

RELATIVE ABUNDANCE, STATUS AND SEASONAL OCCURRENCE OF BUTTERFLIES IN AND AROUND VELACHERY, CHENNAI, TAMILNADU

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ABSTRACT

Butterflies are stunning and beautiful flying insects that are included in the second largest order Lepidoptera. They play dual roles as good pollinators and bio-indicators. Large butterfly communities are attracted by the regions with undisturbed plants and a high floral range. The present study work was undertaken to investigate about the biodiversity of butterflies in and around the city of Velachery, Chennai Tamilnadu from January 2020 to December 2020. Totally 48 butterfly species along with their host and nectar plants belonging to 8 different families based on their abundancy such as Lycaenidae > (Nymphalidae, Pieridae) > Danaidae > Papilionidae > Hesperidae and (Acreidae, Satyridae) were observed, identified and Photo-documented. Family Lycaenidae documented the highest number of species (13 species), followed by Nymphalidae (8 species), Pieridae (8 species), Danaidae (7 species), Papilionidae (6 species), Hesperidae (3 species), Acreidae (1 species), and Satyridae (1 species). The butterfly's status was arranged on the basis of number of 4 sightings in the field such as Common (C) (17 species), Very common (12 species), Occasional (O) (11 species) and Rare (R) (8 species).

Keywords: *Lepidoptera, Butterflies, Survey Status, Abundance, Seasonal Occurrence, Velachery*

INTRODUCTION

Butterflies are the most attractive insects which are classified under the second largest order Lepidoptera, suborder Rhopalocera of the class Insecta including moths. Their body and wings are very colourful and they are considered as the diurnal insects which plays a major key role in the pollination to a greater extend (Rosenberg *et al.*, 1986). These insects play a dual role as pollinators and energy transferors around the natural ecosystem (Chakravarthy *et al.*, 1997). In addition to the good pollinators to most of the agricultural crops, they also serve as a good bio-indicators in relation to the environmental ecosystem. Under the order Lepidoptera they have more than about 1,50,000 species described in the worldwide. Among those, butterflies (Rhopalocera) accounts for about 18,000 species and the rest of them are the moths (heterocera) which are found in large amount all over the world and India is a home for about 1501 species of butterflies (Daniel *et al.*, 2018; Kristensen *et al.*, 2008 and Issac, 2008). In Tamil Nadu, at present there are about 325 species of butterflies are expected to occur. From these, 318 species of butterflies have been recorded and found. Many of the butterfly species which are present in the Indian subcontinent are reported from the Himalayas and western Ghats (Gaonkar 1996; Kunte, 1997 and Kunte *et al.*, 2012; Larsen, 1987 and Murugesan and Muthusamy, 2011). Lepidoptera means scaly winged. They pass through the complex metamorphosis of egg, larvae and pupa to adult. They are characterised by their large, often with the colourful wings and by their proboscis, which they are used to suck the flower nectar. They are the beneficial insects in which they are the main component in the food chain and being prey for the reptiles, birds, spiders, and predatory insects (Thangapandian *et al.*, 2014). They are the sensible creatures which reacts quickly to any kind of disturbances like changes in the habitat quality, environmental influences, climatic changes such as temperature, humidity, rainfall, light levels, availability of larval host plants and disturbances (Murphy *et al.*, 1990). Adult butterflies and their caterpillars are most commonly related to their specific host plants and nectar as food for their life cycle (Padhey *et al.*, 2006 and Kunte, 1997). Among all over the group of insect species, butterflies are the

most popular fascinating group of insects which are readily and easily identifiable (Ehrlich and Raven, 1964 and Kumar, 2017). Habitat fragmentation is occurred due to the main cause of the urban and suburban stretch outs. There were no attempts made towards the habitat loss and fragmentation of butterfly species and plants. Because of these habitat loss, over-exploitation, pollution, overpopulation and fragmentation a very large number of butterfly species and plant species extinctions are involved (Clark *et al.*, 2007). Hence, these methods should be changed quickly by conserving the butterflies around the ecosystem. The butterfly’s conservation lies in the ensuring of the proper functioning of the ecosystems and their ability to enhance services to humans and dependent dwelling organisms that includes the must to convey returned greenery in meteropolitan cities (Evangeline and Santhi, 2017). Velachery is considered as one of the most important residential area and the largest commercial centre in South Chennai. There were no studies conducted and undertaken by the researchers in this particular region in and around Velachery, which is situated in the Chennai, Tamilnadu. Varieties of species occurs more or less in numbers along with their host and nectar plants in and around Velachery region have been surveyed. There are some of the several checklists of butterflies which are present in and around Velachery region are observed, identified, and photo-documented. The present study work was aimed to inspect about the Relative abundancy, Seasonal occurrence and current status of butterflies with their host and nectar plants by identifying, observing and photo-documenting in and around Velachery, Chennai Tamilnadu.

MATERIALS AND METHODS

Study area

The study on the biodiversity of butterflies in different localities were carried out in and around the Velachery city (Figure 1). This particular area is discovered between the Pallikaranai and Tharamani. This habitat includes weeds such as *Tridax procumbens*, *Allmanda cathartica*, *Murraya spp*, *Leucas aspera*, *Lantana camara*, *Prosopis juliflora* etc. The following shrubs namely *Calotropis spp*, *Amaranthus spp*, Egyptian crowfoot

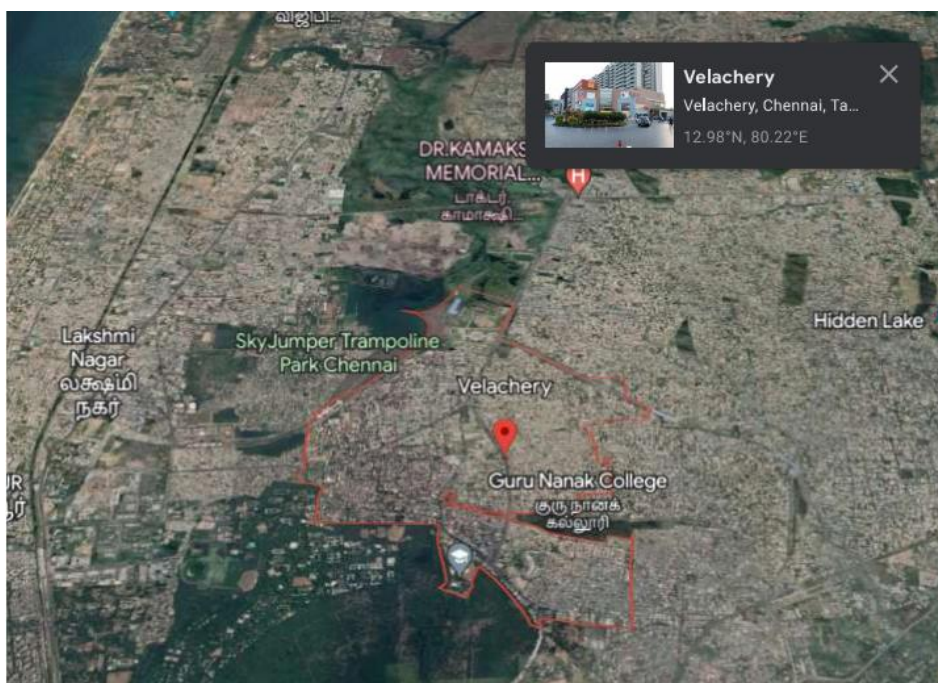


Figure 1: Map showing Velachery region located in Chennai city, Tamil Nadu, India

grass are found regularly in this area. Host and nectar plants includes *Bougainvillea*, *Hibiscus spp*, *Aloe vera*, *Calamus spp*, *Streculia foetida*, *Caesalpinia pulcherrima*, *Pongamia pinnata*, *Corchorus aestuans*, *Clitorea ternatea*, *Datura spp*, *Chamaecristae kleinii*, *Ipomea spp*, Neem tree and *Alternathera ficoidea* are also found

in this area. The most commonly found vegetation in this habitat are *Calotrophis spp*, *Tridax procumbens*, *Leucas aspera*, *Lantana camera*, *Prosopis juliflora*, *Bougainvillea*, *Alternanthera ficoidea*, *Oryza sativa*, *Cassia spp*, *Acalypha spp* and Neem tree etc.

Study interval

The seasons with months are divided into 4 divisions. They are as follows: Pre-monsoon (June, July and August), and monsoon (September, October and November), early Post-monsoon (December, January and February) and late post-monsoon (March, April and May). The study was broadly classified for about 12 months from January 2020 to December 2020 to obtain about the Relative abundancy, Seasonal occurrence and Status survey of butterflies in this particular region.

Methodology

The butterflies were observed from morning 8.30am to evening 5.30 pm. Most of the observations and surveys were recorded in the morning hours from 8.30am to 11.30am and then at evening hours from 3pm to 5.30pm. The butterflies were observed at a distance of 2 m (Kumar, 2017; Shobana *et al.*, 2012; Alagumurugan *et al.*, 2011). The field surveys were only performed during favourable weather conditions without heavy rains and winds. Every habitat in and around Velachery region such as Annai Indira Nagar, oggiyamduraipakkam near Perungudi railway station, Anna Nagar, Balamurugan Nagar, Sarathy Nagar, Tansi Nagar, V.G.P Selva Nagar, Bethel Colony Avenue, Dhandeeswaram Nagar, Gurunanak college campus were covered by random observations during walking through the roads, agricultural lands, nearby the railway tracks, Flowering Garden, Residential vegetation etc. In the field, Photographs of the specimens were taken with the help of Mobile Phone camera Honor 9i. All Butterfly species and unidentified ones were identified by using the standard references such as the field guide “Some south Indian Butterflies” (Murugesan and Muthusamy, 2011; Evans, 1932; Kunte, 2000; Issac, 2008; Dey *et al.*, 2017 and Gunthilagaraj *et al.*,1998) and also they were identified by using Butterfly vision (Identification tool). Plant species were identified by using Plant.id (Plant identification app). Some of the butterfly species were difficult to identify in the field because of their smaller size and vague colouration especially (Lycaenidae and Hesperidae) (Shobana *et al.*, 2012; Alagumurugan *et al.*, 2011 and Arun 2003).

RESULTS AND DISCUSSION

Totally 48 Butterfly species along with their Host and nectar plants in and around Velachery region were observed, identified and photo-documented. Some of the several checklists of butterfly species which are presented in the **TABLE 1** are given below:

TABLE 1: Checklist of the butterfly species were recorded in and around Velachery region, Chennai.

S.no	Common name	Scientific name	Family	Host and nectar plants	Status
1	Tawny coster	<i>Acraea terpsicore</i>	Acraeidae	Tridax procumbens, Leucas aspera.	Very common
2	Plain tiger	<i>Danaus chrysippus</i>	Danaidae	Tridax procumbens, Calotrophis spp, Alternanthera ficoidia, Hibiscus spp.	Very common
3	Striped tiger	<i>Danaus genutia</i>	Danaidae	Calotrophis spp	Occasional
4	Blue tiger	<i>Tirumala limniace</i>	Danaidae	Tridax procumbens, Calotrophis spp	Very common

5	Dark blue tiger	<i>Tirumala septentrionis</i>	Danaidae	Calotrophis spp, Tridax procumbens	Occasional
6	Glassy tiger	<i>Parantica aglea</i>	Danaidae	Calotrophis spp	Rare
7	Common crow	<i>Euploea core</i>	Danaidae	Calotrophis spp, Tridax procumbens	Very common
8	Double-branded crow	<i>Euploea Sylvester</i>	Danaidae	Calotrophis spp, Murraya spp	Common
9	Angled castor	<i>Ariadne ariadne</i>	Nymphalidae	Ipomea spp	Rare
10	Common castor	<i>Ariadne merione</i>	Nymphalidae	Ipomea spp	Common
11	Lemon pansy	<i>Junonia lemonias</i>	Nymphalidae	Tridax procumbens, Leucas aspera, Calotrophis spp	Common
12	Chocolate pansy	<i>Junonia iphita</i>	Nymphalidae	Datura metal	Common
13	Peacock pansy	<i>Junonia almanac</i>	Nymphalidae	Prosopis juliflora, Leucas aspera, Tridax procumbens	Very common
14	Grey pansy	<i>Junonia atlites</i>	Nymphalidae	Leucas aspera, Tridax procumbens	Common
15	Common palmfly	<i>Elymnias hypermnestra</i>	Nymphalidae	Calamus spp	Rare
16	Common sailor	<i>Neptis hylas</i>	Nymphalidae	Pongamia pinnata	Occasional
17	Common cerulean	<i>Jamides celeno</i>	Lycaenidae	Tridax procumbens	Very common
18	Dark cerulean	<i>Jamides bochus</i>	Lycaenidae	Tridax procumbens, Pongamia pinnata	Common
19	Common pierrot	<i>Castalius rosimon</i>	Lycaenidae	Tridax procumbens	Common
20	Gram blue	<i>Euchrysops cnejus</i>	Lycaenidae	Prosopis juliflora, Tridax procumbens, Alternanthera ficoidea	Occasional
21	Common line blue	<i>Prosotas nora</i>	Lycaenidae	Streculia foetida	Very common

22	Common grass blue	<i>Zizina labradus</i>	Lycaenidae	Tridax procumbens	Very common
23	Lesser grass blue	<i>Zizina otis</i>	Lycaenidae	Prosopis juliflora, Tridax procumbens	Occasional
24	Pale grass blue	<i>Pseudozizeeria maha</i>	Lycaenidae	Prosopis juliflora, Tridax procumbens	Common
25	Dark grass blue	<i>Zizeeria karsandra</i>	Lycaenidae	Prosopis juliflora	Occasional
26	Tiny grass blue	<i>Zizula hylax</i>	Lycaenidae	Lantana spp	Occasional
27	Plains cupid	<i>Luthrodes pandava</i>	Lycaenidae	Caesalpinia pulcherrima	Rare
28	Grass jewel	<i>Chilades trochylus</i>	Lycaenidae	Corchorus aestuans	Common
29	Forget me not	<i>Catochrysops strabo</i>	Lycaenidae	Tridax procumbens, Pongamia pinnata	Occasional
30	Common grass yellow	<i>Eurema hecabe</i>	Pieridae	Allmanda cathartica, Tridax procumbens, Alternanthera ficoidea	Very common
31	Small grass yellow	<i>Eurema brigitta</i>	Pieridae	Chamaecristae kleinii, Tridax procumbens	Common
32	Common emigrant	<i>Catopsilia pomona</i>	Pieridae	Lantana camara, Leucas aspera	Common
33	Mottled emigrant	<i>Catopsilia pyranthe</i>	Pieridae	Lantana camara, Leucas aspera	Very common
34	Lemon emigrant	<i>Catopsilia pomona</i>	Pieridae	Lantana camara	Occasional
35	Common gull	<i>Cepora nerissa</i>	Pieridae	Tridax procumbens	Common
36	Common jezebel	<i>Delias eucharis</i>	Pieridae	Bougainvilleae	Common
37	Psyche	<i>Leptosia nina</i>	Pieridae	Tridax procumbens	Rare
38	Common mormon	<i>Papilio polytes</i>	Papilionidae	Prosopis juliflora	Common

39	Common rose	<i>Pachliopta aristolochiae</i>	Papilionidae	Bougainvillea	Occasional
40	Crimson rose	<i>Pachliopta hector</i>	Papilionidae	Bougainvillea	Occasional
41	Common lime	<i>Papilio demoleus</i>	Papilionidae	Aloe vera, Bougainvillea	Rare
42	Tailed jay	<i>Graphium agamemnon</i>	Papilionidae	Caesalpinia pulcherrima	Rare
43	Common jay	<i>Graphium doson</i>	Papilionidae	Clitoria ternatea	Occasional
44	Indian grizzled skipper	<i>Spialia galba</i>	Hesperiidae	Alternanthera sessilis	Rare
45	Small branded swift	<i>Pelopidas mathias</i>	Hesperiidae	Oryza spp	Common
46	Rice swift	<i>Borbo cinnara</i>	Hesperiidae	Lantana camara, Oryza spp	Very common
47	Grass demon	<i>Udaspes folus</i>	Hesperiidae	Alternanthera sessilis	Common
48	Common evening brown	<i>Melanitis leda</i>	Satyridae	Oryza spp	Very common

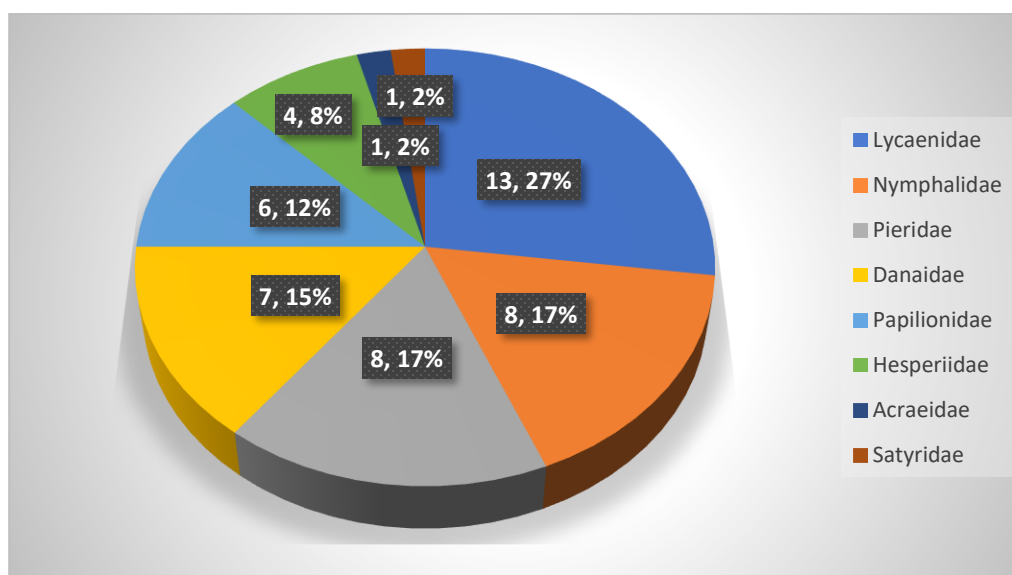


Figure 2: Percentage of Butterfly Families observed in and around Velachery region, Chennai

The family-wise distribution of butterflies is given below in (figure 2). Family **Lycaenidae (blues)** contributes a greater number of species with (13) (27%) respectively followed by these two families Nymphalidae (brush-footed butterflies) (8 species) (17%) and Pieridae (Whites and yellows) (8 species) (17%), followed by Danaidae (7 species) (15%), followed by Papilionidae (Swallow-tails) (6 species) (15%), Hesperidae (Skippers) (4 species) (8%), Satyridae (1 species) (2%) and Acraeidae (1 Species) (2%).

Relative Abundance of butterflies which are present in and around velachery region were calculated and presented in the **TABLE 2**: This study area comprehends about 48 species of butterflies under 8 families. Among these 8 families, Family Lycaenidae were found to be most dominant member with (27.08%), followed by Nymphalidae and Pieridae with (16.6%), followed by Danaidae with (14.5%), followed by Papilionidae with (12.5%), and finally Hesperidae with (8.3%). The minimum number of species which are present in this region are Acraeidae and Satyridae Families with 2.08%.

TABLE 2: Relative Abundancy of Butterflies in and around Velachery city:

S.No	Family	Number of species	Relative Abundance
1	Acraeidae	01	2.08%
2	Danaidae	07	14.5%
3	Nymphalidae	08	16.6%
4	Lycaenidae	13	27.08%
5	Pieridae	08	16.6%
6	Papilionidae	06	12.5%
7	Hesperidae	04	8.3%
8	Satyridae	01	2.08%
	Total	48	100%

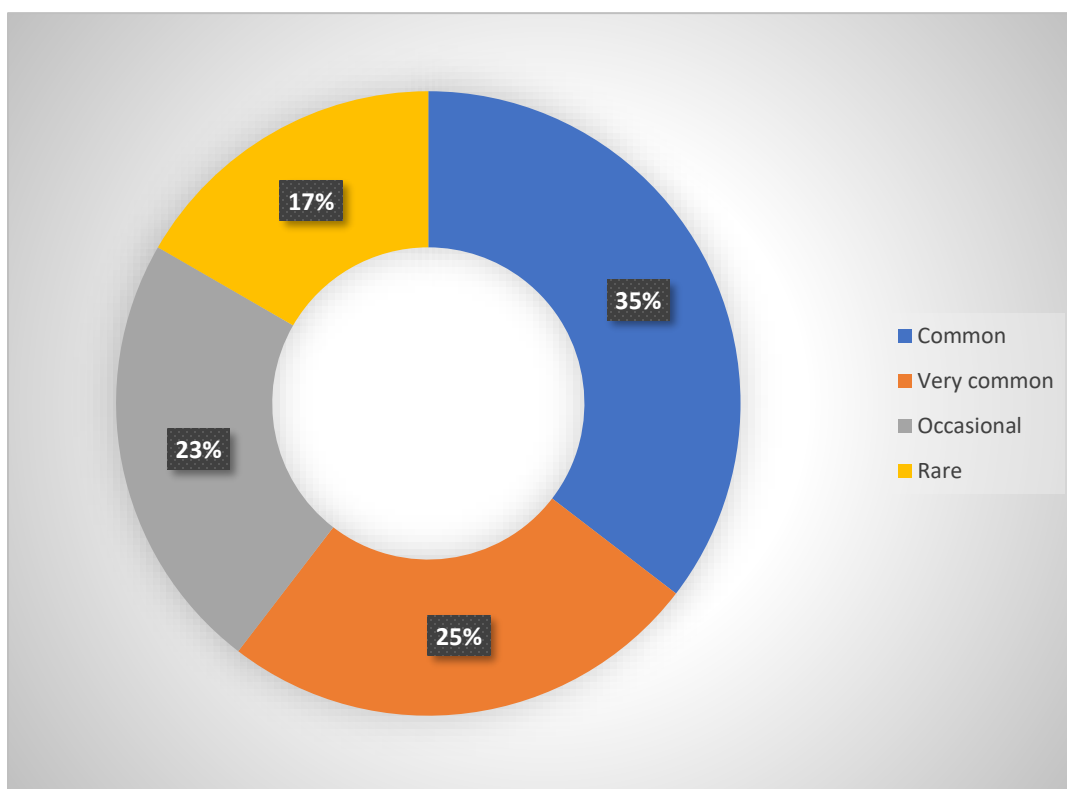


Figure 3: Percentage of Butterfly Status observed in and around Velachery region, Chennai.

The percentage of butterfly status were grouped into 4 categories on the basis of number of sightings in the field such as Common (C) (17 species), Very common (12), Occasional (O) (11 species) and Rare (R) (8

species). The occurrence of Common species were plenty with (35%) followed by Very common species (25%), followed by Occasional (23%) and Rare (17%).

The seasonal occurrence and abundancy of butterflies observed in and around the Velachery city were presented in the **Table 3**.

TABLE 3: Seasonal occurrence of Butterflies in and around Velachery region.

S.no	Family and Butterflies species	Pre monsoon (June, July and August)	Monsoon (September, October and November)	Early post monsoon (December, January and February)	Late post monsoon (March, April and May)
	Acraeidae				
1.	<i>Acraea terpsicore</i>	-	4	3	3
	Danaidae				
2.	<i>Danaus chrysippus chrysippus</i>	3	6	5	-
3.	<i>Danaus genutia</i>	-	2	2	-
4.	<i>Tirumala limniace exoticus</i>	4	5	3	-
5.	<i>Tirumala septentrionis</i>	3	3	2	-
6.	<i>Parantica aglea</i>	3	-	2	-
7.	<i>Euploea core</i>	3	4	2	-
8.	<i>Euploea Sylvester</i>	2	1	-	-
	Nymphalidae				
9.	<i>Ariadne merione</i>	-	4	4	-
10.	<i>Ariadne ariadne</i>	-	3	-	-
11.	<i>Junonia lemonias</i>	5	5	3	2
12.	<i>Junonia iphita iphita</i>	5	5	6	2
13.	<i>Junonia almana almanac</i>	6	8	8	3
14.	<i>Junonia atlites</i>	4	3	4	2

15.	<i>Elymnias hypermnestra</i>	-	3	2	-
16.	<i>Neptis hylas</i>	1	2	3	-
	Pieridae				
17.	<i>Eurema hecabe</i>	3	5	4	-
18.	<i>Eurema brigitta</i>	-	4	3	-
19.	<i>Catopsilia pomona</i>	2	5	2	3
20.	<i>Catopsilia pyranthe</i>	3	6	4	4
21.	<i>Catopsilia pomona</i>	-	4	-	3
22.	<i>Cepora nerissa</i>	-	3	1	2
23.	<i>Delias eucharis</i>	2	3	1	3
24.	<i>Leptosia nina</i>	-	-	2	-
	Lycaenidae				
25.	<i>Jamides celeno</i>	-	2	3	2
26.	<i>Jamides bochus</i>	-	1	2	-
27.	<i>Castalius rosimon</i>	3	1	3	3
28.	<i>Euchrysops cnejus</i>	1	2	3	2
29.	<i>Prosotas nora</i>	5	3	4	4
30.	<i>Zizina labradus</i>	2	4	3	3
31.	<i>Zizina otis</i>	3	5	5	4
32.	<i>Pseudozizeeria maha</i>	4	4	-	-

33.	<i>Zizeeria karsandra</i>	2	3	2	2
34.	<i>Zizula hylax</i>	-	2	2	3
35.	<i>Luthrodes pandava</i>	4	-	3	-
36.	<i>Chilades trochylus</i>	3	4	1	-
37.	<i>Catochrysops strabo</i>	-	3	-	3
	Papilionidae				
38.	<i>Papilio polytes</i>	2	3	2	1
39.	<i>Pachliopta aristolochiae</i>	1	2	-	-
40.	<i>Pachliopta hector</i>	2	4	4	-
41.	<i>Papilio demoleus</i>	1	2	3	-
42.	<i>Graphium agamemnon</i>	1	2	3	1
43.	<i>Graphium doson</i>	1	2	2	3
❖	Hesperiidae				
44.	<i>Spialia galba</i>	-	2	-	1
45.	<i>Pelopidas mathias</i>	3	2	1	3
46.	<i>Borbo cinnara</i>	2	3	2	1
47.	<i>Udaspes folus</i>	-	3	2	-
	Satyridae				
48.	<i>Melanitis leda</i>	1	2	1	-
	Total number of Individuals	90	149	117	63
	Total number of Species	33	45	41	25

During **Pre-monsoon** period, (June 2020 to August 2020) 90 butterflies belonging to 33 species were observed. Among these butterflies, *Junonia almana* (**Peacock pansy**) of family **Nymphalidae**, were found to be most cardinal member (**6 numbers**), followed by *Junonia lemonias* (Lemon pansy) (5 numbers), followed by family Lycaenidae, *Prosotas nora* (Common lineblue) (5 numbers), followed by family Danaidae, *Tirumala limniace* (Blue tiger) (4 numbers), followed by family Nymphalidae, *Junonia atlites* (Grey pansy) (4 numbers) and followed by family Lycaenidae, *Luthrodes pandava* (Plains cupid) (4 numbers). During **Monsoon** period, (September 2020 to November 2020) 149 butterflies belonging to 45 species were observed. Among these butterflies, *Junonia almana* (**Peacock pansy**) of family **Nymphalidae**, were found to be most cardinal member (**8 numbers**), followed by family Danaidae, *Danaus chrysippus* (Plain tiger) (6 numbers), followed by family Pieridae, *Catopsilia pyranthe* (Mottled emigrant) (6 numbers), followed by family Danaidae, *Tirumala limniace* (Blue tiger) (5 numbers), followed by family Nymphalidae, *Junonia iphita* (chocolate pansy) (5 numbers), followed by family Pieridae, *Eurema hecabe* (Common grass yellow) (5 numbers), followed by family Lycaenidae, *Zizinia otis* (Lesser grass blue) (5 numbers), followed by family Acraeidae *Acraea terpsicore* (Tawny coster) (4 numbers), followed by family Danaidae, *Euploea core* (Common crow) (4 numbers), followed by family Nymphalidae, *Ariadne merione* (Common castor) (4 numbers), followed by family Pieridae, *Catopsilia pomona* (Common emigrant) (4 numbers), followed by family Lycaenidae, *Zizina labradus* (Common grass blue) (4 numbers) and followed by family Papilionidae, *Pachliopta hector* (Crimson rose) (4 numbers). During **Early Post-monsoon** period, (December 2020 to February 2021) 117 butterflies belonging to 41 species were observed. Among these butterflies, *Junonia almana* (**Peacock pansy**) of family **Nymphalidae**, were found to be most cardinal member (**8 numbers**), followed by family Nymphalidae, *Junonia iphita* (chocolate pansy) (6 numbers), followed by family Danaidae, *Danaus chrysippus* (Plain tiger) (5 numbers), followed by family Lycaenidae, *Zizinia otis* (Lesser grass blue) (5 numbers), followed by family Nymphalidae, *Junonia atlites* (Grey pansy) (4 numbers), followed by family Pieridae, *Catopsilia pyranthe* (Mottled emigrant) (4 numbers), followed by family Lycaenidae, *Prosotas nora* (Common lineblue) (4 numbers), followed by family Papilionidae, *Pachliopta hector* (Crimson rose) (4 numbers), followed by family Acraeidae, *Acraea terpsicore* (Tawny coster) (3 numbers), followed by family Danaidae, *Tirumala limniace* (Blue tiger) (3 numbers), followed by family Nymphalidae, *Neptis hylas* (Common sailor) (3 numbers), followed by family Pieridae, *Eurema brigitta* (Small grass yellow) (3 numbers), followed by family Lycaenidae, *Jamides celeno* (Common cerulean) (3 numbers) and followed by family Papilionidae, *Graphium agememnon* (Tailed jay) (3 numbers). During **late Post-monsoon** period, (March 2021 to May 2021) 63 butterflies belonging to 25 species were observed. Among these butterflies, *Catopsilia pyranthe* (Mottled emigrant) of family **Pieridae**, were found to be most cardinal member (**4 numbers**), followed by family **lycaenidae**, *Zizinia otis* (**Lesser grass blue**) (**4 numbers**), followed by family Acraeidae, *Acraea terpsicore* (Tawny coster) (3 numbers), followed by family Nymphalidae, *Junonia almana* (Peacock pansy) (3 numbers), followed by family Pieridae, *Catopsilia pomona* (Lemon emigrant) (3 numbers), followed by *Catopsilia pomona* (Common emigrant) (3 numbers), followed by *Delias eucharis* (Common jezebel) (3 numbers), followed by family Lycaenidae *Castalius rosimon* (Common pierrot) (3 numbers), followed by *Zizula hylax* (Tiny grass blue) (3 numbers), followed by *Catochrysops strabo* (Forget me not) (3 numbers), followed by family Papilionidae, *Graphium doson* (Tailed jay) (3 numbers), followed by family Hesperidae, *Pelopidas mathias* (Small branded swift) (3 numbers), followed by family Nymphalidae, *Junonia iphita* (Chocolate pansy) (2 numbers), followed by family Pieridae *Cepora nerissa* (Common gull) (2 numbers) and lastly followed by family Lycaenidae, *Zizeeria karsandra* (Dark grass blue) (2 numbers). Nymphalidae, Pieridae and Lycaenidae families with butterfly species were the most frequently sighted groups during the survey in this Annai Indira Nagar oggiyamduraipakkam near Perungudi Railway Station region. Hesperidae, Acraeidae, Satyridae families with butterfly species were the leastly sighted groups during the survey near Perungudi Railway Station region. Mostly in this Velachery region, Acraeidae family with Tawny coster species, Danaidae family with Plain tiger, Blue tiger and Common crow species, Nymphalidae family with Common castor, Peacock pansy and Chocolate pansy species, Lycaenidae family with Common cerulean, Lesser grass blue and Dark grass blue species, Pieridae family with Common grass yellow, Mottled emigrant, Common

emigrant and Common jezebel species, Papilionidae family with Common mormon and Crimson rose species, Satyridae family with Common evening brown species were regularly found with dominant members. Hesperidae family with Rice swift and Indian grizzled skipper species were found least dominant members. By depending upon their surrounding temperature, Butterflies have constant body temperature individually present at them. At my study area, Species like Chocolate pansy, Common castor of family Nymphalidae, Common grass yellow of family Pieridae, Indian grizzled skipper of family Hesperidae and Tawny coster of family Acraeidae is involved at basking process because to regulate its body temperature, these species bask at the sunlight. Some species like Common castor of family Nymphalidae, Common grass yellow, Mottled emigrant of family Pieridae, Tawny coster of family Acraeidae, Chocolate pansy of family Nymphalidae is involved at the mud puddling process. Many Male Common mormon species alone are involved at the mud puddling process in groups, because they were attracted by nature vegetation, sunshine availability of water, dissolved salts, with increase in reproductive success and also by congregating at drinking place where animals have urinated on the sand (Molleman *et al.*, 2005; Sculley and Boggs 1996; Boggs and Jackson 1991; Beck *et al.*, 1999; PIVNICK, K. A., and McNEIL 1987). Butterfly diversity may vary independently of plant species in different regions. From this study, because of the nature vegetation, extensive plantation of nectar and host plants involved, each butterfly species survival has become more dominant in a particular habitat at different regions in and around Velachery region. Hence, the present information is useful for planning conservation measures in and around Velachery region.

Photographs taken in and around Velachery region:

NYMPHALIDAE:



Peacock Pansy
(*Junonia almanac*)



Chocolate Pansy
(*Junonia iphita*)



Lemon Pansy
(*Junonia lemonias*)



Grey Pansy
(*Junonia atlites*)



Common Castor
(*Ariadne merione*)

PIERIDAE:



Mottled Emigrant
(*Catopsilia pyranthe*)



Common Grass Yellow
(*Eurema hecabe*)



Common Emigrant
(*Catopsilia pomona*)

LYCAENIDAE:



Lesser Grass Blue
(*Zizina otis*)



Gram Blue
(*Euchrysops cnejus*)



Common Cerulean
(*Jamides celeno*)



Common Pierrot
(*Castalius rosimon*)



Dark Grass Blue
(*Zizeeria karsandra*)

DANAIDAE:



Plain Tiger
(*Danaus chrysippus*)

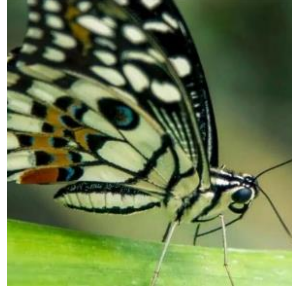


Blue tiger
(*Tirumala limniace*)

PAPILIONIDAE:



Common Mormon
(*Papilio polytes*)



Common Lime
(*Papilio demoleus*)

HESPERIIDAE:
Indian Grizzled Skipper
(*Spialia galba*)



ACRAEIDAE:
Tawny coster
(*Acraeae terpsicore*)



SATYRIDAE:
Common Evening Brown
(*Melanitis leda*)



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