RESEARCH ARTICLE

Diversity and distribution of Sphecoid Wasp in Koradi region Dist. Nagpur, India

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ABSTRACT

Sphecid wasps are a familiar and diverse group of solitary wasp. They are beneficial and harmless insect to human being. The present study was to know the diversity of sphecid wasp around Koradi region, Dist. Nagpur. The study recorded 8 species of sphecid wasp in 5 genera from 2 sub family. The subfamily Ampulicinae recorded 2 species from 2 genera while from subfamily Sphecinae 6 species under 3 genera. The most number of species recorded from the subfamily Sphecinae.

Keywords: Sphecoid wasp, digger wasp

INTRODUCTION

Sphecidae is a cosmopolitan family of wasp with 9716 described species through the world (Pulawaski, 2009). Sphecidae is a diverse group of solitary wasp which may be of different shaped, size and colour. The female dig its nest soil, sand or wood and provisions each nest cell with paralyzed prey and lay egg on it. The wasp larva feed on the provisions while adult feed on nectar, pollen and juice containing high amount of sugar while larva need adults or larva of different insect order and Araneida (Murray, 1940,; Gillott, 2005). The wasps are valuable bio control agent as they control the population of insect pest (Gayubo, 2005; Borror, 1988). The relationship of these insect with man has been unfriendly due to fear from their over rated stinging powers.

Sphecidae are recorded from various part of India. The resent works on Sphecid wasp were done in various state of India. (Gupta,1995; Suresh, et al; 1995; Jonathan et al; 2000,;2003; Kundu et al;2006; Job et al;2014,; Kumar. et al; 2011). In Kerla 47 species of sphecid wasp has been listed (Sudheendrakumar, 1989; 1999; Madhavikutty, 2004).

Present study revealed valuable information about the diversity and distribution of Sphecid wasp around Koradi rejoin, Nagpur district, India.

MATERIALS AND METHODS

The four selected habitats agriculture fields, community gardens, fragmented habitats and residential sites situated at different locations around koradi region dist. Nagpur were selected for collecting the sample. The sample were collected from random ways from August 20013 to May 2014 between 9 AM to 5 PM. The areal net was used for collecting the insect. Aerial nets that were prepared of white meshed material with light weight handle were used for effective collection.

Collection, Preservation and Identification

The insect were collected using hand nets, killed with Acetone, pinned with entomological pins and preserved in insect boxes for identification studies. The collected specimens were identified using Stereo zoom microscope and with the help of literature.

RESULTS AND DISCUSSION

In the present study eight species of sphecid wasp in five genera from two sub family were recorded.

Table 1: Different species of sphecid wasp with their scientific name & food habit collected from Koradi region, Dist Nagpur.

S.no	Common name	Scientific name	Food habit
Sub family- Sphecinae			
1	Yellow and black Mud dauber wasp	*Chalybion bengalense*	Spiders
2	Blue Mud dauber wasp	*Sceliphron madraspatanum*	Spiders
3	Digger wasp	*Sphex sericeus*	Caterpillar, Insect
4	Digger wasp	*Sphex argentatus*	Caterpillar, Insect
5	Digger wasp	*Spex ichneumoneus*	Caterpillar, insect
6	Digger wasp	*Sphex sp.*	Caterpillar, Insect
Sub family- Ampulicinae			
7	Emerald Cockroach wasp	*Ampulex compressa*	Cockroach
8	Cricket hunter wasp	*Chlorion sp.*	Cricket

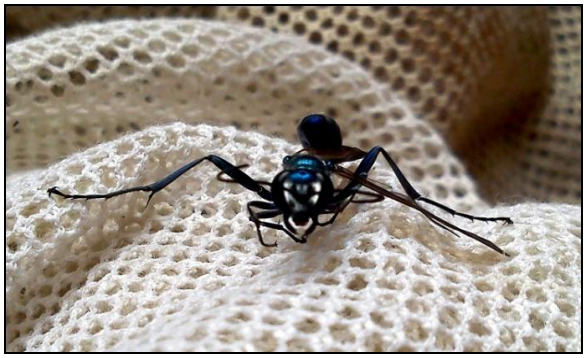

Fig. 1- *Chalybion bengalense*

Fig.2- *Sceliphron madraspatatum*

Fig.3- *Sphex sericus*

Fig.4- *Sphex argentatus*

Fig. 5- Sphex *ichneumoneus*

Fig. 6-*Sphex sp*.

Fig.-7 *Ampulex compressa*

Fig.8- *Cllorion sp*.

The subfamily Ampulicinae recorded two species from two genera while from subfamily *Sphecinae* six species under three genera. Among the Genus *Scelophron* most number of species recorded. One species from *Scelophron* not identified. *Chalybion bengalense* (Fig. 1) are metallic blue mud-dauber wasp. They build their nest by mud or lay egg in mud nest build by other species of wasp. *Sceliphron madraspatatum* (Fig. 2) are Yellow and black Mud dauber wasp they are solitary, female build large multi celled mud nest. The cells are provisioned with mass number of spiders. *Sphex sericus* (Fig. 3) female are golden yellow while male are black and red in colour. *Sphex argentatus* are robust black species (Fig. 4). S*phex ichneumoneus* (Fig. 5) are called grate golden digger wasp it is red and black in colour. *Sphex sp*. (Fig. 6). Genus *Sphex* are called digger wasp because of their dig nest habit. A hole is dug in the soil as a nest with stock of captured insects. The wasp lay their eggs in the provisioned nest, when the larva hatched they feed on the paralyzed insect.

Ampulex compressa (fig.7) are called cockroach wasp. They are metallic green blue colour they used live cockroach (*Periplaneta Americana*) as a host for its larva. *Cllorion sp*. (fig.8) are called cricket hunter wasp. They are metallic blue in colour, they spend most of time to hunt the cricket, and newly hatched larva feed on paralyzed cricket prey.

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