



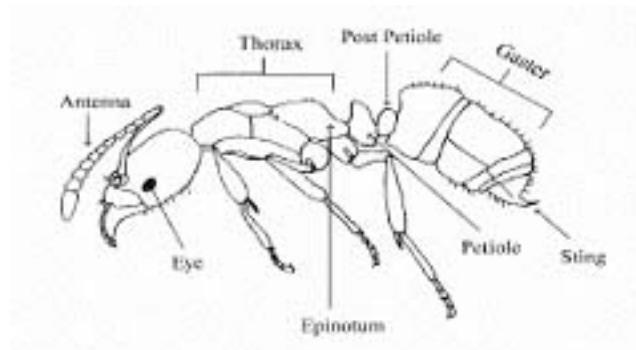
## Living on the Edge: Management Considerations for Imported Fire Ants in Western Texas, Near or in Recently-Infested Areas

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Those of you fortunate enough to live without red imported fire ants count yourself lucky! People who are new to Texas or visiting from an area free of fire ants are usually introduced to these creatures in a painful manner. Unsuspecting people, newcomers or those who do not pay attention to where they step can find their foot in the middle of a fire ant mound and being attacked severely by these organisms. Red imported fire ants can cause painful stings that swell into pustules and, for some, cause serious health problems.

**You may not have an imported fire ant infestation.** The red imported fire ant, *Solenopsis invicta* Buren (Hymenoptera: Formicidae) does not occur in the majority of west Texas counties (for distribution maps, see <http://fireant.tamu.edu>). Even in counties known to have imported fire ant infestations, parts of the county may not harbor this pest. While other fire ant species may be locally common in western Texas, these are native occurring species such as the tropical fire ant (*Solenopsis geminata* Fabricius), the southern fire ant (*S. xyloni* McCook,), or desert fire ants (*S. aurea* Wheeler and *S. amblychila* Wheeler). The red imported fire ant has been detected in only a few areas of west Texas (Midland, Ector, Lubbock and El Paso Counties).

**Properly identify suspect ants.** So, how do you know if you have red imported fire ants? This species has two nodes or bumps between the thorax and abdomen (see petiole and post petiole, below). These ants also have ten-segmented antennae with a two-segmented club at the end. The workers are reddish black with distinct compound eyes. Red imported fire ant workers are polymorphic, meaning that they come in a range of sizes, but are never larger than 1/4 of an inch.



Red imported fire ants can often be distinguished from other ants by their characteristic mound as well as their behavior. The mound has no central opening and can be up to 18 inches tall. In hot dry climates, fire ants often do not build mounds. Unlike many native ant

species, when the nest is disturbed worker ants emerge en masse and run up vertical objects to bite and sting.

Imported fire ants prefer to build their mound in open, sunny areas such as pastures, lawns or meadows. Their mounds often occur around the base of trees, in rotting logs, next to concrete walks, beside brick walls or in irrigated landscaping. The mound can occasionally be found in or under buildings as well as electrical or utility housings (see fire ant fact sheets [FAPFS010](#) and [013](#) for ant identification keys). Colonies of these ants can move several hundred feet away from the original mound site almost overnight. Mounds may also seem to suddenly appear after heavy rains or in recently flooded areas. Under hot, dry conditions, fire ants may survive for long periods deeper in the soil.

**Collecting and submitting ant specimens for identification.** Ants can be collected by dipping an ear swab into alcohol and touching the swab lightly to the ant. Tweezers can also be used to collect ants. Place the ants in rubbing alcohol for preservation purposes until they can be identified. Be careful not to get bitten or stung (see fact sheet [FAPFS023](#) for medical problems associated with imported fire ants).

Another method to collect ants is to place a vial with alcohol on the mound and leave it for a period of time-long enough for ants to climb the vial and fall into the alcohol. In all collecting methods, care should be taken as to not damage the ants. Antennae are a common characteristic used for proper identification, and these can be damaged easily.

After collecting ants, they can be sent to the County Extension Agent in your area for proper identification. The local County Extension Agent may need to send the ant sample to another source for identification, such as a fire ant agent or Extension Entomologist. This may require a bit of time and patience for the proper identification to occur. Another source of identification may be pest control companies that have a staff entomologist.

**Why not kill all ants?** There are approximately 300 species of ants found in Texas (O’Keefe et al. 2000, Southwestern Entomologist Supplement Issue 22), and the majority of them are beneficial (see [FAPFS010](#) and [013](#) for ant identification keys or [FASIMS](#), under “maps” for distribution maps of Texas ant species). Native ants should be identified and conserved in their original habitat. Some species of native and exotic ants are our best defense against red imported fire ants. They are thought to provide “biotic resistance” because they compete with exotic red imported fire ants for resources such as food and nesting sites, prey on newly mated imported fire ant queens and raid small nests. Some competing ant species include the little black ant (*Monomorium minimum*), the thief ant (*Solenopsis molesta*), the big-headed ants (*Pheidole dentata* and others), the introduced pavement ants (*Tetramorium* species), and pyramid ants (*Dorymyrmex* species). It is possible, however, for the competing ant species to become pests in and around the home, but their benefits may outweigh their pest status.

**Select the proper course of action.** Dependent upon the pest ant species, strategies for management can vary greatly (see publications [L-5314](#), [L-1783](#), [L-2061](#) for harvester, carpenter and house-infesting ant control information, respectively). If the ants have been identified as red imported fire ants and they are posing a threat or causing problems, a plan to manage them can then be selected.

General pesticides kill a wide variety of insects. If the goal is to eliminate all ants, these may be ideal products to use. However, if the goal is to preserve the “good” ant species, these products should not be used for ant management since general use chemicals tend to kill all ant species in the area. Remember, you are trying to conserve native, competing ant species.

If you live in an area that has recently been invaded by imported fire ants and their mound numbers are low (less than 20 mounds per acre), consider using only individual ant mound treatments as a first line of defense. This strategy will conserve the native ant species that compete with red imported fire ants. There are numerous products for mound treatments that come in a variety of forms such as granular, dust, liquid or powder (see [FAPFS012](#) and [037](#), also publication [L-5070](#)). Broadcast-applied bait-formulated products are best used in larger fully-infested areas (those areas that reach or exceed 20 or more imported fire ant mounds per acre). It may even be possible to attempt a spot eradication if the area for eradication does not have infested areas within two to five miles or more (see [FAPFS030](#)).

Help keep the spread of imported fire ants in check. The west Texas counties that are not currently infested by imported fire ants are the location of the last stand to keep areas free of this pest. By being aware of the environment as well as being educated on the red imported fire ant and its identification, biology, and control options, Texans may be able to keep fire ants from moving farther into these areas.

The United States Department of Agriculture has developed a quarantine program to prevent the spread of the imported fire ant. Quarantine regulations are enforced by the Texas Department of Agriculture. You can help prevent the spread of fire ants by being aware of the law. If you live in a non-infested red imported fire ant area, be aware of landscaping material originating from infested parts of Texas or the U.S. The material could be harboring transported fire ants. Inspect all baled hay, landscape plants and materials such as mulch, soil, compost and sod, as well as construction machinery and honey bee hive housing equipment. If fire ants are discovered in material purchased from a nursery or other source, contact the source of the shipment to make them aware of the problem. The fire ant infestation should also be reported to the Texas Department of Agriculture.

See [http://www.agr.state.tx.us/producer\\_info/regulatory/reg\\_fire\\_ant.htm](http://www.agr.state.tx.us/producer_info/regulatory/reg_fire_ant.htm) for information on quarantine areas.

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**For more information regarding fire ant management, see Extension publications [B-6043](#), *Managing Red Imported Fire Ants in Urban Areas*; [B-6076](#), *Managing Red Imported Fire Ants in Agriculture*; [B-6099](#), *Broadcast Baits for Fire Ant Control*; or [L-5070](#), *The Texas Two-Step Method Do-It-Yourself Fire Ant Control for Homes and Neighborhoods*. Also visit our web site at <http://fireant.tamu.edu>.**

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