

Record of a parasitoid, *Homalotylus hemipterinus* (De Stefani) on an aphid predator *Cheilomenes sexmaculatus* (Fabricius)

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Predatory coccinellids play a significant role in biological control of aphids. Unusual death of coccinellid predator grubs, *Cheilomenes sexmaculatus* (Fabricius) was observed during February 2012 in an aphid infested (80-90/plant) field of Ashwaganda (*Withania somnifera* Dunal) at Medicinal and Aromatic Plants Farm of AAU, Anand. There was no previous history of any insecticide spray in the area which can be attributed to be the root



Fig. 1; Parasitized grub

Fig. 2: *H. hemipterinus*

cause for predator death. It was noticed that large numbers of adult parasitoids emerged out from *C. sexmaculatus*.

Further, it was observed that parasitized grubs were not active or moribund and slightly swollen than the normal grubs. The colour of the parasitized grubs was lighter in comparison to normal ones. They aggregated on the upper surface of the top leaves of the plant (Fig 1). Sometimes, the dead grubs were found hanging from the top portion of the plant resembling "tree top" symptom. Within 2-3 days of parasitization, the grub became brittle and the internal contents got dried up. On dissection of the parasitized specimens, the immature stages were observed.

The parasitoid that emerged from the grub belongs to family viz., Encyrtidae (Chalcidoidea: Hymenoptera). The species of the parasitoid was identified as *Homalotylus hemipterinus* (De Stefani) (Fig. 2) which was earlier described from India as *Homalotylus eyetelweinii* (Ratzeburg). This is a gregarious endoparasitoid on the grubs of coccinellid beetles and does not parasitize the adults. The adult parasitoids are small black insects with middle legs possessing a typical white colour with 5 tarsal segments and a spur which are characteristics of the Encyrtid family. The terminal segments of the antennae are also white in colour. Four to five parasitoids emerge from a single coccinellid grub making multiple exit holes on the grub and the number of exit holes is exactly the number of adults emerge that.

The genus *Homalotylus* is a dominant group of parasitoids parasitizing grubs and pupae of predatory coccinellids found in association with mealy bugs, soft scales and aphid colonies. Based on the review of literature, *H. hemipterinus* was reported for the first time from Gujarat. Since coccinellid predators play an important role in biological control of economically important insects like aphids, mealy bugs, scales etc; mass death of this predator due to parasitisation will affect the natural control of sucking insect pests.

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