Managing Ants Safely in and around Sensitive Environments

Nebraska Extension
Successful ant management means treating the colony

- Direct treatment with insecticides
- Bait treatments for some species
  - Both types of treatments can be done using low risk approaches
- So, locate the colony
  - Knowing the type of ant can help you find it
Ant colonies can be found outdoors or indoors

- Wet or rotted wood, under concrete slabs
- In soil, under objects or in the open
- Inside walls if there is a moisture source
- Follow the trail

...the colony location determines the treatment
Ant treatments include:

- Treating ant mounds or nests in the soil with liquids
- Wall voids: inject dusts
- Direct treatments of active trails
- Baits: granular, syrup, and gel baits

Not all ants will eat baits

Broadcast treatments and baseboard sprays are hardly ever effective because they don’t target the colony
Hand lens or microscope magnify ant parts

- Your pest control professional may be able to identify specimens
- Or, take specimens to your local county extension office
- Or, send them to the UNL diagnostic lab in Lincoln:
  - Plant and Pest Diagnostic Clinic
  - 448 Plant Sciences
  - P.O. Box 830722
  - Lincoln, NE 68583-0722
  - Phone: (402) 472-2559
Knowledge of ant parts needed to identify ants

Head: Diagnostic Features

1. Eye
2. Scape
3. Elbowed Antenna
4. 5. 6. 7. 8. 9. 10. 11. 12. Ocelli

Drawing: Nebraska Extension in Lancaster County

Mandible

Nebraska Extension in Lancaster County
Thorax: Diagnostic Features

- Profile bumpy or rounded
- Spine
- Leg length

Drawing: Nebraska Extension in Lancaster County
Number of nodes is an important diagnostic feature
One-node Ants

- Rounded or lumpy thorax
- Smell
- Length of scape
- Hidden node
- Ocelli (simple eyes)

Photo: Nebraska Extension in Lancaster County
Examples of one-node ants:
Black Carpenter Ant

- Large black ants
- Dimorphic (two sized) workers
- Evenly rounded thorax

One node

Drawing: Nebraska Extension in Lancaster County
“Red” Carpenter Ant

- Red head and thorax
- Medium sized
- Evenly rounded thorax

Drawing: Nebraska Extension in Lancaster County
Carpenter Ants live in wet wood

- Dead tree limbs and hollow trees
- Landscape timbers/railroad ties
- Carpenter ants don’t kill trees

Photo: University of Nebraska–Lincoln
Department of Entomology
Poorly maintained log houses susceptible to Carpenter Ants

- Weathered logs allow water to penetrate
- Cracks make it easy for ants to get inside
- Perfect situation for Carpenter Ants

Photo: Nebraska Extension in Lancaster County

Discolored area below window
Indicates moisture damage
Poorly maintained log houses susceptible to Carpenter Ants

- Weathered logs allow water to penetrate
- Cracks make it easy for ants to get inside
- Ideal location for Carpenter Ant colony

Photo: Nebraska Extension in Lancaster County
Piles of sawdust are a sign of Carpenter Ants

Photos: Nebraska Extension in Lancaster County

Sawdust
Carpenter Ants not common in institutional and commercial buildings

But......

- May be found on grounds in landscape timbers, railroad ties, hollow trees
- Also structures susceptible to moisture infiltration
Field Ant

- Large ants resemble Carpenter Ants
- Variable color
- “Bumpy” thorax

3 ocelli

Drawings: Nebraska Extension in Lancaster County

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Field Ants construct mounds and live in soil

- Rarely, if ever, found inside, but look like carpenter ants
- Playgrounds, fields, vacant lots, and lawns
  - Also nest under rocks, patio blocks, firewood, and similar objects
- Treat mounds or use granulated baits
Large Yellow Ant:
Citronella Ant

- Yellowish red
- Uneven thorax
- Circle of hairs
- Smells like lemon when crushed

Drawing: Nebraska Extension in Lancaster County
Citronella Ant workers rarely found inside

- Soil nesting ant, under concrete slabs, garages, basements, crawlspace
- Excavate soil
- Emerge from nest as winged swarmers
- Inside, swarmers die quickly on their own so no treatment is necessary

Photo: University of Nebraska–Lincoln Department of Entomology

Large Yellow Ant Swarmers

IPM EASY AS ABC
A couple more one-node ants: sweet-loving ants

- Odorous house ant
  - Common pest ant
  - Smell like coconuts
  - Node is hidden from above

- Honey ant has a pinched waist and swollen gaster

Drawings: Nebraska Extension in Lancaster County
Sweet ants usually invade from outdoors

- Treat outdoor colonies with a small amount of insecticide
- Compressed air sprayer/crack and crevice tip
- Baits may also be effective for sweet ants
Odorous House Ants may nest inside:

- Areas with accessible moisture
  - Wall voids around hot water pipes and heaters
  - Greenhouses
  - Bathrooms
  - Dishwashers/kitchens
Features of two-node ants

- Spines on thorax
- Number of antennal segments
- Color
- Attachment of pedicel
- Grooves on head

Photo: Nebraska Extension in Lancaster County
Acrobat Ant

- Spines on thorax
- Pedicel attached to top of gaster
- Heart-shaped abdomen
- Live in wet wood

Drawing: Nebraska Extension in Lancaster County

Photo: University of Nebraska–Lincoln Department of Entomology
Pavement Ants have two nodes

- **Key feature:** grooves on face

Nest under pavement, bricks, sidewalks

Common around buildings

Treat colonies with insecticide or use baits
Pharaoh Ants and Thief Ants are tiny, yellowish ants.

Pharaoh Ant

3 segments

Thief Ant

2 segments

Count the number of segments on the antennal club.
Management is completely different

- **Thief Ant**
  - Baits don’t work, must find and treat colony

- **Pharaoh Ant**
  - Colonies split when sprays are used. Must use baits

Drawings: Nebraska Extension in Lancaster County
What are swarmers?

- Reproductive ants
- Swarming ants inside means an indoor nest, a nest under a concrete slab, or a nest next to a foundation
- Swarmers have some characteristics of workers
  - Same number of nodes, smell, grooves on head

Photo: University of Nebraska–Lincoln Department of Entomology

Carpenter Ant swarmers
Winged ants don’t look like worker ants

- Swarmers may be larger (queens) or smaller (kings) than workers
- May not be the same color as workers

Large yellow ant queen and worker
Summary

- Ant identification can be important in determining where colonies are located and what types of treatments are most appropriate.
Ant management resources

- Pest Control Technology (PCT) Field Guide for the Management of Structure Infesting Ants
- Inexpensive
- Sold through PCT online or Amazon.com

Photo: Nebraska Extension in Lancaster County
Ant management resources

- **Identification of Structure-Invading Ants in Nebraska**
- Colorized pictures
- Focus on 12 ant structure-invading species specific to Nebraska
- UNL Publications or county extension offices
- [http://ianrpubs.unl.edu/](http://ianrpubs.unl.edu/), search for title

Photo: Nebraska Extension in Lancaster County
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