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**NEW MICHIGAN STATE RECORD FOR A SPHECINE WASP,
PODIUM LUCTUOSUM (HYMENOPTERA: SPHECIDAE)**

rufipes

David P. Cowan¹

ABSTRACT

Podium rufipes, previously unrecorded from Michigan, has been found occupying trap nests in the southwestern lower peninsula.

The recorded range for *Podium rufipes* Fabricius is the eastern United States from Iowa eastward to New York in the north and southward on into Central and South America (Bohart and Menke 1963), and although previously unknown in Michigan (O'Brien 1989), it is not surprising to discover populations in the southern part of the state. I reared a total of seven individuals from trap nests (artificial nest sites consisting of 20 x 20 x 150 mm blocks of wood with a hole drilled lengthwise to a depth of 125 mm) at two localities. In Allegan County the trap nests were placed along the margin of a dry oak forest with scattered white pines, and in Kalamazoo County the nests were put along a brushy strip between a mesic forest and a red pine plantation. The nests were provisioned and sealed during July of 1986 and 1987 and the adult progeny emerged in mid-June of 1987 and 1988.

Previous studies indicate that females of *P. rufipes* prefer to use preexisting cavities as nest sites. Rau (1937) found them using the vacated mud cells of *Sceliphron* and Krombein (1967,1970) observed nesting in trap nests. My observations agree closely with Krombein's. Unlike many wasps that move into trap nests (Krombein 1967), the cavity was not partitioned into a series of cells for rearing multiple offspring. Instead, only one offspring was reared in each nest stick using paralyzed cockroaches as prey. The nests were sealed at the entrance with a plug of debris that was plastered over on the outside with resin. Rau (1937) determined that the resin is obtained from pine trees. Krombein (1967,1970) found that cockroaches used as prey belong to the genera *Labiblatella*, *Chorisoneura*, *Eurycotis*, *Cariblatta*, and *Parcoblatta*. He also found that in South Carolina and Florida *P. rufipes* has several generations per year, but Rau's 1937 observations in Missouri and mine in Michigan indicate that northern populations are univoltine.

This species is rare in collections and this may reflect the wasp's cryptic habits and difficulty capturing quickly moving wasps on logs and branches in forests. They may also have particular habitat requirements that restrict their distribution. The cockroaches that *P. rufipes* preys on may be most abundant in the dead trees and leaf litter of deciduous forests, but pines are required as a source of resins to seal the nests. Krombein's habitat descriptions (1967,1970) and mine all indicate a mixture of broad-leaved trees and conifers.

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