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Parasitic Nematode Observed in the Tropical Fire Ant, *Solenopsis geminata* (F.) (Hymenoptera: Formicidae)

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PARASITIC NEMATODE OBSERVED IN THE  
TROPICAL FIRE ANT, *SOLENOPSIS GEMINATA* (F.)  
(HYMENOPTERA: FORMICIDAE)

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Parasitic nematodes occur in ants of several genera (Nickle 1974), but have not been reported previously in fire ants *sens. str.*, *Solenopsis* (*Solenopsis*) spp. Recently we observed a single nematode in the gaster of each of nine workers of the tropical fire ant, *Solenopsis geminata* (F.). These ants were among 270 specimens that had been collected ca six months previously in pitfall traps at two sites in Alachua County, Florida, during an ecological study. They were preserved in 70% isopropanol, which causes the gasters of fire ants to become greatly distended. Subsequent sampling of *S. geminata* from this and other areas failed to yield additional parasitized specimens; therefore, we decided to report our observation now because it appears that considerable time may be required to find the nematode again.

The parasitized ants were detected by observing the white larval nematodes in the distended, partially cleared gasters. Due to the distortions of alcohol preservation, it was not possible to precisely visualize these ants as they appeared in life; however, we believe their gasters were enlarged. The presence of one parasite per host, their large size (ca 3 mm long) relative

to the size of the host, and the apparently altered morphology of the host (a "mermithergate"?—Wheeler, 1928) suggests this nematode belongs to Mermithoidea (Mermithida of some authors).

Jouvenaz et al. (1977) failed to detect nematodes in surveys for diseases of fire ants in the United States or in Brazil (Jouvenaz et al. 1980). The methods employed in these surveys (microscopic examination of crude aqueous extracts of live ants homogenized *en masse*) would destroy parasites as large as these nematodes. Because of this, we have modified our protocol for screening for biocontrol agents of fire ants in South America to include darkfield stereomicroscopic examination of alcohol-preserved specimens. If nematodes are detected, the host colonies will be excavated and established in the laboratory for study.

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## DIURNAL OVIPOSITION BY *WYEOMYIA MITCHELLII* AND *W. VANDUZEEI* (DIPTERA: CULICIDAE)

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Adult *Wyeomyia mitchellii* (Theobald) and *W. vanduzeei* Dyar & Knab oviposit in water impounded in bromeliad leaf axils. Female *W. vanduzeei* have been observed performing brief, hovering, daytime ovipositional flights (Frank and Curtis 1982). This study explores the question of whether oviposition by these mosquitoes normally is diurnal, nocturnal, or both.

*Aedes aegypti* (L.) is the best-known exception to the generalization (Riley and Johannsen 1938) that mosquitoes oviposit at night. At Entebbe, Uganda, on the equator, with sunrise at 0600 h and sunset at 1800 h, Haddow and Gillett (1957) found that oviposition occurred in this species only during daylight and twilight, with a prominent single mode at 1500 h.

In studies of timing of mosquito activity, more is known about biting than about oviposition. Haddow (1954) studied biting behavior of some African mosquitoes and recommended (a) that timing records should be related to sunrise and sunset and (b) that collection intervals should not exceed one hour. We adopted these recommendations in our study of oviposition.

In May-July 1984, preimaginal *W. mitchellii* and *W. vanduzeei* were collected from bromeliads at Vero Beach, Florida, USA (27° 38'N 80°