

BUTTERFLIES OF MELGHAT TIGER RESERVE, MAHARASHTRA WITH NOTES ON THEIR ABUNDANCE, STATUS AND LARVAL HOST PLANTS

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Key Words:

Butterflies, Melghat, Abundance, larval host plants.

ABSTRACT:

This paper presents the data on the butterfly fauna of Melghat Tiger Reserve (MTR) with abundance, status and host plants. Overall 101 species of butterflies from 8 families and 19 subfamilies were found during the study period. The larval host plants (101) of different butterflies were also listed. Family-wise occurrence of the species was found to be Papilionidae- 9, Pieridae - 16, Danaidae - 06, Satyridae - 10, Nymphalidae - 22, Riodinidae - 01, Lycaenidae - 23 and Hesperidae - 14. It was found that 22 species of butterflies are very common, 21 species are common, 16 species are not rare/ occasional and 21 species are rare, 17 species are very rare and 04 species are locally common in occurrence in MTR.

INTRODUCTION:

Documentation of biodiversity is basic need for management planning for conservation. Melghat Tiger Reserve (MTR) is a very popular wilderness among nature lovers. It is the one of the first nine Tiger Reserves in India, established in 1972. Geographical location of Melghat region is 20^o51' to 21^o46' N and to 76^o38' to 77^o33' E. It is spread in 3970 sq. km area of Chikhaldara and Dharni tehsils in Amravati district and Akot tehsil in Akola district in Maharashtra, India. Out of that 2200 sq. km. area is protected under Melghat Tiger Reserve (MTR) and it includes five protected areas under unified control. These protected areas are Gugamal National Park (*or the sanctum sanctorum*), Melghat Sanctuary (the buffer zone), Narnala Wildlife Sanctuary, Wan Wildlife Sanctuary and Ambabarwa Wildlife Sanctuary (Mahabal, 2005); (Fig. 1).



Fig. 1. : Melghat Tiger Reserve .

Melghat has southern tropical dry deciduous forest. It experiences tropical climate with temperatures ranging between 13⁰C and 22⁰C during winter and between 23⁰C to 45⁰C during summer. The annual rainfall ranges between 1000mm and 2250mm. A total of 715 plant species have been recorded from MTR (Mahabal, 2005 and Dhore & Joshi, 1998).

A total of 45 species of butterflies were recorded in Melghat region by Mahabal (2005). D'Abreu (1931) had studied the butterflies of the then Central Provinces (now Madhya Pradesh and Vidarbha) in general.

A survey of the butterfly diversity of the MTR was done during January 2005 to December 2007 to record the abundance, status and larval host plants of the species in the various parts of the MTR.

MATERIALS AND METHODS:

Butterflies were observed, captured, identified and released immediately at the spot of capture. A butterfly net was used for this purpose. Many of the species were photographed in the wild. Dead butterflies killed on the roads by speeding vehicles were collected and identified using the available literature (Evans, 1932; Wynter-Blyth, 1957; Haribal, 1992 and Kunte, 2000). The dead specimens, many of them not in very good condition, were kept in butterfly collection boxes. Collecting live specimens was avoided during the study.

Butterflies were categorized into five groups based on their occurrence during the study period on the basis of frequency of sightings. Accordingly, those species found were categorized as:

VC- very common- seen on 80-100% of field visits

C- common- seen on 60-80% of field visits

NR- not rare / occasional - seen on 40-60% of field visits

R- rare - seen on 20-40% of field visits and

VR- very rare- seen on less than 20% of field visits

DISCUSSION AND RESULTS:

Overall 101 species of butterflies from total 08 families and 19 subfamilies were found during the study period. The family-wise occurrence of the species is: Papilionidae - 9.09% (number of species, n=9), Pieridae - 16.16% (n=16), Danaidae - 6.06% (n=6), Satyridae - 10.01% (n=10), Nymphalidae - 22.22% (n=22), Riodinidae - 01.01% (n=01), Lycaenidae - 23.23% (n=23) and Hesperidae - 14.14% (n=14). It was found 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 04 species are locally common in status. Lycaenidae dominated the family-wise abundance amongst the diverse taxa with a maximum of 23 species reported from the study area. (Table-1).

Total 101 host plants species of butterflies were recorded which are used by listed butterflies in the Melghat region. Out of these 07 plant species are cultivated in agriculture land or planted exotic plants species and 03 plant species were recorded from outside MTR. (Table 2).

Recorded host plants of *Pachliopta aristolochiae* F. (Common Rose) are *Aristolochia bracteolate*, *A. indica*, *A. tagala*, *A. griffithi*, *Thottea siliquosa* but these plants were not recorded from MTR. Listed host plants of *Sarangesa purendra* (Spotted small Flat) are *Blepharis asperrima* and *Asystasia* spp but these plants were not recorded from MTR. Listed host plants of *Pachliopta hactor* L. (Crimson Rose) are *Aristolochia bracteolate*, *A. indica*, *Thottea siliquosa* but these plants were not recorded from MTR. *Danaus genutia* Cr. (Common Tiger) butterflies are common in MTR. More than 10 host plants have been recorded for *D. genutia* from Peninsular India (Kunte, 2000) Surprisingly none of these are reported from MTR by the taxonomists.

Surprisingly it was found that many earlier reported host plant species (Kunte, 2000) of some butterflies are not found in the study area or have not been reported by taxonomists (Dhore & Joshi, 1988, Bhogaonkar & Devarkar, 1999). This suggests that either the butterfly species are using some other alternative host plants in MTR or these plants occur in the study area but were not reported earlier. Further study to find out the alternative host plants of these butterfly species from MTR is being done.

Hygrophila auriculata is most widely used by 10 species of butterflies in MTR, as well as the butterfly species *Catopsilia pyranthe* L., *Neptis hylas varmona* L. and *Parathyma perius* Linn. are using maximum variety of host plants.

The plant *Caesalpinia decapetala* (family Mimosaceae) was recorded as a new host plant of *Eurema brigitta rubella* W. Plant *Echinops echinatus* was recorded as a new host plant of *Cynthia cardui* L. (Painted Lady) and a small grass species, *Cynodon dactylon* was recorded as a new host plant of *Ypthima asterope mahratta* M (Common Three Ring). Extensive study on specific grasses and plants to record host plants of various butterfly species is needed.

Table -1. Checklist of butterflies from Melghat Tiger Reserve (MTR)

Sr. No	Common Name	Scientific Name	Specific Area	Status
Suborder : Rhopalocera				
I. Family : PAPILIONIDAE				
1. Subfamily : Papilioninae				
01	Common Mormon	<i>Papilio polytes</i> Cr.	GNP,MS,NS,WS,AS,O	C

			F	
02	Lime Butterfly	<i>Papilio demoleus</i> L.	GNP,MS,NS,WS,AS,O F	VC
03	Common Rose	<i>Pachliopta aristolochiae</i> F.	GNP,MS,NS,WS,AS,O F	NR
04	Crimson Rose	<i>Pachliopta hactor</i> L.	GNP,MS,OF	R
05	Malabar Rose	<i>Pachliopta pandiyan</i> M	MS	VR
06	Tailed Jay	<i>Graphium Agamemnon</i> L.	GNP,MS,NS,WS,AS,O F	NR
07	Common Jay	<i>Graphium doson</i> Fd.	MS,OF	VR
08	Spot Swordtail	<i>Graphium nomius</i> Esp.	GNP,MS,WS,AS,OF	VC
09	Common Bluebottle	<i>Graphium sarpedon</i> L.	MS	VR
II. Family : PIERIDAE				
1. Subfamily : Pierinae				
10	Common Jezebel	<i>Delis eucharis</i> Dry.	GNP,MS,NS,WS,AS,O F	C
11	Common Gull	<i>Cepora nerissa</i> F.	GNP,MS,NS,WS,AS,O F	NR
12	Pioneer	<i>Anaphaeis aurota</i> F.	GNP,MS,NS,WS,AS,O F	VC
13	Common Albatross	<i>Appis albina darada</i> Fd.	MS	VR
14	Great Orange Tip	<i>Hebomoea glaucippe</i> L.	MS,NS,WS,AS,OF	R
15	White Orange Tip	<i>Ixias Marianne</i> Cr.	MS,NS,WS,AS,OF	NR
16	Yellow Orange Tip	<i>Ixias pyrene</i> L.	MS,WS,AS,OF	NR
17	Small Orange Tip	<i>Calotis etrida</i> Hub.	WS,AS,OF	VR
18	Common Wanderer	<i>Pareronia valeria</i> Cra.	GNP,MS,OF	R
2. Subfamily : Colladinae				
19	Lemon Emigrant	<i>Catopsilia crocale</i> Pomona F.	GNP,MS,NS,WS,AS,O F	C
20	Mottled Emigrant	<i>Catopsilia pyranthe</i> L.	GNP,MS,NS,WS,AS,O F	VC
21	African Emigrant	<i>Catopsilia pyranthe florella</i>	GNP,MS	C
22	Small Grass Yellow	<i>Eurema brigitta rubella</i> Wallace	GNP,MS,NS,WS,AS,O F	VC
23	Common Grass Yellow	<i>Eurema hecabe</i> L.	GNP,MS,NS,WS,AS,O F	VC
24	Spotless Grass Yellow	<i>Eurema laeta</i> Bdv.	GNP,MS,NS,WS,AS,O F	C
25	Threespot Grass Yellow	<i>Eurema blanda silhetana</i> Wallace	GNP,MS,NS,WS,AS,O F	NR
III. Family : DANAIDAE				
1. Subfamily : Danainae				
26	Plain Tiger	<i>Danaus chrysippus</i> L.	GNP,MS,NS,WS,AS,O F	VC
27	Striped Tiger	<i>Danaus genutia</i> Cr.	GNP,MS,NS,WS,AS,O F	C
28	Blue Tiger	<i>Tirumala limniace</i>	GNP,MS,NS,WS,AS,O	C

			F	
29	Dark Blue Tiger	<i>Tirumala Septentrionis</i>	GNP,MS	R
30	Glassy Tiger	<i>Parantica aglea</i>	MS	VR
2. Subfamily : Euploeinae				
31	Common Indian Crow	<i>Euploea core</i> Cr.	GNP,MS,NS,WS,AS,O F	VC
IV. Family : SATYRIDAE				
1. Subfamily : Satyrinae				
32	Comm. Evening Brown	<i>Melanitis leda ismeme</i> Cr.	GNP,MS,NS,WS,AS,O F	VC
33	Dark Evening Brown	<i>Melanitis phedima</i> Stoll.	GNP,MS	NR
34	Common Bushbrown	<i>Mycalesis perseus</i> F.	GNP,MS,NS,WS,AS,O F	VC
35	Darkbrand Bushbrown	<i>Mycalesis mineus</i> L.	MS	VR
36	Tamil Bush Brown	<i>Mycalesis Visala subdita</i> M.	GNP,MS	R
37	Common Tree Brown	<i>Lethe rohria</i> F.	GNP,MS,AS,OF	C
38	Bamboo Tree Brown	<i>Lethe europa</i> F.	GNP,MS,WS,OF	C
39	Banded Tree Brown	<i>Lethe confusa</i> Aurivill	GNP,MS	VR
40	Common Three Ring	<i>Ypthima asterope mahratta</i> M	GNP,MS,NS,WS,AS	C
41	Common Four Ring	<i>Ypthima ceylonica huebneri</i> Kirby.	MS	VR
V. Family : NYMPHALIDAE				
1. Subfamily : Biblidinae				
42	Joker	<i>Byblia ilithyia</i> Dry.	GNP,MS,WS,AS,OF	NR
43	Common Castor	<i>Ariadne merione</i> Cr.	GNP,MS,NS,WS,AS,O F	LC
44	Angled Castor	<i>Ariadne ariadne</i> L.	GNP,MS,NS,WS,AS,O F	R
2. Subfamily : Agrynninae				
45	Common Leopard	<i>Phalanta phalantha</i> Dry.	GNP,MS,NS,WS,AS,O F	VC
3. Subfamily : Nymphalinae				
46	Painted Lady	<i>Cynthia cardui</i> L.	GNP,MS,NS,WS,AS,O F	C
47	Lemon Pansy	<i>Junonia lemonias</i> L.	GNP,MS,NS,WS,AS,O F	VC
48	Yellow Pansy	<i>Junonia hierta</i> F.	GNP,MS,NS,WS,AS,O F	C
49	Blue Pansy	<i>Junonia orithya</i> L.	GNP,MS,NS,WS,AS,O F	VC
50	Grey Pansy	<i>Junonia atlited</i> L.	MS,WS,AS	R
51	Peacock Pansy	<i>Junonia almanac</i> L.	GNP,MS,NS,WS	LC
52	Chocolate Pansy	<i>Precis iphita</i> Cr.	GNP,MS,NS,WS,AS,O F	VC
53	Danaid Eggfly	<i>Hypolamnas misippus</i> L.	GNP,MS,NS,WS,AS,O F	C

54	Great Eggfly	<i>Hypolamnas bolina</i> L.	GNP,MS,NS,WS,AS,O F	VC
4. Subfamily : Limenitidinae				
55	Baronet	<i>Euthalia nais</i> Forst	GNP,MS,NS,WS,AS,O F	C
56	Baron	<i>Euthalia aconthea</i> Cr.	GNP, MS	LC
57	Commander	<i>Moduza procris procris</i> Cr.	GNP,MS,OF	NR
58	Common Sailer	<i>Neptis hylas varmona</i> L.	GNP,MS,NS,WS,AS,O F	VC
59	Common Sergeant	<i>Parathyma perius</i> Linn	GNP,MS, OF	VR
60	Staff Sergeant	<i>Athyma selenophora</i> Koll	MS,OF	VR
5. Subfamily : Charaxinae				
61	Common Nawab	<i>Polyura athamas</i> Dry	MS,NS,WS,AS,OF	VR
62	Black Rajah	<i>Charaxes fabius</i> F.	GNP,MS,WS, AS	R
6. Subfamily : Acraeinae				
63	Tawny Coster	<i>Acraea violae</i> F.	GNP,MS,NS,WS,AS,O F	VC
VI. Family : RIODINIDAE				
1. Subfamily : Riodininae				
64	Plum Judy	<i>Abisara echerius</i> Stoll.	GNP,MS,NS,WS,AS	C
VII. Family : LYCAENIDAE				
1. Subfamily : Polyommatainae				
65	Tiny Grass Blue	<i>Zizula hylax</i> F.	GNP,MS,NS,WS,AS	C
66	Grass Jewel	<i>Freyeria trochylus</i> Freyer	MS,NS,WS,AS	C
67	Lesser Grass Blue	<i>Zizinia otis</i> F.	MS,NS,WS,AS	R
68	Dark Grass Blue	<i>Zizeeria karsandra</i> M.	MS,NS,WS,AS	R
69	Pale Grass Blue	<i>Pseudozizeeria maha</i> K.	MS,NS,WS,AS,OF	VR
70	African Babul Blue	<i>Azanus jesous</i> (Guerin)	MS, OF	R
71	Common Hedge Blue	<i>Calastrina puspa</i> Moore	MS, OF	R
72	Gram Blue	<i>Euchrysops cnejus</i> F.	GNP,MS,NS,WS,AS,O F	VC
73	Pea Blue	<i>Lampides boeticus</i> Linn	MS,NS,WS,AS,OF	NR
74	Lime blue	<i>Chilades laius</i> Cr.	MS, OF	R
75	Plains Cupid	<i>Chilades pandava</i>	GNP,MS,NS,WS,AS	VC
76	Small Cupid	<i>Chilades parrhasius</i>	GNP,MS,NS,WS,AS,O F	C
77	Common Caerulean	<i>Jamides celeno</i> Cr.	GNP,MS,NS,WS,AS,O F	R
78	Zebra Blue	<i>Leptotes plinius</i> Fab.	GNP,MS,NS,WS,AS,O F	VC
79	Rounded Pierrot	<i>Tarucus nara</i> Kollar	GNP,MS,NS,WS,AS,O F	VC
80	Dark Pierrot	<i>Tarucus ananda</i> DeN	MS,WS,AS	R
81	Forget -me-not	<i>Catochrysops strabo</i>	GNP,MS,NS,WS,AS	NR
82	Common Lineblue	<i>Prosotas nora</i> C & R Felder	MS, WS, AS	R
2. Subfamily : Aphnaeinae				
83	Common Silverline	<i>Spindasis vulcanus</i> F.	MS,OF	R
3. Subfamily : Theclinae				

84	Slate Flash	<i>Rapala manera</i> H.	GNP,MS,NS,WS,AS,O F	NR
85	Indian Red Flash	<i>Rapala jarbus</i> Fab.	MS	R
86	Western Centaur Oakblue	<i>Nilasera pseudocentaurus</i>	MS	VR
87	Large Oakblue	<i>Arhopala amantes</i> Hew	GNP	NR
B. Suborder : Grypocera				
VIII. Family : HESPERIIDAE				
1. Subfamily : Coeliadinae				
88	Brown Awl	<i>Badamia exclamationis</i>	GNP,MS,OF	NR
89	Common Banded Awl	<i>Hasora chromus</i> Car	MS,NS,WS,AS,OF	LC
2. Subfamily : Pyrginae				
90	Spotted Small Flat	<i>Sarangesa purendra</i> M.	GNP,MS,NS,WS,AS,O F	C
91	Common Spotted Flat	<i>Celaenorrhinus leucocera</i> Koll.	GNP,MS,OF	NR
92	Indian Skipper	<i>Spialia galba</i> F.	GNP,MS	VR
93	Tricolor Pied Flat	<i>Pseudocoladenia indrani</i> Moore	MS	R
94	Golden Angle	<i>Odontoptilum ransonnetti</i> C & R Felder	GNP,MS	C
3. Subfamily : Hesperinae				
95	Chestnut Bob	<i>Lambrix salsala</i> M.	GNP,MS,NS	R
96	Vindhyan Bob	<i>Arnetta vindhiana</i> Moore	GNP,MS	VR
97	Bush Hopper	<i>Ampitita dioscorides</i> Fab	GNP,MS	R
98	Rice Swift	<i>Borbo cinnara</i> Wallace	GNP,MS,NS,WS,AS,O F	VC
99	Grass Demon	<i>Udaspes folus</i> Cr.	GNP,MS,WS	C
100	Common Dartlet	<i>Oriens gola</i> Moore	MS	VR
101	Small Branded Swift	<i>Pelopidas mathias mathias</i>	GNP,MS	NR

Abbreviations used for the specific areas of the MTR where the butterflies were found are:

MTR – Melghat Tiger Reserve,
MS- Melghat Sanctuary,
GNP-Gugamal National Park,
NS- Narnala Wildlife Sanctuary,
WS-Wan Sanctuary,
AS-Ambabarwa Sanctuary and

Abbreviations Used for Status:

Very Common - **VC**, Common - **C**, Not Rare - **NR**, Rare - **R**, Very Rare – **VR**,
Locally Common - **LC**

Table - 2. List of host plants of butterflies recorded from MTR.

Sr. No.	Host plant species	Used by butterfly spp.	Observations/remarks
01	<i>Abelmoschus spp.</i>	54	
02	<i>Abutilon spp.</i>	54	
03	<i>Acacia caesia</i>	61	
04	<i>Acacia pennata</i>	61,84	
05	<i>Acacia Spp.</i>	72,75,76,81	10 spp. in MTR
06	<i>Acacia tora</i>	84	
07	<i>Achyranthes aspera</i>	93,94	
08	<i>Adina cordifolia</i>	60	Large tree, common in MTR
09	<i>Aegle marmelos</i>	1, 2,	Frequently used all over MTR
10	<i>Albizia lebbek</i>	78	
11	<i>Anacardium occidentale</i>	56	
12	<i>Anona squamosa</i>	1, 6,	
13	<i>Apluda mutica</i>	33,37	Grass, in MTR
14	<i>Apulda spp.</i>	33	Grass
15	<i>Bambusa arundinaceae</i>	38,95	Record of specific grass needed.
16	<i>Barleria cristata</i>	53,54	
17	<i>Barleria Spp.</i>	47,48,49,50, 51,52	3 spp. in MTR
18	<i>Bryonia palmate</i>	56	
19	<i>Buhainia recemosa</i>	19,20,21	
20	<i>Butea frondosa</i>	19,20,21	
21	<i>Butea monosperma</i>	72,73,75,76, 77	
22	<i>Cadaba indica</i>	83	Plant found outside MTR
23	<i>Caesalpinia decapetala</i> Fam: Mimosaceae	22	Recorded as a new host plant of <i>Eurema brigitta rubella</i> W. in MTR
24	<i>Calotropis gigantea</i>	26,28,29,30	
25	<i>Capillipedium Spp.</i>	39	3 spp. found in MTR
26	<i>Capparis grandis</i>	14,15,16,17	Outside MTR
27	<i>Capparis zeylanica</i>	11,12,14,15, 18	Outside MTR
28	<i>Carvia callosa</i>	52,91	Common plant all over MTR
29	<i>Cassia occidentalis</i>	19,20,21	Frequently used by <i>Catopsilia pyranthe</i> (Mottled Emigrant)
30	<i>Cassia fistula</i>	19,20,21,25	
31	<i>Cassia siamea</i>	19,20,21	
32	<i>Cassia tora</i>	19,20,21	
33	<i>Citrus Spp.</i>	2,	In cultivation around MTR
34	<i>Corchorus spp.</i>	58,59	5 spp. in MTR
35	<i>Crotalaria spp.</i>	73	
36	<i>Cryptolepis buchanani</i>	26,31	Frequently used all over MTR
37	<i>Curcuma aromatica</i>	99	
38	<i>Curcuma dicipiens</i>	99	
39	<i>Curcuma pseudomontana</i>	99	
40	<i>Cymbopogon martini</i>	98	Common grass in some areas
41	<i>Cynodon dactylon</i>	40	Recorded as a new host plant.

42	<i>Delonix regia</i>	61	Cultivated exotic plant.
43	<i>Dendrophthoe falcate</i>	10	
44	<i>Diospyros melanoxylon</i>	55	
45	<i>Diplocyclos palmatus</i>	56	
46	<i>Dregea volubilis</i>	28	
47	<i>Echinops echinatus</i>	46	Recorded as a new host plant
48	<i>Embellia spp</i>	64	
49	<i>Ficus racemosa</i>	31	
50	<i>Ficus religiosa</i>	31	
51	<i>Flacourtia indica</i>	45	
52	<i>Flacourtia Montana</i>	45	
53	<i>Flemingia spp.</i>	58,59	2 spp. in MTR
54	<i>Glochidion velutinum</i>	59	
55	<i>Gnaphalium luteo</i>	46	
56	<i>Gnaphalium pulvinatum</i>	46	
57	Grasses	34,36,37,40	Specific grass record needed
58	<i>Grewia sp.</i>	58,59,61	6 spp. in MTR
59	<i>Helicteres isora</i>	58,59	
60	<i>Hemidesmus indicus</i>	31	
61	<i>Hygrophila auriculata</i>	47,48,49,50, 52,65,66,67, 68,69	
62	<i>Justicia procumbens</i>	52	
63	<i>Lantana camera</i>	66,67,68,69	
64	<i>Mangifera indica</i>	56	
65	<i>Michelia champaca</i>	2,6,7,	Cultivated plant.
66	<i>Milius tomentosum</i>	6,7,8,9	
67	<i>Mitragyna parvifolia</i>	57	
68	<i>Mucuna purpurea</i>	58,59	
69	<i>Murraya koenigii</i>	1	
70	<i>Oplismenus compositus</i>	32,33	
71	<i>Orizya sativa</i>	32,33,98	Cultivated plant.
72	<i>Ougeinia oojensis</i>	72,75,76,81	
73	<i>Panicum spp.</i>	32,33	4 spp in MTR, 3 wild
74	<i>Passiflora foetida</i>	63	Common climber, found around villages, recorded outside MTR
75	<i>Pennisetum alopecuross</i>	98	
76	<i>Plumbago zeylanica</i>	78	
77	<i>Polyalthia longifolia</i>	6,7,9,	Cultivated around rest houses & schools
78	<i>Pongamia pinnata</i>	77,89	Common in MTR along streams.
79	<i>Portulaca oleracea</i>	54	4 spp. in MTR
80	<i>Psorela corylifolia</i>	2,	Mostly used by <i>Papilio demoleus</i> L
81	<i>Richinus communis</i>	43,44,89	More plant sp. search required.
82	<i>Schleichera oleosa</i>	86	Found in Raipur range and N. P. of MTR
83	<i>Sesbania bispinosa</i>	78	

84	<i>Sida rhombifolia</i>	47,48,49,52, 53,54,92	
85	<i>Sorghum spp.</i>	32,33	4 spp in MTR, 3 wild
86	<i>Strobilanthes spp.</i>	66,67,68,69	1 sp. found in MTR
87	<i>Tamarindus indicus</i>	62	
88	<i>Terminalia alata</i>	86,87	
89	<i>Terminalia bellirica</i>	88	
90	<i>Tragia cannabina</i>	42	Both <i>Tragia sp.</i> recorded outside MTR
91	<i>Tragia Plukenetii</i>	42	Recorded as a new host plant
92	<i>Tricholepis amplexicaulis</i>	46	
93	<i>Vigna trilobata</i>	72,75,76,81	
94	<i>Vigna unguiculata</i>	58,59	Cultivated plant.
95	<i>Waltheria indica</i>	92	
96	<i>Zea mays</i>	32,33	Cultivated plant.
97	<i>Zingiber nimmonii</i>	99	
98	<i>Ziziphus mauritiana</i>	79,80,83	
99	<i>Ziziphus rugosa</i>	79,80,83	
100	<i>Ziziphus spp.</i>	84	
101	<i>Zornia gibbosa</i>	46	

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