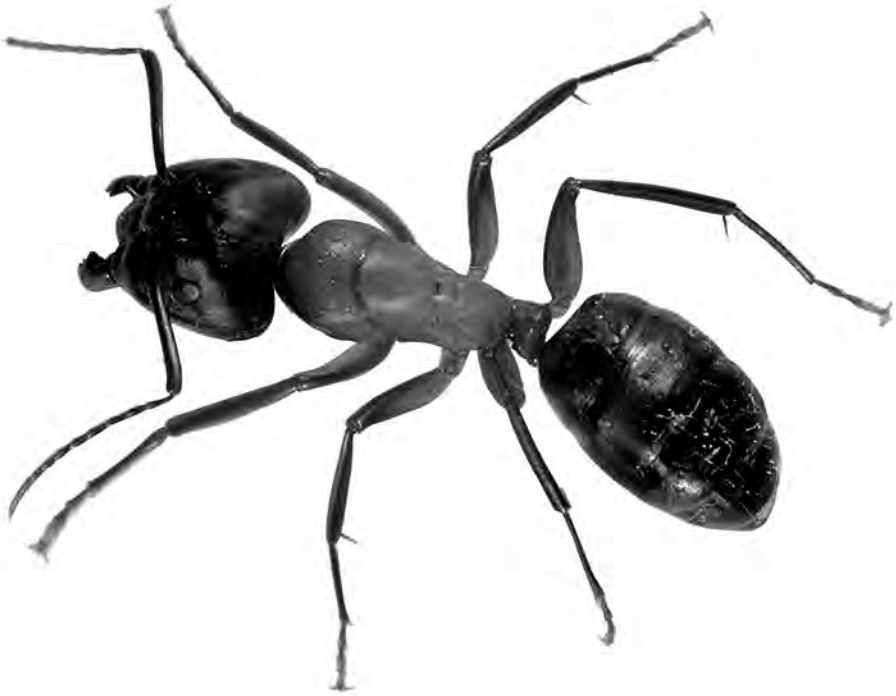
Pest Control
Technical
Bulletin

Controlling Carpenter Ants



Nisus® CORPORATION

Green Pest Control Solutions

CONTROLLING CARPENTER ANTS
PEST CONTROL TECHNICAL BULLETIN

For complete product application instructions, always refer to the product label.

INTRODUCTION

In some areas of the country, carpenter ants cause more damage to structures than termites. They are difficult insects to control and can cause extensive damage to wood members in a short period of time. Nisus Corporation manufactures three products that have proven effective against carpenter ants. These products are Nibor-D® and Timbor® Professional insecticide dusts, Niban® and Niban-FG® insect baits and Bora-Care® insecticide and wood preservative. All are borate-based products with a low toxicity to humans and animals and are considered for use in Green Pest Management programs.

Carpenter ants do not actually eat wood, but excavate galleries within wood to use as nesting sites. Foraging activity occurs at any time of day, but usually peaks at night. When foraging inside houses, carpenter ants are attracted to sweets, meat, grease and fat.

A carpenter ant colony is usually formed by a queen who begins a nest in a piece of old buried wood or in a partially decayed tree or stump. In mature infestations, there may be as many as ten satellite colonies linked to the parent colony by trails. There is a frequent exchange of workers between these satellite colonies and the main nest. Colonies normally do not produce winged reproductive forms until they are at least three to six years old with emergence of swarmers typically occurring from May through July.

The most common way in which homes become infested is through emigration of an existing colony. Houses located near wooded areas or brush covered vacant lots are good candidates for infestation. Carpenter ant colonies are inclined to move if they are disturbed, as often happens during construction. Thus, new homes or those surrounding a new building lot present likely locations for attack.

INSPECTION

The first sign of a carpenter ant infestation is usually the sighting of numerous workers throughout the home. However, the presence of workers alone is not conclusive evidence that a colony is established within a structure. Carpenter ant workers tend to roam far and wide looking for food, and some transient workers are sure to enter any home located in a wooded area. Signs of an active infestation include the presence of fibrous sawdust beneath slit-like openings in wood members and faint, rustling noises in walls and woodwork. A positive indication that an active, mature infestation is present is the emergence of large winged ants from walls, ceilings or crawl spaces.

Carpenter ant galleries in wood have smooth surfaces and can be differentiated from subterranean termite damage by the absence of “mud” in the galleries. Ants normally excavate wood that has been softened by decay or other insects; however, they will tunnel into sound wood when conditions are favorable. Nests and galleries may be located a considerable distance from the point or points of entry. In addition to structural lumber, sites such as hollow-core doors, window headers, wall voids, and foam panels are particularly attractive to carpenter ants.

Carpenter ants often enter homes through openings such as foundation or attic vents, cracks, plumbing holes, entrances for telephone and electric wires, etc. One thing to look for during an inspection are tree branches that may be just above or in contact with the roof. Firewood piles are prime nesting sites and should never be stacked against or near a home. Infested firewood should be treated with an appropriately labeled pesticide such as Niban, or discarded.

CARPENTER ANT CONTROL METHODS

Mechanical Modifications

The first step in carpenter ant control should always include mechanical modifications to the structure and environment. The object is to reduce the avenues available for carpenter ants to enter a home or structure. If any tree limbs are in contact with the roof, cut them back. Move firewood away from the house. Seal cracks along foundations, siding, windows, and doors with caulk and install fine mesh screens over crawl space and attic vents.

Insects need water in addition to food and eliminating sources of water will make an area less attractive to carpenter ants. If necessary, fix plumbing leaks, reroute air conditioner drains, and make sure sprinkler heads are properly adjusted.

Pesticides

There are four common methods of pesticide application used to control carpenter ant infestations: exterior perimeter treatments, interior void treatments, treating the infested wood, and baiting.

Perimeter Insecticide Treatments
The most commonly used method for controlling carpenter ants is treating the perimeter of a home with a dust or spray. There are several products available for this type of application. When used in accordance with their labels they can work fairly well. However, some disadvantages of this method of control include:

1. Treatments are fairly short-lived.
2. Since the products used are both toxic and repellent to ants, they not only exclude ants from the outside, but prevent them from leaving a structure.
3. They do not keep ants from entering a home from overhead trees and power lines.

Interior Void Treatments
The treatment of interior wall voids has become more popular with the availability of borate dusts. Two effective "green" dusts are Nibor-D® and Timbor® Professional.

The efficacy of dusts depends on ants ignoring their presence and walking through them, contaminating the ants' bodies in the process. Ants then ingest the borate while grooming. The dust must be placed directly onto the pathway used by the ants. If, for example, the dust is placed on the floor sill plate and the ants are using an electrical conduit located three inches above the plate as their pathway, control will not be attained.

Another potential problem with using dusts is their sensitivity to high moisture conditions. Some dusts have a tendency to cake or crust when they get damp, which makes them ineffective since ants can then walk across them without picking any up on their bodies. Nibor-D and Timbor Professional, however, are not generally affected by moisture as other dusts are, and can be active after being wet.

Spot Treatments of Infested Wood
Spot treating infested wood with Bora-Care will quickly eliminate a localized carpenter ant infestation. Whenever practical, inject Bora-Care directly into the carpenter ant galleries.

The best treatment method consists of not only treating the infested area, but also treating all wood susceptible to attack. This would include an entire crawl space, wall or attic showing any signs of damage. All bare wood should be sprayed to the point of wetness. Confined areas can be treated using a foaming device but heavily infested wood should be directly sprayed either before or after fogging.

Treating Infested Foam Panels
Carpenter ants will occasionally infest foam insulation panels around foundations and under stucco and other types of siding. Carpenter ant infestations in foam may be treated by spraying the infested area, it accessible, or by drilling and injecting diluted Bora-Care solution directly into ant galleries.

Voids behind foam panels may be treated by injecting Bora-Care as a foam. Inject foam at the interface of the foam panel and sheathing or backing material. Drill holes on a grid pattern to insure adequate coverage of infested area.

NOTE: The three types of foam typically used in building construction are: expanded polystyrene (white headboard); extruded polystyrene (Dow® brand, blue or pink board); and polyisocyanurate (normally yellow or beige in color). White headboard has an open structure and may be surface sprayed with Bora-Care; in most cases injection is not necessary. However, for all other types of foam, penetration from surface spraying is limited and product must be injected into the infested areas.

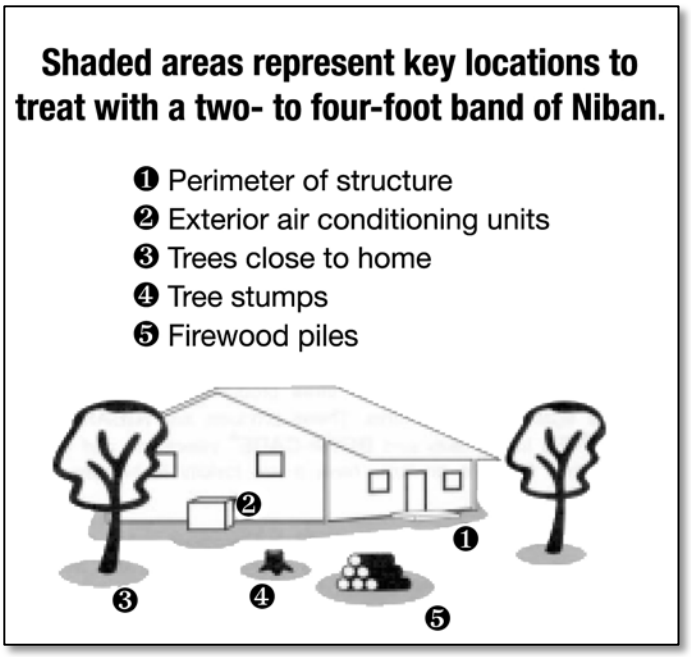
Baits
One of the most effective methods of controlling carpenter ants is by using baits. Baits work by decreasing the population of carpenter ants in an area, thus reducing their potential for entering a structure. Niban and Niban-FG are "green" carpenter ant baits that can be used for both interior and exterior applications.

NOTE: One of the quickest ways to destroy the effectiveness of any bait is to contaminate it with another pesticide. Never treat the same area with both a spray and a bait at the same time. If you must use a pesticide spray, wait at least two weeks after application before beginning your baiting program, and never use the same containers, measuring cups, or dusters for both baits and contact pesticides. A little bit of pesticide residue can contaminate a lot of bait.

Exterior Baiting
A primary objective in an exterior baiting program is to place a band of bait between the satellite colonies in the structure and the main nest. Since there is a continual exchange of workers between satellite colonies and the main nest, you want to give worker ants an opportunity to pick up the bait on their way to and from nesting sites. Since the main nest is frequently in an old log or stump within a 300-foot radius of the home, it is important to locate and treat it with the bait. Although following ants and their trails to the main nest can be a tedious task, especially at night, it is well worth the effort. Elimination of the main nest will substantially reduce the risk of re-infestation.

A two- to four-foot band of Niban should be applied around the perimeter of the structure as well as around the base of all trees, stumps, firewood piles and other locations where carpenter ants may nest. Niban should also be applied along ant trails and other areas where ant activity has been noted.

Unlike other carpenter ant baits, Niban will not degrade from exposure to heat or sunlight and studies have shown that Niban will remain effective through about four inches of rainfall. Re-application of Niban should be made periodically during intervals of very wet weather.



Interior Baiting
Whenever possible, exterior baiting should be combined with an interior baiting program. This will speed the eradication process and provide residual bait in order to prevent a reinfestation; however, you must use a long-lasting bait like Niban-FG that will remain effective for months rather than days or weeks.

One advantage that Niban-FG has over pesticide dusts is its ability to actually attract carpenter ants to it. Whereas ants must ignore and walk through dusts, they will leave their usual pathways to feed on Niban-FG.

You should treat all cracks, crevices, and voids where carpenter ants have been seen. Pay particular attention to kitchens and bathrooms, especially around plumbing fixtures. Carpenter ants are attracted to water, as well as food. If an infestation is located in an attic, broadcast Niban-FG into the attic space with a power duster, concentrating application along the perimeter eaves and around vent pipes and access areas.

Preventative Treatments
As previously stated, new construction is particularly susceptible to carpenter ant attack. Uninfested wood properly treated with Bora-Care will be protected from carpenter ant attack. Exterior wood surfaces exposed to rain or snow that have been treated with Bora-Care should also be coated with a water resistant finish such as paint or stain. Interior Bora-Care treated wood surfaces do not need to be coated.

During construction, the application of Timbor Professional, Nibor-D dusts or Niban and/or Niban-FG baits in wall voids and other confined spaces will help prevent carpenter ant infestations. Reapplication of these baits on a periodic basis will significantly reduce the likelihood of carpenter ants establishing a satellite colony within a structure.

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