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Butterfly Lepidoptera (*Danaus Chrysippus*) diversity in union council Koaz Bahram Dheri

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ABSTRACT

Butterflies play an important role in ecosystem. The present study was conducted in Union Council Koaz Bahram Dheri Khyber Pakhtunkhwa Pakistan during the period July 2012 to October 2012. The collection of butterflies was done randomly by using the Arial net and neck hand. A total of 73 specimens of Danaus chrysippus were collected from different study sites of the said area. The high number of specimens was collected from Haji Sargund Kally 8 (10.96%), Toor Khat Kally 8 (10.96%), Soor Kamar 8 (10.96%) and Mardhand 8 (10.96%). The wing span is 8.2±0.20 cm and body length 2.5±0.23 cm. From the p resent investigation it was concluded that the Danaus chrysippus species is common in Union Council Koaz Bahram Dehri. The area has rich fauna of butterflies and recommended further studies.

Key words: Butterfly, Danaus chrysippus, wing span, Arial net, Pollinator.

INTRODUCTION

Butterflies are the most important group of insects on the earth which are adapted among the common community and discipline due to their outstanding colors and graceful flight [1]. Butterflies serve as important plant pollinators in the local environment, and help to pollinate more than 50 economically important plants and crops, in ecosystem functioning, including nutrient cycling and pollination, they should be studied as potential biological indicators, and for their conservation [2]. They are valuable pollinators when they move from plant to plant, gathering nectars and important food for the birds, reptiles, spiders and predatory insects they are also good indicators of environment [3]. Diversity of butterflies increases with increasing of habitat scale, vegetation structure complex plant diversity and lowest in shrub, grass and open areas [4-5]. Butterflies are predominantly susceptible to ecological variation comprehensively examined as to their ecological attributes and biotope occupancy [6-7].

Morphological Description of *Danaus chrysippus,* Plain tiger (Linnaeus, 1758)
Plain tiger *D. chrysippus* is a medium sized butterfly. The wing span is about 8.2±0.20 cm and body length 2.5±0.23 cm. The body color is yellowish-brown, the superior surface is brighter and richer than the beneath side. Superior margin of fore wing is black with white spots. Hind wing consists of three black spots in male and two in female. The hind wing has a thin border of black encompassing a series of semi-circular white spots. Male Plain tiger is smaller than the female, but have more bright coloration (Figure 1-2).

Systematic Classification
Kingdom: Animalia

Phylum: Arthropoda
Class: Insecta
Order: Lepidoptera
Family: Nymphalidae
Genus: Danaus
Specie: *Danaus chrysippus*, *(*Linnaeus, 1758)

Figure 1: (Dorsal view)

Figure 2: (Ventral view)

MATERIALS AND METHODS

Current study is aim to explore butterflies fauna of Union Council Koaz Bahram Dheri, Khyber Pakhtunkhwa Pakistan. The present study was carried out from July 2012 to October 2012 and collection of butterflies was done during day time (8:00 AM to 4:00 PM). The materials, arial net, chloroform bottle, digital camera, and insect's pins, setting boards, insect boxes, naphthalene balls, ruler, graph paper and field book were used. Collection and preservation was done following the Haroon *et al.* [8] method. The butterflies identification was done with the help of available literature and keys. For photography digital camera, Yashica (14.2 megapixels) were used.

RESULTS AND DISCUSSION

Table No 1: Area wise distribution of *Danaus chrysippus* Occurrence.

S. No	Name of area	Total no	Abundance	Occurrence (Months)	Status	Biotope
1	Haji Sargund kally	8	10.96 %	22-07-2012	VC	S, G, P
2	Toor Khat Kally	8	10.96 %	03-08-2012	VC	S, P, G
3	Soor Kamar	8	10.96 %	05-08-2012	VC	B, S, G, P
4	Mardhand	8	10.96 %	30-09-2012	VC	S, P, G
5	Aslam Khan Kally	7	9.59%	05-08-2012	VC	B, S, G, P
6	Bahram Dheri	7	9.59%	11-08-2012	VC	S, P, G
7	Gulandy kally	6	8.22%	07-09-2012	C	S, P, G
8	Pally Qalla	5	6.85%	25-09-2012	C	S, G, P
9	Landi Shah	5	6.85%	24-08-2012	C	S, P, G
10	Aratt Kally	4	5.48%	21-09-2012	NR	B, S, G, P
11	Sewan Kally	4	5.48%	10-07-2012	NR	S, P
12	Fazal Kally	3	4.11%	13-09-2012	NR	S, P

Status: (VC: Very Common >7; C: Common >5; NR: Not Rare >3; R: Rare; VR: Very Rare >1) and Biotope: (S: Scrub; G: Grassland; P: Plantation; B: Botanical and Nursery Garden).

The sideways area has different communities like scrub, grassland, plantation, botanical and nursery gardens. Each habitat was explored on the basis of opportunity and accessibility of butterflies. A total of 73 specimens of *Danaus chrysippus* were collected from different study sites of Union Council Koaz Bahram Dheri. The maximum numbers of *Danaus chrysippus* specimens were collected from Haji Sargund Kally 8 (10.96%), Toor Khat Kally 8 (10.96%), Soor Kamar 8 (10.96%), Mardhand 8 (10.96%), follwed by Aslam Khan Kally 7 (9.59%), Bahram Dheri 7 (9.59%), Gulandy Kally 6 (8.22%), Landi Shah 5 (6.85%), Pally Qalla 5 (6.85%), and minimum specimens were recorded from Arratt Kally 4 (5.48%), Sewan Kally 4 (5.48%) and Fazal Kally 3 (4.11%) (Table no 1). The result of the

present study shows that the *Danaus chrysippus* is very common in Haji Sargund Kally, Toor Khat Kally, Soor Kamar and Mardhand, while common in Aslam Khan Kally and Bahram Dheri follwed by Gulandy Kally, Landi Shah and Pally Qalla. The species are rare in Arratt Kally, Sewan Kally and Fazal Kally due to lake of scrubs, grasses and plants (Table 1).

Month wise distribution

The months wise distribution of *Danaus chrysippus* shows that the maximum specimens were recorded in September 35 (47.95%), October 26 (35.62%) followed by August 12 (16.44%) and no species were recorded in July 0 (0%) as shown in figure 3.

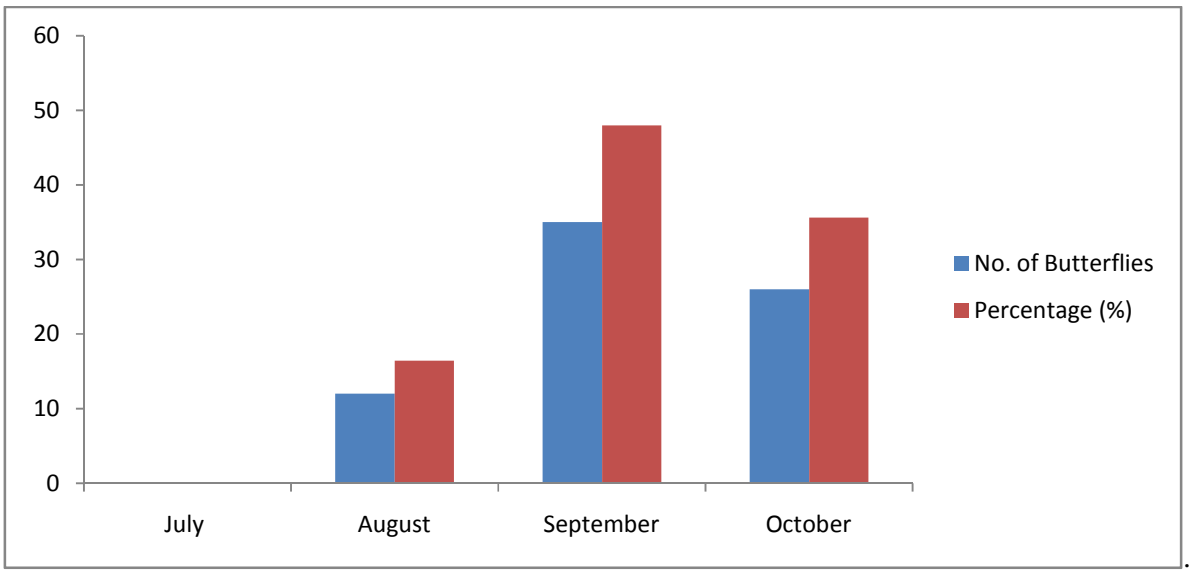

Figure 3: Month wise distribution of *Danaus chrysippus* in Union Council Koaz Bahram Dheri

Recommendation

Further study is required to explore the different species of butterflies. For conservation of such species the protection of habitat is an important.

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