



Butterfly diversity of Goa

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ABSTRACT: An inventory of butterfly species of Goa was made. Fifty two species of butterflies, belonging to seven families were recorded. © 2001 Association for Advancement of Entomology

KEYWORDS: Butterfly diversity, Goa

Lepidoptera is the second largest Order of the Class Insecta and perhaps the most widely studied Order. Due to large-scale conversion of natural landscape in the recent past, the butterfly population has faced severe threat to their habitat.

Goa, with the land area of 3701 km², lies between latitude 15°48' 00" N and 14° 53' 54" N and longitude 74° 20' 13" E and 73° 40' 33" E. The altitude varies from sea level to 1022 m. Goa has a salubrious climate and receives an average annual rainfall of about 300 cm. It is situated on the slopes of Western Ghats, with the Arabian Sea on its west. Goa also harbors estuarine vegetation, semi-evergreen and evergreen forests. Though there are a number of records of butterflies in various places in India (Mani, 1986; Haribal-Meena, 1992; Mehta *et al.*, 1999; Murugan *et al.*, 1999) there is hardly any report on butterfly diversity of Goa. Hence, the present work was undertaken.

Net collection was the primary method of collection. In addition, sweeping, baiting and collecting of immature stages were used. The collection was conducted all over the State of Goa, by following random and opportunistic collection for about an year. The collected butterflies were killed, pinned and preserved following standard methods (Anonymous, 1990).

During the study period (1998-1999), 52 species belonging to seven families, namely Papilionidae, Pieridae, Danaidae, Satyridae, Nymphalidae, Lycaenidae and Hesperidae were observed and recorded. Relatively rare species such as Common gem, White band blue and Cornelian were recorded from isolated places like Charao Islands, Old Goa and Brittona. Relatively undisturbed places such as Taleigao Plateau and Bambolim exhibited higher density of butterflies. Table 1 gives a list of butterflies recorded in the present study.

More than 17 820 species of butterflies have been identified till date. There are about 1500 butterfly species in the Indian subcontinent (Gay *et al.*, 1992). Goa, with an area of about 3701 km² has rich vegetation due to the presence of Western Ghats in its eastern part. The diversity of environmental conditions, wide agricultural practices and horticultural activities have provided varied ecological conditions for butterflies. For example, the members of the Family Papilionidae feed on flowers, while some prefer to sit on damp grounds near puddles and others love basking in sun. The members of Pieridae love open places, males generally preferring

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TABLE 1: Butterflies collected from the state of Goa

Family	Common name	Scientific name
Papilionidae	Common mormon	<i>Papilio polytes polytes</i>
	Blue mormon	<i>Papilio polymnester</i>
	Crimson rose	<i>Pachliopta hector</i>
	Common rose	<i>Pachliopta aristolochiae aristolochiae</i>
	Southern birdwing	<i>Troides minus</i>
	Tailed Jay	<i>Graphium agamemnon manid</i> or <i>Zatidas agamemnon</i>
Pieridae	Common emigrant	<i>Catopsilia crocale</i>
	Common grass yellow	<i>Cepora nerissa nerissa</i> or <i>Huphina nerissa</i>
	Common gull	<i>Eurema hecabe simulata</i> or <i>Terias hecabe</i>
	Psyche	<i>Leptosia nina nina</i>
	Mottled emigrant	<i>Catopsilia comona</i>
	Common wanderer	<i>Pararonia valeria hippia</i> or <i>Pararonia valeria</i>
	Common Jizabel	<i>Delias eucharis</i>
Danaidae	Plain tiger	<i>Danaus chrysippus chrysippus</i> or <i>Danaus chrysippus</i>
	Stripes tiger	<i>Danaus genutia genutia</i> or <i>Danaus plexiopus</i>
	Glassy blue tiger	<i>Parantica aglea aglea</i> or <i>Danaus aglea</i>
	Blue tiger	<i>Tirumala limniace exoticus</i> or <i>Danaus limniaca leopardus</i>
	Common crow	<i>Euploea core core</i>
	Dark blue tiger	<i>Tirumala septentrionis dravidarum</i> or <i>Danaus melissa</i>
Satyridae	Common palm fly	<i>Elymnias hypermenstra caudata</i>
	Bushbrown	<i>Mycalesis subdita</i>
	Common evening brown	<i>Melanitis lada lada</i> or <i>Melanitis lada ismene</i>
Nymphalidae	Common castor	<i>Aridna merions merions</i> or <i>Ergolis merions</i>
	Common leopard	<i>Phalanta phalanta</i> or <i>Atella phalantina</i>
	Common sargent	<i>Athyma gerius gerius</i> or <i>Panthogoria gerius</i>
	Yellow jack sailor	<i>Moduza procris undifragus</i> or <i>Limentis procris</i>
	Danaid eggfly	<i>Hypolimnea misippus</i>
	Great eggfly	<i>Tanaecia lepidea miyana</i> or <i>Euthelia lepidae</i>
	Baron	<i>Euthelia aconthe meridionalis</i> or <i>Euthalia garuda</i>
	Grey pansy	<i>Pracis allites</i>
	Peacock pansy	<i>Pracis almana almana</i>
	Lemon pansy	<i>Precis lemonias lemonias</i>
	Tamil yeoman	<i>Cirrochros thais thais</i>
	Black prince	<i>Rohana garisatis</i>
	Black rajah	<i>Charaxes solon solon</i> or <i>Charaxes fabius</i>
	Map butterfly	<i>Cyrtasis thyodamas indica</i>
	Painted lady	<i>Venessa cardui</i>
Lycaenidae	Common pierrot	<i>Castalius rosimon rosimon</i>
	Banded blue pierrot	<i>Discolampa ethion vavasanus</i> or <i>Castalius ethion</i>
	Red pierrot	<i>Talicauda nyssus nyssus</i>
	Common cerulean	<i>Jamides celena selianus</i> or <i>Jamides celena celena</i>
	Common silverline	<i>Spindasis vulcanus vulcanus</i>
	Monkey puzzle	<i>Rathinda anor</i>
	Vamfly	<i>Loxura atymnus atymnus</i>
	White banded royal	<i>Ancema cotys</i> or <i>Pratapa cotys</i>
	Common gem	<i>Poritia hewitsoni hewitsoni</i>
Cornelian	<i>Daudorix epijarbus amatius</i>	
Hesperiidae	Malabar flat	<i>Celaenorrhinus ambareesa</i>
	Multi spotted flat	<i>Celaenorrhinus gulomaya gulomaya</i>

sunshine and females shady areas. The members of Danaidae visit flowers or settle down on damp ground and prefer to sit on the over-ripe fruits or congregate on herbs and shrubs. The members of Nymphalidae visit flowers and love sunshine. They are attracted towards fruits, dung, etc. Members of Hesperidae are mostly found on open grassland. They are attracted towards flowers and feed on them but prefer to settle on ground in shady areas (Gunathilagaraj *et al.*, 1998).

Although only 52 species of butterflies were recorded from Goa in this study, it is estimated that at least 150 species may occur.

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