chail Wildlife Sanctuary Shimla. 53 species of butterflies recorded. Family Nymphalidae was found to be dominant with 23 species, followed by Pieridae 12 species, Lycaenidae 11 species, Papilionidae 4 species and Hesperidae with 3 species.

Basavarajappa et al. (2018) recorded 138 butterfly species from protected area of Karnatak, India. The butterflies are belongs to five families namely Hesperidae, Lycaenidae, Nymphalidae, Papilionidae and Pieridae. The Nymphalidae family exhibited the highest diversity with 21 genera and 47 species. 113 species are widely distributed six forest ranges and remaining 25 butterfly species were specific in their distribution and only in few forest ranges of Nagarahale National Park. Modak and Das (2018) studied on butterfly diversity in Garbhanga Reserve forest, Basistha, Assam. A total 54 butterfly species observed. Out of these, 3 rare taxa namely *Papilio s protenor*, *Cheritra freja* and *Letha confuse* were recorded, that belongs to different families. Maximum butterflies were recorded during rainy season.

Tiple (2018) studied butterflies of the Bor Wildlife Sanctuary Maharashtra. A total 114 species of butterflies belonging to 6 families were recorded. Most of the butterflies belongs to Nymphalidae (35 species) and Lycaenidae (34 species), followed by Pieridae (18 species), Hesperidae (18 species), Papilionidae (8 species) and 1 from Pieridae. Among the 114 butterflies recorded, 9 species come under the protection category of the Indian Wildlife (Protection) Act 1972 i.e. *Pachliopta hector*, *Appias albino*, *A. libythea*, *Eurema andersonii*, *Euploea care*, *Hypolimnas misippus*, *Euchrysops cnejus*, *Lampides boeticus*, *Ionolyce helicon*, *Baoris farri*. Among 114 species of butterflies *Papilio demoleus*, *Cepora nerissa*, *Eurema brigitta*, *E.*

hecabe, Danaus chrysippus, Euploea care, Hypolimnas misippus, Junonia lemonias, Melanitis leda, Tirumala limniace, Castalius rosimon, Catochrysops Strabo, Luthrodes pandava, Zizeeria karsandra, Barbo cinnara occurred throughout the year whereas remaining 99 species of butterflies observed only after June – July to April – May.

Paliwal and Bhandarkar (2019) reported 56 species of butterfly belonging to 5 families from Navegaon National Park, Gondia, Maharashtra.

Arya et al. (2020) studied Butterfly diversity in Binsar wildlife sanctuary, India and recorded 46 species and 35 genera under six families of butterflies. Virani (2020) studied diversity of butterflies in Tipeshwar Wildlife Sanctuary of Maharashtra, India. Total 97 species recorded, out of these 15 species, specified under Indian Wildlife (Protection) Act, 1972 were encountered in good numbers. The butterflies *Pachliopta hector*, *Castalius rosimon* and *Virachala Isocrates* are placed in Schedule I Part IV, the species *Appias albino*, *Cepora nerissa*, *Hypolimnas misippus*, *Polyura athamas*, *Charaxes bernardus*, *Anthene lycaenina*, *Charaxes solon*, *Euchrysops cnejus*, *Lampides boeticus*. *Prosotas dubiosa* and *Tajuria cippus* are protected under schedule part II, while *Baoris farri* is categorized as schedule IV. Patil and Magdum (2020) noted 10 genera and 19 butterflies species belongs to thje family Pieridae from Vanda forest Gujrat. Among these, genus *Eurema* has the highest recorded 5 species and 3 species were observed for the genus *Colotis*. Choudhary (2020) studied butterflies of Guma Reserve forest of western Assam and identified 239 species belonging to 150 genera representing six families. Of which the maximum number (95) species i.e. 40% belonging to the family Nymphalidae followed by family Lycaenidae with 60 species (25%), Hesperidae with 38 species (16%), Papilionidae with 23 species (10%), Pieridae with 20 species 98%0 and Riodinidae with only 3 species (1%). Among the butterflies recorded *Chilasa clytia*, *Castalius rosimon*, *Chloria othona*, *Euthlia telchinia*, *Hypolimnas misippus*, *Actolepis puspa*, *Megisha Malaya*, *Doleschallia bisaltida* were enlisted as schedule - I; *Appias lyncaida*, *Euchrysope cnejus*, *Lamodea boeticus*, *Tanaecia lepidea* in schedule - II and *Taraka Hamada* listed as schedule - IV in the Indian Wildlife (Protection) Act 1972.

Saikia et al. (2021) studied Butterfly diversity of lower- Doigrung (Bijuli) Reserve forest of Galaghat Assam, India. A total 60 species belongs to five families have recorded. Among them, family Nymphalidae (26 species) was found to be dominant followed by Lycaenidae (13 species), Papilionidae (9 species), Hesperidae (6 species) and Pieridae (6 species) respectively. Kachanwar and Kumble (2021) investigated butterfly fauna of Tadoba Andhari Tiger reserve, Chandrapur Maharashtra. 66 butterfly species belongs to five families. Nymphalidae was the richest butterfly family with 25 (38%) species. Maximum butterfly species diversity was observed from June to January. Rani and Ahmed (2021) investigated diversity and seasonality of butterflies in Sarika tiger reserve, Rajasthan. A total 38 species of butterflies belonging to 26 genera and 5 families Pieridae (36.16%) is the dominant family followed by family Nymphalidae (30.78%), Lycaenidae (27.19%), Hesperidae (4.53%) and Papilionidae (1.3%) respectively. Species *Eurema hecabe*, *Eurema Blanda*, *Junonia lemonias*, *Chilades putti*, and *Euploea care* were mosly observed in all season while the species *Cepora nerissa*, *Castalius rosimon* were least observed. Maximum number of species observed during the post monsoon season followed by monsoon, summer and winter repectively.

Paunikar and Sharma (2022) studied butterfly diversity and distribution in protected forest area of North- West Himalaya of India. They found 102 butterfly species distributed in 5 families, 18 subfamilies and 66 genera. The dominant family was found to be 55 species of Nymphalidae (53.92%) with 10 subfamilies followed by 17 species of Pieridae (16.66%) with 2 subfamilies. Whereas 7 species of Hesperidae (6.86%) with 2 subfamilies and 5 species of Papilionidae were represented (4.90%) with 1 subfamily. Palot (2022) recorded 119 species of butterflies from Periyar tiger reserve, Kerala. Maximum number of species recorded from family Nymphalidae (29 sp) followed by Pieridae (18 sp), Satyridae (18 sp), Hesperidae (14 sp) and Lycaenidae (13

sp). Out of 119 species, 19 are endemic to South India. They belongs to the families Papilionidae (5 sp), Pieridae (1 sp), Lycaenidae (1 sp), Satyridae (6 sp), Amathusiidae (1 sp), Nymphalidae (2sp), Acraeidae (1sp) and Danaidae (2 sp). Virani and Madavi (2022) studied butterfly diversity of Isapur Wildlife Sanctuary, Maharashtra and observed total 87 species. 37.93% species was categorised as abundant species whereas 39.08% species was common, 8.05% species was frequent, 12.64% was occasional and 2.30% species was very rare. Kannan and Chandrasekaran (2022) studied the butterfly diversity of Sathyamangalam Tiger Reserve Tamilnadu. They recorded a total of 168 species of butterflies belongs to six families and 102 genera. Among the 12 species of family Papilionidae, 11 species appears to common and 1 species Paris Peacock Papilla paris is very rare, which are 6.5% of the total number of species. Among the Pieridae of 21 species, all species of butterflies are common, which is 12.5% of the total number of species recorded. Among the Nymphalidae 58 species was recorded, of that 45 species are very common which is 26.8% of the total species recorded. Though five species are rare and eight species are uncommon in this area. From the Lycaenidae, 51 species was recorded of these 46 species are common which is 27.4% of the total number species recorded. 3 species appears to be rare and 2 species uncommon. In the Riodinidae, only one species recorded which is a commonest species in the study area.

Rai and Chaudhury (2023) were recorded 27 butterfly species in Hastinapur Wildlife Sanctuary, Utter Pradesh, India, Maximum abundance was found in September, October and November while minimum abundance was recorded in December and January. Tiple and Bhagwat (2023) recorded 134 butterfly species from Tadoba National Park, Chandrapur, Maharashtra, which belongs to six families. Among the 134 species about 44% (60) species were very common, 25% (34) species were common, 7% (09) were frequent common, 14% (19) were rare and 9% (12) were very rare.

II. CONCLUSION:

Butterflies occur throughout the India and have one of the richest and most diverse butterfly faunas of the world. The diversity of species depends on factors like the climate and topography of the region. India is large country with different types of physical features and contrasting climatic zones – from scorching sun – basked deserts to the wettest places on earth, and from tropical hot deserts to cold alpine regions. During the months of rain, the abundance of butterfly fauna found in most parts of the India. Out of this review, it has been noticed that Family Nymphalidae found to be most dominant in the number of individuals and very less individuals found in the family Lycaenidae. Other butterfly families have been recorded as moderate occurrence in the environment. The above observation of literature indicate that every butterfly family has its own importance in maintaining biodiversity of ecosystem so in view of this, there is need of future planning for effective butterfly conservation and their host plants as well as nectar food plants conservation.

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