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Abundance of Family Pieridae in Union Council Koaz Bahram Dheri, KP, Pakistan

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ABSTRACT

The present study was conducted in Union Council Koaz Bahram Dheri, District Charsadda, Khyber Pakhtunkhwa, Pakistan. A total of 87 species of family Pieridae were examined, the most abundant specie was Eurema hecabe 39/87 (44.83%) followed by Catopsilia phyranythe 16/87 (18.39%), Catopsilia ponoma and Pieris canidia 12/87 (13.79%), Colias croceus 5/87 (5.75%), Colotis amata 2 (2.3%) and minimum specie was Colotis fausta 1/87 (1.15%). The area has rich butterfly and moth fauna recommended for further study.

Key words: *Eurema hecabe, Catopsilia phyranythe, Catopsilia ponoma, Pieris canidia, Colias croceus, Colotis amata, Colotis fausta.*

INTRODUCTION

Butterflies belong to class Insecta, order Lepidoptera. Generally butterflies and other insects are divided into three regions head, thorax and abdomen [1]. Butterflies provide as significant plant pollinators in the limited environment, in ecosystem functioning, as well as nutrient cycling [2], for the birds, reptiles, spiders and predatory insects [3]. Butterflies comprise enormous trade and industry importance they are most capable pollinators of flowers in accumulation to moths and bees. They help in construction of food crops, seeds and fruits so necessary for the survival of man and animals [4]. Insect diversity is premier in plant diversity and lowly in shrub, grass and open areas but diversity in natural forests lower while, advanced in troubled forests, and highest in moderately disturbed forests [5].

MATERIALS AND METHODS

Study Area

The study was conducted in Union Council Koaz Bahram Dheri, District Charsadda, Khyber Pakhtunkhwa, Pakistan. The headquarters of District Charsadda is Charsadda. Charsadda is located at 34°8'43N 71°43'51E with an altitude of 276 meters (908 feet) and situated 29 kilometers from the provincial capital Peshawar (Figure 1). The total area of the District is about 996 square kilometers (243753 acres). According to census report of (1998), the Population is more than 10, 22,000; most of the people are Agriculture list. The history of Charsadda can be traced back to the 6th century BCE. It was the capital of Gandhara from the sixth century BCE to the second century CE. The ancient name of Charsadda was Pushkalavati, which means "Lotus City". It was the administrative center of the Gandhara kingdom.

Material

The materials which are used in present study that are sweep net, chloroform bottle, digital camera, and insect's pins, setting boards, insect boxes, naphthalene balls, ruler, graph paper and field book.

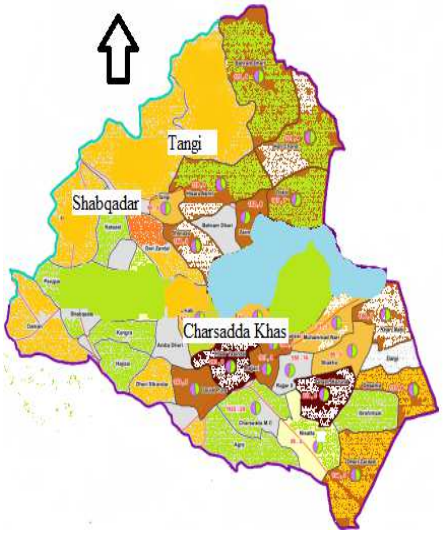

Figure 1. Map of District Charsadda [6].

Collection, Preservation and Identification

The collection and preservation of butterflies was carried out with the help of sweep net, chloroform bottle, digital camera, and insect's pins, setting boards, insect boxes, naphthalene balls, ruler and field book. Butterflies identified with the help of keys and available literature. Help was also taken by already identified specimens placed in National Insect Museum, (NARC) Islamabad by Dr. Muhammad Ather Rafi Director National Insect Museum Islamabad, Pakistan.

RESULTS AND DISCUSSION

A total of 87 specimens were collected from the study area. The collected species are *Eurema hecabe* (Linnaeus, 1758), *Colias croceus* (Geoffroy, 1758), *Colotis fausta*, (Olivier, 1804), *Catopsilia phyranythe*, (Linnaeus, 1758), *Catopsilia ponoma* (Fabricius, 1775), *Pieris canidia* (Linnaeus, 1768) and *Colotis amata* (Fabricius, 1775). The most abundant specie was *Eurema hecabe* 39/87 (44.83%) and minimum specie was *Colotis fausta* 1/87 (1.15%).

Table 1. Butterflies species with common and scientific name, Abundance and Biotope: (S: Scrub; G: Grassland; P: Plantation; B: Botanical and Nursery Garden).

S.No	Common name	Scientific name	n	Biotope
1	Common Grass Yellow	*Eurema hecabe*	39	S, P, G, B
2	Dark Clouded Yellow	*Colias croceus*	5	B, S, P, G
3	Large Salmon Arab	*Colotis fausta*	1	P
4	Mottled Emigrant	*Catopsilia phyranythe*	16	S, P, G
5	Lemon Emigrant	*Catopsilia ponoma*	12	S, P, G
6	Indian Cabbage White	*Pieris canidia*	12	P, S, G
7	Small Salmon Arab	*Colotis amata*	2	S

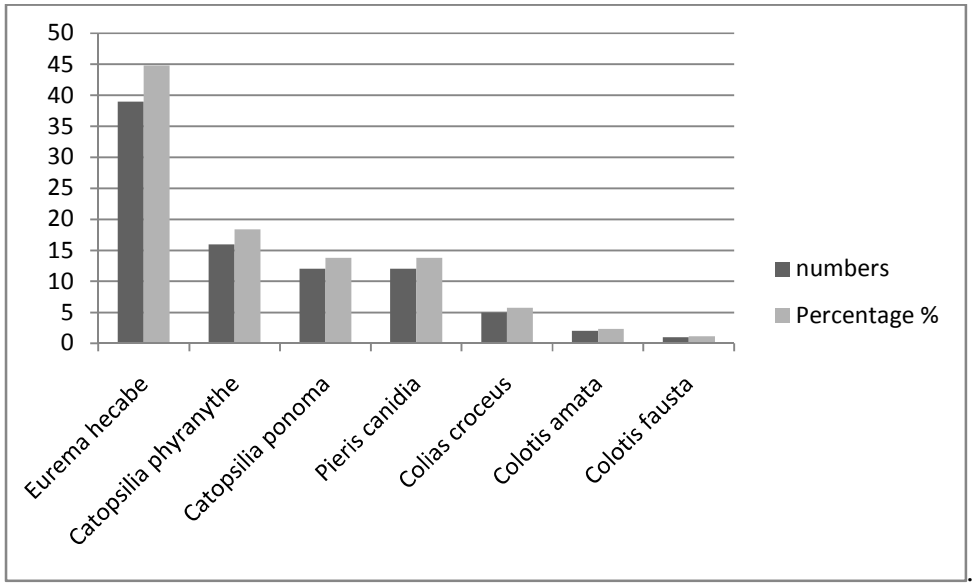

Figure 2. Species abundance

The most abundant specie was *Eurema hecabe* 39/87 (44.83%) followed by *Catopsilia phyranythe* 16/87 (18.39%), *Catopsilia ponoma* and *Pieris canidia* 12/87 (13.79%), *Colias croceus* 5/87 (5.75%), *Colotis amata* 2 (2.3%) and minimum specie was *Colotis fausta* 1/87 (1.15%).

CONCLUSION

The present research was conducted to evaluate the butterfly fauna of Union Council Koaz Bahram Dheri, Tehsil Tangi, District Charsadda, Khyber Pakhtunkhwa, Pakistan. A total of 87 specimens were collected from the study area. The most abundant specie was *Eurema hecabe* 39/87 (44.83%) and minimum number of specie was *Colotis fausta* 1 (1.15%). Similar surveys on large scales are recommended to fully evaluate the butterfly fauna of District Charsadda. Natural habitat should not be lost; therefore, proper preventive measures should be taken in order to conserve the butterfly fauna. They are dependent upon proper environmental conditions.

Acknowledgement
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