

Red Imported Fire Ants: A Threat to Nursing Homes and Day Care Centers

Molly Keck

Extension Program Specialist II-Integrated Pest Management
 Texas A&M AgriLife Extension Service

Bastiaan M. Drees

Extension Entomologist Emeritus
 Texas A&M AgriLife Extension Service

Roger Gold

Professor of Entomology and Endowed Chair
 Texas A&M AgriLife Extension Service

1991, fire ants have attacked patients in nursing homes (see [“Reducing Fire Ant Risks to Critical Health Care Facilities in Texas”](#)). Popular press has also reported numerous cases, including several which resulted in patient death (see [Fire Ants and Texas Nursing Homes](#)).

Contract pest control services. Nursing home and convalescent center managers can help assure the safety of their patients by contacting licensed pest control operators and discussing ant control options with them. If separate companies manage insect pests indoors and outdoors, make them aware of the control tactics being used for this and other pests. Red imported fire ants and other ant species move easily through small cracks and crevices in foundations and around windows. If not controlled outdoors, the ants will often suddenly migrate indoors. *Controlling them outdoors before they enter the building is the best preventive action.*

Study the contracts with pest control and lawn care companies to ensure that a plan is included for managing the ants both indoors and outdoors. A [2007 study](#) evaluated three treatment options for managing fire ants outdoors to prevent them from moving indoors at 19 nurs-

NURSING HOMES

The threat. The red imported fire ant, *Solenopsis invicta* Buren (Hymenoptera: Formicidae), now infests over two-thirds of Texas (see [Geographic Distribution of Fire Ants](#)). Although primarily a pest found in outdoor sites such as flower beds, ornamental plantings, and turfgrass areas, they can migrate indoors in search of food, moisture, and nesting sites, endangering residents (see [“Fire Ant Attacks on Residents in Health Care Facilities”](#) and [“Red Imported Fire Ant Multiple Stinging Incidents to Humans Indoors in Texas”](#)). Fire ants can present a medical threat to immobile patients and a potential legal liability. In at least 20 known cases in Texas since



ing homes throughout Texas. Treatment options were 1) perimeter broadcast bait applications, 2) perimeter sprays and individual mound treatments, and 3) perimeter broadcast granular insecticides. Results from this study determined that any of these fire ant programs can make a significant impact on fire ant foraging activity around nursing homes.

Prevention. Conduct regular inspections for ant activity or ant colonies both outside and inside the premises, and correct any conducive conditions and potential problems. A dedicated, trained staff member or contracted professional pest control operator can provide at least weekly inspections because the ants can quickly infest or reinfest patient areas. Carefully control sanitation within the care rooms to include eliminating food sources from bedside tables, clothing drawers, and other storage areas within rooms. Constantly review procedures for caring for patients to make sure patients who are incapable of turning are “direct turned” frequently so that ants do not go undetected.

Training facility staff about the risks of fire ants and identifying foragers and mounds may help the staff detect or prevent a problem. Provide fire ant in-service trainings to nursing home staff, educating them on fire ant risks, identifying signs of activity indoors, identifying mounds, and how to react to fire ants indoors.

Diagnose ant problems. Certain weather conditions can initiate ant colony movement indoors. In very hot, dry weather, colonies may migrate indoors in search of a more suitable nesting site, whereas heavy rains may cause them to seek dry nesting sites indoors to escape flooding. Ants that suddenly appear in the beds of immobile patients may be seeking moisture or food for colonies located outdoors or exploring the patient’s bed as a possible nesting site for the colony. Foraging ants recruit additional foragers to suitable food sources, but colonies can migrate en masse in a matter of hours. It is often impossible to determine why ants suddenly appear on a patient, but if developmental

stages (larvae and pupae) are present along with worker ants, it is likely that a colony migrated to a new location.

Take specimens for identification. If you find ants indoors, collect them in a vial of alcohol using a cotton swab or tweezers. This helps the pest control operator diagnose the problem and determine the most appropriate course of control. These specimens are also useful in documenting any problems that may result from their presence or activities. They can be sent to the Texas A&M University’s Center for Structural and Urban Entomology using this [identification form](#). For ant identification guidelines, see [Texas Pest Ant Identification: An Illustrated Key to Common Pest Ants and Fire Ant Species](#) and [Managing Household Ant Pests](#).

DAY CARE CENTERS

The threat. To most young children, an insect is an interesting creature that causes very little, if any, fear. Ants probably receive the attention of most children because they are easy to find and can be watched for long periods. Most ants in a day care playground setting are harmless, either because they lack a stinger or because they don’t use them. Red imported fire ants, on the other hand, sting more children each year than all other insects combined. Children are stung on their arms, feet, hands, and legs during close inspection of fire ant trails or mounds, or because they do not know they are standing on or near one of these areas. Fortunately, most children are not allergic to fire ant stings and eventually recover on their own. For some, fire ants stings are a real danger and may require emergency medical attention. Fire ant control for daycare operators can be a difficult, expensive, and ongoing problem that must be dealt with to ensure the safety of the children in their care.

Contact pest control services. By law, all pest control operations in a day care must be performed by a pest control operator licensed by the Texas Department of Agriculture, Structural

Control Service. These operations can include insects, pest birds, plant diseases, rodents, weeds, and all other similar situations.

Prevention. Treating fire ants in these areas can be as costly or inexpensive as the situation demands. In many instances, day care playgrounds may contain areas of hardened bare soil, pea gravel, sparse grasses, and wood mulch. These conditions usually discourage fire ants from building mounds, but do not prevent them from inhabiting these areas. Children are frequently stung by fire ants without any warning or indication of an ant mound. In situations where ant mounds are not visible, some inexpensive, environmentally friendly, and viable strategies can reduce fire ants for extended periods.

Whatever the situation, one fact is clear: fire ant stings to children are unacceptable. They can cause painful blisters and even serious medical problems. Treating daycare playgrounds is a sensitive issue and must be approached with forethought and careful planning.

Call your local county Extension agent for more information or consult the additional resources below.

Also see *Medical Problems and Treatment Considerations for the Red Imported Fire Ant, Fire Ants and the Texas IPM in Schools Program*, and *Stings of Imported Fire Ants: Clinical Manifestations, Diagnosis, and Treatment*.

ACKNOWLEDGMENTS

This fact sheet was originally written by Bastiaan M. Drees, Nathan Riggs, and Roger Gold and released as Fire Ant Plan Fact Sheet #032. It was revised in June 2002.

CITATIONS

deShazo, R. D., D. F. Williams, and E. S. Moak. 1999. "Fire Ant Attacks on Residents in Health

Care Facilities: A Report of Two Cases." *Annals of Internal Medicine* 131:424-429, posted at www.annals.org/content/131/6/424.full.pdf.

Drees, B. M. 1995. "Red Imported Fire Ant Multiple Stinging Incidents to Humans Indoors in Texas." *Southwestern Entomologist*. 20(3):383-385, posted at sswe.tamu.edu/articles/PDF/SWE_V20_N3_P383-385.pdf.

Merchant et al. 2007. "Reducing Fire Ant Risks to Critical Health Care Facilities in Texas: Nursing Homes Survey and Treatment Evaluation." *FY 2006-2007 Report on Progress*. Texas Imported Fire Ant Research and Management Project posted at bug.tamu.edu/fireant/research/projects/pdf/Merchant_Michael_AnnRept0607.pdf.

FOR MORE INFORMATION

Geographic Distribution of Fire Ants

www.extension.org/pages/9725/geographic-distribution-of-fire-ants

Fire Ants and Texas Nursing Homes

fireant.tamu.edu/materials/slides/

Fire Ant Identification Form

urbanentomology.tamu.edu/pdf/forms/AntID-form.pdf

Texas Pest Ant Identification: An Illustrated Key to Common Pest Ants and Fire Ant Species

u.tamu.edu/ento-001

Managing Household Ant Pests

www.agrilifebookstore.org/product-p/eb-6183.htm

Medical Problems and Treatment

Considerations for the Red Imported Fire Ant

u.tamu.edu/ento-005

Fire Ants and the Texas IPM in Schools Program

u.tamu.edu/ento-017

Stings of Imported Fire Ants: Clinical Manifestations, Diagnosis, and Treatment
www.uptodate.com/contents/stings-of-imported-fire-ants-clinical-manifestations-diagnosis-and-treatment

Managing Red Imported Fire Ants in Urban Areas
www.extension.org/pages/11004/managing-imported-fire-ants-in-urban-areas-printable-version

Broadcast Baits for Fire Ant Control
www.agrilifebookstore.org/product-p/e-628.htm

Fire Ant Control: The Two-Step Method and Other Approaches
www.agrilifebookstore.org/product-p/ento-034.htm

For more information regarding fire ant management, see Extension publications *Managing Red Imported Fire Ants in Urban Areas*, *Broadcast Baits for Fire Ant Control*, or *Fire Ant Control: The Two-Step Method and Other Approaches* posted on <http://AgriLifeBookstore.org>.

The information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Texas A&M AgriLife Extension Service is implied.

Texas A&M AgriLife Extension Service

AgriLifeExtension.tamu.edu

More Extension publications can be found at *AgriLifeBookstore.org*

Educational programs of the Texas A&M AgriLife Extension Service are open to all people without regard to race, color, sex, religion, national origin, age, disability, genetic information, or veteran status.

The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating.