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Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.aygrt.isrj.net

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DIVERSITY AND ABUNDANCE OF BUTTERFLIES OF SAIKHEDA WATER RESERVOIR OF YAVATMAL DISTRICT, MAHARASHTRA (INDIA)

Vidhya B. Soyam

Department of Zoology , S. M. College, Pandharkawada, Dt. Yavatmal

Abstract:-Among insects, butterflies are ideal subject for ecological studies of landscapes and their value as indicators of biotope quality is being increasingly recognized because of their sensitivity to minor changes in micro-habitat, in particular, light levels. Saikheda dam is good habitat for butterflies which is located at 20˚-6'-55"N latitude and 78˚-28'-4"E longitude. It is surrounded by forest on one side with major agriculture land. It is an important water body in area for drinking water, commercial fishing, and irrigation purpose In this study 12 species of butterflies of 5 families were recorded during the course of this study.

Keywords: Diversity and abundance ,ecological studies , micro-habitat , agriculture.

INTRODUCTION:

Butterflies offer good opportunities for studies on population and community ecology (Pollard 1991). Many species are strictly seasonal, preferring only a particular set of habitats. Butterflies are suitable for biodiversity studies, as the taxonomy, geographic distribution and status of many species are relatively well known. Further, butterflies are good biological indicators of habitat quality as well as general environmental health (Larsen 1988; Kocher and Williams 2000; Sawchik et al. 2005), as many species are strictly seasonal and prefer only particular set of habitats (Kunte 1997). Butterflies may react to disturbance and change in habitat and act as an ecological indicator (Mac Nally and Fleishman 2004; Fleishman et al. 2004). Among insects, butterflies are ideal subject for ecological studies of landscapes (Thomas and Malorie 1985),and their value as indicators of biotope quality is being increasingly recognized because of their sensitivity to minor changes in micro-habitat, in particular, light levels (Kremen 1992). To a large extent, butterflies (being a pollinating agent) contribute to the growth, maintenance and expansion of flora in the tropical regions where these insects show high abundance and species diversity (Bonebrake et al. 2010).

STUDYAREA

Saikheda dam is located at 20˚-6'-55"N latitude and 78˚-28'-4"E longitude. It is surrounded by forest on one side with major agriculture land. It is an important water body in area for drinking water, commercial fishing, and irrigation purpose.

MATERIALS AND METHODS

Data Collection

Data was collected from two study station with the help of insect net and by handpicking. Specimens were collected from the month of June to September 2013 on (rainy) days .

Butterflies were observed, captured, identified and released immediately at the spot of capture. Many of the species were photographed in the wild. Dead butterflies killed on the roads by speeding vehicles were collected and identified.

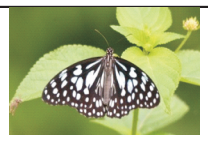
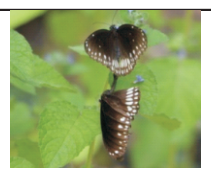
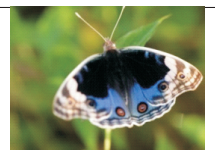
Specimen preparation

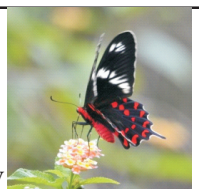
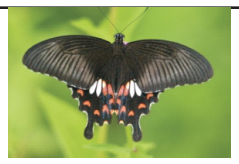
The collected species were preserved after collection and kept in an insect box. After collection the species were stretched in a stretching box and pining with the help of entomological pin. Naphthalene and benzoic acid were used for the preservation.
g the available literature (Evans, 1932; Wynter- Blyth, 1957; Haribal, 1992 and Kunte, 2000

RESULTS AND DISCUSSION:

In this study 12 species of butterflies of 5 families were recorded. It is observed that out of total species recorded 42% are of Nymphalionidae followed by 25% are of Papilionidae,17% are Pieridae family and families Lycaenidae & Hesperidae showed less species diversity and represented by only one species. Increasing species abundance from the beginning of the monsoons (June–July) till early winter (August–November) and decline in species abundance from late winter (January–February) to the end of summer have also been reported by Tiple et al. (2007) and Tiple & Khurad (2009) in similar climatic conditions in this region of central India. They further demonstrated that most of the species were noticeably absent in the disturbed and human impacted sites (gardens, plantation and grassland) and there was no occurrence of unique species in moderately disturbed areas comparable to those of less disturbed wild areas.

Table:Name of different species include in different families.

SCIENTIFIC NAME	COMMAN NAME	PHOTO
(1) Carpona agama Moore (family-hesperiidae)	Spoted angel	
(2) Cepora nerissa fabricius (family-pieridae)	Comman gull	
(3) Colitis etrida Boisduval (family-Pieridae)	Small orange tip	
(4) Danaus genutia Cramer (Family-Nymphalidae)	Striped or comman tiger	
(5) Delais eucharis Drury (family-Lycaenidae)	Comman jezbel	
(6) Euploea klugii Moore (family-Nymphalidae)	Brown king crow	
(7) Hypolimnas misippus Linnaeus (family-Nymphalidae)	Daniad eggfly	
(8) Junonia lemonias Linnaeus (family-Nymphalidae)	Lemen pancy	
(9) Junonia orithiya Linnaeus (family-Nymphalidae)	Blue pancy	

(1) Pachiliopta aristolochiae Fabricus (family-papilionidae)	Comman rose	V 
(2) Papilio demoleus Linnaeus (family-Papilionidae)	Lime butterfly	V 
(3) Papilio helenus Linnaeus (family-Papilionidae)	Red Helen	

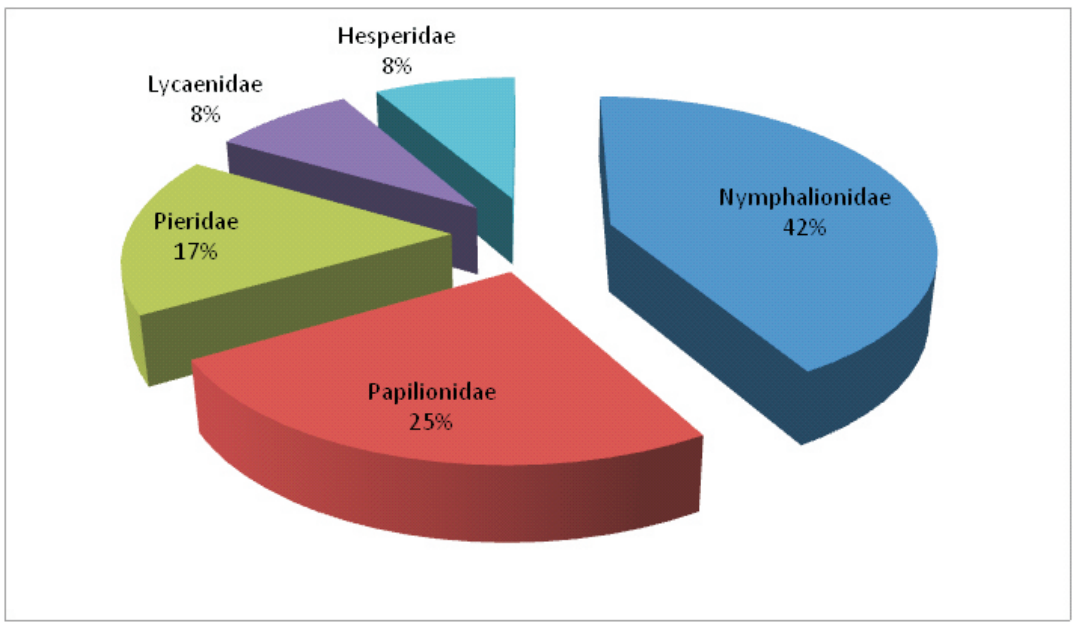


Fig.1 – Abundance of butterfly from wetland of Saikheda

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Vidhya B. Soyam
Department of Zoology , S. M. College, Pandharkawada, Dt. Yavatmal