

The Diversity of butterfly in area of Gharni Dam in Latur District, Maharashtra, India

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Abstract- A study area Gharni Dam is located in Latur District, surrounding village are Shivapur and Dhamangaon, where investigator found, a total 19 species of butterfly belong to 4 family were recorded during the short term study period August to November 2022. Nymphalidae was the richest family that (10 and 50%) of the total species of butterfly recorded in the study area followed by pieridae (4 and 20%) and Lycaenidae (5 and 25%) and Papilionidae (1 and 5%) each respectively maximum number of butterflies were observed in proper Gharni Dam followed by Damangaon village near a dam area and minimum in Shivpur village near area the study area is rich in butterfly diversity and for the research could be conducted to obtain more details and documentation on butterfly diversity for the conservation of Butterfly. This is first record from study area. This study will uplift the information regarding the diversity of butterflies and forms a reference data for future butterfly studies.

Key words: Butterflies, Nymphalidae, Gharni Dam, Shivapur, Dhamangaon,

Introduction:

Butterflies are insects in the microlipidopetra clade rhopolocera from the order Lepidopetera (Wikipedia) more than half of the world's identified animals species are insects in which lipidopeTera is the second largest and most diverse order of class in sector the butterfly belong to order lepidopatera and are the most beautiful and colourful creatures on the earth they are closely associated with plants most efficient pollinators of flowers in addition to monts and bees and important ecological indicators butterflies help in production of food crops seeds and fruits they play important role in the food chain of a forest ecosystem therefore they are essential for the survival of man and animals India hosts about 1,501 butterfly species from 5 different families (Tanmoy Dey and Jayati Ghosh 2016). Butterflies are the indicators of ecological wellbeing they have fascinated humankind from Times immemorial coming under the large insect group called lipido pe Tera butterfly is part of food chain and also indicate climate change and degradation aur wellbeing of the environment in the world there are about 17,000 - 20,000 or more species of butterfly and in India 1502 species (Uday kumar K et al. 2019 book of winged Jewels). Butterflies are wonderful divorce in the shape size and colour they are found everywhere around the world except near the poles there are about 200,000 known species of lipidopetera, of which about 10% are butterfly based on Wikipedia their anatomy they are classified into 6 family the pieridea commonly known as White and sulphurs the papilionidea, or swallowtails. The Nymphalidae, including the morphas the owl butterfly and long wings the Hesperidae, or Skipper the Libytheidae or snout butterflies and the small Lycaenidae (Mohammed A et al. 2019) Heppner (1998) documented 19238 species of butterflies in the world. Later, Gaonkar (1996) reported 1504 species in the Indian subcontinent. D. Abreau (1931) reported about 177 species of butterflies in Central provinces. Tipale (2011) recorded a total 167 species of 90 genera from vidarbha region. Kunte et al. (2012) indicated that India harbored total 1504 of butterfly species which accounted 8.74% of the words butterfly and 285 spaces found in Southern India the peninsular India and Western Ghats have 351 and 334 species respectively. Leon- Cortes et al. (2019) reported that the most diverse species of butterfly in the study area were belonging to Nymphalidea family with 31 species followed by Hespirdia (12) Pieridae (19) and Lycaenidae (16) respectively. The present study was carried out in and around gharani Dam from Latur district Maharashtra gharani Dam is an Earth fill them on Garmi river near Shirur Latur state of Maharashtra opened in 1969 Dharani Dam along with surrounding form small forest like area it's provide abundance of host and marvel food plants vegetation and tropical features which are the most dominant feature for diversity of butterfly observed in there. The aim of current study is to find out the current study of butterfly in gharani dam and to prepare a checklist of butterfly of this area for the conservation of indigenous species present in this area.

Study area

Study area the present study was carried out in and around Gharani Dam, it's geographical location is an around 18.38 0325 8°N, 76.8264913°N. Gharni Dam is and Earthfill Dam on Gharni River near Shirur Latur district in the state of Maharashtra in India. The climate of the study area is characterized by hot summers with the maximum temperature of 40°C in May. Sampling sites were selected in the study area which includes Shivpur village area near by Dam, Damangaon village near by Dam.

Material and Method:

The field survey was carried out in the study area for the period of month August to November 2022. Butterflies were accessed in the study area from 8:00 a.m. to 2:00 p.m. by random observation during Walking through the three selected sites based on habitat present in the study area. The photographs of the butterflies were taken with Huawei mobile camera, for the purpose of identification based on (Tanmoy Dey et al. 2016) and M. Abdullah I et al. 2919).

Identification of the species: The close photographs of butterfly were used for the identification of the species based on color, patterns, size and shape and their design were considered for identification. Also with the help of relevant available literature as well as photographs describe in the Kunte (2000), Kehimkar (2008), T. Dey et al. (2016), M. Abdullahi et al. (2019), U. Kumar et al. Book of winged Jewels (2019).

RESULT: The abundance of butterfly was observed in surrounding a dam area. A checklist of butterfly was made based on study of total 20species from 4 families. Among these families, Nymphalidae consist maximum number of species i.e (10 and 50%) this number followed by Pieridae i.e (4 and 25 %) Lycapenidae consist of (5 and 25%) and Papilionidae (2and 5%) species. Most species from family: Nymphalidae species were found near water body.

Table no 1. Checklist of the species of butterfly recorded in the study area.

S/N	Family	Common Name	Scientific Name
1.	Nymphalidea	Plain tiger	Danaus chrysippus
2.		Common crow	Euploea core
3.		Common bushbrown	Mycalesisperseus
4.		Danaid Eggfly	Hypolimnasmisippus
5.		Grey Pansy	JunoniaAtlites
6.		Common evening brown	Melanitis leda linnaeus
7.		Dark evening brown	Melanitisphe dima
8.		Common leopard	Phalantaphanlantha
9.		Common Tiger	Danaus genutia
10.		Blue tiger	Tirumala limniace
11.	Lycaenidae	Dark grass blue	Zizeeriakarsandra
12.		Pale grass blue	Pseudozizeerimaha
13.		Tiny grass blue	Zizulahylax
14.		C. starbo	Catochrysopsstarbo
15.		Rounded pierrot	Tarucusextricatus
		Anar butterfly,fruit borer,guva blue male	Virachola isocrates
16		Red Pierrot	Talica da
17.	Pieridea	Common grass yellow	Eurema hecade
18.		One spot grass yellow	Eurema andersoni
19.		Common Albatross	Appias albino
20.		Leptosianina	Leptosianina
21	Papilionidae	Common rose	Pachlioptoaristolochiae
22		Lime butterfly	Papillio demoleus
23		Swallowtail butterfly crimson rose	Pachliopta hector

Discussion

The study is based on family wise composition. The checklist of the species of butterfly observed, Nymphalidae family was the highest number and percentage of the species of butterfly among the other family. Similar studies reported by M. Abdullahi et al. (2019), on a preliminary checklist of butterfly that recorded 21 species of butterfly Kishore G. Patil et al. (2017), on a preliminary checklist of butterfly that recorded 84 spaces from five family and 54 genera. Tanmoy Dey and Jayti Ghosh reported 33 species of butterflies belonging to the 5 families. Work on butterfly diversity in Central India was done earlier by for sayeth (1891) and Witt (1957) has also documented some diversity from Madhyapradesh and Chattisgarh. D'Abreau (1931) reported 92 from Nagpur region, Central provinces. Latter in 2014 Patil and Shinde have reported 92 species and 59 genera from Gorwadan International BioPark, Nagpur Central India. Sayeswara (2018) recorded higher percentage of the species of butterfly From Nymphalidae family with 44.4% followed by papilionidae of 22.2% Lycalaenidae having 8.33%and Hesperidae was the least percentage of the species of butterfly in the study area. Another relevant study reported by Saurav et al. (2017) who were found that the Lycalaenidae family having the maximum percentage of the species of butterfly with 34.9% followed by Nymphalidae of 28.3% Hesperidae 19.8% pieridae 9.43%, papilionidae 6.6% and Riordinidae o. 94% respectively. Similar study Sathy et al. (2014) reported the Nymphalidae 42.5%, papilionidae 21.2%, Lycalaenidae 15.1%, pieridae 14.1% and Hesperidae with 7.1%. Koneri and Nangoy (2019) observed sangish Island butterflies and recorded maximum number of the Nymphalidae family with 53.8% followed by papilionidae of 22.67%, pieridae 15.57%, Lycalaenidae having 7.31% and Hesperidae only 0.64%. In present study a total 20species were recorded from 4 families, family Nymphalidae was found to contain maximum number of species 10 and Lycaenidae5 species and pieridae contain 4 species and papilionidae1species. Harsh et al. (2015) reported 50 species 44 genera from kanhapench region, madhaypradesh. With reference and previous studies most of the observations of present study similar the different current study and previous studies may be because of the place or some limitations like restricted entry in the forest area due to presence of beasts, limitation of camera range etc.

Conclusion:

The present study include with systematic study of butterfly diversity. This study is preliminary observation of butterflies and its occurrence, richness of species in Gharni Dam area, this is first record from this region. This study will be useful for the conservation of wild range of butterfly species of this area. Family Nymphalidae is the most dominant one followed by Lycaenidae, pieridae and Papilionidae is least dominant is Gharni Dam.

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Table no. 2: Photographs of the species of butterfly in the study area.

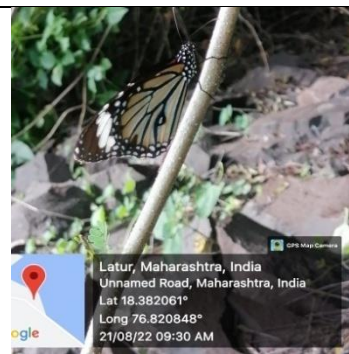




C.Strabo



Common rose



Common tiger



Common Albatross



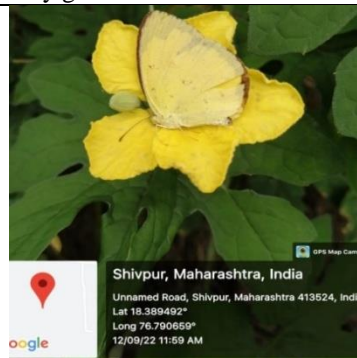
Tiny grass blue



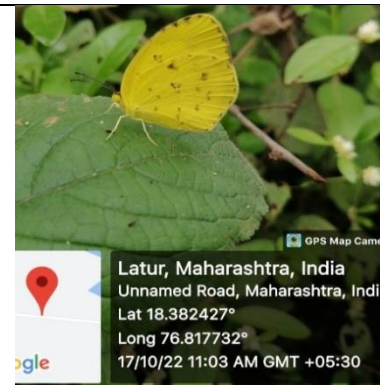
Common bushbrown



Common evening brown



Common grass yellow



One spot grass



Danaid eggfly



Common crow



Blue tiger



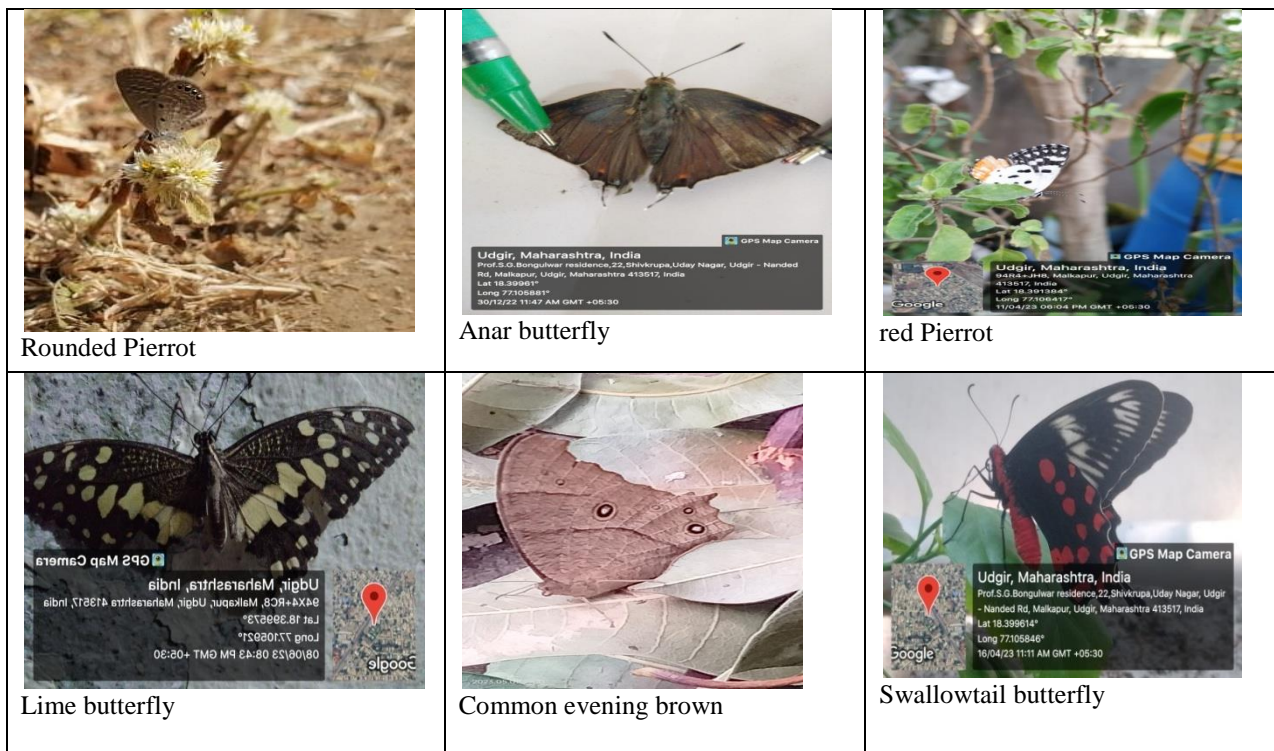
Dark grass blue



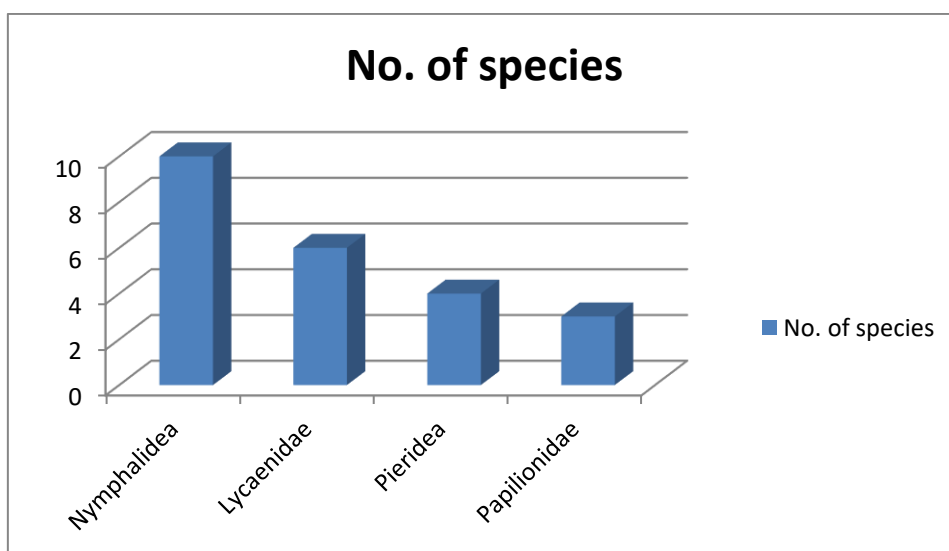
Pale grass blue



Common Leopard



Sr. No.	Family	No. of species
1	Nymphalidea	10
2	Lycaenidae	6
3	Pieridea	4
4	Papilionidae	3



Sr.No.	family	No. of species
1	Nymphalidea	10
2	Lycaenidae	06
3	Pieridea	04
4	Papilionidae	02

