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THE HOST-PARASITE RELATIONSHIP OF *XYLOCELIA VIRGINIANA*  
ROHWER AND *OMALUS INTERMEDIUS* (AARON)

(HYMENOPTERA: SPHECIDAE, CHRYSIDIDAE)

There is a populous colony of the solitary, ground-nesting pemphredonine wasp, *Xylocelia virginiana* Rohwer, near the picnic table on Plummers Island, Maryland. Males frequent the foliage of a hop-hornbeam, *Ostrya virginiana* (Mill.) Koch, at the edge of the nesting site from late May to late June. For several years I have collected concurrently on this same foliage a number of males of the cuckoo wasp, *Omalus intermedius* (Aaron), and have suspected that *virginiana* served as the host for the chrysidid. Each of these wasps normally has only a single generation a year. However, I was never able to find *intermedius* females frequenting the nesting site, and, as a matter of fact, had never collected females of this species anywhere.

Early in the spring of 1963 I dug up two small areas in the *virginiana* colony site in an attempt to recover some wasp cocoons. The first digging on May 5 produced nothing. A second digging on May 12 yielded a single, light-tan, ovoid, silken cocoon (51263 A) 5 mm. long, at a depth of 2-5 cm. A female of *intermedius* emerged from this cocoon on May 23.

On June 16 I staked out several small areas containing nest entrances of *virginiana* females. I dug up two of these sites (61663 C, D) on July 21. In the 2-5 cm. layer I recovered two puparia of *Leucophora sociata* Meigen, an anthomyid parasite of *virginiana*, two cocoons containing resting larvae of *virginiana*, and one cocoon with a resting larva of *intermedius*.

There can be no doubt now that a host-parasite relationship exists between these two wasps. This is only the second published record for a species of *Omalus* parasitizing a ground-nesting pemphredonine wasp. The Peckhams (Bull. Wisc. Nat. Hist. Surv. 2: 104, 1898) recorded an *Omalus*, which was identified for them as *coruscans* (Norton), as a parasite of *Xylocelia americana* (Packard). It is probable that both of these wasps were misidentified specifically, but there is no reason to doubt the generic assignments. Other published host records establish that most species of *Omalus* parasitize twig- or wood-nesting pemphredonine wasps belonging to the genera *Stigmus*, *Pemphredon*, *Passaloecus* and *Diodontus*.

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