Abstract

Predatory syrphid larvae feed on relatively immobile prey, but here we report the first case (as far as we are aware) of obligatory predation on very mobile prey. Larvae of an undescribed species of Ocyptamus (Diptera: Syrphidae) were found in whitefly (Hemiptera: Aleyrodidae) aggregations on the undersides of citrus leaves. However, instead of preying on the whitefly nymphs (as would be expected), the larvae preyed on adult flies (Diptera) that were attracted to the honeydew. In the laboratory, larvae captured significantly more flies on whitefly infested leaves than on washed leaves, and generally abandoned leaves that lacked whiteflies. Most cases of successful prey capture involved flies that probed the anterior part of the larva's body with its proboscis (as if it were honeydew). The syrphid larva lashed out at the fly and entangled it in sticky oral secretion. The prey did not recover when they were removed from the larva, suggesting that this new predatory species also employs venom to subdue its prey. Although the larvae consumed some honeydew, they were unable to complete their development on this diet. Two parasitoids were reared from Ocyptamus puparia, Proaspicera sp. (Hymenoptera: Figitidae) and Paracarotomus sp. (Hymenoptera: Pteromalidae), both of which are endoparasitic koinobionts. Rev. Biol. Trop. 58 (4): 1157-1163. Epub 2010 December 01.

Keywords

Aleyrodidae, citrus, Costa Rica, Diptera, honeydew, whitefly.