

Record of Fungus beetle *Cis pickeri* (Coleoptera: Ciidae) from Wani region, District- Yavatmal, Maharashtra, India

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Abstract:

Ciidae is one of the families of Coleoptera and beetles are commonly called as fungus beetles. The members of this family are small and feed on fungus. The study area, Wani a tehsil in Yavatmal district of Maharashtra state in India. The study represents the first report of ciids from Yavatmal district. For better identification the Scanning electron microscopy of various body parts of the beetle was done and attempt is made to describe the species.

Key words: Coleoptera, Ciidae, fungus beetle, Wani.

Introduction:

Ciidae, the small sized tree fungal beetle family includes most abundant fungivorous beetle with 43 genera and 650 species (Antunes-Carvalho et al. 2012). The Polyporales and Himenochaetales basidiosomes are the source of the habitat and food for the larvae and adult beetles. The consumption of mycelium, basidiomes, or spores of fungi is called either fungivory or mycophagy, and may be one of the oldest feeding habits of beetles (Gillott 1982; Lawrence 1989). The specialization in using one or few parts of fungi has led to special adaptations of the mouthparts, ovipositor, feeding habits, and life cycle of fungivorous organisms (Lawrence 1989).

The adult Ciidae are small (1–4 mm), mostly cylindrical, brown to black beetles. Different species are sometimes morphologically very similar to each other. They can easily be distinguished from other families by the morphology of the antennae (8 to 10 segmented with 3, rarely 2, enlarged terminal segments) and tarsi (4 tarsomeres with a greatly enlarged claw). Most species are more or less covered with hairs or scales. The clypeus of males often carries small teeth or lamellae, and sometimes even the scutellum shows such features. The first sternite often carries a wart-like structure in the shape of a “u”, and is generally pubescent (Lohse 1967; Reibnitz 2004).

Larvae are longish and cylindrical, white to yellow and sometimes covered with bristles. The head, mouthparts, claws, the last three abdominal tergites and the urogomphi, which originate on the 9th abdominal segment, are more or less heavily sclerotized. On either side of the head capsule 2–5 setae are present. Both the larvae and adults are mycetophagous and spend their entire life-cycle (except for a short swarming phase) in polypores and (more rarely) in wood attacked by xylotrophic fungi as well as under bark carrying fungi. In some fungus species a number of species

of Ciidae can coexist, often in large populations. (Reibnitz 2004). In the present study, the scanning electron microscopic structures of Sensilla on antennae, and cilia on elytra are studied to find out their structural variations.

Material And Methods:

i) Study Area:

Wani town is situated in the south- east corner of the Maharashtra state. It is at south- east border of the Yavatmal district. The town measures about 13 sq. km. and fairly linear in shape along north to south direction. It lies between the Latitudes: 20° 03' to 20° 06'N and Longitudes: 79° 01' to 79° 03'E. The city has hot and dry tropical climate with moderate rainfall of 950 mm per annum.

ii) Sample collection:

Collection was done by hand picking of the beetles. Samples after collection were preserved in absolute alcohol in glass vials and brought to laboratory.

iii) Preparation for SEM:

For Scanning Electron Microscopy, dried beetles were used. Beetles are kept on stuff then coated it by platinum. For coating, the sputtering unit of 10nm was used for 50 sec and later it was observed under JEOL JSM 6380A scanning electron microscope and photographs were captured. SEM was carried out at VNIT, Nagpur (M.S.) India.

The following symbols are used for measurements: TL, total length (including head measured from above); PL, pronotal length along midline; PW, greatest pronotal width; EL, elytral length (median length from base of scutellum to elytral apex); EW, greatest elytral width, etc.

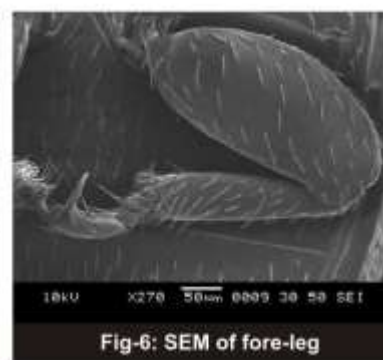
Description.

Measurements in mm: TL 1.66; PL 0.49; PW 0.57; EL 0.90; EW 0.65;. Ratios:

PL/PW 0.85; EL/EW 1.38; EL/PL 1.8; TL/EW 2.55. Body convex, subcylindrical; dorsal and ventral surfaces brown; basal antennomeres and legs yellowish brown. Head declined, barely seen from above, its dorsal surface granulate (Fig-3); frontoclypeal ridge raised and produced forming one conspicuous lamina slightly longer than wide and with a straight terminal edge, frons concave, subglabrous, bearing a few shallow punctures; vertex moderately flattened, bearing small, suberect yellowish setae; each occipitium finely punctate. Eyes coarsely faceted, each with more than 75 ommatidia (Fig-3 & 4). Antenna (Fig-5) with length of antennomeres (in mm) as follows: 0.086; 0.047; 0.052; 0.030; 0.017; 0.013; 0.013; 0.034; 0.039; 0.047. Pronotum convex;

punctuation distinct, coarse, but anterior marginal area and ribbon along midline unpunctate; distance between punctures around one puncture width; vestiture single, consisting of short, moderately stout decumbent yellowish setae; in between punctures finely granulate; anterior edge produced forward and upwards, forming a raised plate, slightly emarginated at apex, area at the base of the raised plate slightly concave, lateral sides broadly rounded, not produced forwards at anterior corners; lateral margins finely crenulate, only the most posterior parts seen from above. Scutellum conspicuous, subtriangular, subglabrous, bearing several small punctures. Elytra with confused, dense, dual punctuation, the large punctures being irregular, devoid of seta and at least twice as long as the small ones; vestiture

subseriate and dual, consisting of stout sub erect yellowish setae and small slender decumbent yellowish setae, both types of seta located in a small puncture; in between punctures irregular, smooth, humeri barely discernible; lateral edges subparallel; apex broadly rounded; lateral and apical edges not visible from above. Hindwings fully developed (macropterous species). Hypomera glabrous, unpunctate, finely granulate, giving a dull appearance to the surface. Prosternum biconcave, tumid and bearing a longitudinal carina at midline; surface similar to that of the hypomera; prosternal process parallel-sided, as long as the prosternum at midline, apex slightly curved inwards. Each protibia with the apex bearing a row of spines; outer apical angle devoid of spines, but produced forming one conspicuous tooth, outer margin devoid of spines. Metaventrite subglabrous, bearing sparse slender setae; punctation coarse, irregular, sparse, in between punctures finely granulate; discimen with round one-fourth the length of the metaventrite at midline. Abdominal ventrites sub-glabrous, bearing sparse slender setae, coarsely punctate, surface finely granulate; first abdominal ventrite twice as long as the second, bearing a margined, circular, fully exposed, and setose sex patch at middle, its diameter being a bit less than one-third the length of the ventrite at midline.



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