Managing Ants Safely in and around Schools

University of Nebraska—Lincoln Extension

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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

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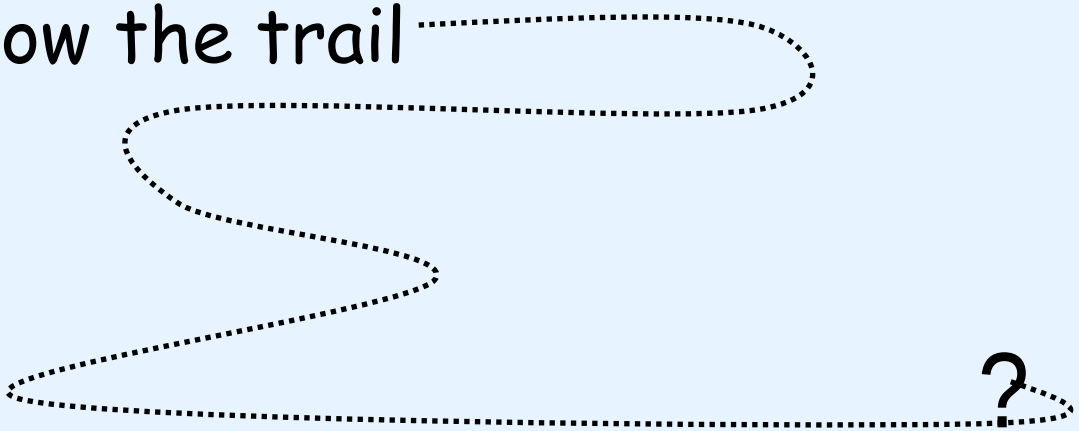
Ant colonies can be found outdoors or indoors

- 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

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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

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Hand lens or microscope magnify ant parts

Photo: UNL Extension in Lancaster County

- 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

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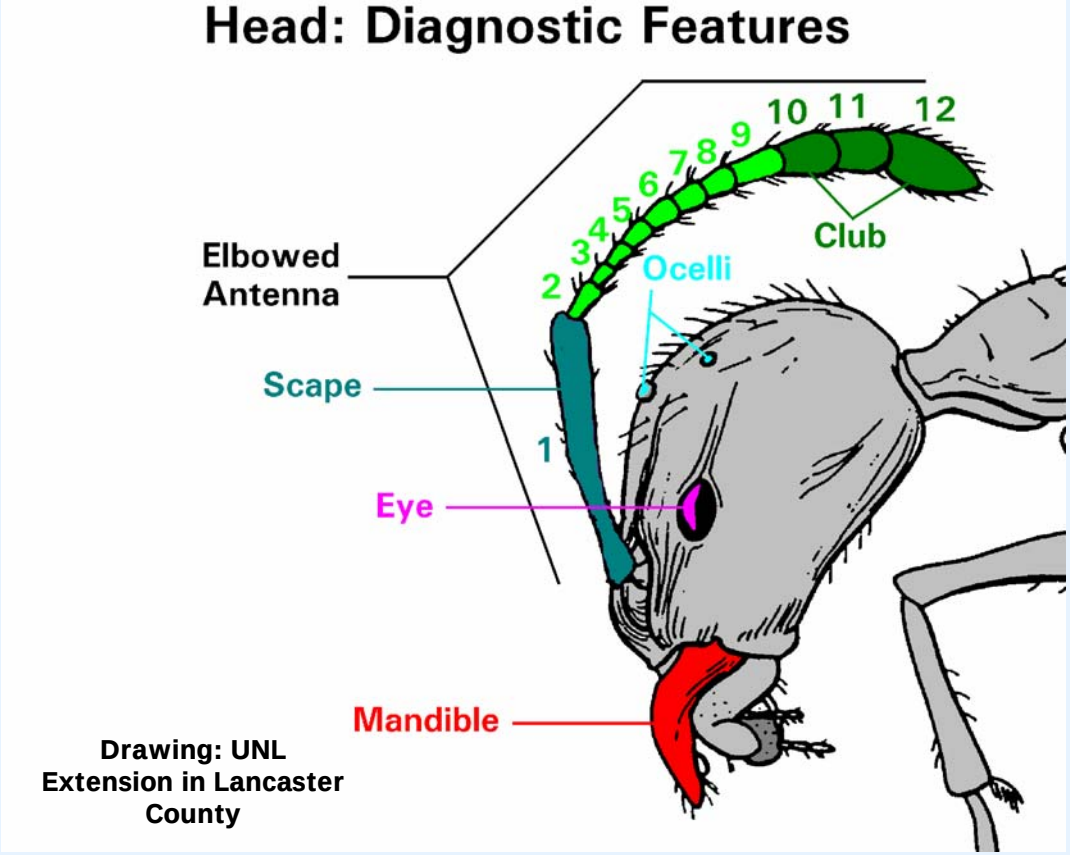
Knowledge of ant parts needed to identify ants



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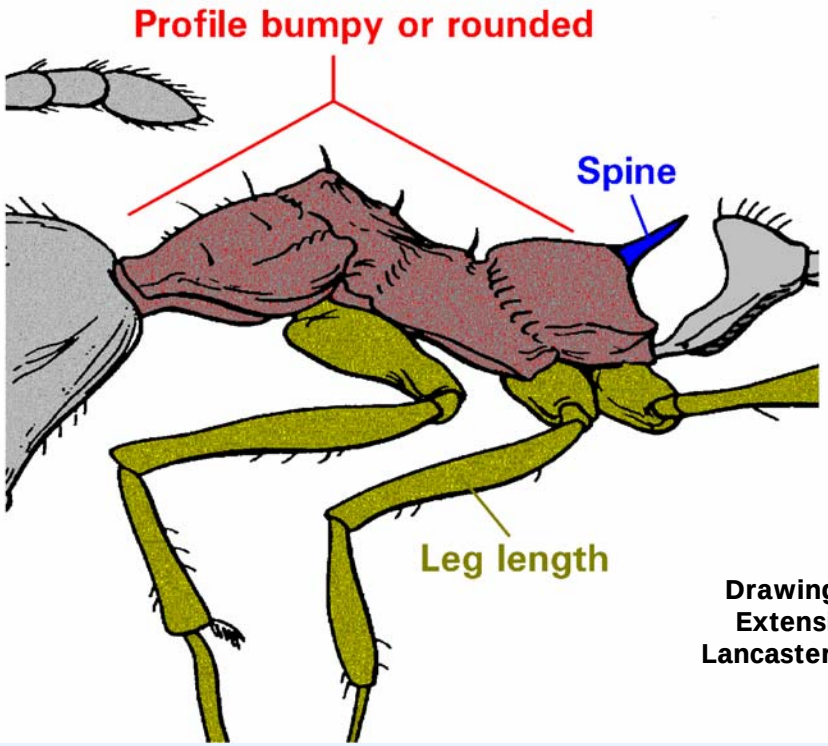
Thorax: Diagnostic Features



Drawing: UNL Extension in Lancaster County

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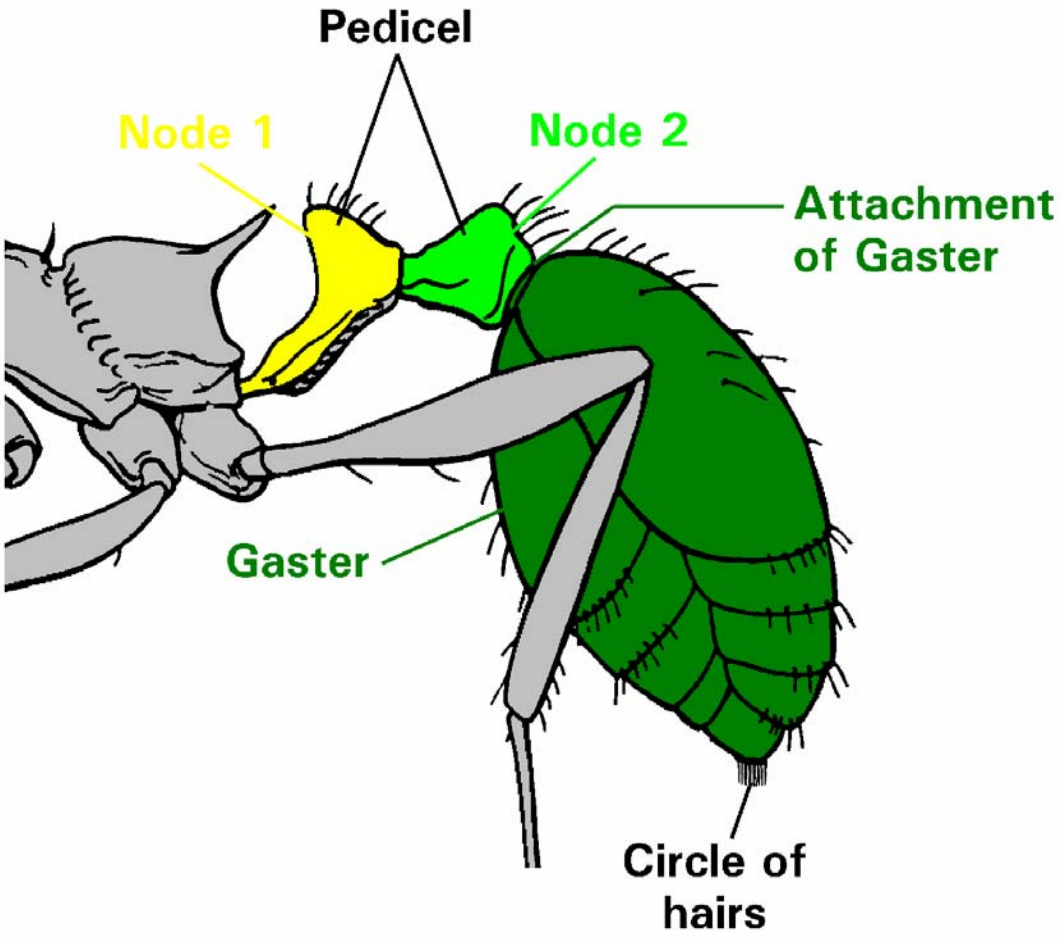
Abdomen: Diagnostic Features



Drawing: UNL Extension in Lancaster County

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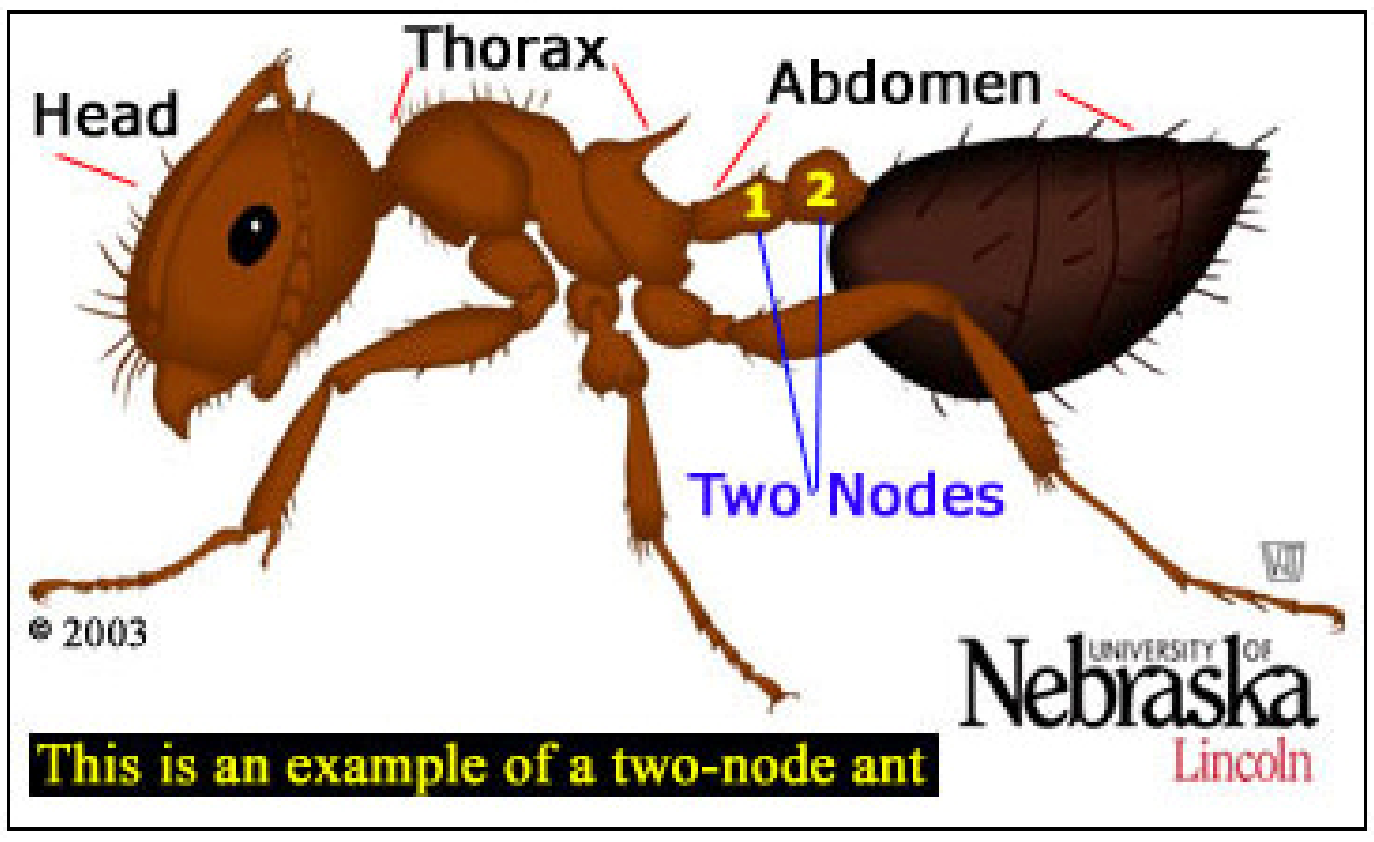
Number of nodes is an important diagnostic feature



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One-node Ants

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

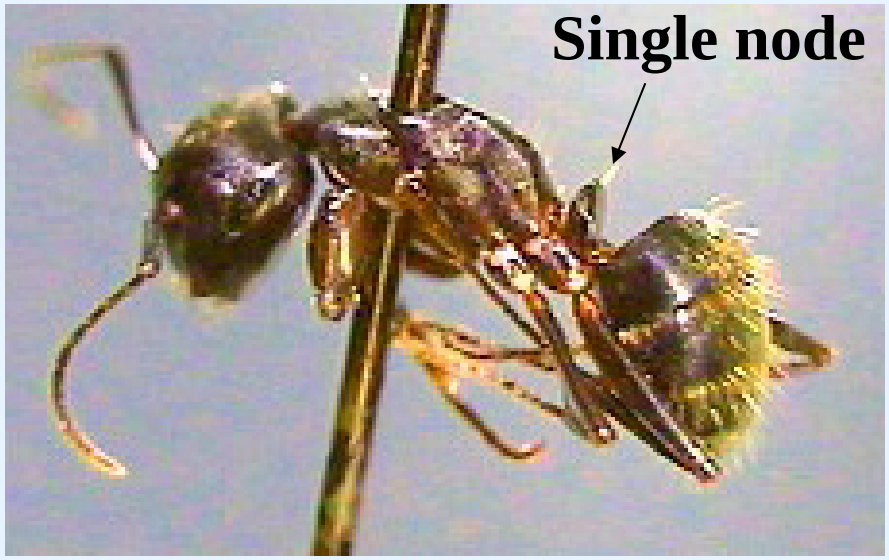

Photo: UNL Extension in Lancaster County

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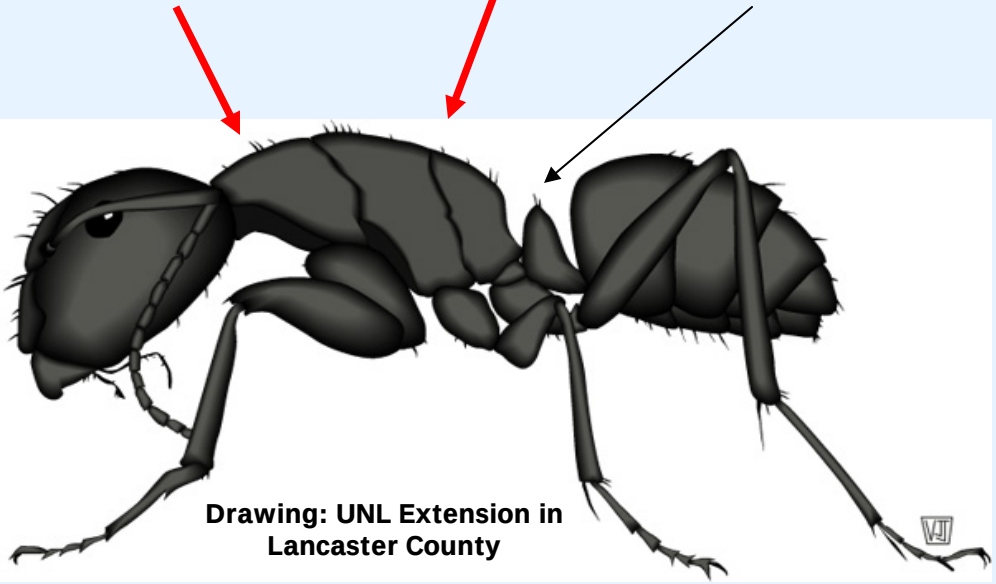
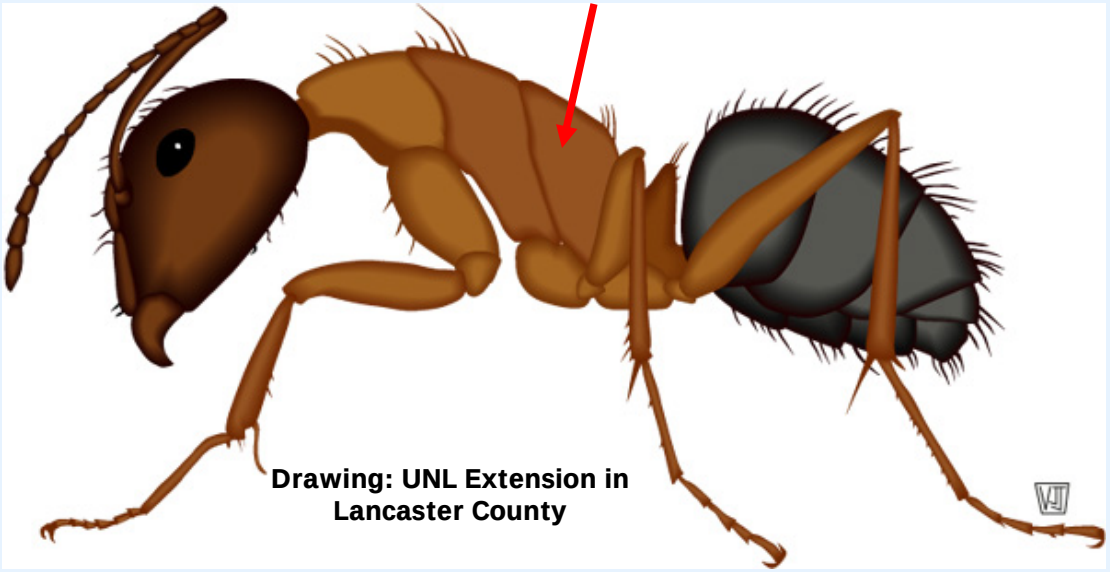
Examples of one-node ants: Black Carpenter Ant

- Large black ants
- Dimorphic workers
- Evenly rounded thorax



"Red" Carpenter Ant

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



Drawing: UNL Extension in Lancaster County

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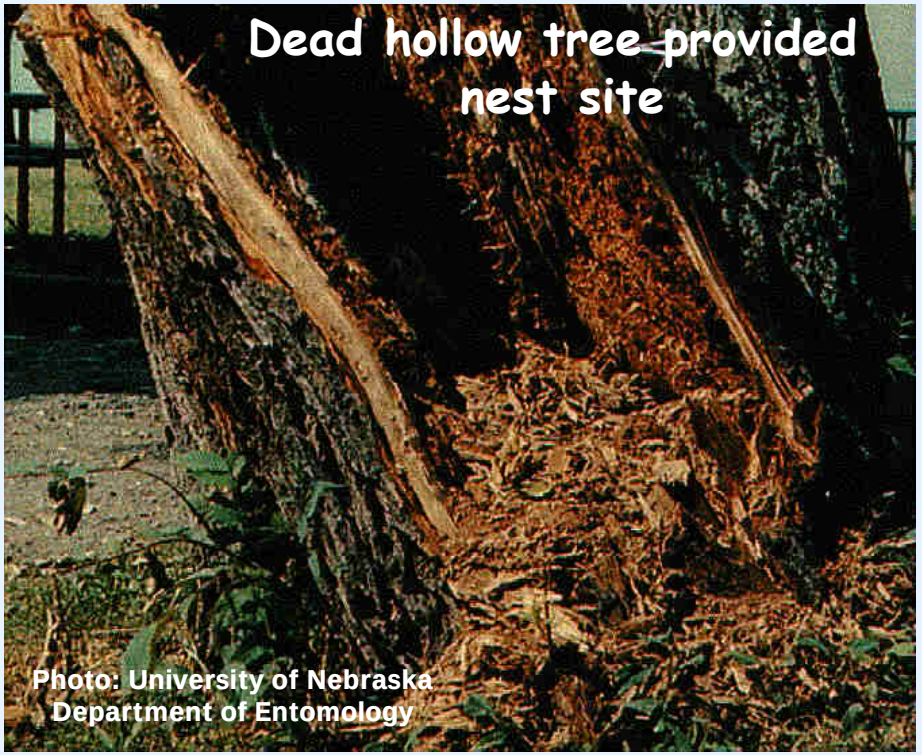
Carpenter Ants live in wet wood

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



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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

Discolored area below window
Indicates moisture damage

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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: UNL Extension in Lancaster County

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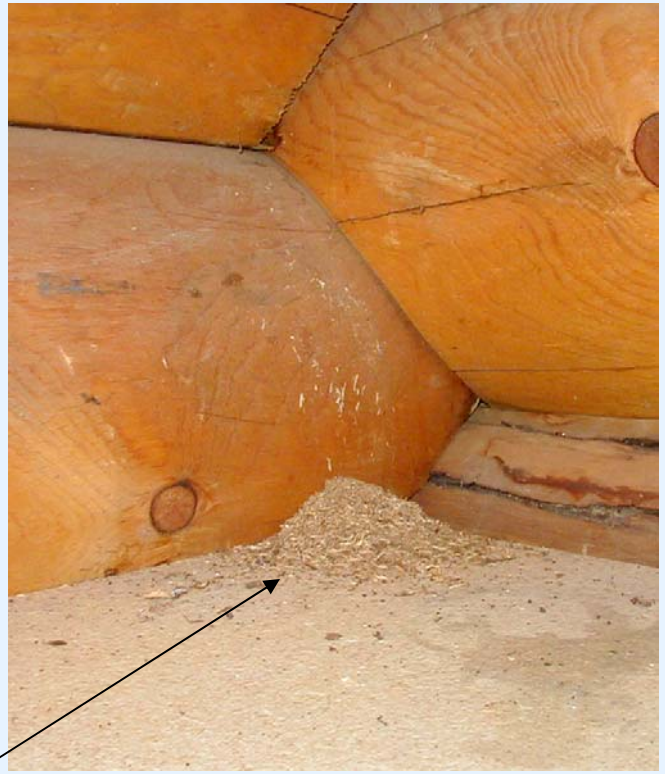
Piles of sawdust are a sign of Carpenter Ants



Photos: UNL Extension in Lancaster County

Sawdust

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Carpenter Ants not common in traditional school buildings

But……

- May be found on school grounds in landscape timbers, railroad ties, hollow trees
- Also in "portables" or "modulars," used as temporary classrooms

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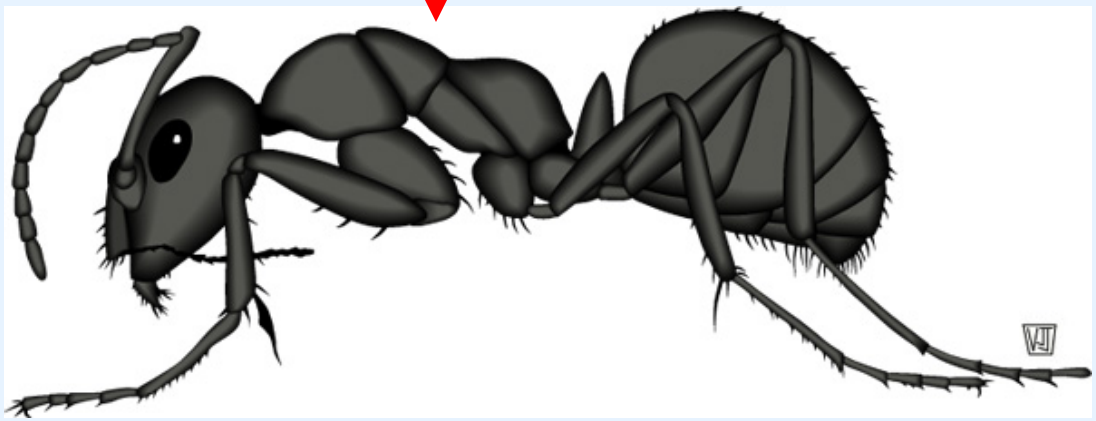
Field Ant

- Large ants resemble Carpenter Ants
- Variable color
- "Bumpy" thorax

3 ocelli

Drawings: UNL 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

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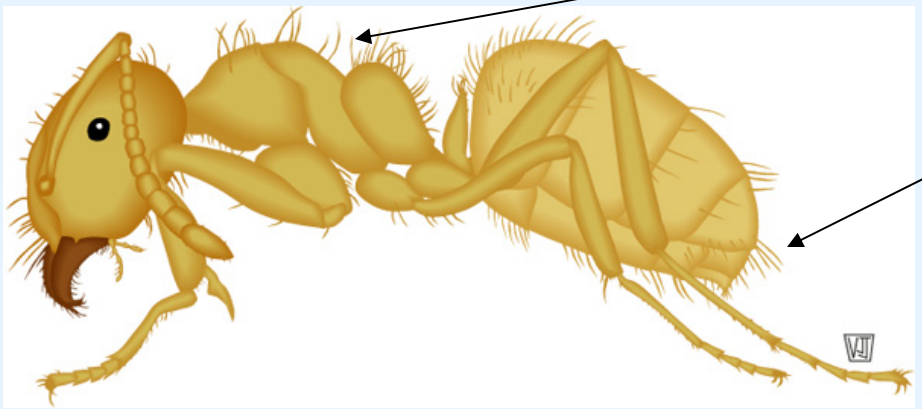
Large Yellow Ant: Citronella Ant



Drawing: UNL Extension in Lancaster County

- Yellowish red
- Uneven thorax
- Circle of hairs

- Smells like lemon when crushed

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Citronella Ant workers rarely found inside

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

Photo: University of Nebraska Department of Entomology

Large Yellow Ant Swarmers

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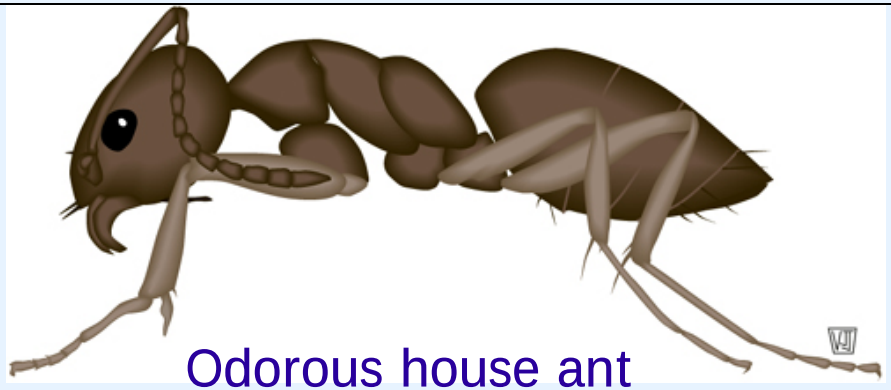
A couple more one-node ants: sweet-loving ants



Odorous house ant

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

- Honey ant has a pinched waist and swollen gaster

Small honey ant

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Drawings: UNL Extension in Lancaster County

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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

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Odorous House Ants may nest inside

- Areas with accessible moisture
  - Wall voids around hot water pipes and heaters
  - Greenhouses
  - Bathrooms
  - Dishwashers/kitchens

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Features of two-node ants

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

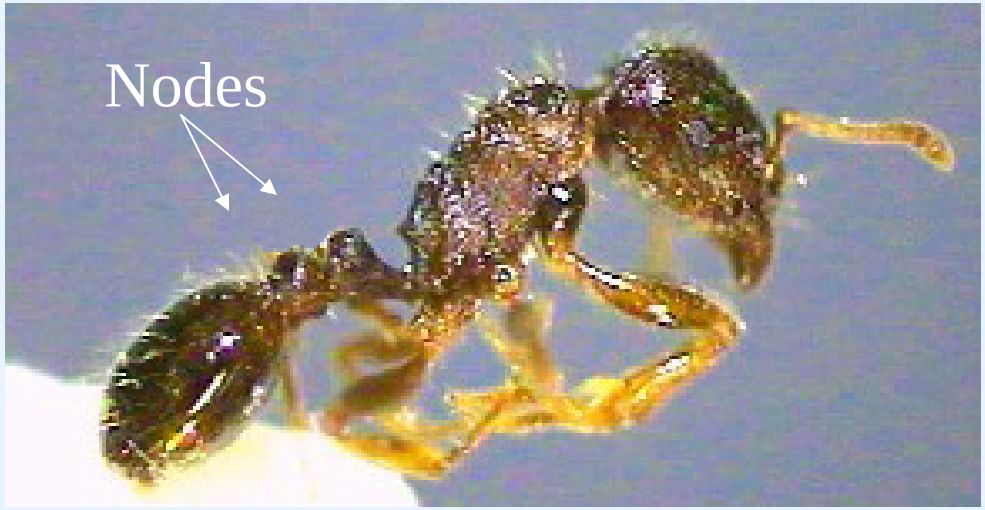

Photo: UNL Extension in Lancaster County

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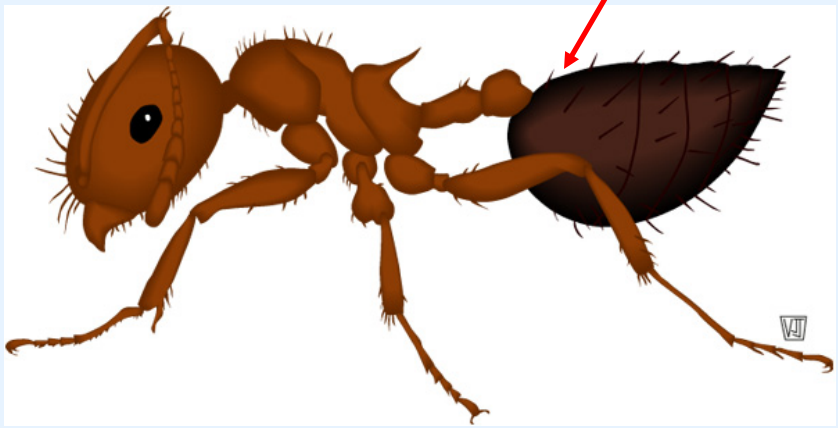
Acrobat Ant

Photo: University of Nebraska Department of Entomology

- Spines on thorax
- Pedicel attached to top of gaster



Drawing: UNL Extension in Lancaster County

- Heart-shaped abdomen
- Live in wet wood

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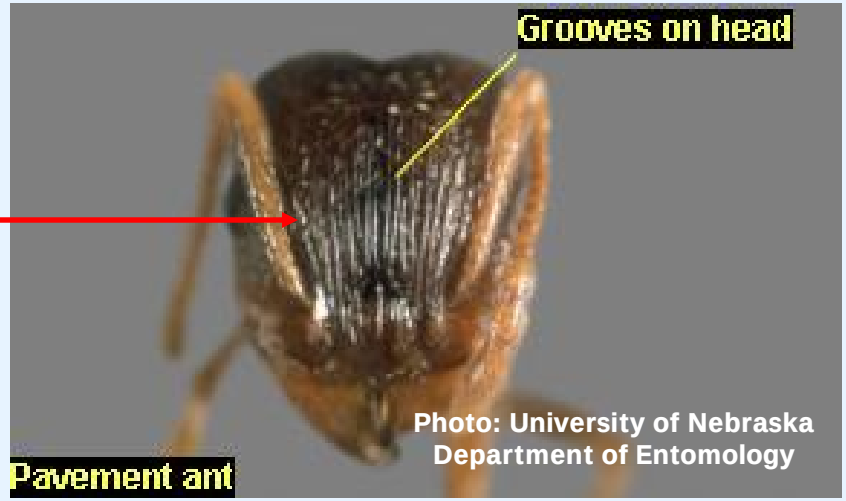
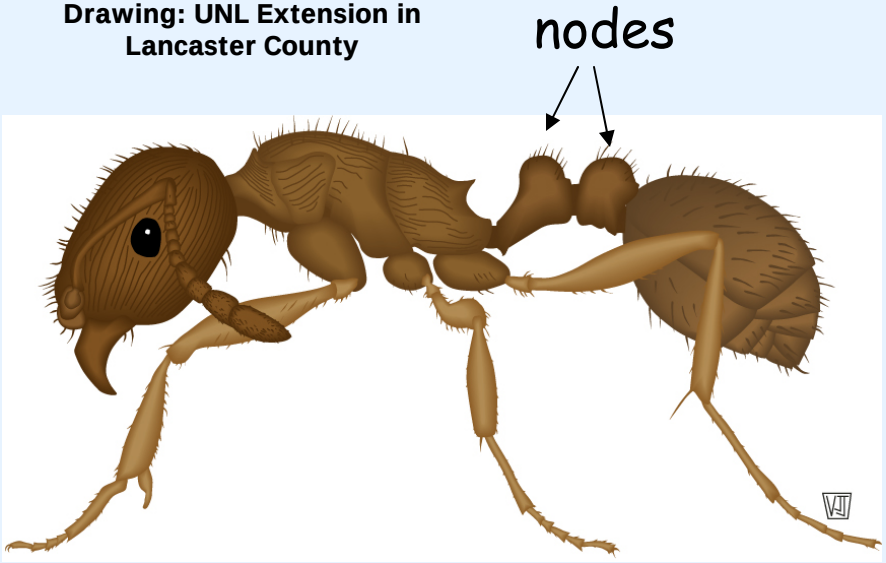
Pavement Ants have two nodes

- Key feature: grooves on face



Drawing: UNL Extension in Lancaster County



Nest under pavement, bricks, sidewalks

Common around schools

Treat colonies with insecticide or use baits

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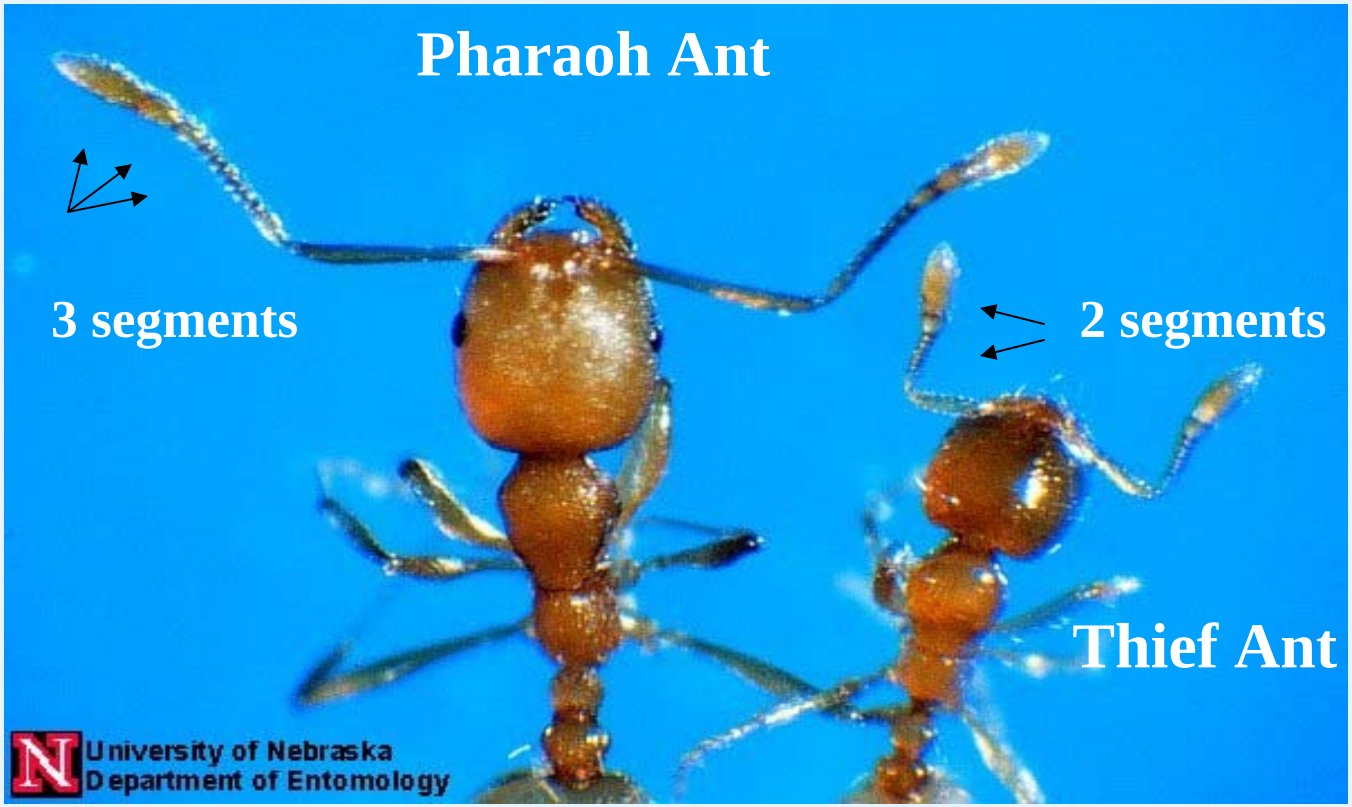
Pharaoh Ants and Thief Ants are tiny, yellowish ants



Count the number of segments on the antennal club

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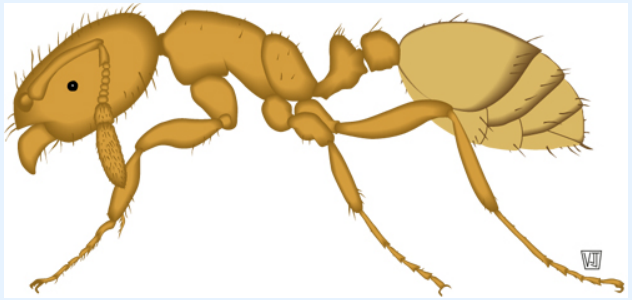
Management is completely different

- Thief Ant
  - Baits don't work, must find and treat colony
- Pharaoh Ant
  - Colonies split when sprays are used. Must use baits



Drawings: UNL Extension in Lancaster County

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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 # nodes, smell, grooves on head

Carpenter Ant swarmers

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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

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Summary

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

Ant management resources

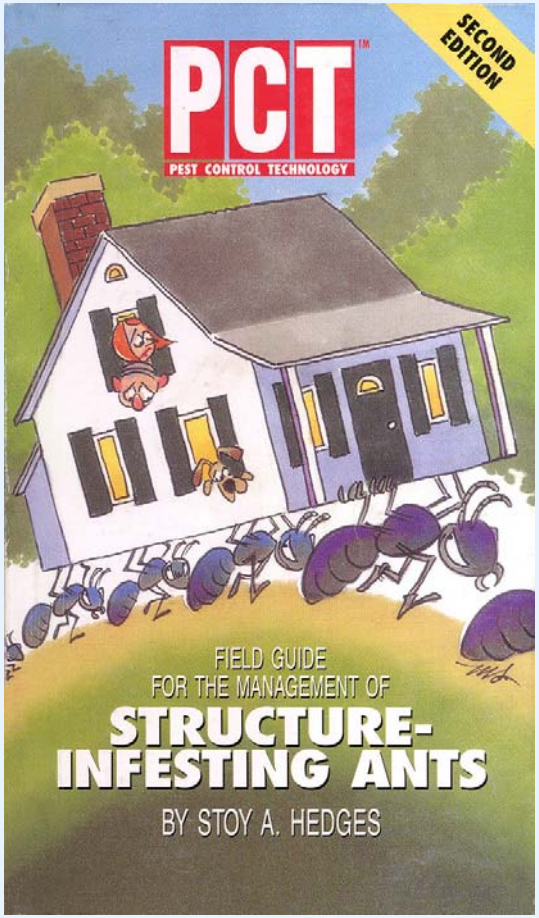

Photo: UNL Extension in Lancaster County

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

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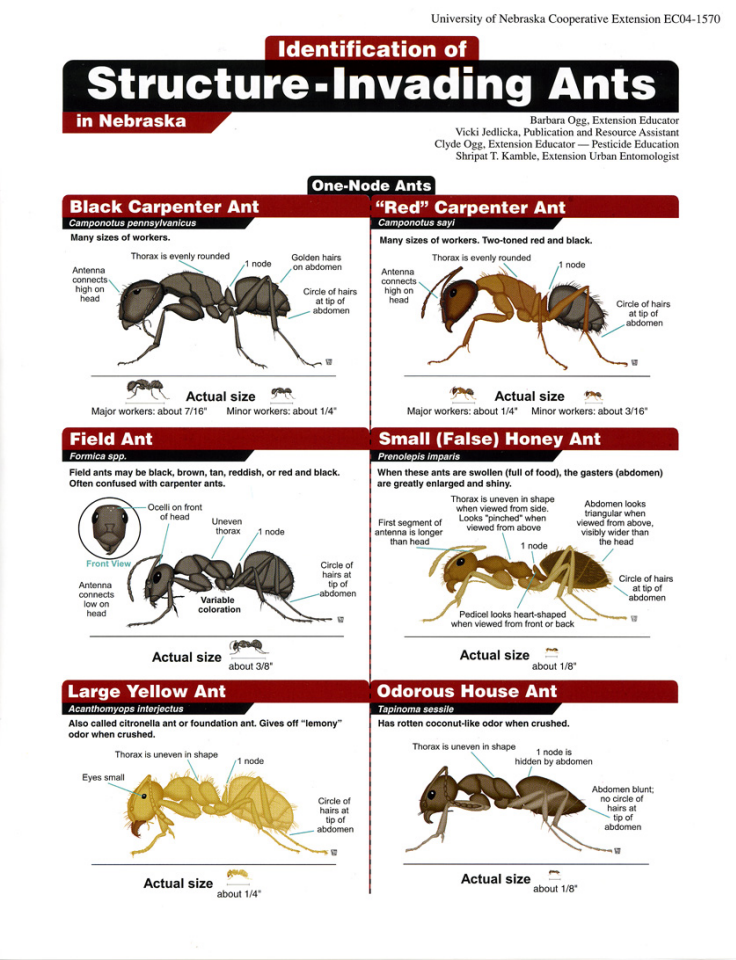
Ant management resources



University of Nebraska Cooperative Extension EC04-1570

Identification of

Structure-Invading Ants

in Nebraska

Barbara Ogg, Extension Educator
Vicki Jedlicka, Publication and Resource Assistant
Clyde Ogg, Extension Educator — Pesticide Education
Shripat T. Kamble, Extension Urban Entomologist

One-Node Ants

Black Carpenter Ant
Camponotus pennsylvanicus
Many sizes of workers.
Thorax is evenly rounded
1 node
Golden hairs on abdomen
Antenna connects high on head
Circle of hairs at tip of abdomen
Actual size
Major workers: about 7/16" Minor workers: about 1/4"

"Red" Carpenter Ant
Camponotus sayi
Many sizes of workers. Two-toned red and black.
Thorax is evenly rounded
1 node
Antenna connects high on head
Circle of hairs at tip of abdomen
Actual size
Major workers: about 1/4" Minor workers: about 3/16"

Field Ant
Formica spp.
Field ants may be black, brown, tan, reddish, or red and black. Often confused with carpenter ants.
Ocelli on front of head
Uneven thorax
1 node
Front View
Antenna connects low on head
Variable coloration
Circle of hairs at tip of abdomen
Actual size
about 3/8"

Small (False) Honey Ant
Prenolepis imparis
When these ants are swollen (full of food), the gasters (abdomen) are greatly enlarged and shiny.
Thorax is uneven in shape when viewed from side. Looks "pinched" when viewed from above
Abdomen looks triangular when viewed from above, visibly wider than the head
First segment of antenna is longer than head
1 node
Circle of hairs at tip of abdomen
Pedicel looks heart-shaped when viewed from front or back
Actual size
about 1/8"

Large Yellow Ant
Acanthomyops interjectus
Also called citronella ant or foundation ant. Gives off "lemony" odor when crushed.
Thorax is uneven in shape
1 node
Eyes small
Circle of hairs at tip of abdomen
Actual size
about 1/4"

Odorous House Ant
Tapinoma sessile
Has rotten coconut-like odor when crushed.
Thorax is uneven in shape
1 node is hidden by abdomen
Abdomen blunt; no circle of hairs at tip of abdomen
Actual size
about 1/8"

Photo: UNL Extension in Lancaster County

- *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/orders/

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Credits

- Content Specialist
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- Content Editor
  - Erin Bauer, UNL Extension
- Photos
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  - Department of Entomology, University of Nebraska—Lincoln

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