

Little Fire Ant, *Wasmannia auropunctata* (Roger) (Insecta: Hymenoptera: Formicidae)¹

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Introduction

Prior to the advent of chlorinated hydrocarbons, organophosphates, and carbamates the little fire ant, *Wasmannia auropunctata* (Roger), was a problem in Florida. The use of persistent pesticide chemicals reduced the populations of the ants until they were no longer a menace. With the reduction in the use of these persistent pesticide chemicals populations of little fire ants have been allowed to increase, and in some areas, to develop into a serious problem.

Taxonomy

Wasmannia auropunctata was originally described by Roger (1863) as *Tetramorium auropunctata* from specimens collected in Cuba. Forel (1893) described the genus *Wasmannia*. Enzmann (1947) described *Hercynia panamana* as a new genus and species from Panama. Brown (1948) relegated *Hercynia panamana* to synonymy, as the type specimens were identical to *auropunctata*.

Distribution

The little fire ant is a common tramp ant species located throughout northern and central South America, the West Indies, the warmer portions of Mexico (Wheeler 1929) and the United States. Populations of little fire ants have been found in Los Angeles County, California but occur primarily in south and central Florida (Hedges 1998). Florida counties with populations of little fire ants include: Broward, Collier, Dade, Glades, Hardee, Hendry, Hernando, Highlands, Indian river, Lake, Martin, Manatee, Marion, Monroe, Okeechobee, Orange, Osceola, Palm Beach, Polk, Sarasota, St. Lucie, and Seminole Counties (Ferster, Deyrup and Scheffrahn 2000).

Description

The little fire ant is approximately 1.5 mm in length and reddish to golden brown. The workers are monomorphic (all one size), have two segments, or nodes, in their pedicel, and the thorax has one pair of spines (Hedges 1998). The antennae consist of 11

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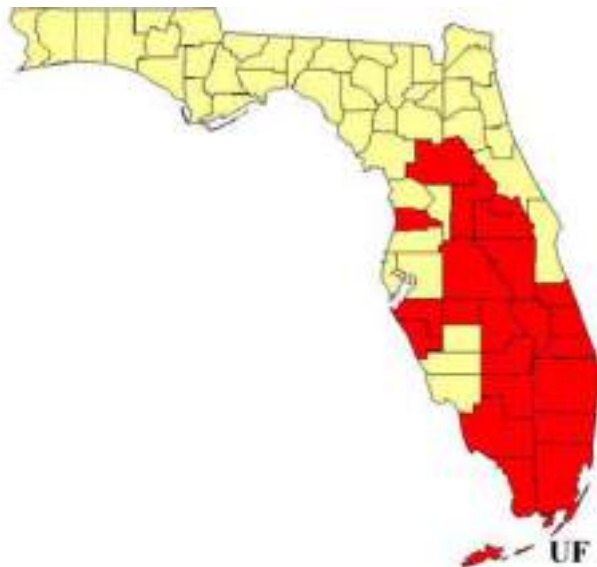


Figure 1. Distribution of the little fire ant, *Wasmannia auropunctata* (Roger), in Florida, as of 2000. Credits: Shawn Brooks, University of Florida

segments with the last two forming a distinct club. The antennal scrobes are well marked and extend almost to the occipital border (Creighton 1950). The head and thorax are heavily sculptured with grooves and pits (Hedges 1998). The epinotal spines are set close together at the base, strongly diverging and slightly incurved when seen from above. The node of the petiole is rectangular in profile and higher than the post-petiole. The erect body hairs are long, coarse and rather sparse (Creighton 1950).

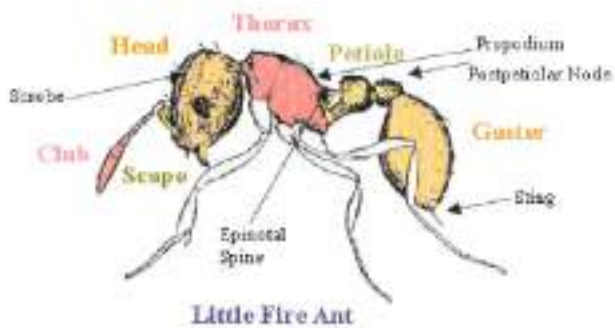


Figure 2. Lateral view. Credits: Mark Deyrup

Nesting Habits

A single nest of little fire ants may contain several dealate (wingless) reproducing queens, numerous workers, pupae, larvae, and eggs. The little fire ant nests under leaf debris, rotten limbs, stones, and in the crotches of trees or clumps of grass. Nests are frequently found behind the sheaths of palms or



Figure 3. Little fire ant, *Wasmannia auropunctata* (Roger), workers. Credits: University of Florida



Figure 4. Little fire ant, *Wasmannia auropunctata* (Roger), worker. Credits: University of Florida



Figure 5. Little fire ant, *Wasmannia auropunctata* (Roger), queen. Credits: Division of Plant Industry

palmettos. The little fire ant is highly adaptable, nesting in both open and shaded areas, seeming to thrive equally well under moist or xeric conditions (Smith 1942). However, during heavy rains nests may be moved into buildings or trees (Hedges 1998).

Economic Importance

The little fire ant is especially noted for its painful and long-lasting sting (Smith 1965). Spencer (1941) reported that little fire ant workers did not readily sting; however, they would sting when pressed by clothing or other objects. In infested citrus groves, the ants are predominant on the leaves, around fruit, and on the trunk, making contact between the ants and workers unavoidable. Spencer (1941) reported that premium wages had to be paid to harvest fruit in some groves.

In houses, the little fire ant may infest items clothing, beds, furniture, or food (Smith 1965). Food in homes, such as fats, peanut butter, and other oily materials are preferred by the ant, while in nature the ants tend honeydew-secreting insects (Fernald 1947). The workers also feed on dead insects, other arthropods, small animals, and are probably predacious on many insects (Smith 1965). In Cameroon farmers encourage the spread of the ant by distributing artificial nests to limit cocoa pests (Bruneau de Mire 1969).

Survey and Management

Trails of little fire ant workers may be found along sidewalks and foundations and up the sides of buildings. Grass and mulch should be moved away from building foundations, driveways, and sidewalks to inspect for hidden foraging trails. Items in contact with the ground, such as debris, landscape lumber, stones, and firewood should be lifted to check for hidden colonies (Hedges 1998).

In homes trails of little fire ants can be found along baseboards or under the edges of carpeting (Hedges 1998). They may also infest clothing, furniture, beds, or food (Smith 1965).

Management of little fire ants is accomplished by finding and eliminating colonies in around the structure. Colonies living in soil or under debris

should be treated with a residual insecticide. Injecting a dust or aerosol insecticide into the structure can eliminate colonies living in wood or wall voids. Ant baits can also be used if the colony cannot be located (Hedges 1998).

For more management information see:

Insect Management Guide for Ants

Ant Trails: A Key to Control with Baits

Selected References

Bruneau de Mire, P. 1969. Une fourmi utilisee au Cameroun dans la lutte contre des mirides du cacaoyer *Wasmannia auropunctata* Roger. *Café -Cacao-The*. 13: 209-212.

Brown, W.L., Jr. 1948. The status of the genus *Hercynia* J. Enzmann. (Hymenoptera: Formicidae). *Ent. News* 59: 102.

Creighton, W.S. 1950. The ants of North America. *Bull. Mus. Comp. Zool.* 104: 1-585.

Enzmann, J. 1947. *Hercynia*, a new genus of myrmecine ants. *J. New York Ent. Soc.* 55: 43- 45.

Fernald, H.T. 1947. The little fire ant as a house pest. *J. Econ. Ent.* 40: 428.

Ferster, B., M. Deyrup, and R. Scheffrahn. 2000. *The Pest Ants of Florida*. Institute of Food and Agricultural Sciences, Gainesville, Florida.

Forel, A. 1893. Formicides de l'Antille. St. Vincent Recoltees par Monsieur H.H. Smith. *Trans Ent. Soc. London* 4: 333-418.

Hedges, S.A. 1998. *Field Guide for the management of structure infesting ants*, 2nd ed. G.I.E. Inc., Publishers, Cleveland, Ohio.

Koehler, P.G., D.E.Short and T.R. Fasulo. (1998). *Pests In and Around the Home*. UF/IFAS. SW-126. CD-ROM.

Roger, J. 1863. Die neu aufgeführten gattungen und arten meines Formiciden Verzeichnisses. *Berl. Ent. Zeitschr.* 7: 131-214.

Smith, M.R. 1942. The relationship of ants and other organisms to certain scale insects on coffee in Puerto Rico. *J. Agri. Univ. Puerto Rico*. 26: 21-27.

Smith, M.R. 1965. House-infesting ants of the eastern United States. USDA-ARS Tech. Bull. No. 1326. 105p.

Spencer, H. 1941. The small fire ant *Wasmannia* in citrus groves: A preliminary report. *Fla. Ent.* 24: 6-14.

Wheeler, W.M. 1929. Two neotropical ants established in the United States. *Psyche* 36: 89-90.