

To Study Butterflies Diversity of Taranga Hills

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Abstract: Present study of butterflies (Lepidoptera) biodiversity from Taranga hills using various methods like Visual observations and aerial net method, during January 2015 to April 2016. A total of 46 species belonging to 34 genera and 5 families of butterflies were identified, in which *Nymphalidae* (17 species) was most dominant family followed by family *Pieridae* (15 species), *Lycaenidae* (07 species), *Papilionidae* (05 species) and *Hesperiidae* (02 species). Results also showed that study area has rich and unique biodiversity of butterfly fauna.

Keywords — Butterfly, diversity, Taranga Hills

I. INTRODUCTION

Class Insect is one of the larger classes in phylum Arthropoda. Butterflies belong to the great order Lepidoptera of Class Insect. Butterflies are diurnal, which are serving to be pollinators and biological indicator in ecosystems. Spastically, 1501 butterflies' species are recorded from India (Gaonkar, 1996). There are about 193 species are recorded from Gujarat State (Parasharya, B. & J. Jani. 2007). Because of the primary limitations using this in conservation studies is time-consuming along with unavailability of proper standardized study procedures, insufficient taxonomic data about their biology and distribution. Additionally, the interval in this particular research field is due to an inadequate number of interested Taxonomists. The present study was carried out in Taranga Hills to document the butterfly fauna.

II. STUDY AREA

Taranga Hills are located (23.540 N and 72.380 E) in Satlasana taluka of Mahesana district with total area 18.12 km². Climatic condition of the area is semi-arid with irregular rainfall. Temperature ranges in day around 38°C in summer and 20°C in winter. The Saraswati and The Sabarmati are two main rivers of area. Dharoi dam on the Sabarmati is being the main source of irrigation in taluka.

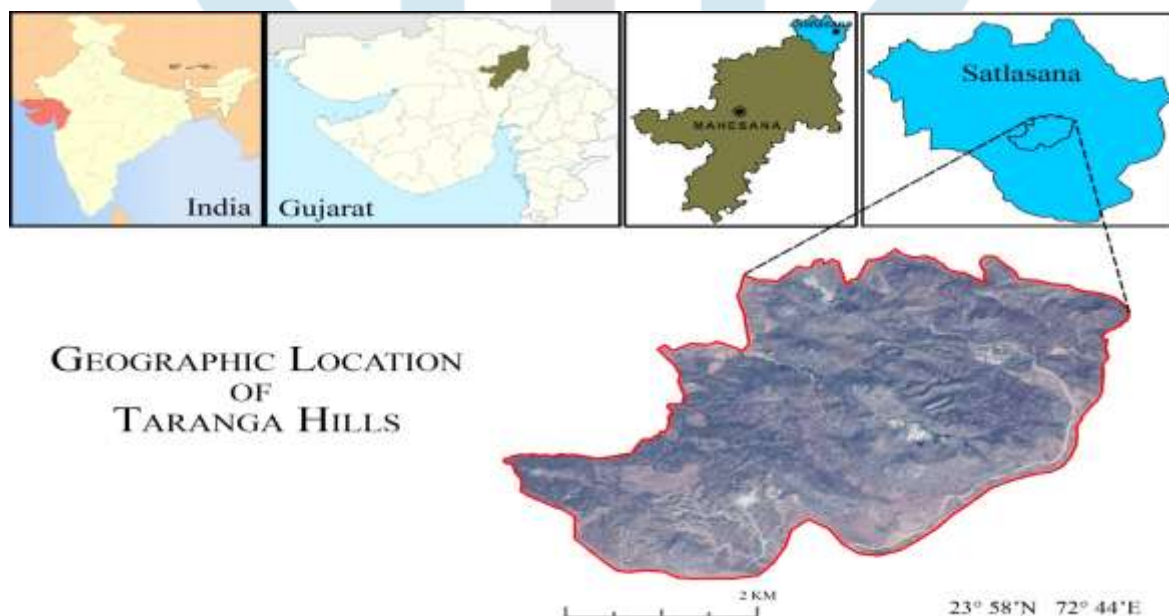


FIGURE 1: MAP OF TARANGA HILLS

III. METHODOLOGY

Visual observations and aerial net method were used to monitor butterflies. Samplings were carried out every three weeks, by collecting adults on a fixed transect which transects were of 1.5kms length and 20m width, within the investigated sites. Monitoring were carried out in sunlit situations at fixed time, walking on a fixed route and observing both sides of transect.

Samples were collected of the species that could not be identified in the field and were photographed in the field, which were later identified using relevant literatures.

IV. RESULTS:

During study, 46 species from 5 families were recorded, details about which can be found in Table-1. The diversity of butterflies resulted in identification of 46 species belonging to 34 genera spread over 5 families of order Lepidoptera. In this total 46 species, family Nymphalidae was numerically dominant forming 36.95% (17 species) followed by Pieridae 32.60% (15 species), Lycaenidae 15.21% (7 species), Papilionidae 10.86% (5 species) and Hesperidae 4.34% (2 species). This was amazing to investigate that this study cover only small region of Taranga Hills, in different habitats placed in a small region has detected more than 3% of Indian Butterflies.

Table: 1 Checklist of butterflies

Sr. No.	Family	Scientific Name	Common Name
1.	Papilionidae	<i>Pachliopta hector</i>	Crimson Rose
2.		<i>Pachliopta aristolochiae</i>	Common Rose
3.		<i>Graphium doson</i>	Common Joy
4.		<i>Papilio demoleus</i>	Common Lime
5.		<i>Papilio polytes</i>	Common Mormon
6.	Pieridae	<i>Appias libythea</i>	Western Striped albatross
7.		<i>Colotis amata</i>	Small Salmon Arab
8.		<i>Colotis etrida</i>	Little Orange Tip
9.		<i>Belenois aurota</i>	Indian Pioneer
10.		<i>Cepora nerissa</i>	Common Gull
11.		<i>Catopsilia pomona</i>	Lemon Emigrant
12.		<i>Catopsilia pyranthe</i>	Mottled Emigrant
13.		<i>Hebomoia glaucippe</i>	Great Orange Tip
14.		<i>Eurema andersonii</i>	One Spot Grass Yellow
15.		<i>Leptosia nina</i>	Psyche
16.		<i>Ixias marianne</i>	White Orange Tip
17.		<i>Ixias pyrene</i>	Yellow Orange Tip
18.		<i>Prioneris sita</i>	Painted Sawtooth
19.		<i>Pareronia hippia</i>	Indian Wanderer
20.		<i>Eurema hecabe</i>	Common Grass yellow
21.	Nymphalidae	<i>Ariadne ariadne</i>	Angled Castor
22.		<i>Ariadne merione</i>	Common Caster
23.		<i>Acraea terpsicore</i>	Tawny Coster
24.		<i>Danaus chrysippus</i>	Oriental Plain Tiger
25.		<i>Danaus genutia</i>	Oriental Common Tiger
26.		<i>Danaus plexippus</i>	Monarch Butterfly
27.		<i>Euploea core</i>	The Common Crow
28.		<i>Euploea klugii</i>	Brown King crow
29.		<i>Hypolimnas misippus</i>	Danaid Eggfly
30.		<i>Hypolimnas bolina</i>	Common Eggfly
31.		<i>Junonia almana</i>	Peacock Pansy
32.		<i>Junonia iphita</i>	Chocolate Pansy
33.		<i>Junonia orithya swinhoei</i>	Pale Blue Pansy
34.		<i>Junonia lemonias</i>	Lemon Pansy
35.		<i>Melanitis leda</i>	Common Evening Brown
36.		<i>Mycalasis perseus</i>	Common Bushbrown

37.		<i>Tirumala limniace</i>	Blue Tiger
38.	Lycaenidae	<i>Azonus jesous</i>	Topaz Spotted blue
39.		<i>Catochrysops strabo</i>	Forget me not
40.		<i>Euchrysops cnejus</i>	The Gram blue
41.		<i>Tarucus nara</i>	Striped Pierrot
42.		<i>Zizeeria lysimon</i>	Dark Grass Blue
43.		<i>Zizina labradus</i>	Common Grass Blue
44.		<i>Chilades parrhasius</i>	Small Cupid
45.	Hesperiidae	<i>Borbo cinnara</i>	Rice Swift
46.		<i>Badamia exclamationis</i>	Brown Awl

Table: 2 Species contribution percentage

No.	Family	No of Genus	No of Species	Percentage %
1.	Papilionidae	03	05	10.86
2.	Pieridae	12	15	32.60
3.	Nymphalidae	10	17	36.95
4.	Lycaenidae	07	07	15.21
5.	Hesperiidae	02	02	04.34

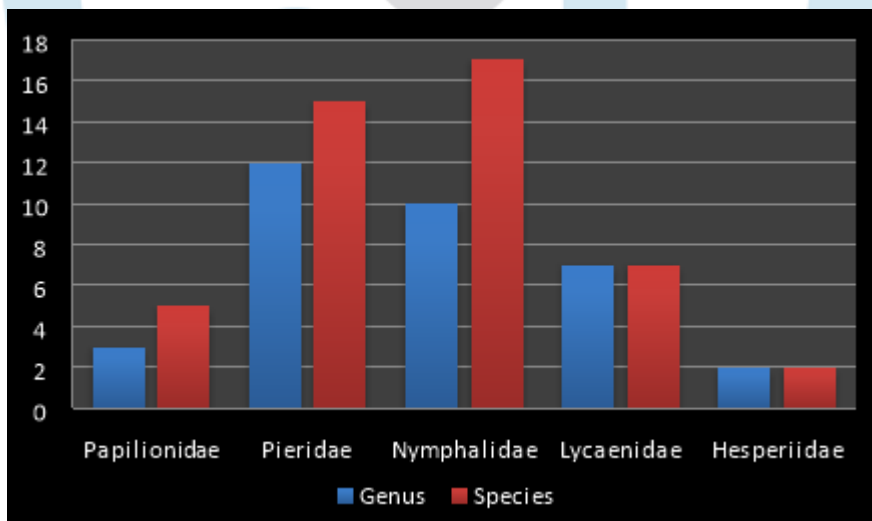


FIGURE 2: FAMILY WISE NUMBERS OF GENERA AND SPECIES

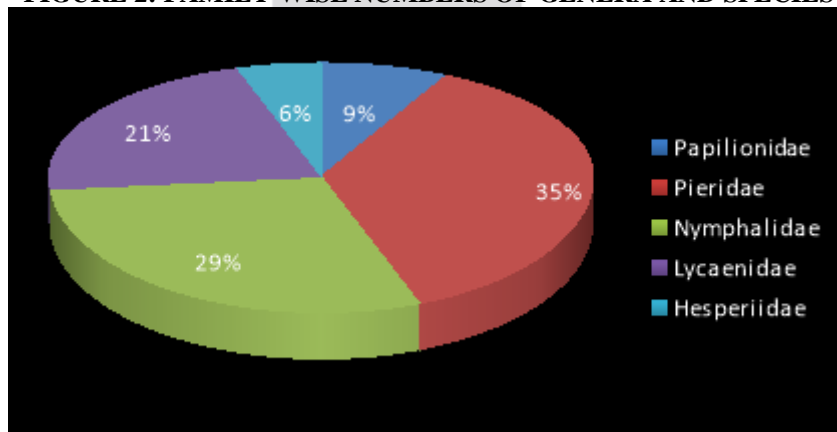


FIGURE 3: PERCENTILE DISTRIBUTION OF FAMILIES

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