

Identification of Structure-Invading Ants in Nebraska

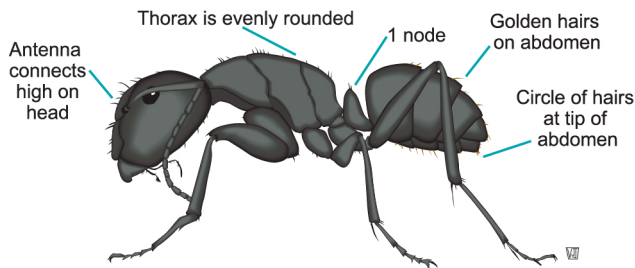
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One-Node Ants

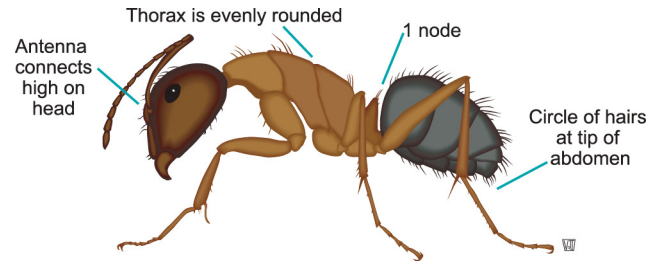
Black Carpenter Ant

Camponotus pennsylvanicus
Many sizes of workers.



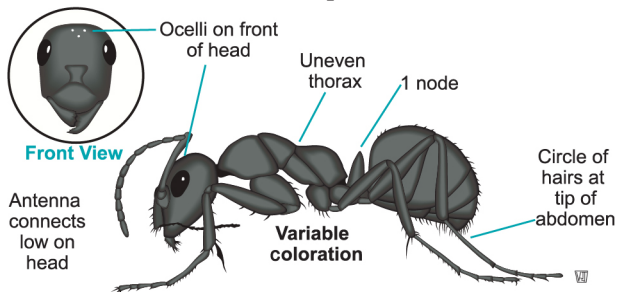
“Red” Carpenter Ant

Camponotus sayi
Many sizes of workers. Two-toned red and black.



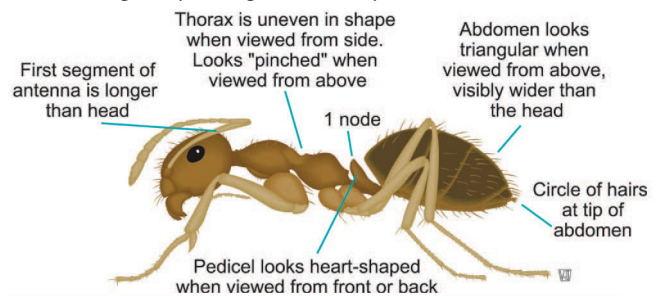
Field Ant

Formica spp.
Field ants may be black, brown, tan, reddish, or red and black. Often confused with carpenter ants.



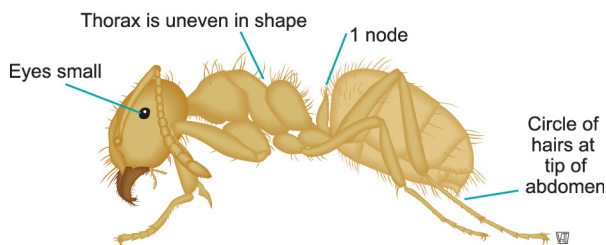
Small (False) Honey Ant

Prenolepis imparis
When these ants are swollen (full of food), the gasters (abdomen) are greatly enlarged and shiny.



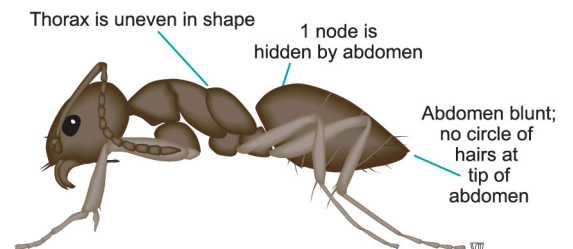
Citronella Ant






Lasius interjectus
Also called large yellow ant or foundation ant.
Gives off “lemony” odor when crushed or threatened.



Odorous House Ant

Tapinoma sessile
When crushed, gives off odor described as rotten coconut, blue cheese, or household cleaner.



Species	Workers	Habits/Management
Carpenter Ant <i>Camponotus spp.</i>	<p>Workers are considered medium to large: 1/4 inch to 1/2 inch (7–15 mm). Major (larger) and minor (smaller) workers can belong to the same colony. Workers' color and size vary, but all carpenter ants have an evenly rounded thorax when viewed from the side. Identification is not based on size or color. Black carpenter ants are completely black, with yellow hairs on the abdomen. Red and black carpenter ants are smaller than the black carpenter ant. These ants have a black abdomen but a reddish-brown head and thorax.</p>	<p>Carpenter ants damage wood by excavating nests and galleries, but they do not eat wood. Outdoor nesting locations include dead trees, limbs, stumps, railroad ties, firewood, and decaying landscape timbers. Indoor nesting colonies are often in moisture-damaged wood caused by plumbing leaks, faulty skylights, windows, roofs, or clogged and overflowing gutters. The creation of galleries results in piles of wood shavings called 'frass.' The frass looks like coarse sawdust with insect body fragments in it. Sometimes, carpenter ants create galleries in foam insulation, which can be seen in the frass. Carpenter ants can travel over 100 feet from the nest in search of food, so finding ants indoors does not necessarily indicate a nest is inside the structure. Colonies consist of a primary, or 'parent', colony and may grow to include secondary, or 'satellite', colonies, which may be found both indoors and outdoors where moisture is abundant.</p> <p>Integrated Pest Management: Prevention: Prevent carpenter ants from entering a building by eliminating moisture problems, replacing rotten wood, cleaning gutters, fixing plumbing leaks, trimming tree branches back from the roof, and storing firewood away from the structure. Inspection: To locate the nesting colony, conduct a thorough inspection and follow foraging ants back to the nest after offering a sugary substance (e.g., diluted honey, sugary milk). Carpenter ants are nocturnal, so observation after dusk and before dawn may be helpful. Carpenter ants make a noise that sounds like crinkling cellophane and may be heard inside walls as they chew wood. A stethoscope may aid in locating colonies in wall voids. Treatment: Only when nests have been located can residual insecticide treatments and baits be used effectively to eliminate the entire colony. Insecticide sprays and dusts must be applied directly to the nest where the queen, eggs, larvae, and pupae are located. Long-term infestations may best be treated by a professional. A variety of ant baits are available. However, due to the nutritional needs of carpenter ants (they require protein and eat other insects), sugar bait alone will not be effective. Note: Carpenter ants do not kill trees; they are an indicator that a tree contains decayed wood.</p>
Black carpenter ant <i>Camponotus pennsylvanicus</i>	 <p>Actual size</p>  <p>Major workers: about 7/16" Minor workers: about 1/4"</p>	
Red and black carpenter ant <i>Camponotus sayi</i>	 <p>Actual size</p>  <p>Major workers: about 1/4" Minor workers: about 3/16"</p>	
Field Ant <i>Formica spp.</i>	<p>Field ants are medium size: approximately 3/8 inch (11 mm). They are often confused with carpenter ants. Color varies widely: black, brown, tan, reddish, or red and black. Thorax is bumpy in appearance. The field ant's key distinguishing features are the three ocelli on its head.</p>	<p>Field ants are common around structures and in landscapes, but are not found indoors. Field ants are soil nesters that construct sizeable mounds in open fields. In lawns, nests have a low profile, rarely reaching above the top of the grass. In well-manicured turf, field ant mounds can damage mowing equipment. Colonies are also found nesting under objects such as rocks, landscape timbers, and stacks of firewood.</p> <p>Integrated Pest Management: Indoor treatment is not recommended. Outdoor treatment options for colonies include drenching mounds with an appropriately labeled insecticide or placing outdoor liquid sugar bait stations near mounds. Before drench applications, rake the soil away as much as possible so the insecticide can penetrate into the nest. Baiting options for field ants include outdoor granular baits and liquid bait stakes.</p>
Small Honey Ant, also called 'winter ant' <i>Prenolepis imparis</i>	<p>Small honey ant workers are small: about 1/8 inch long (3 mm). Their color is golden yellow to brown. This ant has stiff hairs on the abdomen and thorax. The first segment of antenna is longer than the top of the head. The pedicel looks heart-shaped when viewed from front or back. After feeding, the ant's abdomen is swollen with food.</p>	<p>Small honey ants build nests in soil in open, well-shaded areas, seldom under items such as logs or stone. May be found in soil under shrubs and landscaping beds. The nest consists of numerous small galleries dug in the soil; excavated soil particles are deposited in a crater-shaped mound. Small honey ants forage in easily detected trails. Active even in early spring or autumn when temperatures are well below 45°F, these ants tend aphids for their honeydew. In rare instances, these ants are known to appear in basements during their swarming phase, which occurs from March to April. During this time, workers, and winged ants called 'alates', may crawl out of expansion joints in the floor and alarm homeowners.</p> <p>Integrated Pest Management: Manage indoor swarms of small honey ants by vacuuming and disposing of them. Repeat this daily until swarming subsides. Baits are ineffective against swarms; a colony's sole interest during swarming is mating, so no foraging occurs at this time. Sugar baits are effective against foraging workers, but because they rarely, if ever, forage indoors, indoor bait treatment is not warranted.</p>
 <p>Actual size</p> <p>about 1/8"</p>		

Citronella Ant

Lasius spp.

Larger yellow ant
Lasius interjectus



about 1/4"

Actual size

Smaller yellow ant
Lasius claviger

Larger yellow ant workers are considered medium: approximately 1/4 inch (6–7 mm). Smaller yellow ant workers are smaller in size but otherwise resemble larger yellow ant workers. Citronella ants are easily recognized by their yellow-orange color. They emit an odor that smells like citronella or lemon when colonies are disturbed. Swarmers, or alates, are yellowish-brown to black, with smoke-colored wings.

Citronella ants are soil-nesting ants. They nest under items such as logs, rocks, patio blocks, porches, and concrete patios. Occasionally, citronella ants excavate large amounts of soil as they create galleries. When this occurs beneath a concrete slab, excavated soil and debris may be discarded as a pile on the slab's surface. These ants feed on the sugary honeydew produced by aphids, often underground root aphids. Citronella ants are rarely seen indoors unless they are in their swarming phase. They swarm nearly any time of the year (even winter) and may occur inside basements when colonies are located next to or under the structure. Similarly to small honey ant swarms, workers and alates crawl out of expansion joints in the floor and alarm homeowners. Swarming events, or mating dispersals, usually last a few days and then stop until the following year.

Integrated Pest Management: When citronella ants are found swarming indoors, vacuum them up and dispose of them. This may need to be repeated daily for about a week. Nests located outdoors may require a liquid insecticide drench application. If a persistent, seasonal colony is located beneath a structure's foundation, a pest management professional may perform a sub-slab injection of insecticide. Baits are ineffective against mating swarms; foraging does not occur at that time because a colony's sole interest during swarming is mating. Baits are effective against workers, but because they are rarely found foraging indoors, indoor treatment is not warranted.

Odorous House Ant

Tapinoma sessile



about 1/8"

Actual size

Workers are small: 1/16 to 1/8 inch in length (1.5 to 3 mm). Their color is always dark brown to black. The pedicel, or the node between thorax and abdomen, cannot be seen when viewed from above. Odorous house ants have a distinct smell when crushed, reportedly similar to rotten coconut, blue cheese, or household cleaner.

Odorous house ants are the most frequent structure-invading ants in Nebraska. They nest in a wide variety of places both outdoors and indoors. Nests are often located beneath objects such as stones, patio blocks, and debris. They may also nest on the outside of a structure's siding or around its foundation. Indoors, it prefers areas with moisture such as around hot water pipes, heaters, and small appliances or motors. Odorous house ants forage when temperatures are cool, down to 50°F. Foragers lay strong trail pheromones for other ants to follow toward a food source. They tend aphids for honeydew outdoors but will enter kitchens through small gaps or cracks to feed off countertops.

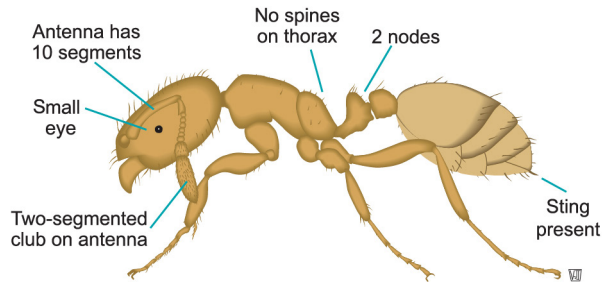
Integrated Pest Management: Locate the foraging trail and follow ants back to their nesting location. If nests are found inside small appliances or other items, take them outdoors for treatment. In these cases, treatment options include bagging and freezing the items, purging them with compressed air, or simply exposing the colony so the ants disperse with eggs, larvae, and pupae. If ants are coming from outside to forage indoors, locate the trail and place a liquid sugar bait as close to the structure's exterior as possible. The key to effective baiting is providing enough bait placements and replenishing bait for as long as foragers continue to feed. In some situations, a pest management professional may need to apply a residual insecticide spray or dust.

Two-Node Ants

Thief Ant

Solenopsis molesta

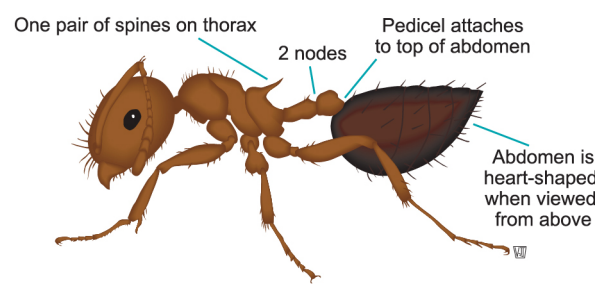
Also called grease ant. The thief ant is most often confused with the pharaoh ant.



Acrobat Ant

Crematogaster spp.

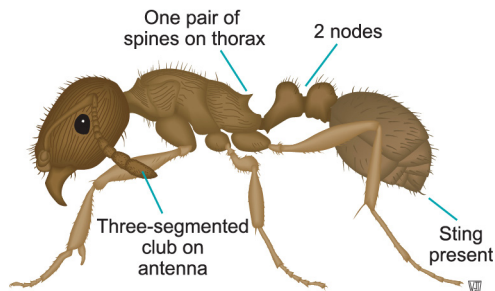
Acrobat ants get their names from the habit of holding their abdomens above their thorax when the workers are disturbed.



Pavement Ant

Tetramorium caespitum

Head and thorax are covered with visible grooves.




Species

Workers

Habits/Management

Thief Ant, also called 'grease ant'

Solenopsis molesta


1/32" to 1/20"
Actual size

Thief ants are tiny: 1/32 to 1/20 inch (1.0–1.5 mm). They are yellowish brown in color, and they are often camouflaged in their surroundings. Thief ants may be confused with pharaoh ants, which are pests in hospitals and in southern regions of the country. The main difference is that the thief ant's antenna has a two-segmented club at the end, while the pharaoh ant's has a three-segmented club.

Thief ants get their name from the fact that they often live in association with other ants as a predator of the host's brood. They are omnivorous (i.e., can feed on both plant and animal material) but prefer grease or high-protein foods over sweets. Thief ants are frequent house invaders, feeding on nuts, pet food, and cereal (with nuts). They may nest indoors in cracks and crevices inside pantries.

Integrated Pest Management: Eliminate infested food sources. Store food in airtight glass or plastic containers to prevent ants' access. Inspect the area for foragers and nesting locations. Place a combination bait that incorporates both sugar and grease/protein near foraging trails. If nests are located in wall voids, an insecticidal dust may be applied by a professional.

Acrobat Ant

Crematogaster spp.


slightly longer than 1/8"
Actual size

Acrobat ants are small: about 1/8 inch long (3 mm). They are brown to blackish in color. The thorax has a pair of spines, the pedicel attaches to the upper part of the abdomen, and the end of the abdomen has a stinger. Acrobat ants are easy to identify because they have a heart-shaped gaster, or abdomen, which they will hold above their bodies when disturbed.

Acrobat ants nest in moist, decaying wood, similar to carpenter ants. They can be found in decayed branches, rotten logs, and tree stumps. They tend aphids and feed on their honeydew. Acrobat ants are occasional invaders and may nest indoors in wood already damaged by carpenter ants or termites. Indoor nests may be located in wall voids, door or window frames, or foam insulation under siding associated with moisture damage.

Integrated Pest Management:

Prevention: Prevent acrobat ants from entering a building by eliminating moisture problems and replacing damp or water-damaged wood.

Inspection: Locate a nesting colony by offering foragers a sugary substance and following their trail.

Treatment: Only when nests have been located can baits and residual insecticide treatments be used effectively to eliminate an entire colony. Sprays and dusts must be applied directly to the nest where the queen, eggs, larvae, and pupae are located. Long-term infestations may best be treated by a professional.

Pavement Ant

Tetramorium caespitum



Pavement ant workers are numerous and small: about 1/8 inch (2.5 to 3 mm). They are light to dark brown or blackish in color. The head and thorax have distinct parallel ridges that are visible under magnification.

Pavement ants also have a pair of spines on the thorax and a stinger at the end of the abdomen.

Pavement ants nest beneath concrete such as sidewalks, driveways, and building foundations. A mound of displaced soil along a paved area is a sign of pavement ant activity. During the winter, pavement ants may nest inside structures near a heat source. Soil and debris found above ground under baseboards near expansion joints is evidence of indoor ant activity. Trailing ants feed on a wide variety of foods, including dead insects, greasy foods, seeds and sweets, as well as aphid honeydew. Pavement ant colonies are territorial and may be seen having hours-long battles with other pavement colonies outdoors. During this period, pavement ants do not cause damage, and the entire mass will disappear without a trace in a matter of hours.

Integrated Pest Management: Eliminate food sources such as drips or spills, as pavement ants are the first ant to find these substances. If ants are foraging indoors from outside, locate the trail and use an indoor liquid sugar bait as close to the structure's exterior as possible. The key to effective baiting is to provide enough bait placements and replenish bait for as long as foragers continue to feed. In some situations, a pest management professional may need to apply a residual insecticide spray or dust.

Identifying Winged Ants: Mature ant colonies produce winged ants that swarm seasonally based on environmental conditions. These winged ants, called 'swarmers' or 'alates', emerge from the nest and fly off to mate and start new colonies. When colonies are found outdoors, swarming occurs outside. Indoor swarming usually indicates the ant nest is in or under the structure. Swarming ants include females (queens) and males (kings) that look quite different from the worker ants. Compared with workers, queens are much larger and more robust; kings are smaller than queens. Queens and kings may also be colored differently than workers, so color is not a reliable feature when identifying winged ants. Swarming ants have some of the key features of workers, but ant identification is most accurate with worker specimens. Winged ants are often confused with winged termites. Table 1 lists some key features that distinguish the two.

Table 1. Distinguishing features of winged ants and termites.

	Wings	Antennae	Body
Winged Ants	4 wings: pair of forewings are larger than pair of hindwings	Elbowed antennae	Slender waist with node or pedicel between thorax and abdomen
Winged Termites	4 wings of equal size	Straight, bead-like antennae	Broad waist with no distinction between thorax and abdomen

Table 2. U.S. EPA-approved ant baits available to homeowners.

Active Ingredient	Application Site	Bait Formulation	Labeled for Carpenter Ant Control?*
Indoxacarb	Indoor/Outdoor	Bait stations	No
	Outdoor	Bait stakes	No
Hydramethylnon	Indoor/Outdoor	Gel bait stations	Yes
	Outdoor	Granular bait	Yes
	Indoor/Outdoor	Granular bait	No
Borax (Sodium Tetraborate Decahydrate or Orthoboric Acid)	Indoor	Liquid bait stations	No
	Indoor	Liquid bait with dropper applicator	No
	Indoor	Granular bait	No
	Outdoor	Granular bait	Yes
	Outdoor	Liquid bait stakes	No
Avermectin	Indoor	Bait stations	No
Thiamethoxam	Indoor	Gel bait with dropper applicator	Yes
Dinotefuran	Indoor	Liquid bait stations	No
Spinosad	Indoor/Outdoor	Liquid bait stations	No
Fipronil	Indoor/Outdoor	Bait stations	No
	Indoor/Outdoor	Gel bait stations	No
	Indoor	Gel bait with syringe applicator	Yes
	Indoor	Bait strips	No

* It is permissible to use a pesticide to control a pest (e.g., carpenter ant) not listed on its label, unless the label explicitly forbids this. However, be aware that a pest's absence from a label means that the product has not been tested for controlling that pest. In other words, you might be able to control carpenter ants with a bait not labeled for carpenter ants, but because the product's registrant has not proven the bait's effectiveness against carpenter ants to EPA, control should not be expected. Read the entire product label before purchasing and applying a pesticide.

Please note that it is illegal to apply a pesticide (including baits) to sites that are not listed on its label. Pesticide labels change frequently without warning. Always read the label to make sure your intended application complies with label requirements.

This publication is a revision of Identification of Structure-Invading Ants in Nebraska, 2004, Extension Circular EC1570 by Clyde Ogg, Extension Educator; Shripat T. Kamble, Extension Specialist; Jody Green, Extension Educator; Jonathan Larson, Extension Educator; and Vicki Jedlicka, Extension Assistant/Graphic Artist.



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