

Managing Tawny Crazy Ants in Livestock Production Systems

► Tawny crazy ants (*Nylanderia fulva*), previously known as the Caribbean or the Rasberry crazy ant, are fast becoming an economic, ecological, and nuisance pest in the southeastern United States. They have been a serious problem in parts of Florida and Texas for more than 10 years and are spreading to other states.

Tawny Crazy Ant Movement

While this pest does not bite or sting, it is considered to be one of the worst nuisance ants. In infested areas, extremely large populations of tawny crazy ants (TCA) have caused great annoyance to residents and businesses. When populations reach a critical density, they become extremely difficult to control, and management options are usually expensive. These reasons make reducing the spread of TCA in the Southeast highly important.

TCA expansion is either by slow, methodical crawling of workers or by jump movement to an uninfested location. TCA may expand their local range 800 to 1,300 feet per year by crawling. Jump movements are characterized by the sudden presence of the ant in an area where it was formerly unknown. They occur when a small group of ants is inadvertently moved, such as in trash, mulch, potted plants, cars, etc., by humans to uninfested areas.

When the ants arrive at their new home, they establish new nest sites as colonies grow and expand. Because colonies consist of multiple egg-laying queens, worker numbers increase rapidly in the heat and humidity of summer.

Identification

Trails of TCA are fast moving, erratic, wide, and have vast numbers of ants. They do not form mounds in the landscape, but can tunnel in loose soil. They are uniformly sized, reddish-brown ants 1/8 inch long. Worker ants have long legs and antennae. Under a microscope, you will see a 12-segmented antenna, a petiole with one node, and an acidopore; the ant will be covered with many hairs (figure 1). Winged males are required for species-level morphological identification. A common and unique visual sign of TCA is large numbers of dead ants found outdoors and piled in corners of structures or along walls next to buildings. If you suspect

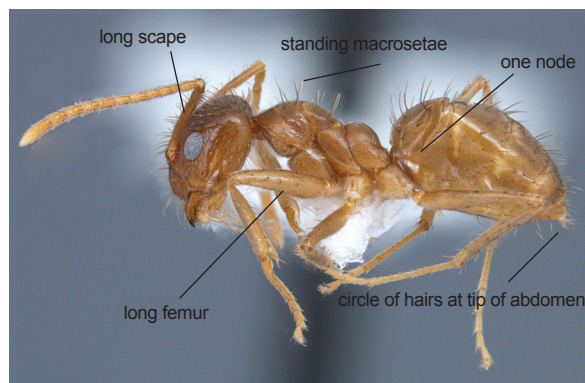


Figure 1. Tawny crazy ant, *Nylanderia fulva* (Mayr), worker. (Photo credit: Joe MacGown, Mississippi State University)

that TCA have been found, it is important to confirm their identity. A sample of the ants, as well as photographic documentation, should be sent to a local Alabama Extension agent/office, who will identify the ant or contact a specialist to confirm identification. Proper identification is necessary to develop a management plan.

Biology and Behavior

In areas where TCA are well established, workers can number in the millions. Colonies have multiple queens that share reproduction responsibilities allowing colonies to reach extremely large populations and occupy wide swaths of land. They prefer foraging and nesting in shaded areas. Foraging trails are quite apparent (≥ 4 inches wide) and individuals forage erratically. Foraging trails will often be found going up and down trees and fences, following seams in concrete surfaces, following structural barriers, and in large open shady grassy areas. Colonies nest in, on, and under anything that can provide moisture and protection from rainfall. They have been found in mulch and leaf litter; under pots, natural debris, landscape objects, loose tree bark; and in signs and structures. Nests occur primarily outdoors, but worker ants will forage indoors.

Tawny crazy ants eat almost any organic material. Worker ants commonly “tend” sucking hemipterous insects such as aphids, scale insects, whiteflies, mealy bugs, and others that excrete a sugary liquid called *honeydew* when stimulated by the ants. Workers are also attracted to sweet parts of plants including nectaries or damaged and over-ripe fruit. Worker ants also consume other insects and small vertebrates for protein.

Impacts to Livestock

In 2015, the owners of a calving operation in Texas started noted serious impacts in young calves that they believed was caused by TCA. Calves appear to have been overwhelmed by TCA, which resulted in eye damage and blindness (figures 2–4). Texas AgriLife Extension personnel visited the site and found only TCA responding to food lures and no other ants, such as red imported fire ants. Although this activity has only been noted so far in cattle, producers of horses, goats, and sheep in TCA-infested areas should also be vigilant.

Management for Livestock Producers

In a TCA-infested area, it is best to plan calving before May and after October when populations of TCA are naturally lower. If this is not possible, prepare a confined calving area to minimize the impact of TCA. Choose and prepare an area so broadcast insecticide treatments can be applied to the grounds to reduce ant activity and allow for a stress free calving. Depending on the number of animals to be confined, set up the confined calving area in 2 to 3 separate lots so animals can be rotated from lot to lot to reduce foraging pressure on the areas.

Preparing a Confined Calving Area

When selecting a location for the confined calving area, stay at least 100 feet from a wooded area of land so the animals are away from areas of TCA refuge and overhanging limbs. This will also allow for easier treatment of the ground in and around the confined area. Remove any debris, such as limbs, wood, and any unnecessary materials, from within and around the area.



Figure 2. Tawny crazy ant injury to newborn calf. (Photo credit: Paul Nester)



Figure 3. Tawny crazy ant injury to newborn calf. (Photo credit: Beth McMahon)



Figure 4. Tawny crazy ants around calf's eye. (Photo credit: Beth McMahon)

Managing TCA in Confined Calving Area

Select insecticides with approved active ingredients for use around and on livestock. For more information, visit the Texas A&M AgriLife Extension website at <http://livestockvetento.tamu.edu/pesticides-2/>. Begin broadcast insecticide treatments with the lowest labeled rate in and around the confined calving area one month before calving, treating areas every 2 weeks unless otherwise indicated on label. Continue to treat on this schedule until calves are up and walking and able to move freely in pastures. Monitor areas weekly to make sure that insecticide treatments are effective. Rotate cattle from one area to another based on grazing pressure. Application rates and intervals may need to be adjusted depending on weekly monitoring observations of the TCA population. Treatment to young calves with approved insecticide may be necessary. Contact your veterinarian for suggestions on treatment of symptoms, if necessary.

Monitoring for TCA Presence

Begin monitoring TCA populations in April in and around the confined calving areas. A ¼-inch thick slice of hot dog is used as a monitoring food lure. Place lures every 10 to 15 steps around the border and within the confined calving area in early morning or late evening when ants are active. Mark the lures with an electrician's flag to aid in relocating after placement. Let the lures stand for 20 minutes, and then observe for the presence of the TCA (figure 5). The denser the population of TCA, the quicker they will be attracted to the lures. If more than 50 percent of the food lures have TCA present within the 20-minute period, it is time to treat. If any of the lures have TCA present, monitor every week.



Figure 5. Tawny crazy ants on hot dog lure. (Photo credit: Paul Nester)

Managing TCA Spread

If TCA are present in your area, it is critical that you inspect any material you are bringing onto your farm. TCA populations are easily spread into new areas via infested materials, such as hay, equipment, potted plants, etc.

Report Findings of the Tawny Crazy Ant

If you think that you have a tawny crazy ant infestation, contact your county Extension agent/office to get a proper identification. This will allow Extension to track the movement of this invasive species.



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For more information, contact your county Extension office.
Visit www.aces.edu/directory.

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