



Butterflies of MACFAST Campus, Thiruvalla, Pathanamthitta District, Kerala, India

Butterflies are very sensitive to the changes in the environment and are considered good ecological indicators; hence they are included in various conservation and biodiversity studies (Gadgil 1996). Butterflies are valuable pollinators and form an important part of the food chain components of reptiles, birds, and other predatory insects. Butterflies are diurnal creatures but some are active at night also. Approximately, 18,000 species of butterflies have been recorded from around the world. Of them, 1,501 species are from India, 334 species from the Western Ghats (Evans 1932; Gaonkar 1996; Kunte 2000) and 316 from Kerala (Palot et al., 2012). Some of the earlier works, which enriched the butterfly studies in Kerala include Ferguson (1891) who recorded 220 butterfly species from Travancore area, Mathew & Rahmathulla (1993) recorded 100 species from Silent Valley National Park, 119 species from Periyar Tiger Reserve (Palot et al., 1997), 124 species from Parambikulam Wildlife Sanctuary (Sudheendrakumar et al., 2000), and 71 species from Aralam Wildlife Sanctuary (Sreekumar & Balakrishnan, 2001). Fire, illegal trading of butterflies, overuse of pesticides and weedicides, road kills, habitat destruction, may negatively

impact butterfly species. Diversity studies from representative habitats will give an outline of the ecological system of that area.

The butterfly fauna of the MACFAST college campus, Thiruvalla, Pathanamthitta district was monitored once a week from June 2017 to August 2018. The butterfly species were photo documented and species identification was done with the help of field guides by Mathew (2014), Kunte (2000), and the website of Butterflies of India (Kunte 2018).

The present study on butterfly diversity was carried out in the campus of Mar Athanasios College for Advanced Studies (MACFAST) (9.3730°N & 76.584°E from June 2017 to August 2018. The MACFAST campus is located about three kilometers south of Thiruvalla Town. The total area of the campus is about 7.5 acres, and the vegetation is dominated by *Anacardium occidentale*, *Racosperma auriculiforme*, *Racosperma mangium*, *Artocarpus heterophyllus*, *Artocarpus hirsutus*, *Mangifera indica*, *Bamboo* sp., *Cocos nucifera*, *Corypha umbraculifera*, *Lagerstroemia microcarpa*, *Nephelium*



Table. Checklist of butterflies of MACFAST Campus, Thiruvalla, Kerala.

	Common name	Scientific name
Papilionidae: Papilioninae		
1	Sahyadri Birdwing	<i>Troides minos</i>
2	Common Rose	<i>Pachliopta aristolochiae</i>
3	Crimson Rose	<i>Pachliopta hector</i>
4	Common Bluebottle	<i>Graphium sarpedon</i>
5	Tailed Jay	<i>Graphium agamemnon</i>
6	Lime Swallowtail	<i>Papilio demoleus</i>
7	Red Helen	<i>Papilio helenus</i>
8	Common Mormon	<i>Papilio polytes</i>
9	Common Mime	<i>Papilio clytia</i>
10	Blue Mormon	<i>Papilio polymnestor</i>
Pieridae: Coliadinae		
11	Lemon Emigrant	<i>Catopsilia pomona</i>
12	Mottled Emigrant	<i>Catopsilia pyranthe</i>
13	Small Grass Yellow	<i>Eurema brigitta</i>
14	Spotless Grass Yellow	<i>Eurema laeta</i>
15	Common Grass Yellow	<i>Eurema hecabe</i>
16	Three-spot Grass Yellow	<i>Eurema blanda</i>
Pieridae: Pierinae		
17	Indian Jezebel	<i>Delias eucharis</i>
18	Pioneer	<i>Belenois aurota</i>
19	Psyche	<i>Leptosia nina</i>
20	Common Gull	<i>Cepora nerissa</i>
21	Chocolate Albatross	<i>Appiaslyncida</i>
Nymphalidae: Satyrinae		
22	Common Evening Brown	<i>Melanitis leda</i>
23	Tailed Palmfly	<i>Elymnias caudata</i>
24	Bamboo Treebrown	<i>Lethe europa</i>
25	Common Bushbrown	<i>Mycalesis perseus</i>
26	Dark-branded Bushbrown	<i>Mycalesis mineus</i>
27	Long-branded Bushbrown	<i>Mycalesis visala</i>
28	Common Four-ring	<i>Ypthima huebneri</i>
29	Common Five-ring	<i>Ypthima baldus</i>

	Common name	Scientific name
Nymphalidae: Heliconiinae		
30	Tawny Coster	<i>Acraea terpsicore</i>
31	Cruiser	<i>Vindula erota</i>
32	Rustic	<i>Cupha erymanthis</i>
33	Common Leopard	<i>Phalanta phalantha</i>
34	Tamil Yeoman	<i>Cirrochroa thais</i>
Nymphalidae: Limenitidinae		
35	Common Sailer	<i>Neptis hylas</i>
36	Commander	<i>Moduza procris</i>
37	Grey Count	<i>Tanaecia lepidea</i>
38	Baron	<i>Euthalia aconthea</i>
Nymphalidae: Biblidinae		
39	Angled Castor	<i>Ariadne ariadne</i>
40	Common Castor	<i>Ariadne merione</i>
Nymphalidae: Nymphalinae		
41	Yellow Pansy	<i>Junonia hierta</i>
42	Lemon Pansy	<i>Junonia lemonias</i>
43	Peacock Pansy	<i>Junonia almanac</i>
44	Grey Pansy	<i>Junonia atlites</i>
45	Chocolate Pansy	<i>Junonia iphita</i>
46	Danaid Eggfly	<i>Hypolimnas misippus</i>
47	Great Eggfly	<i>Hypolimnas bolina</i>
Nymphalidae: Danainae		
48	Glassy Tiger	<i>Parantica aglea</i>
49	Blue Tiger	<i>Tirumala limniace</i>
50	Dark Blue Tiger	<i>Tirumala septentrionis</i>
51	Plain Tiger	<i>Danaus chrysippus</i>
52	Striped Tiger	<i>Danaus genutia</i>
53	Common Crow	<i>Euploea core</i>
Lycaenidae: Polyommatainae		
54	Common Pierrot	<i>Castalius rosimon</i>
55	Banded Blue Pierrot	<i>Discolampa ethion</i>
56	Plains Cupid	<i>Chilades pandava</i>
57	Tiny Grass Blue	<i>Zizula hylax</i>

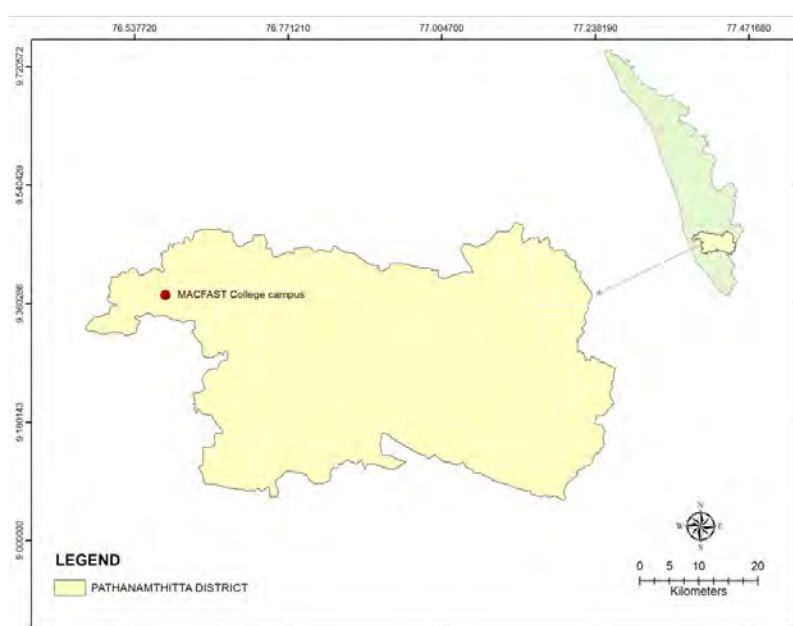
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	Common name	Scientific name
58	Lime Blue	<i>Chilades lajus</i>
59	Gram Blue	<i>Euchrysops cnejus</i>
60	Common Cerulean	<i>Jamides celeno</i>
61	Red Pierrot	<i>Talicauda nyseus</i>
Lycaenidae: Theclinae		
62	Slate Flash	<i>Rapala manea</i>
63	Monkey Puzzle	<i>Rathinda amor</i>
Hesperiidae: Pyrginae		
64	Common Snow Flat	<i>Tagiades japaetus</i>
65	Water Snow Flat	<i>Tagiades litigiosa</i>
66	Tricolour Pied Flat	<i>Coladenia indrani</i>
67	Suffused Snow Flat	<i>Tagiades gana</i>
Hesperiidae: Hesperinae		
68	Bush Hopper	<i>Ampittia dioscorides</i>
69	Chestnut Bob	<i>Iambrix salsala</i>
70	Common Branded Redeye	<i>Matapa aria</i>
71	Grey-veined Grass Dart	<i>Taractroceras maevius</i>
72	Smaller Dartlet	<i>Oriens goloides</i>
73	Oriental Palm Bob	<i>Suastus gremius</i>
74	Pelopidas swift species	<i>Pelopidas</i> sp.
75	Parnara Swift species	<i>Parnara</i> sp.

lappaceum, *Ficus auriculata*, *Flacourtia jangomas*, *Azadirachta indica*, *Carica papaya*, *Cassia fistula*, *Syzygium jambos*, *Phyllanthus emblica*, *Sapindus emarginatus*, *Tectona grandis*, *Macaranga indica*, *Bauhinia racemosa*, *Averrhoa carambola*, *Albizia chinensis*, *Delonix regia*, *Muntingia calabura*, *Elaeocarpus serratus*, *Manilkara zapota* and *Artocarpus incises*. Aquatic weeds like *Eichhornia crassipes*, *Salvinia molesta* were also present in water bodies near paddy fields.

A total of 75 species from 52 genera of butterflies belonging to five families and 13 subfamilies were identified from MACFAST Campus, including one species which is endemic to the Western Ghats and 10 species protected under various schedules of the Indian Wildlife (Protection)

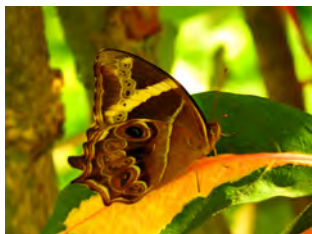


MACFAST Campus, Thiruvalla.

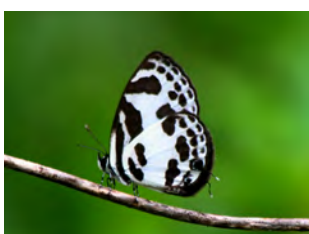
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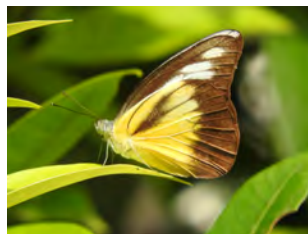
Photographs of butterflies recorded in the MACFAST Campus.



Bamboo Treebrown



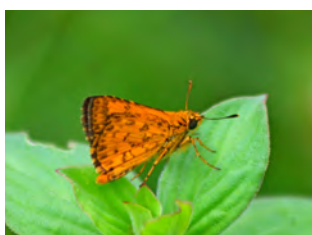
Banded Blue Pierrot



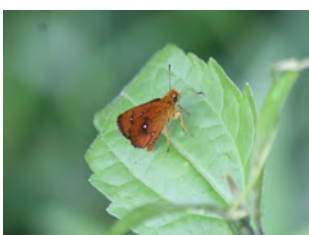
Chocolate Albatross



Common Bluebottle



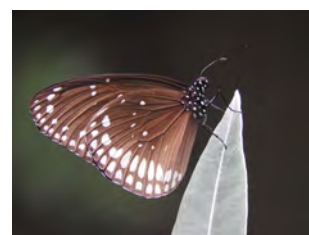
Bush Hopper



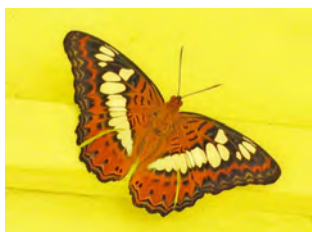
Chestnut Bob



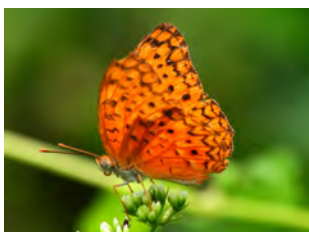
Chocolate Pansy



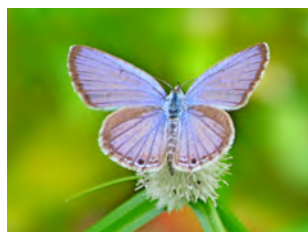
Common Crow



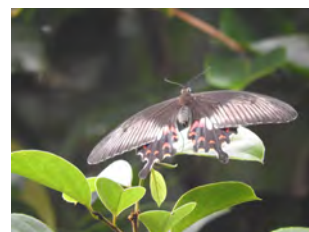
Commander



Common Leopard



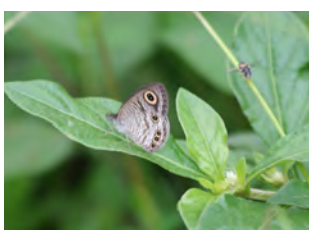
Common Cerulean



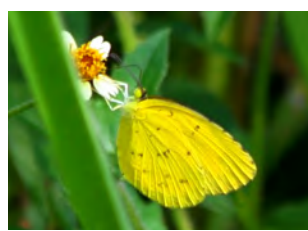
**Common Mormon
(female)**



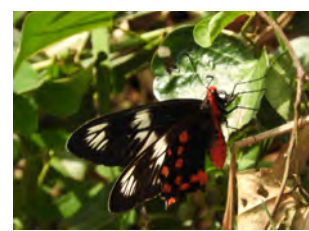
Common Five-ring



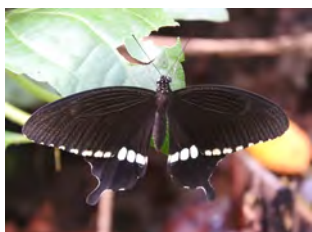
Common Four-ring



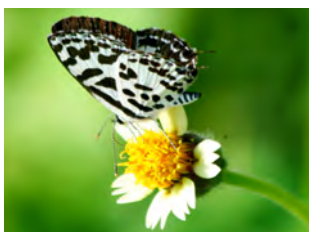
Common Grass Yellow



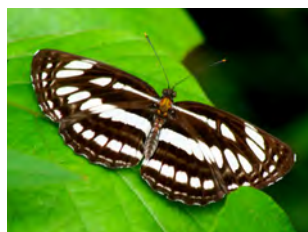
Crimson Rose



**Common Mormon
(male)**



Common Pierrot



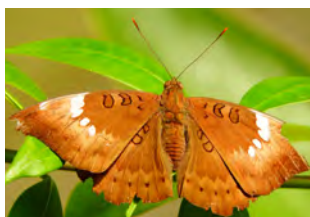
Common Sailer



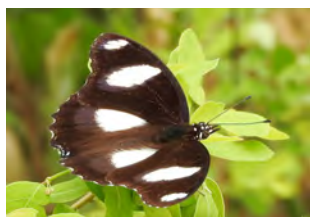
Cruiser

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Baron



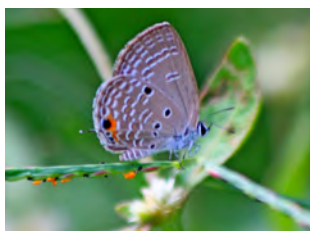
Danaid Eggfly



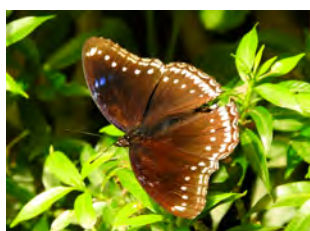
Dark Blue Tiger



**Dark-banded
Bushbrown**



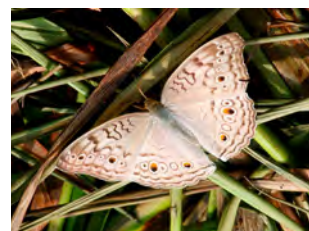
Gram Blue



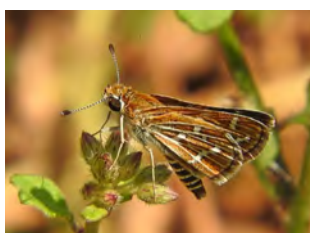
Great Eggfly



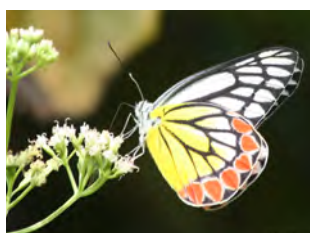
Grey Count



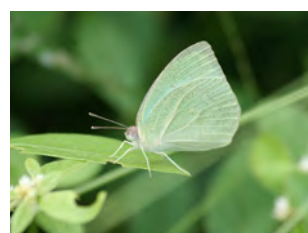
Grey Pansy



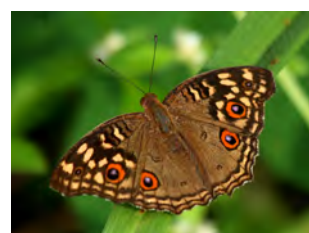
Grey-veined Grass Dart



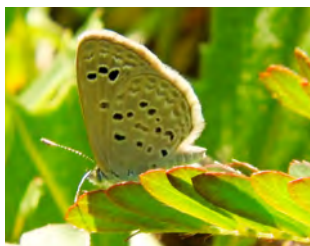
Indian Jezebel



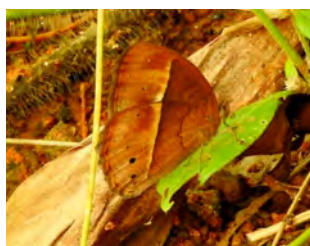
Lemon Emigrant



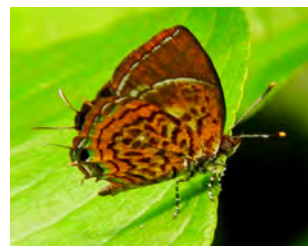
Lemon Pansy



Lime Blue



**Long-branded
Bushbrown**



Monkey Puzzle



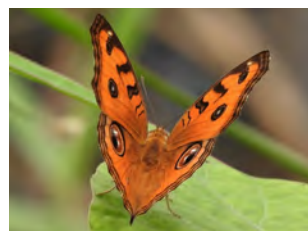
Pioneer



Mottled Emigrant



Oriental Palm Bob



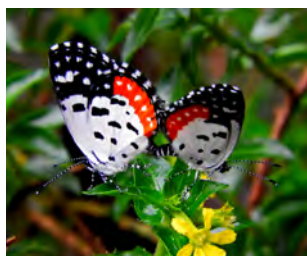
Peacock Pansy



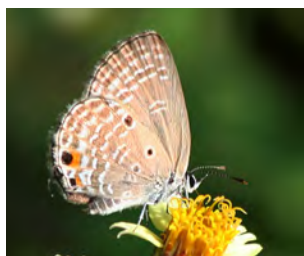
Plain Tiger

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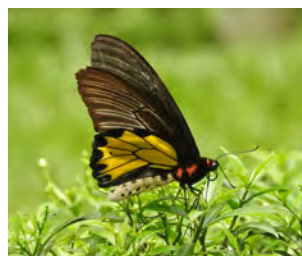
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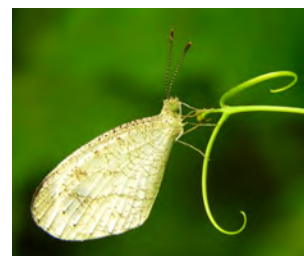
Red Pierrot



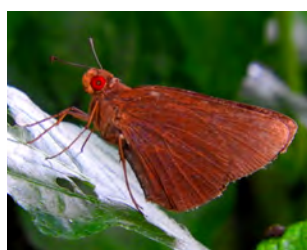
Plains Cupid



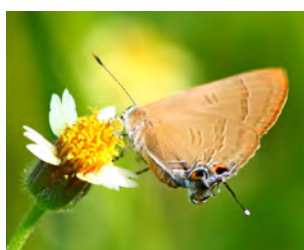
Sahyadri Birdwing



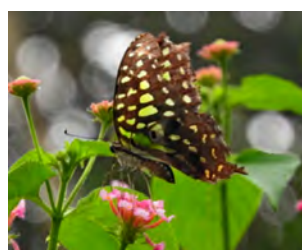
Psyche



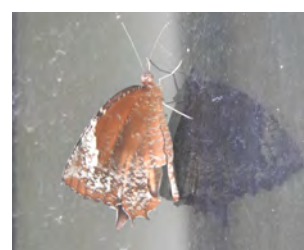
Common Branded Redeye



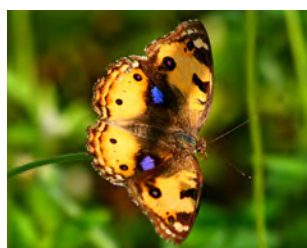
Slate Flash



Tailed Jay



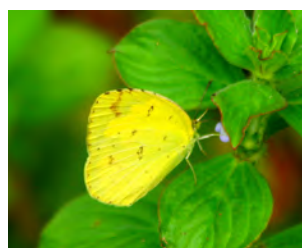
Tailed Palmfly



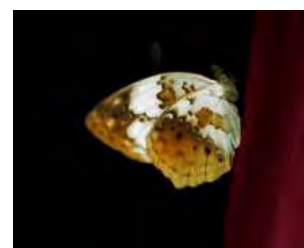
Yellow Pansy



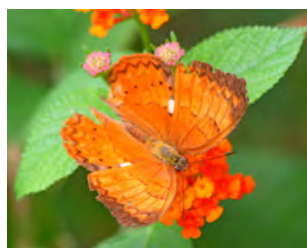
Tawny Coster



Three-spot Grass Yellow



Rustic



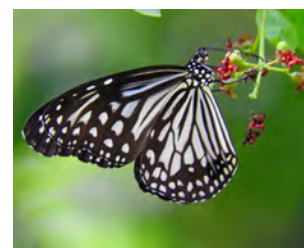
Tamil Yeoman



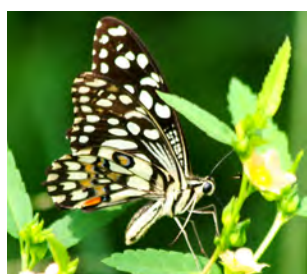
Tiny Grass Blue



Striped Tiger



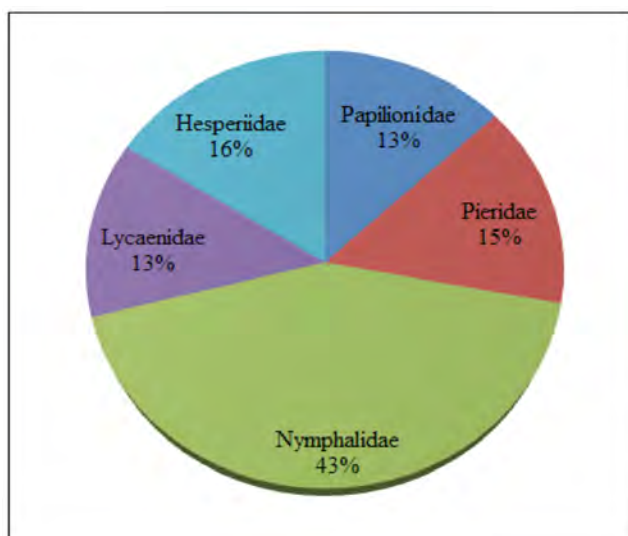
Glassy Tiger



Lime Swallowtail

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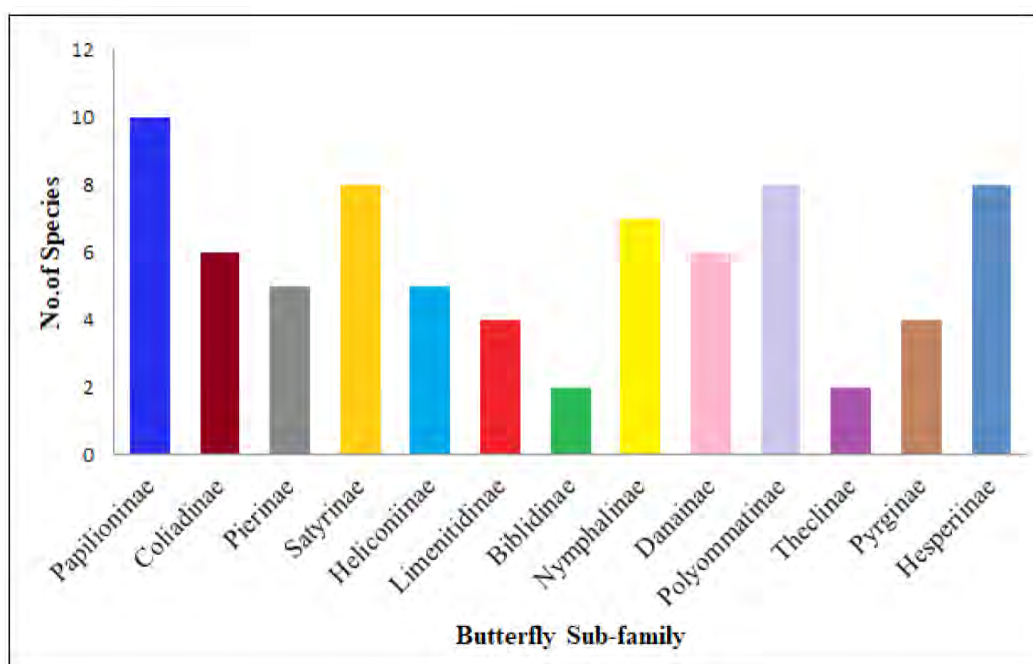


Family wise distribution of butterfly species in MACFAST campus.

Act, 1972. The sighted butterflies are listed in Table. Nymphalidae (brush-footed butterflies) were the most dominant family comprising of 32 species belonging to five subfamilies and it constituted 42.7% of the

total butterfly species in the campus. The subfamily-wise distribution of butterflies of MACFAST campus is given.

Out of 316 species recorded from Kerala, 75 species are recorded from the MACFAST campus, which implies that the small green campus is rich in butterfly diversity. Among the 75 species, *Pachliopta hector*, *Papilio clytia*, *Lethe europa*, *Castalius rosimon* are listed in the Schedule I of the Indian Wildlife (Protection) Act of 1972. Species such as *Euchrysops cnejus*, *Hypolimnys misippus*, *Tanaecia lepidea*, *Cepora nerissa*, *Appias lyncida* are in Schedule II and *Euploea core* is under Schedule IV as per the Act. Sahyadri Birdwing *Troides minos*, an endemic species to the Western Ghats was also recorded from the campus. Six migratory



Sub-family wise distribution of butterfly species in MACFAST campus.

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butterfly species namely *Euploea core*, *Danaus chrysippus*, *Tirumalalimniace*, *Catopsilia pyranthe*, *Catopsilia*, *Pomona*, and *Papilio demoleus*, have also been recorded on this campus.

While comparing with the butterfly diversity of well-established butterfly gardens like Nilambur Butterfly Garden (with 50 species) (Revathy & Mathew 2013) and Thumboormuzhi river garden (with 89 species) (Puthur et al. 2015), MACFAST campus, without a butterfly garden, exemplifies a potential habitat for the butterflies. This small urban landscape is an abode to 5% and 23.73% of the total butterfly species of India and Kerala respectively. As there is an urgent need for conservation programmes, setting up of a butterfly garden by planting more nectar plants and larval food plants is the main recommendation for the conservation of butterflies on the campus.

References

- Evans, W.H. (1932).** *The Identification of Indian Butterflies. 2nd Edition.* Bombay Natural History Society, Mumbai, 464pp+32pl.
- Ferguson, H.S. (1891).** A list of butterflies of Travancore. *Journal of the Bombay Natural History Society* 6(4):432–448.
- Gadgil, M. (1996).** Documenting Diversity: An experiment. *Current Science* 70: 36–44.
- Gaonkar, H. (1996).** Butterflies of the Western Ghats, including Sri Lanka. A biodiversity assessment of a threatened mountain system. Report to the Centre for Ecological Sciences, Bangalore (Unpublished).
- Kunte, K. (2000).** *Butterflies of Peninsular India.* Indian Academy of Sciences, Universities Press (India) Limited. 254pp.
- Kunte, K., S. Sondhi & P. Roy (eds) (2018).** Butterflies of India, v. 2.53. Indian Foundation for Butterflies. <http://www.ifoundbutterflies.org/>. Accessed on 13 September 2018.

Mathew, G. (2014). *A Photographic Guide to Butterflies of Kerala.* Thenmala Ecotourism Promotion Society, 232pp.

Palot, M.J., V.C. Balakrishnan & S. Kalesh (2012).

An updated checklist of butterflies of Kerala, with their Malayalam names. *Malabar Trogon* 9(3): 22–29.

Puthur, S., A.V., Asha & E.M. Aneesh (2015). Bio ecology and family wise distribution of butterfly (Lepidoptera) species at Thumboormuzhi river garden, Thrissur, Kerala, pp. 131–133. In: *Biodiversity & Evaluation: Perspectives and Paradigm shifts.*

Revathy, V.S. & G. Mathew (2013). Seasonality of Rhopalocera (Lepidoptera) species in the Butterfly Garden at Nilambur in Kerala, southern India. *Colemania* 35: 1–9.

Revathy, V.S. & G. Mathew (2014). Seasonal Fluctuations of Butterfly Population: A Study in Butterfly Garden at Peechi, Kerala, India. *International Journal of Agriculture, Environment & Biotechnology* 7(1): 29–35.

Sreekumar, P.G. & M. Balakrishnan (2001). Habitat and altitude preferences of butterflies in Aralam Wildlife Sanctuary, Kerala. *Tropical Ecology* 42(2): 277–281.

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