

BUTTERFLIES OF TAMHINI – DONGARWADI AREA, MULSHI, MAHARASHTRA

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Mulshi (18°25'-18°41'N and 73°20'-73°35'E) is located almost centrally in northern Western Ghats, about 70km west of Pune District, Maharashtra, at an altitude of about 700m. It forms the crest line of Western Ghats, with hill ranges and gently sloping part bordering the Deccan Plateau and has a total area of 250km². The average rainfall of the region is about 6500mm. The vegetation is moist deciduous as well as with some evergreen forest patches with many sacred groves. This area provides a good habitat to diverse forms of plants and animals. Prominent feature of this area is a centrally located Mulshi Lake formed by a dam constructed by Tata Electric Company during 1921 to 1924. This privately owned lake is about 37km², spreading in a semicircular manner in the Mula basin. The lake water flows over the western escarpment for hydro-electric power generation at Bhira station in the Konkan.

Tamhini and Dongarwadi are small villages situated close to the backwaters of Mulshi Lake. People, mostly tribals as well as non-tribal communities consisting of Mahadev Koli, Marathas, Dhangras and Katkaris inhabit the area. The main crop cultivation is *Oryza sativa* (rice) supplemented by *Eleusine coracana* (Nachani or Ragi), *Panicum miliaceum* (Varai) and *Guizotia abyssinica* (Karala or Ram-til or Kala-til).

A survey was made to record the diversity of butterflies at three specifically selected transects under the Biodiversity Monitoring Project. These transects, each 500m long and 10m wide, included different types of habitats such as scrubland, grassland, forest, waterfalls, streams, canopy and croplands. Butterfly species were observed and counted live by line transect method in the same transects once a month from June 1999 to June 2002, and identified by using various field guides (Haribal, 1992; Gunathilagaraj *et al.*, 1998; Smetacek, 2000). Single specimens of some species were collected and dry-preserved following (Beirne, 1955) and further identified by the keys provided by Wynter-Blyth (1957), Smetacek (2000), Peile and Riley (1937). The nomenclature followed was that of

Gaonkar (1996).

Out of 331 species of butterflies listed from Western Ghats by Gaonkar (1996), 72 species were sighted in the Tamhini area during the survey, of which 33 species belonged to family Nymphalidae, nine to Papilionidae, 13 to Pieridae, 11 to Lycaenidae and six to Hesperidae. Species belonging to family Nymphalidae were the most dominant (46%) followed by Pieridae (18%), Lycaenidae (15%), Papilionidae (13%) and Hesperidae (8%). The number of genera recorded in each family is as follows: Nymphalidae (22), Pieridae (12), Lycaenidae (9), Hesperidae (6) and Papilionidae (3). Species like *Danaus chrysippus*, *Danaus genuta*, *Euthalia garuda*, *Hypolimnas bolina*, *Kallima horsefieldi*, *Neptis hylas*, *Parantica aglea*, *Phalanta phalanta*, *Tirumala limniace* and *Papilio polymnestor* were very commonly found throughout the year, while species like *Charaxes solon* and *Appias indra* were sighted only once throughout the survey and thus appear to be very rare.

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Table 1. List of butterflies of Tamhini-Dongarwadi area, Maharashtra

Scientific name	Common name	Habitat	Abundance	Months observed
<u>Nymphalidae</u>				
<i>Acraea violae</i>	Tawny Coster	S	O	June to September
<i>Ariadne merione</i>	Common Castor	-	O	June to September
<i>Byblia ilithya</i>	Joker	-	R	July and August
<i>Charaxes solon</i>	Black Rajah	-	R	13 April 2001
<i>Crytes thyodomas</i>	Painted Lady	S, G	O	August to December
<i>Cupha erymanthis</i>	Rustic	FR	O	June to October
<i>Cynthia cardui</i>	Common Map	S, WR	C	June to December
<i>Danaus chrysippus</i>	Plain Tiger	LF	VC	found throughout the year
<i>Danaus genutia</i>	Stripped Tiger	CP	VC	found throughout the year
<i>Euploea core</i>	Common Indian Crow	CP	C	May to January
<i>Euthalia garuda</i>	Common Baron	CP	VC	found throughout the year
<i>Euthalia lubentina</i>	Gaudy Baron	-	O	July to September
<i>Hypolimnas bolina</i>	Great Egg Fly	CP	VC	found throughout the year
<i>Hypolimnas misippus</i>	Danaid Egg Fly	CP	VC	found throughout the year
<i>Junonia almana</i>	Peacock Pansy	S, G, LF	C	June to December
<i>Junonia atlites</i>	Grey Pansy	S, G, LF	C	May to January
<i>Junonia hierta</i>	Yellow Pansy	S, G, LF	C	April to November
<i>Junonia iphita</i>	Chocolate Pansy	S, G, LF	C	June to January
<i>Junonia lemonias</i>	Lemon Pansy	S, G, LF	C	June to November
<i>Junonia orithya</i>	Blue Pansy	S, G, LF	C	May to November
<i>Kallima horsfieldi</i>	Blue Oakleaf	FR, S, G	VC	found throughout the year
<i>Melanitis leda</i>	Common Evening Brown	CP	C	June to March
<i>Melanitis phedima</i>	Dark Evening Brown	-	C	August to December
<i>Mycalis perseus</i>	Common Bush Brown	-	O	July to September
<i>Neptis hylas</i>	Common Sailor	S, R, WR	VC	found throughout the year
<i>Pantoporia perius</i>	Sergeant	-	C	July to January
<i>Parantica aglea</i>	Glassy Tiger	CP	VC	found throughout the year
<i>Phalanta phalanta</i>	Common Leopard	CP	VC	found throughout the year
<i>Polyura schreiberi</i>	Blue Nawab	-	O	August to October
<i>Tirumala limniace</i>	Blue Tiger	CP	VC	found throughout the year
<i>Ypthima asterope</i>	Common Three Ring	-	R	July and August
<i>Ypthima avanta</i>	Common Four Ring	CP	C	June to April
<i>Ypthima baldus</i>	Common Five Ring	CP	C	July to February
<u>Papilionidae</u>				
<i>Graphium agamemnon</i>	Tailed Jay	-	O	August to November
<i>Graphium sarpedon</i>	Common Bluebottle	-	R	February and March
<i>Pachliopta aristolochiae</i>	Common Rose	C	O	August to October
<i>Pachliopta hector</i>	Crimson Rose	C	O	June to September
<i>Pachliopta paniiana</i>	Malabar Rose	-	O	July to October
<i>Papilio demoleus</i>	Lime Butterfly	-	O	August to November
<i>Papilio helenus</i>	Red Helen	C	R	March and April
<i>Papilio polymnestor</i>	Blue Mormon	FR, S	VC	found throughout the year
<i>Papilio polytes</i>	Common Mormon	C,	O	August to November
<u>Pieridae</u>				
<i>Appias indra</i>	Plain Puffin	-	R	13 April 2001
<i>Anaphaeis aurota</i>	Pioneer	S, C	O	July to October
<i>Catopsilia pomona</i>	Common Emigrant	FR, S, C	C	February to November
<i>Catopsilia pyranthe</i>	Mottled Emigrant	FR, S	O	July to April
<i>Cepora nerissa</i>	Common Gull	-	R	August and September
<i>Delias eucharis</i>	Common Jezebel	S, LF	O	June to November
<i>Dercas lycoris</i>	Sulphur	FR, S, C	C	March to September
<i>Eurema hecabe</i>	Common Grass Yellow	S, C, G	C	May to January

Scientific name	Common name	Habitat	Abundance	Months observed
<i>Hebomoia glaucippe</i>	Great Orange Tip	-	O	November to March
<i>Ixias marianne</i>	White Orange Tip	-	O	September to January
<i>Leptosia nina</i>	Psyche	-	R	September and October
<i>Pararonia valeria</i>	Common Wanderer	-	O	August to December
<i>Pieris canidia</i>	Indian Cabbage White	-	C	June to February
<u>Lycaenidae</u>				
<i>Abisara echerius</i>	Plum Judy	S, C, G, LF	C	May to March
<i>Castalius caleta</i>	Angled Pierrot	-	C	June to February
<i>Castalius rosimon</i>	Common Pierrot	-	C	July to February
<i>Chilades pandava</i>	Plains Cupid	-	R	August and September
<i>Euchrysops cnejus</i>	Gram Blue	S, C, G, LF	C	June to January
<i>Jamides bochus</i>	Dark Cerulean	S, C, LF	C	July to December
<i>Jamides celeno</i>	Common Cerulean	S, C, LF	C	June to November
<i>Nacaduba nora</i>	Line Blue	S, C, LF	O	June to September
<i>Rathinda amor</i>	Monkey Puzzle	S, G	O	July to November
<i>Spalgis epius</i>	Ape Fly	FR, S,	O	July to September
<i>Talicauda nyseus</i>	Red Pierrot	S, G, LF	O	June to October
<u>Hesperiidae</u>				
<i>Astycus pythias</i>	Dark Palm Dart	-	O	November to April
<i>Gangara thyrus</i>	Giant Red Eye	-	R	March and April
<i>Odontoptilum angulata</i>	Chestnut Angle	-	O	August to December
<i>Syrichthus galbe</i>	Indian Skipper	-	C	July to February
<i>Tagiades litigiosa</i>	Water Snow Flat	-	O	March, April, May, June
<i>Udaspes folus</i>	Grass Demon	-	R	April, May

S - Scrub; G - Grassland; FR - Forest; WR - Waterfalls; LF - Leaves; CP - Canopy; C - Croplands; R - Rare; O - Occasional; C - Common; VC - Very common