

OBEZA FLORIDANA, A PARASITOID
OF *CAMPONOTUS ABDOMINALIS FLORIDANUS*
FROM FLORIDA
(HYMENOPTERA: EUCHARITIDAE, FORMICIDAE)

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Colonies of the carpenter ant, *Camponotus abdominalis floridanus* (Buckley) frequently harbor commensals. In northern Florida these include the inquiline *Microdon*

fulgens Wiedemann (Diptera: Syrphidae), *Myrmecophila pergandei* Bruner (Orthoptera: Gryllidae), an undetermined species of Atelurinae (Thysanura: Nicoletiidae) and the parasitoid *Alachua floridensis* Schauff and Bouček (Hymenoptera: Eulophidae) (L.R.D., unpublished data). Deyrup & Fisk (1984) have reported the occurrence of a cockroach, *Myrmecoblatta wheeleri* Hebard (Blattaria: Polyphagidae) with this ant in southern Florida. *Obeza floridana* (Ashmead), a eucharitid parasitoid whose host was previously unknown, is reported here to parasitize *C. a. floridanus*.

Four colonies of *C. a. floridanus* were collected August 12, 1988 in Alachua County, Florida (T10S R19E section 11; W of Gainesville). This ant thrives in urban trash piles and was collected at several dispersed dump sites which contained a variety of discarded appliances, furniture, and building material scraps. The vegetation varied from open to dense and was dominated by laurel oaks (*Quercus laurifolia*), with thickets of wild plum (*Prunus* sp.), blackberry (*Rubus* sp.), green briar (*Smilax* sp.), smooth sumac (*Rhus* sp.), and persimmon (*Diospyros virginiana*). Ants of the genera *Odontomachus*, *Pogonomyrmex*, *Crematogaster*, *Aphenogaster*, and *Pheidole* were also encountered. Colonies were collected by picking up large pieces of trash and dumping the assorted ants and brood into plastic Fluon® lined buckets.

On August 19, 1988 an adult female *Obeza floridana* emerged from one of the four colonies. This wasp was ignored by the ants in the colony, jumped when an attempt was made to capture her, and buzzed when held with forceps. After this eucharitid was found, the pupae of other colonies of the carpenter ant were examined for parasitism. One of the other colonies had 6 parasitized *Camponotus* pupae, 5 of which contained an *O. floridana* pupa, the sixth contained a larva (instar unknown). Ten additional *C. a. floridanus* colonies were collected from the same area. Two colonies collected on August 22 and 29 contained *O. floridana* parasitized pupae; 3 were found in the first colony and 1 in the second. Thus, 4 of the 14 well-established colonies samples on the site contained *O. floridana* pupae. On August 30, another *C. a. floridanus* pupa parasitized by *O. floridana* was found in a colony about 2 kilometers north of the first site. Less than 1% of brood collected (brood collection was always incomplete) from these 5 colonies was parasitized by *O. floridana*. Only one parasitoid per infested host cocoon was found.

Parasitized pupae of this ant are easily recognized. Normal *C. a. floridanus* pupae have a distinctly darkened area on the posterior end (adjacent to the meconium), whereas pupae infected with *O. floridana* are only dark anteriorly. In contrast, pupae infected with the internal parasitoid *Alachua floridensis* are darkened both posteriorly and anteriorly, while retaining a pale medial band.

A female wasp that emerged August 29, 1988 was given the opportunity to mate with a newly emerged male on Sept. 1. Mating did not occur, but when she was presented twigs with fruit of green briar (*Smilax* sp.) and unripened pokeweed (*Phytolacca americana*, Phytolaccaceae), (plants that were both present at the collection site), she immediately inserted her ovipositor into the fruit of the pokeweed. Plant oviposition is expected for eucharitids (Clausen 1940), but not fruit oviposition. Heraty & Barber (in press) provide additional records of fruit oviposition by *O. floridana*. Rather than dissect the fruit for eggs, we placed it in a healthy ant colony in an unsuccessful attempt to establish parasitism. Apparent oviposition sessions were about 15 min long for each of the first two, 10 min for the third, and 5 min for the fourth. The female was still alive on the morning of September 2, but obviously less vigorous. She did not respond to water drops, honey agar, or the male (which was re-introduced). She did climb onto smooth sumac and attempt to oviposit for less than 1 min before leaving to rest on the side of her cage. She died at about 6:00 pm September 2, 1988.

This parasitism of *C. a. floridanus* is the first host record for *O. floridana* and the first indication that *O. floridana* may oviposit in fruit of pokeweed. We find it interesting that the first host for *O. floridana* was discovered in 1988, exactly 100 years after

Ashmead described this species from a male collected in Florida, probably near Jacksonville.

The specimens of *O. floridana* mentioned in this paper are deposited in the Florida State Collection of Arthropods, Gainesville, Florida. The authors appreciate the constructive comments of John Heraty and Drs. John Sivinski, Fred Santana, and Clifford Lofgren. Marie Benoit kindly typed several early drafts.

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