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Scientific Note

A New Record for *Philanthus neomexicanus* Strandtmann (Hymenoptera: Philanthidae) and Some Insects Found in Its Burrow

On August 31, 1982, I observed an adult female of *Philanthus neomexicanus* Strandtmann (Hymenoptera: Philanthidae) flying with prey over sand dunes at Beach North, Point Reyes, California. After landing, the wasp uncovered a hole in the sand, entered with the prey, plugged the hole from the inside and stayed for several minutes. I captured her as she emerged. Guided by an inserted buckwheat stem, I excavated the oblique tunnel to reveal a pile of insect cadavers approximately 12 cm into the tunnel at a vertical depth of approximately 8 cm. No side tunnel branches or chambers were uncovered, nor were any wasp immatures found.

The insect bodies in the tunnel were mostly intact and in good enough condition to allow identification. There were three males and one female of *Lasioglossum pavonotum* (Cockerell) (Hymenoptera: Halictidae) and a male of *Sphaerophoria cylindrica* (Say) (Diptera: Syrphidae).

Although this record is outside the previously known geographical and temporal limits of *P. neomexicanus* (Bohart and Grissell, 1975, Bull. Calif. Ins. Surv., 19: 1–92), less is known of its biology than of other *Philanthus* species. Nonetheless, the presence of a fly among the insects piled in the burrow is unusual. In field studies of *Philanthus* wasps and their nests, it is standard to assume that paralyzed insects found in tunnels or brood cells have been provisioned by the attending female (Powell and Chemsak, 1959, J. Kans. Entomol. Soc., 32:115–120; Evans, 1966, Great Basin Nat., 26:35–40). Bees are the most common prey of this genus, but members of other hymenopteran families including Ichneumonidae, Chrysididae, Sphecidae, Vespidae and Scelionidae are occasional prey (Evans, 1970, Bull. Mus. Comp. Zool., 140:451–511). So, if the syrphid in the burrow were prey, a broad taxonomic gap in prey selection has been bridged. However, there is a superficial resemblance between *S. cylindrica* and the bees preyed upon by *P. neomexicanus* in size and banding pattern. The female wasp may have used visual cues for prey selection and captured the fly in error. Indeed, Evans and Lin (1959, Wasmann J. Biol., 17:115–132) attribute *Philanthus*' capture of certain wasps to the bee-like qualities of the latter.

The fly's presence in the tunnel does not confirm that it is suitable prey. The nest lacked brood cells, and the fly and paralyzed bees were piled in the main tunnel. These indicate that the nest was in an early stage of development. Presumably the female could still reject the fly during later stages of nest construction, or it could be refused by her larval offspring. Thus, while the observation may be indicative of a previously unknown prey resource of *P. neomexicanus,* such cannot be substantiated by this observation.

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