Tawny Crazy Ant Control Recommendations

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August, 2015

Tawny crazy (TCAs), *Nylanderia fulva*, ants are a non-native ant species that has recently invaded the three coastal counties of Mississippi. In the areas where they occur, tawny crazy ants cause much irritation and consternation for affected homeowners. TCAs crazy ants were first detected in an isolated area of Hancock County in the fall of 2009 and infestations were documented in Jackson County in 2010 and in Harrison County in fall of 2012. This pest now occurs in portions of all three of Mississippi's coastal counties and populations are well-established in all locations where they occur. TCAs continue to spread to additional areas and neighborhoods within the three coastal counties and it is anticipated that they will eventually spread farther northward.

The reason tawny crazy ants create so much excitement when they are first encountered in an area is that they build to unbelievably large numbers. Although they do not sting and their nest sites are inconspicuous, TCAs are a serious nuisance simply because there are so many ants crawling rapidly over the landscape. Heavily infested landscapes will have large numbers of ants rapidly crawling over every square yard of the yard. It is difficult to enjoy sitting on the patio on an otherwise pleasant afternoon when you have dozens of ants crawling up your legs.

These ants also invade homes and other buildings in alarmingly large numbers, and they frequently cause malfunctions in electrical equipment. Of the severely infested homes I have visited personally so far, all have reported having more than one short or other electrical problem caused by crazy ants. Shorts are the result of accumulations of large numbers of dead ants. One ant wanders into the wrong spot and gets electrocuted or crushed, causing it to release alarm pheromones which attract more ants to the spot.

Like Argentine ants, tawny crazy ants form large "super colonies" consisting of large numbers of individual nest sites. Nest sites occur in a variety of situations: in the soil, in leaf litter and mulch, under trees and shrubs, under bricks, boards, and other debris, in rotting stumps and logs, and in other protected locations. They will also nest indoors: in wall voids, under roof coverings and siding, and even in parked vehicles. The number and variety of nest sites is one thing that makes this ant hard to control, because it is so difficult to find and treat all individual nest sites. Individual nest sites may contain only a few thousand individuals, but there will be thousands of nest sites on heavily infested properties.

Tawny crazy ants primarily feed on honeydew and plant exudates, and infested landscapes will have several trails of ants running up each tree and shrub in the yard, as well as in surrounding wooded areas. When these ants invade buildings they will usually ignore pet foods and other high protein foods, but may be attracted to sweets and to water sources, especially during periods of dry weather. When TCAs invade buildings it is the large number of ants, rather than their presence in food items, that causes the greatest nuisance.

TCA populations expand and contract with the seasons. During the winter months populations will be relatively low, with most ants remaining in protected nest sites, and foraging activity will

be low. Populations begin to increase as temperatures warm in spring, building to the huge numbers that are characteristic of TCAs by early summer and persisting until temperatures begin to decline in the fall.

Tawny Crazy Ant Control Recommendations for Homeowners

Although Tawny crazy ants are easy to kill, they are not easy to control. The problem is there are so many ants the numbers are overwhelming. Because these ants thrive in wooded areas and fields, treated areas are quickly and constantly re-infested by ants migrating from adjacent untreated areas. Homeowners often report accumulations of mats of dead ants several feet wide and up to ½ inch or more thick in areas where contact insecticide treatments have been applied. These "ant mats" occur both outdoors where perimeter sprays have been applied and indoors, and they allow surviving ants to travel over the bodies of their dead nest mates without contacting insecticide treated surfaces.

Control options for TCAs are still being developed, but some of the most useful tactics and tools are briefly discussed below. **Successful control of TCAs in heavily infested landscapes will require a well-planned program that uses most, or all, of the available treatments.** Many homeowners will want to enlist the services of a professional pest control company, one that is familiar with TCAs, but homeowners will have to remain involved in the overall control effort. In heavily infested landscapes surrounded by "unmanaged land" that is also infested, total elimination of TCAs is probably not an achievable goal. Successful control of TCA is more realistically defined as: keeping outdoor populations to a low, non-disruptive level that limits the number and intensity of indoor invasions.

Key Control Methods for Homeowner Application:

1} Non-chemical cultural controls: prune limbs and grass that touch building, minimize debris, stacks of wood, mulch and leaf litter around building, seal cracks and potential entry points. **Don't underestimate the importance of these important first steps!**

2} Control honeydew-producing insects on ornamental landscape plants: This is usually done by using soil-applied systemic insecticides. The crazy ants and honeydew insects are mutually supportive of one another. You get more ants because they have honeydew to feed on and then you get more honeydew-producing insects because the ants are protecting them. These systemic plant treatments are important because they break this cycle. Homeowners can use products containing imidacloprid (Bayer Tree and Shrub Insect Control, and other brands) or dinotefuran (Greenlight Tree and Shrub Insect Control). See Extension Publication 2369, Insect Pests of Ornamental Plants in the Home Landscape, for more information on how to control honeydew-producing insects (aphids, whiteflies, mealybugs, and soft scales).

3} Granular baits: **tawny crazy ants will not take most fire ant baits**, but they will readily take Advance Carpenter Ant Bait (abamectin) and Advance 375A bait, and will take MaxForce Complete to some lesser degree. These baits may be difficult to find locally, but homeowners can purchase these baits through internet suppliers, and some local suppliers do sell some of these baits. Begin applying baits in late winter/early spring as soon as ants are active, and when

populations are lowest and competing food sources are less abundant. Re-apply multiple times with the goal of getting enough bait into the spring ant population to reduce early season populations. Treat as large an area around the house as is logistically and financially feasible. Be sure to read and follow label directions when using baits. Especially note the amount of bait to apply per acre or per 1000 square feet; these rates are surprisingly low.

4} Outdoor Perimeter Spray Treatments. Outdoor permiter treatments are treatments that are applied to the outside wall of a building and/or to a band of soil/turf/landscape bed area around the building. Read labels carefully before treating and apply according to instructions. Many labels allow treating up the outside wall and around doors, windows and other entry points, as well as treating soil/turf/landscape plants around the building. The goal of such treatments is to provide contact kill of ants present in the area, including nest sites present in the treated band, and to provide some residual control. The active ingredients in such treatments are usually pyrethroid insecticides (Alpine and Carbaryl are the only non-pyrethroids listed in the table), and the overall effectiveness of pyrethroid insecticides is similar. Outdoor perimeter treatments are usually purchased as concentrates, diluted according to label directions, and applied using a pump-up hand sprayer. Such treatments can also be applied using hose-end sprayers and some products are even sold in "ready-to-use" hose-end sprayers. These treatments can also be applied around sheds, pump houses, and other out buildings, and, if the label allows, around the base of trees and to landscape beds that are not adjacent to buildings.

Examples of Outdoor Perimeter Insecticide Treatments for Control of Home-Invading Ants

Active Ingredient	Brand Name (one example)
Bifenthrin (0.3%)	Ortho Home Defense Max
Carbaryl (22.5%)	Garden Tech Sevin Concentrate Bug Killer
Cyfluthrin (2.5%)	Bayer Advanced Home Carpenter Ant & Termite Killer Plus
Cyfluthrin (0.75%)	Bayer Power Force Multi-Insect Killer
Lambda-cyhalothrin (0.5%)	Spectracide Termite and Carpenter Ant Killer
Gamma-cyhalothrin (0.08%)	Spectracide Triazicide Insect Killer
Permethrin (2.5%)	Enforcer Outdoor Insect Killer Concentrate
Permethrin (10%)	Hi-Yield Garden, Pet & Livestock Insect Control
Permethrin (38%)	Hi-Yield 38 Plus Turf, Termite & Ornamental Insect Control
Dinotefuran (40%)	Alpine WSG

5} Indoor treatments. Ready-to-Use, pre-diluted indoor insecticide sprays will provide good contact kill of TCAs, but such treatments can be quickly overwhelmed by high numbers of ants and should not be relied upon as the sole method of treatment. Still, these treatments are useful to have on hand for treating indoor invasions.

Examples of Ready-to-Use Insecticides for Control of Home Invading Ants

Active Ingredient	Brand Name (example)
Bifenthrin (0.05%)	Ortho Home Defense Max
Beta-Cyfluthrin (0.05%)	Bayer Home Pest Control Indoor & Outdoor Insect Killer
Deltamethrin (0.02%)	Bonide Household Insect Control
Lambda-cyhalothrin (0.03%)	Spectracide Bug Stop Indoor Outdoor Insect Killer
Permethrin (0.25%)	Viper RTU

Key Control Methods for Professional Pest Control Application:

Homeowners who have heavy infestations of TCAs may wish to enlist the services of a professional pest control company. Professional pest control companies have access to several effective treatments that are not available to homeowners, and have better equipment and trained technicians to apply these products. Three of the more useful treatments professional pest control companies can apply for TCAs are listed below. Applicators must be sure to carefully read labels of specific products for full details and instructions for use and comply with all label instructions.

1: **Termidor SC (9.1% fipronil), Section 18 Emergency Exemption for Tawny Crazy Ants:** Termidor SC is not classified as restricted use, but the label allows use only by licensed pest control companies. Termidor SC is labeled for application as an exterior perimeter treatment for various ant species when applied one foot up and one foot of sod out from the foundation. Termidor SC also has a special Section 18 Emergency Exemption, only for use in the Mississippi counties of Jackson, Harrison, and Hancock, to allow expanded use for control of TCAs. This section 18 label allows application to a wider exterior perimeter area that can extend up to 3 ft up and 10 ft of sod out from the foundation. Treatments may be applied 2 times per year at intervals of 60 days or longer. In a trial we conducted in 2014 this treatment provided excellent, long-lasting control of tawny crazy ants, and is currently the best treatment available for control of TCAs. This treatment may only be applied by licensed professional pest control companies. Applicators must comply with buffer zone restrictions for use near bodies of fresh or salt water.

2: **Topchoice granular insecticide (0.0143% fipronil):** Topchoice is a restricted use insecticide that may only be applied by licensed pest control operators. Although not specifically labeled for use against tawny crazy ants, Topchoice is labeled for control of imported fire ants and may be applied to turfgrass and landscape beds for fire ant control. When applied in this manner, Topchoice will provide season-long control of fire ants and approximately 4 months control of mole crickets and will also aid in control of tawny crazy ants and other nuisance ant species. Only one application of Topchoice may be applied per year. Applicators must comply with buffer zone restrictions for use near bodies of fresh or salt water. This is an especially costly treatment, but one that provides season long control of fire ants and a high level of control of tawny crazy ants and other nuisance ants, as well as mole crickets in treated turf, when used as directed.

3: **Alpine WSG (40% dinotefuran):** Alpine WSG is not a restricted use insecticide, and may be purchased and used by homeowners, as well as professionals. It is labeled for outdoor application to lawns and landscape beds, as well as for use as spot or crack and crevice applications to exterior areas or building surfaces where ants may enter buildings. This is an effective addition to a season-long TCA management program to complement control provided by other treatment methods. Alpine may be applied several times per year, as needed.

Planning a Season-Long Control Program for Tawny Crazy Ants:

With the tools discussed above it is possible to develop a season-long control program for tawny crazy ants that is tailored to particular situations and budgets. Keep in mind that total elimination of TCAs is probably not a realistic or achievable goal. However, the tools discussed above and a treatment program similar to that outlined below can be used to keep tawny crazy ant populations low enough to tolerate in the lawn and patio area immediately outside the home and to minimize indoor invasions. One of the key elements of this program is to "save" the two perimeter applications of Termidor SC for the time of year when TCA populations are heaviest and control is most needed.

- Season-long: Homeowner implements and maintains non-chemical cultural controls.

- Early spring: Homeowner, or properly licensed professional lawn care company, controls honeydew-producing insect pests in landscape, especially on plants located near the house.

-Early spring through May: Pest control company applies Alpine WSG as needed to control nuisance population levels of TCAs. Alternatively, or in addition, granular baits can be used at this time (Advance Carpenter Ant Bait or Advance 375A).

- Early June: Pest Control Company applies first application of Termidor SC perimeter treatment (3 ft. up-10 ft. out, under Section 18 Exemption)

- Early August: Pest Control Company applies second application of Termidor SC perimeter treatment (3 ft. up-10 ft. out, under Section 18 Exemption). Must be 60+ days after first treatment.

- September-fall: Pest Control Company applies Alpine WSG as/if needed for continued control.

- Supplemental treatment for heavily infested properties, or for homeowners willing to pay a premium price for improved control: Pest Control Company applies broadcast application of Topchoice—only one application allowed per year. Depending on budget and desired level of control, this can be applied to entire landscape area; as a 10-50 foot perimeter band around the home; or as spot treatments to landscape beds around the building, around trees, and to other sites where TCAs nest sites and activity are greatest. Late April through July would be the optimum time to apply this treatment if desired for season-long control of fire ants and significant long-term suppression of TCA populations in treated areas.

Note that implementing every one of these steps would result in a very aggressive, and costly control program. However, homeowners who have experienced heavy, uncontrolled infestations of TCAs may well be interested in such a program. Many homeowners may be satisfied with less aggressive programs. In many situations this may be as simple as implementing and maintaining non-chemical cultural controls and having a professional pest control company apply one or two applications of Termidor each season.