



NEW RECORD OF TIGER BEETLE *ANTHIA SEXGUTTATA SEXGUTTATA* (COLEOPTERA: CARABIDEA) FROM DISTRICT MIRPURKHAS SINDH

Sidra-Tul Muntha, Naheed Baloch, Riffat Sultana, Javeria Shaikh

Department of Zoology, University of Sindh, Jamshoro

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ABSTRACT

Anthia sexguttata sexguttata (Febricius 1775) commonly known as tiger beetle or ground beetle, belong to family Carabidea. During the present study. Single pair was reported from Mirpurkhas. Its morphometric observation is under: Length of head 18mm, length of pronotum 8mm, length of antenna 15mm, length of abdomen 2.1mm and Total body length 40mm for male, while in female it was length of head 18mm, length of pronotum 9mm, length of antenna 16mm, length of abdomen 23mm and total body length 41mm. Presence of six spots on 02 on thoracic region and 04 on the elytra is key character of tiger beetle due to this character it is commonly known as six spot ground beetle. Female is larger in size than male. They are carnivorous in nature. From Sindh no work has been done on the morphological characters of tiger beetle, present study is the starting point to introduction of this beetle from Mirpurkhas.

1. INTRODUCTION

Ground beetle are the member of family Carabidea. They are usually recognized with thread-like antennae and have a strong mandibles and large size and have a strong margined pronotum. Carabidea is very rich family with numerous species that has attracted an entomologist (Wiesner 2001, 2006; Fragen and Gebert 2004). Family Carabidea contain about 1500 genera and 40,000 species worldwide (Zhang, 2011), and 100 additional new species every year. Carabidea occupy most of land habitats. Carabidea are the Environmental Indicator, their Status effect on ecological Functions. Ground beetles (Coleoptera: Carabidae) are ancestrally ground dwelling and have been used to indicate temperature and moisture gradients (Thiele 1977, Erwin, 1979).

Carabids are partly diurnal, partly nocturnal (Eisner, *et al.*, 1977; Dazzini, 1980; Dettner, 1985; Will, *et al.*, 2000, Brandmayr, *et al.*, 2009). The family Carabidea Including Tiger beetles is distributed among 1,927 genera worldwide. They most found in south Asia and deserted as well as mountainous areas. They are also flightless species. They live in the form of colony in the hilly of mountain. Tiger beetles are voracious predators. Carabidea family Reported under 2 genera and 2 species. These genera are *Carabus* and *Anthia*. And the Species is *Carabus hortensis* and *Anthia sexguttata sexguttata* and *Anthia sexguttata sexguttata* is new record From Mirpurkhas. The selected study area Mirpurkhas is lacking information about carabidea fauna. Mirpurkhas is the agriculture area, this species was reported from Makran Division Balochistan Pakistan (Imran *et al.*, 2016), and we found from Sindh for first time From Mirpurkhas District.

Corresponding Author: sidra.naseerbhatti@gmail.com

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Description: Body is moderate; the front part of head is extended. On the midlateral surface of vertex on both sides the compound net like eyes are present and each compound eye are small oval and narrow sclerite. the frontal ridge extend and arch over the margin of compound eye. Antenna are filliform having 10 segments the first segment is called scape is the largest the 2 segment is pedicel are shortest all other segments are flagellum are small and thin. Mouth part are chewing and biting type, and having a elongated strong mandibles, dorsal surface is slightly convex. The pre and post clypeus are small membrane and rectangular in shape. Labrum is large. Maxilla are lie just behind the mandibles. Labium are well developed and consist of labial palp. pronotum have two white spots, their shape is wage type. Quite white hairs like spurs present on this spots. In female the pronotum is triangular in shape Medium carina present in thorax. fore leg have spines are present. abdomen having a 4 segments and each segments small hairs are presents and full black in color. abdomen are rounded in shape while female abdomen are oval in shape and male abdomen are shorter while female abdomen are large in size. and each elytra having a 2 white spots are present and these spots shape are different. In male and female and male are smaller than female...

2. MATERIALS AND METHODS

For present studies of ground beetle (*Anthia sexguttata sexguttata*) were collected from the Mirpurkhas District, future studies were carried out on the advance entomology Laboratory University of Sindh, Jamshoro. *Anthia sexguttata sexguttata* were collected from the pitfall trap method and hand picking.

Method for Killing and Preservation

Specimen of *Anthia sexguttata sexguttata* bring into advance entomology laboratory and then kill with the help of chloroform then preserve in the insect box then examine the different part of this species for identification under the binocular stereoscopic microscope. Than Measurement of each body part after that Drawing line occur with the help of graph paper and trasing box.



Figure 1&2: Showing the District Mirpurkhas and its Adjoining areas Sindh Pakistan.

3. RESULTS AND DISCUSSION

During the single pair of *Anthia sexguttata sexguttata* the morphometric observation under. Length of head 18mm ,length of pronotum 8mm,length of antenna 15mm, length of abdomen 21mm and the total body length is 40mm for male, while in female it was length of head 1.8mm,length of pronotum 9mm,length of antenna 16mm,length of abdomen 23mm and the total body length is 41mm. From Sindh no work has been done on the morphological characters of tiger beetle, present study is the starting point to introduction of this beetle from Mirpurkhas.

Table 1: Showing measurement of various body parts of *A.sexguttata sexguttata* (Febricus 1775)

Body parameters	Male (n=6) mm	Female (n=6) mm
Length of abdomen	21	23
Length of head	18	18
Width of head	19	19
Length of pronotum	8	9
Length of femur	11	11
Length of wings	20	24
Length of antenna	15	16
Segment of antenna	10	12
Total length of body	40	41

4. CONCLUSION

Present study reveals a new record of species *Anthia sexguttata sexguttata* (Febricus,1775). The Family Carabidea is very rich family with numerous species, about 40,000 species worldwide. and the carabidea beetle or tiger beetle are also differ in many physiological and behavioral characteristics that reflect specific habitat demands (Thiela,1977) During the present study only one pair of species *Anthia sexguttata sexguttata*(Febricus,1775) were recorded from Sindh District Mirpurkhas for the first time. And Identification and Morphometric Characters were observed with the help of Taxonomic keys, Review of li erature and also Stastical analysis.

5. CONFLICT OF INTEREST

All authors have declared that there is no conflict of interest regarding publication of this article.

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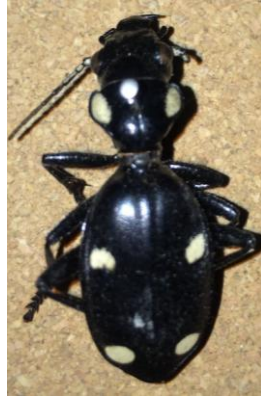


Fig. (a) male ♂

Fig. (b) Female ♀

