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First record and redescription of *Cheilosia albipila* syrphid flies from Punjab, Pakistan

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Abstract

Syrphid flies belong to the genera *Cheilosia* act as mycetophagous. The adult syrphid flies were collected during the January 2013 to December 2013 from 10 different localities of Chakwal, Punjab Pakistan. This paper present one mycetophagous syrphid species: *Cheilosia albipila* Meigen. This specie is redescribed here on the basis of morphological characters and identification key was also developed. Genus *Cheilosia* has been reported for the first time from Pakistan.

Keywords: Redescription, Identification key, Pakistan, *Cheilosia* Syrphidae

1. Introduction

Syrphid flies belong to order Diptera and family Syrphidae, it is one of the largest families of the order Diptera and comprises popularly known as hoverflies, Sun flies or flower flies. All the members belong to family Syrphidae have a characteristic feature of having vena spuria (Vein like thickening in membrane of wing). Family Syrphidae has a worldwide distribution, with widest diversity in Tropics^[9]. It comprises about 6000 identified species in the world^[8]. The genus *Cheilosia* Meigen 1822 belongs to subfamily *Cheilosini*, tribe *Cheilosini*. Distribution of *Cheilosia* species in different regions of the world as with more than 300 species in Palearctic regions and 80 and 50 species from Nearctic and Oriental regions. Larvae of genus *Cheilosia* are Mycetophagous, Phytophagous or Sap-feeders^[10, 2] But the adults are found visiting flowers for pollen and nectar. The genus *Cheilosia* Meigen, 1822 with about 400 species is one of the largest genera of family Syrphidae. It is Holarctic in its distribution^[4] greatest number of species occurs in Palaeartic regions of the World^[5]. No previous attempt has been done to identify and describe this insect fauna from Pakistan. Objective of study is to described the morphological characters of *Cheilosia* and develop identification key.

Materials and Methods

The specimens of *Cheilosia* were collected with the help of insect collection entomological net from different areas of the Chakwal, such as from grassy lands, highly areas and from different orchards from January 2013 to December 2013. After collection the hoverflies were killed with the help of Cyanide bottle. Dead specimens were set properly according to the identification requirements. The species were identified with the help of specific literature^[1].

Results

Cheilosia albipila Meigen, 1838 and *Cheilosia grossa* Fallén, 1817 were more abundant in the month of January, February, March, November and December.

Cheilosia albipila Meigen, 1838

Distribution

It is distributed from Ireland to northern and central Europe, Russia and Central Siberia^[7].

Head

Well developed median tubercles, Black vertex, Large and black eyes, Hairy eyes, gena is situated at lower part of head, below the eyes, clear antennae with orange tips, antennae orange with black tips ♂, distinctly large and orange ♀, wing length 8- 11.5 mm.

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Thorax

Wings are not dark, strikingly long pubescence on thorax, orange fur, Hind tibiae entirely orange, tarsus are mostly black.

Abdomen

In most less fur on upper side of abdomen, black color abdomen, conspicuous yellow pubescence on abdomen,



Subfamily Cheilosinae

Key to Genera Cheilosia

1. Arched and considerable puffed out frons; entire disc of tergites dull, shining around the margin of abdomen*Chrysogaster* Meigen.
2. Entirely shining tergites, disc may dull partly *Cheilosia* Meigen

Genera Cheilosia

Key to Species Albipila

1. Third antennal segment somehow squarish above at tip, yellowish- red; small rounded central prominent face, lower than the usually; body with pubescence normally conspicuously bright foxy-tawny, wing length 8-10.5 mm..... *chrysocoma* Meigen.
Rounded third antennal segment; Orange or brownish body pubescence, never foxy tawny.....(2)
2. Infuscated wing obviously, at cross- veins and towards tip; moderately long body pubescence; brownish or orange antennae, tip darken; wing length 5.5-8.5mm.....*nebulosa* Verrall
Unclouded wings; strikingly long pubescence; antennae clear orange tips may be slightly darkened; wing length 8-11mm.....*albipila* Meigen.

Discussion

A study was conducted in Tehran and East Azerbaijan 69 specimens were collected from different localities and all these specimens were belongs to tribe *Cheilosia*. Of all the species *Cheilosia cumanica* has the highest frequency ^[3, 6]. Stated that the genus *Cheilosia* preferred forests, deciduous forests and open are having high herbs. Adults fly at low settling of large leaved bushes.

In this study, 100 specimens were collected, from which 10 belonging to the tribe *Cheilosia*. All the ten specimens are *Cheilosia albipila*. Identification of the specimens is done on the basis of specific literature and different identification keys. In previous no study has been conducted to investigate the *Cheilosia* fauna of Pakistan. This paper presents one mycetophagous syrphid species: *Cheilosia albipila* Meigen.

Conclusion

After this study it is concluded that sub family Cheilosinae is present in Pakistan. It required very low temperature for activity. In (Chakwal) Pakistan *Cheilosia albipila* was active during the January, February, March, November and December.

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