

First Records from Honduras of a Yellowjacket Wasp, *Vespula squamosa* (Drury) (Hymenoptera: Vespidae: Vespinae)

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ABSTRACT: Specimens of *Vespula squamosa* (Drury) collected in Honduras from 1992 through 2000 demonstrate an extension of the known range of Vespinae in Central America.

RESUMEN: Especímenes de *Vespula squamosa* (Drury) colectados en Honduras a partir la 1992 a 2000 demuestran una extensión de la distribución conocida de Vespinae en América Central.

In the Western Hemisphere, the heretofore southernmost records of non-adventive vespine wasps, the hornets and yellowjackets, are of the yellowjacket *Vespula squamosa* in Guatemala (Krombein, 1979; Akre et al., 1980). Recent examination of collections in Honduras, which lies southeast of Guatemala, has revealed the presence of *V. squamosa* there as well. Six worker specimens were found in the collection of the Escuela Agrícola Panamericana at El Zamorano, Honduras.

Honduras: Departamento Francisco Morazán, Lepaterique, Junacate, 3–10 Feb 1992, rcol. R. Cave. Departamento Cortés, Cofradía 5 km O Buenos Aires, Parque Nacional Cusuco, 9 Dic 1994, rcol. R. Cordero. Departamento Cortés, Parque Nacional El Cusuco, 15°29'N 88°13'W, 2 Mar 1995, rcol. R. Cordero. Departamento Cortés, Parque Nacional Cusuco, 15°29'N 88°13'W, 15 May 1995, rcol. R. Cordero. Departamento Olancho, Parque Nacional La Muralla, 15°07'N 86°45'W, 16 Jul 1998, rcol. R. Cave. Departamento Yoro, Parque Nacional Pico Bonito, San Rafael, 1355 m, 15°31'30"N, 86°46'43"W, 14 Agosto 2000, C. Meléndez.

The Zamorano collection also contains a gyne (potential nest-foundress) of *V. squamosa*.

Honduras: Departamento Francisco Morazán, Tegucigalpa, La Tigra, 10 Jul 1995, rcol. R. Cordero.

An eighth specimen, a worker, is in the collection of the Universidad Nacional Autónoma de Honduras in Tegucigalpa.

Honduras: Departamento Francisco Morazán, Sabanagrande, 15 May 1996, leg. Gabriela Padgett.

The locations and distribution of collection sites are shown in Fig. 1. All collection sites are characterized by sub-tropical to temperate climate and vegetation that has temperate zone elements dominated by pines (*Pinus* spp.). Some sites also include oak (*Quercus*) and sweetgum (*Liquidambar*) among the dominant vegetation. Akre et al. (1980) note that for nests of *V. squamosa* in relatively undisturbed sites, "nearly all colonies are in pine forests . . .". Thus the specimens in Honduras were collected in habitat similar to that of the known distribution in Guatemala, Mexico, and the eastern United States.

V. squamosa is not known to have adventive populations established in isolation from its natural range. Therefore, the records reported here do not necessarily represent adventive occurrence of this species and may represent natural occurrence of the species in Honduras. The broad distribution of collection sites (Fig. 1) and range of collection dates are both indicators that *V. squamosa* is well established in Honduras.

Vespula squamosa often initiates colonies by usurping nests founded by other yellowjacket species (MacDonald and Matthews, 1975, 1984; see also Taylor, 1939), but at least some *V. squamosa* nests are initiated by the *V. squamosa* queen alone (MacDonald and Matthews, 1975, 1984). Therefore, the presence of a host species, none of which are known from Honduras, is not a requirement for the occurrence in Honduras of *V. squamosa*.

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Fig. 1. Outline map of a portion of Central America. Spots indicate the collection localities of *Vespula squamosa* in Honduras.

Literature Cited

- Akre, R. D., A. Greene, J. F. MacDonald, P. J. Landolt, and H. G. Davis. 1980. Yellowjackets of America North of Mexico. U. S. Department of Agriculture, Agriculture Handbook No. 552, 102 pp.
- Krombein, K. V. 1979. Superfamily Vespoidea. In K. V. Krombein, P. D. Hurd, Jr., D. R. Smith, and B. D. Burks, (eds.). Catalog of Hymenoptera in America North of Mexico Vol. 2. P. 1520. Smithsonian Institution Press, Washington.
- MacDonald, J. F., and R. W. Matthews. 1975. *Vespula squamosa*: A yellow jacket wasp evolving toward parasitism. *Science* 190:1003-1004.
- MacDonald, J. F., and R. W. Matthews. 1984. Nesting biology of the southern yellowjacket, *Vespula squamosa* (Hymenoptera: Vespidae): Social parasitism and independent founding. *Journal of the Kansas Entomological Society* 57:134-151.
- Taylor, L. H. 1939. Observations on social parasitism in the genus *Vespula* Thompson. *Annals of the Entomological Society of America* 32:304-315.