

## A checklist of butterflies recorded from Dharmapuri and Kottur, Theni District.

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### Abstract

Butterflies of Dharmapuri and Kottur, Tamil Nadu, India were studied. Total of 3280 individuals belonging to 114 species were recorded. More number of species were recorded during November, followed by October and a less number of species were recorded during December. Ten endemic species were recorded. Three species of butterflies come under IUCN red list, two species of butterflies, namely, one Spot grass yellow, and Common crow, and One species Malabar tree nymph come under the near threatened category. Totally 14 species of butterflies were recorded placed under different schedules.

**Key words:** Butterfly, species, monthly variation, IUCN, schedule.

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### INTRODUCTION

Invertebrates are widely regarded as powerful monitoring tools in environmental management because of their great abundance, diversity and functional importance, their sensitivity to perturbation, and the ease with which they can be sampled (Brown, 1997; McGeoch, 1998). Within the classes of insects, lepidopterans – butterflies in particular, are highly faunistically interesting, habitat specific and often endemic (Wolda *et al.*, 1994). Butterflies play important roles in the ecosystem functions. They are important herbivorous insects that have a direct trophic relationship with plants (Chew, 1975; Gratton and Denno, 2003). India possesses 1501 species of butterflies (Kunte *et al.*, 1999). As pointed out by Daily and Erhlich (1995) butterflies appear to be potentially good indicators of forest biodiversity (Kremen, 1992). In this context, the present article deals an inventory is given from the survey of butterflies made in the Dharmapuri and Kottur in Theni District, Tamil Nadu, India.

### Study area

The study areas Dharmapuri and Kottur are situated in the Theni district of Western Ghats, on the way to MullaiPeriyar River. Theni (Dharmapuri and Kottur) district is rich in soil fertility, vegetation and population of butterflies. The agricultural landscape predominantly covers coconut-based mono-cropping and mixed-

cropping system. The annual atmospheric temperature ranges from a minimum of 13 °C to a maximum of 39.5 °C. March – May is the hottest period and a cool dry winter is experienced during November-January. Though this area is rich in butterfly population there is no published record on the ecological aspects of butterflies so far and hence this study was carried out to record the butterfly species found in this area.

### MATERIALS AND METHODS

Pollard's walk method described by Moore (1975) and Pollard *et al.*, (1975) was adopted for observing the butterflies. As suggested by Swengel (1977) a transect route of one km was generally used as a standard. Butterflies were counted at a distance of 2.5m on both sides and 5 m in front of the observer. These surveys were made during 11.00 -13.00 h. Butterflies were identified by using the field guide (Gunathilagaraj *et al.*, 2015)

Totally four habitat types namely, natural forest, pond edge, mixed plantation and coconut plantation were selected. In each habitat one fixed transect was laid and observed fortnightly. A total of eight transects were run in each month. Counting in the transects was avoided during rainy and windy days in order to avoid bias and fluctuations in the collection of data.

### RESULTS AND DISCUSSION

Totally 3280 individuals belonged to 114 species of butterflies were recorded which included ten endemic, two Least concern and one nearly

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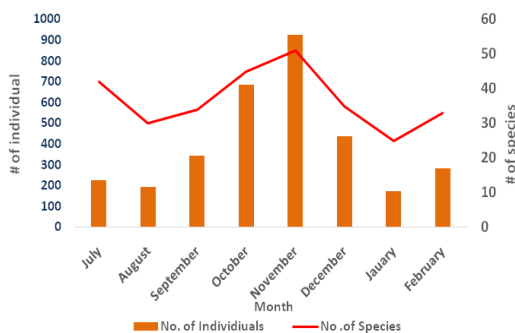
threatened butterflies. More number of species were recorded during November (51), followed by October (45), July (42), December (35), September (34), February (33), August(30) and January(25), while number of individuals were more during the month of October when compared to the months of December and other months (Table 1, Fig. 1).

A total of three species of butterflies are categorized under IUCN red list, two species of butterflies, namely, one-spot grass yellow (*Euremoandersoni*) and Common crow (*Euploea corekept*) are listed under least concern and one species Malabar tree nymph (*Idea molabarica*) is recorded under the near threatened category. Totally 14 species of butterflies are listed under different schedules, of which three are kept under schedule I and three species under schedule IV. A total of eight species are listed in schedule II. Totally ten endemic species have been recorded (Table. 2).

Thus this survey of butterflies recorded from Dharmapuri and Kottur of Theni district provides a valuable information regarding the status of various species of butterflies in this district. This inventory of butterflies status is a document for the future generation. The documentation with reference to endemic, least concern and near threatened categories suggest the urgent need for evolving measures of conservation and strategies for management that could sustain the species and protect them from extinction.

**Table.1.** Number of species and individuals recorded during the study period

Month	No. of Individuals	No. of Species
July	229	42
August	195	30
September	344	34
October	685	45
November	928	51
December	439	35
January	176	25
February	284	33



**Fig.1.** Number of individuals and species recorded during the different month of study period

**Table.2..** List of butterflies recorded during the study period

S. No.	Family	Common name	Scientific name	Status
1	Hesperiidae	Brown awl	<i>Badamiaexclamationis</i>	
2	Hesperiidae	Common grass dart	<i>Taractroceramaevius</i>	
3	Hesperiidae	Kanara swift	<i>Caltoriscanarica</i>	E
4	Hesperiidae	Common banded awl	<i>Hasorachromus</i>	
5	Hesperiidae	Dark branded swift	<i>Pelopidas mathias</i>	
6	Hesperiidae	Brush flitter	<i>Hyarotismicrostictum</i>	
7	Hesperiidae	Suffused snow flat	<i>Tagidesgana</i>	
8	Hesperiidae	African marbled skipper	<i>Gomaliaelma</i>	
9	Hesperiidae	Common spotted flat	<i>Celanorrhinusleucocera</i>	
10	Hesperiidae	Tamil grass dart	<i>Taractroceraceras</i>	
11	Hesperiidae	Rice swift	<i>Borbocimara</i>	
12	Hesperiidae	Vindhyan bob	<i>Arnetta vindhiana</i>	
13	Hesperiidae	Wax dart	<i>Cupithapurreea</i>	
14	Lycaenidae	Eastern grass jewel	<i>Freyeriaputti</i>	
15	Lycaenidae	Grass jewel	<i>Chiladestrochylus</i>	
16	Lycaenidae	Tailless lineblue	<i>Prosotasdubiosa</i>	
17	Lycaenidae	Gram blue	<i>Euchrysops</i>	Sch ii
18	Lycaenidae	Peacock royal	<i>Tajura cippus</i>	Sch ii
19	Lycaenidae	Indian oakblue	<i>Arhopalaatrax</i>	
20	Lycaenidae	Dark cerulean	<i>Janidesbochus</i>	
21	Lycaenidae	Bright babul blue	<i>Azanusubaldus</i>	
22	Lycaenidae	Tiny grass blue	<i>Zizulahylax</i>	
23	Lycaenidae	White hedge blue	<i>Udara akasa</i>	
24	Lycaenidae	Quaker	<i>Nepithecopszalmora</i>	
25	Lycaenidae	Common cerulean	<i>Janidesceleno</i>	
26	Lycaenidae	Indian cupid	<i>Eereslaeternus</i>	
27	Lycaenidae	Dark grass blue	<i>Zizeerikarsandra</i>	
28	Lycaenidae	Plain hedge blue	<i>Celastrinalaxendularis</i>	
29	Lycaenidae	Large guava blue	<i>Viracholaparse</i>	
30	Lycaenidae	Silver forget me not	<i>Catochrysopsanormus</i>	
31	Lycaenidae	Common silverline	<i>Cigaritisculcanus</i>	
32	Lycaenidae	Zebra blue	<i>Tarucusplinius</i>	
33	Lycaenidae	Lime blue	<i>Chiladeslajus</i>	
34	Lycaenidae	Large oakblue	<i>Arhopalaanantes</i>	
35	Lycaenidae	White tipped lineblue	<i>Prosotasnoreia</i>	Schi
36	Lycaenidae	Common hedge blue	<i>Acytoleppispuspa</i>	
37	Lycaenidae	Plains cupid	<i>Chiladespandava</i>	
38	Nymphalidae	Common baron	<i>Euthaliaaconthea</i>	
39	Nymphalidae	Painted courtesan	<i>Euripus consimilis</i>	Sch ii
40	Nymphalidae	Yellow jack sailer	<i>Lasippaviraja</i>	
41	Nymphalidae	Painted lady	<i>Vanessa cardui</i>	
42	Nymphalidae	Angled castor	<i>Ariadne ariadne</i>	
43	Nymphalidae	Blue admiral	<i>Kaniskacanace</i>	
44	Nymphalidae	Blue pansy	<i>Junoniaarithya</i>	
45	Nymphalidae	Dark brand bush	<i>Mycalessimineus</i>	
46	Nymphalidae	Blue tiger	<i>Tirumala limniace</i>	
47	Nymphalidae	Chocolate pansy	<i>Junoniaiphita</i>	
48	Nymphalidae	Common leopard	<i>Atellaphalanthia</i>	
49	Nymphalidae	Common five ring	<i>Ypthimabaldus</i>	
50	Nymphalidae	Common sailer	<i>Neptishylas</i>	

S. No.	Family	Common name	Scientific name	Status
51	Nymphalidae	Dark blue tiger	<i>Tirumala septentrionis</i>	
52	Nymphalidae	Gladeye/Bushbrown	<i>Mycalesis patnia</i>	E
53	Nymphalidae	Great eggfly	<i>Hypolimnastolus</i>	
54	Nymphalidae	Grey pansy	<i>Junonia atlites</i>	
55	Nymphalidae	Lemon pansy	<i>Junonia lemonias</i>	
56	Nymphalidae	Clipper	<i>Parthenos sylvia</i>	Schii
57	Nymphalidae	Nigger	<i>Orsotricena medus</i>	
58	Nymphalidae	Small leopard	<i>Palcippe</i>	Schii
59	Nymphalidae	Baronet	<i>Euthaliopsis</i>	
60	Nymphalidae	Short banded sailor	<i>Neptis columella</i>	
61	Nymphalidae	Lepcha bushbrown	<i>Mycalesis lepcha</i>	
62	Nymphalidae	Common castor	<i>Ariadne merione</i>	
63	Nymphalidae	Striped tiger	<i>Danaus genutia</i>	
64	Nymphalidae	Common crow	<i>Euploea core</i>	LC&Schiv
65	Nymphalidae	Red disc bushbrown	<i>Mycalesis ocellus</i>	E
66	Nymphalidae	Tamil yeoman	<i>Cirrochthonais</i>	E
67	Nymphalidae	Tawny coster	<i>Acraea violae</i>	
68	Nymphalidae	White/ceylon four ring	<i>Ypthima ceylonica</i>	
69	Nymphalidae	Common lascar	<i>Pantoporia hordonia</i>	
70	Nymphalidae	Yellow pansy	<i>Junonia hierta</i>	
71	Nymphalidae	Black-vein sergent	<i>Athymnanga</i>	
72	Nymphalidae	Chestnut streaked sailer	<i>Neptis jumbah</i>	
73	Nymphalidae	Anomalous nawab	<i>Charaxes sagarius</i>	
74	Nymphalidae	Staff sergeant	<i>Athymnaselephora</i>	
75	Nymphalidae	Joker	<i>Byblia lithyia</i>	
76	Nymphalidae	Indian fritillary	<i>Argynnis hyperbius</i>	
77	Nymphalidae	Common treebrown	<i>Lethe rohria</i>	
78	Nymphalidae	Indian red admiral	<i>Cynthia indica</i>	
79	Nymphalidae	Common three ring	<i>Ypthima asterope</i>	
80	Nymphalidae	Common sergeant	<i>Athymnaperis</i>	
81	Nymphalidae	Double branded crow	<i>Euploea sylvestris</i>	
82	Nymphalidae	Rustic	<i>Cuphaerymantis</i>	
83	Nymphalidae	Cruiser	<i>Vagrantinoidindula</i>	
84	Nymphalidae	Orange oakleaf	<i>Kallimainachus</i>	
85	Nymphalidae	Black prince	<i>Rhanoparisatis</i>	
86	Nymphalidae	Bamboo treebrown	<i>Lethe europa</i>	
87	Nymphalidae	Grey count	<i>Tanaecialepidea</i>	Schii
88	Nymphalidae	Malabar tree nymph	<i>Idea malabarica</i>	NI&E
89	Nymphalidae	Plain tiger	<i>Danaus chrysippus</i>	
90	Papilionidae	Malabar-banded peacock	<i>Papilio buddha</i>	Schii & E
91	Papilionidae	Blue mormon	<i>Papilio polymnestor</i>	
92	Papilionidae	Common mime	<i>Papilio clytia</i>	Schi
93	Papilionidae	Common mormon	<i>Papilio polytes</i>	
94	Papilionidae	Red helen	<i>Papilio helenus</i>	
95	Papilionidae	Common rose	<i>Pachliopta aristolochiae</i>	
96	Papilionidae	Crimson rose	<i>Pachliopta hector</i>	Schi
97	Papilionidae	Malabar rose	<i>Pachliopta pandiyana</i>	E
98	Pieridae	Common jezebel	<i>Delias eucharis</i>	
99	Pieridae	Common albatross	<i>Appias albina</i>	
100	Pieridae	Common grass yellow	<i>Eurema hecabe</i>	
101	Pieridae	Common wanderer	<i>Pareronia valeria</i>	

S. No.	Family	Common name	Scientific name	Status
101	Pieridae	Common wanderer	<i>Pareronia valeria</i>	
102	Pieridae	Painted sawtooth	<i>Prionerissa</i>	Schiv & E
103	Pieridae	Psyche	<i>Leptosianina</i>	
104	Pieridae	Yellow orange tip	<i>Ixias pyrene</i>	
105	Pieridae	White orange tip	<i>Ixias mariannae</i>	
106	Pieridae	Lesser albatross	<i>Appias wardii</i>	Schii & E
107	Pieridae	Pioneer	<i>Belenois aurora</i>	
108	Pieridae	One spot grass yellow	<i>Eurema andersonii</i>	LC
109	Pieridae	Small salmon arab	<i>Colotis amata</i>	
110	Pieridae	Small orange tip	<i>Colotis etrida</i>	
111	Pieridae	Nilgiri clouded yellow	<i>Colias nilagiriensis</i>	E
112	Pieridae	Striped albatross	<i>Appias libythea</i>	Schiv
113	Pieridae	Common emigrant	<i>Catopsilia pomona</i>	
114	Pieridae	Crimson tip	<i>Colotis danae</i>	

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