



In This Issue:
ANTS



March/April

"Pest Management is People Management"

2011

Ant Basics

To effectively keep ants out of your building IPM strategies must be used. Pesticides will only kill the ants or ant colony that is bothering you now. But guess what? They will be back – unless you address food issues, sanitation issues, and use exclusion techniques by means of an integrated approach. As with any solid IPM program, the first step to address your facilities ant issues is proper identification.

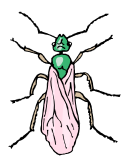
Is it an Ant or is it a Termite?



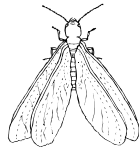
Ant worker



Termite worker



Ant reproductive



Termite reproductive

Before you attempt to identify the species of ant, first you must determine that it is an ant and not a termite. Winged (reproductive) ants are often confused with termites. The winged reproductive form of ants and termites is called an *alate*. Use the guide below to distinguish between ants and termites.

Ants

Termites

Metamorphosis	Complete	Gradual
Antenna	Segmented elbow*	Totally Segmented**
Body	Wasp like waist***	Straight/No constrictions
Wings	Two Pairs	Two Pairs
Wings	Unequal in size	Equal in size
Wings	Do not break easily	Easily broken
Front Wing	Wider & longer	Long & narrow
Front Wing	Black dot on tip	N/A
Rear Wing	Narrower/shorter	Long & narrow
Wing Veins	Visually noticeable	Not noticed by naked eye

Additional Clarifications:

*An ants antenna is straight with a segmented and flexible elbow.

** A termites antenna is totally segmented and flexible.

*** The narrow "wasp like" waist on ants is called a *petiole*.

A *node* is a raised segment or hump located on the *petiole*.

Ant Identification

Now that you know the distinguishing characterizes between ants and termites, let us take a closer look at four of the most common problem ants in the Midwest.

Carpenter Ant (*Camponotus spp.*)

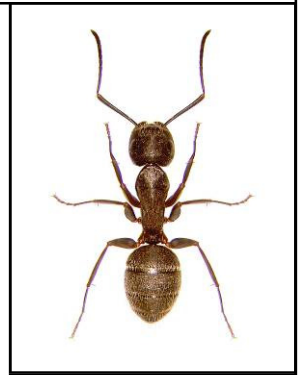
Size: Workers range from ¼ to ½ inch and queens up to ¾ of an inch.

Appearance: Smooth arched contour from behind the head to the petiole with one node (hump).

Color: Basic black in color with abdomen covered in gray to yellowish hairs.

Behavior: Broods may start anywhere: under stones or rock and various other secretive and secluded places but soon move to wood. In wood, they use their powerful jaws to carve out nesting galleries for a harborage area. Unlike termites, they do not eat wood – they excavate the wood.

This process leaves a tell tale sign of a carpenter ant infestation due to the piles of wood shavings that have been discarded. Carpenter ants can be a structural pest, and a large colony can cause damage to a buildings vital structural area. Most generally carpenter ants reside in rotting trees, tree stumps, and wood piles.



Carpenter ant worker
Photo By Dr. Dave Shetlar , OSU.

Pavement Ant

(*Tetramorium caespitum*)

Size: Approximately 1/8 of an inch long.

Appearance: Pavement ants head and thorax are a dull reddish-brown due to the pattern of very small parallel furrows or ridges. The Pavement ant has a deeper or darker colored abdomen that appears to be more glossy or polished. Legs are lighter in coloration. The pavement ant also has two nodes located on the petiole.

Behavior: Typical nesting sites outside consist of: sidewalk areas, concrete door stoops and entry areas, concrete and block patios, paved areas, and under rocks. Pavement ants in the great outdoors consume seeds and other insects. They also care for honeydew producing insects, such as, Aphids.



Pavement Ants
Photo By Dr. Dave Shetlar , OSU.

Pavement Ant Behavior Continued... However, when a pavement ant colony moves indoors they can be structural pests. Pavement ants will reside in the tiny voids in your building, such as: behind the base boards (where the sill plate meets the foundation), and wall cracks. These ants will store debris consisting of dead insect parts, seed shells, sand, and sawdust until more room is needed in the nesting area. When the nest needs to expand the debris is pushed out leaving small granular mounds where the wall meets the floor.

Pharaoh Ant (*Monomorium pharaonis*)

Size: Tiny ants, where workers range in size from 1/15 to 1/12 of an inch.

Appearance: Head and thorax are dull in appearance with a darker and shiny abdomen. The pharaoh ant has 2 nodes.

Color: Light yellow to an orange/reddish brown in coloration.

Behavior: Mature reproductives have wings but cannot fly. Pharaohs are active throughout the year in warm buildings. Nests are often found around HVAC equipment such as: hot water tanks, furnaces and boiler rooms, heating duct work, hot water pipes and other hot moist areas including cooling units and sprinkler systems. They prefer a nesting site that has a warm temperature within the range of 80° to 85° Fahrenheit. Pharaohs will feed on almost anything but prefer sweets and grease. Workers forage in trails and may be spotted around baseboards and on countertops and window sills. It is important to note that the use of sprays and dust applications or colony stress will cause the ants to split off into satellite colonies. This is called **budding**. Pharaohs have multiple queens in medium to large colonies and when a budding occurs a queen will split off with a new satellite colony.



Pharaoh ant
Courtesy: University of Florida.

Odorous House Ant (*Tapinoma sessile*)

Size: Adult workers range from 1/12th to 1/8th inch in length.

Appearance: Slightly broad abdomen (compared to thorax) with one node. The node is slightly covered by an extension of the abdominal region. A good practice to identify odorous house ants is to crush the ant. When crushed it releases a pungent coconut like smell.

Color: Brownish black to dark brown/gray.

Behavior: Average colony size can be quite large, with up to 3,000 to 4,000 individuals, accompanied by several queens. Interior nests may be found in between walls, below floors, and many other structural voids. Exterior nests may be found under boards and stones, nests of this type are usually shallow in depth. Foraging workers trail each other searching for honeydew outside, when outside conditions change and honeydew is no longer available they tend to move into structures. Odorous house ants can be a potential school facility and household pest. Odorous house ants can be found throughout the U.S.

General IPM Control Measures For Ants

- Inspect for foraging in all food areas. Keep all food products (including pet food and food products used for art and science projects) stored in air tight sealable containers.
- Inspect all wood and lumber before bringing into schools and facilities. Do not store scrap wood, pallets, or lumber next to the buildings.

- Assure that rain gutters are in proper working condition and free and clear of debris so that rain water is not spilling over the gutters and falling next to the foundation. Use splash blocks properly, blocked end out, so that the rain water is dispersed out and away from the building.
- Assure that the structures roof and roof fixtures (chimneys, flashing, soffits, and vents) are well maintained.
- Repair leaky plumbing fixtures.
- Keep trees and bushes trimmed away from the building and away from the roof.
- Caulk and screen all possible points of ant entry areas,
- Check landscaping stones and rocks in beds next to the building and remove if necessary for habitat alteration.
- Caulk and seal all foundation, wall cracks and behind baseboards with a high quality silicone sealant.
- Assure that all door sweeps/brushes are in good condition and create a good seal.
- Inside sanitation-keep it clean! Clean up food spills as they occur. Report wet spills to the building custodian. Vacuum and /or dust mop/wet mop food areas daily. Remove damp or moist garbage from the area in hot and dry weather.
- Work in conjunction with your grounds crew to control honeydew producing insects on plants near to the school or facility.
- Rotate and rearrange supplies regularly to detect hidden nests.
- Recommend to all teachers and staff to rinse out all drink containers at the end of the day.
- Reduce interior and exterior clutter.
- Use humidifiers to reduce moisture in humid areas.

Licensed Applicators: Use bait stations or gel baits for crack and crevice application. There are a variety of baits that work for different ant species. Assure that the bait that you choose is acceptable to the species that you are treating through proper identification! If dusts must be used in crack and crevices applications, assure that all gaps are sealed after applications with an elastomeric sealant. Use pesticides correctly. Remember the label is the law!

Pest Press Produced By: Allen Wilson, Safe Zone IPM Consultation Services. [Email: safezonecs@wowway.com](mailto:safezonecs@wowway.com) Phone (614) 620-1643

Informational Resources:

▶ **Truman's Scientific Guide To Pest Management Operations** Sixth Edition; Bennett, Owens, Corrigan; A Purdue University/Advanstar Communications Project, 2003.

▶ **Ohio Department of Agriculture's General Pest Control 10a** text book (2001). Editor: Carolyn Randall, Extension Associate/Pesticide Education Program/Michigan State University. **General Pest Control 10a** text book adapted from **Urban Integrated Pest Management, A Guide for Commercial Applicators**, written by: Dr. Eugene Wood, University of Maryland, and Lawrence Pinto. Pinto & Associates. Dual Associates, Arlington, Va, February 1991.

▶ **University of Arizona, Arizona Cooperative Extension website:** aq.arizona.edu/pubs/insects/az1280.pdf

▶ **Carpenter and Pavement Ant Photography By:** Dr. David Shetlar, Ohio State University, Extension Entomology.

▶ **Pharaoh Ant Photography Courtesy:** University of Florida.