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Taxonomic analysis and morpho-descriptive short notes on Museum specimens of *Conicera (Tritoconicera) kempii* Brunetti, 1924 (Insecta: Diptera: Phoridae: Phorinae)

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Abstract

The family Phoridae is represented by 4087 species worldwide, out of which 67 are indigenous to India. There are 67 species of Phoridae family, of which, 4 Sub-families namely Metopininae, Aenigmatiinae, Termitoxeniinae and Phorinae are present in India. Out of which Phorinae, has gotten the least attention in terms of proper taxonomic treatment. Therefore, this paper envisages to give detailed account of morpho-taxonomic descriptions of one of the members Phorinae sub family.

Keywords: Phoridae, India, phorinae, morpho descriptions, *Conicera kempii*, museology

Introduction

The family Phoridae, are one of the most variable groups of the order Diptera. The family has six sub families worldwide, all of which have been recorded with social insects, the sub families found worldwide are viz., Phorinae, Metopininae, Aenigmatiinae, Alamirinae, Termitoxeniinae and Thaumatoxeninae (Batista-Da-Silva, 2012) ^[1] out of which Indian Phoridae is represented by Metopininae, Aenigmatiinae, Termitoxeniinae and Phorinae. The nomenclature utilized in this manuscript conforms to (Borgmeier, 1968; 1935) ^[3].

Methodology

Literature survey

From internet resources and other relevant literature, such as Catalog of Life (updated on January, 2015), Systema Dipteroform (Updated on June, 2013), Catalog of Fossil Diptera (updated on January, 2015), Oriental catalogue and Catalog of Diptera from Australasian and Oceania regions, Zoo records series (2011 to 2014), and State fauna series, Indian species of the family Phoridae were extracted. The taxonomic terminology is based on Bickel and Dye (1967).

Survey of Specimens

Specimens and samples were collected from surveys, the general collection, the national zoological collection, and the diptera register, and assembled in a check list with the current name, first author, and type locality, as well as distribution in India and around the world.

Analytics

The catalogue of life data was searched using the inclusion criteria "Phoridae, India (States, Union territories, and geographic regions)", then current valid names were compiled and hand sorted using Systema Dipteroform data, and this primary data was compared to Oriental catalogue and other literature. The Australian catalogue nomenclature system was used.

Morpho-description and microscopy

Identification of specimens using microscopy and morph-description Morphogenetic keys of verified reference materials were used.

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Results and Discussion

Family Phoridae

Sub Family Phorinae

Genus *Conicera* Meigen, 1830

Conicera Meigen 1830: 226. Type species: *Conicera atra* Meigen (SD) Westwood 1840: 154 = *dauci* Meigen.

Sub genus *Tritoconicera* Schmitz 1953

Conicera (Tritoconicera) kemp Brunetti, 1924^[7]

Brunetti, E. 1924^[7]. Diptera of the Siju Cave, Garo Hills, Assam. I. Tipulidae, Tabanidae, Anthomyidae, acalyptrate Muscidae and Phoridae. Rec. Indian Mus. 26: 99-106. [1924.01.31]. TL: India. Assam. Garo Hills, Siju Cave.

Description of Adult

Length: ♂ (2.00-2.25 mm), ♀ (1.75-2.00 mm)

Head: Almost pear-shaped, with pointy tip, microscopically setuose; arista three times as long as joint, apical, completely naked. 1 ocellar bristle pair, 1 vertical pair near the eye-margins; an upper frontal row of four bristles, the middle two much larger than the others; a lower frontal row of the middle pair only.

Thorax: Side margins of dorsum with numerous bristly hairs from humeri to posterior calli; dull black with uniform microscopic recumbent dark brown bristly hairs. Long, fine, covering bristles are present on the dorso-central side. One pair of apical, converging bristles on a scutellum.

Abdomen: Dull black with a faint brownish yellow genitalia and the tip of the last segment.

Wings: Costa with fine short bristly hairs to tip of 3rd vein; very inconspicuous; 1st and 3rd veins distinct, not parallel with costa; tip of 1st vein meeting later beyond half way between humeral cross vein and tip of costa. The four weak veins on the disc and wing are almost equidistant. Black halteres, huge clubs

Legs: Brownish yellow in colour. Fore tibiae have a row of fine bristles on the apical three-fourths, and a longer one well after the base: middle tibiae have a long strong one on the front side after the base, also one pre apical, one on the outer side at first, 3rd of the length, a long apical, and a smaller one: hind tibiae have a fairly strong one beyond the base on outer. The hind metatarsi are roughly two-thirds the length of the tibiae and almost as long as the remainder of the tarsi.

Materials examined: 6 ♀♀, taken 400-500 feet from the entrance of the cave, Holotype in Indian Museum, Cotype in British Museum.

Distribution in India: Meghalaya. Garo Hills, Siju Cave, 400-500 feet from the entrance of the cave, Assam.

Figure and Legends: Longitudinal veins: C: costa; Rs: radius; m1: medial 1; A: anal, m2: medial: 2, m2+4: medial 2+4, AB: abdomen, H: Head, T (L+W): Thorax (wings and legs), OC: Ocellar, PO: Pre Ocellar, SU: Supra antennal, AN: Antennal, UF: upper frontal, LF: lower frontal.

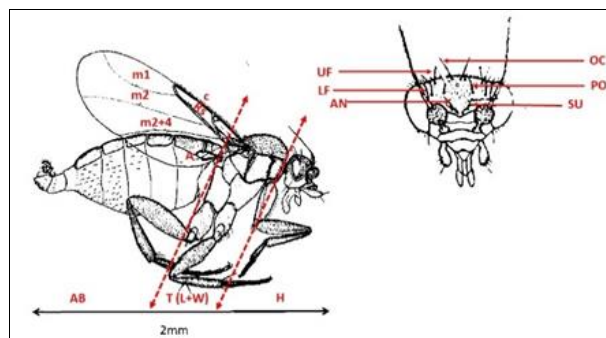


Fig 1: *Conicera (Tritoconicera) kemp* Brunetti, 1924

Conclusion

The Phorids are well known for parasitoidism, are important in documenting lapse time since death and climate change, as they are holometabolous insects. The species under scrutiny is found in high altitudes, in wet and damp places, with no light. Therefore, it is imperative to understand and identify this least worked out this species. In the near future I will try to focus on the other members of this sub family for fast in hand taxonomic identification.

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