

**insect answers**



## MOISTURE ANTS

Ants (Hymenoptera: Formicidae) are an easily recognized group of social insects. The workers are wingless, all possess elbowed antennae and all have a petiole (narrow constriction) of one or two segments between the thorax and the abdomen.

Most ant colonies are started by a single, inseminated female or queen. From this single individual colonies can grow to contain anywhere from several hundred to several thousand individuals.

Ants normally have three distinct castes: workers, queens and males. Males are intermediate in size between queens and workers and can be recognized by ocelli (simple “eyes”) on top of the head, wings, protruding genitalia and large eyes. The sole function of the male is to mate with the queen.

The queen is the largest member of the colony. She has wings, but loses them soon after mating. However, scars remain where the wings were attached. Queens usually have ocelli, in addition to large eyes, and a large abdomen for egg production.

The worker, the smallest member of the colony, lacks ocelli (usually) and is never winged. Workers may be of one size (monomorphic) or may vary considerably in size (polymorphic). Large workers are usually called soldiers or majors, very small workers are minors.

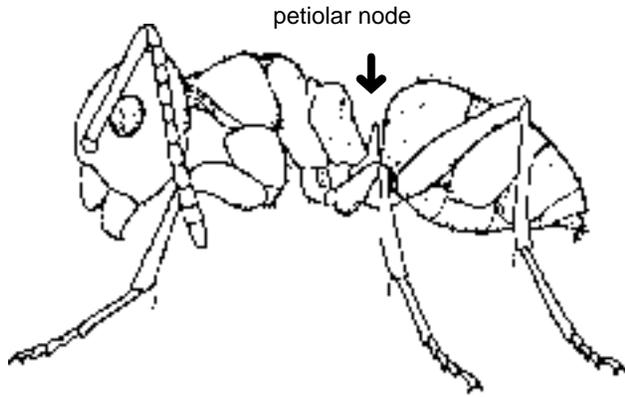
Ants pass through several distinct developmental stages in the colony: egg, larva, pupa and adult. The egg is very small and varies in shape according to the species. The larva also varies in size and shape,

but is usually white and is always legless. The pupal stage looks like the adult but is soft, white and motionless. Many are enclosed in a cocoon of a brownish or whitish papery material.

Ants produce reproductive forms usually at one time of the year (spring or fall, depending on species and colony disposition). Colony activity at the time of reproductive swarming is high, with winged males and queens and workers in a very active state. The queen and males fly from the colony and mate. Shortly after mating, the male dies. The inseminated queen then builds a small nest, lays a few eggs and nurtures the developing larvae that soon hatch. When adult workers appear, they take over the function of caring for the queen and larvae, building the nest and bringing in food for the colony. Colonies may persist for 20 years or more.

“Moisture ant” is a collective name that includes a number of ant species in two major genera which are superficially similar in appearance and size. Both are wood invaders. These are the yellow ants (*Acanthomyops* spp.), which are not found in Washington, and the cornfield ants (*Lasius* spp.), described briefly here.

**Cornfield and Other Ants** (*Lasius* spp.). Most pest species are yellow; they can vary to a rather dark brown, from 3–5 mm long. These are monomorphic species having workers all the same size. Maxillary palpi are long and **five-segmented**. Colonies usually occur in decayed logs and stumps, but some may be found in soil. They feed on sweet materials, attend



***Lasius* sp.—worker (cornfield and other ants).**

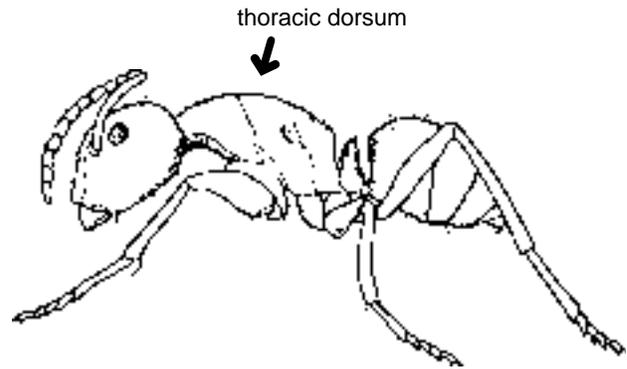
aphids for honeydew and become a general annoyance factor around homes.

Reproductive swarming usually occurs late summer to early autumn. This widely distributed genus contains several species of pest status. The ants occur throughout the state of Washington and are the most common moisture ants in home structures.

*Major concern.* These ants frequently appear associated with rotting wood in houses. While several species may bring moisture into the wood structure to increase damage, the colony initially started in wood in an advanced stage of decay. Do not consider these ants a structural pest as the problem invariably existed before the colony was established. Remove the decayed wood and replace it with sound material while correcting the condition that led to the decayed wood in the first place.

These ants will construct galleries from the rotting wood within which they feed (see illustration). Do not confuse these galleries with the more linear tube-like tunnels made by subterranean termites.

These ants are continually confused with carpenter ants. However, these are small ants; carpenter ants are usually large. A sure way to distinguish them from carpenter ants is to view them from the side and determine if the thoracic dorsum is evenly convex (smoothly rounded). All carpenter ants have this rounded thoracic dorsum. Moisture ants have a notch or dip on the thoracic dorsum (see illustrations). This characteristic applies only to worker ants and is not generally useful for identifying winged forms.



***Camponotus* sp.—worker (carpenter ants).**

## Control

These ants are not a primary structural pest, but they can speed the deterioration of wood. They also become a nuisance as they enter homes in search of food. If possible, determine where the ants are coming from. These ants require moisture to survive. They may be nesting in damp soil outside or under the house, beneath sidewalks, along foundations or under debris and rocks in the yard. Or, the ants may be living in damp, decaying wood. If the ants are nesting in wood, they may throw out sawdust as they enlarge their nests.

## Cultural Control

Check periodically for wet, decaying wood or wet soil under the house. Correct problems which are creating a damp place for the ants to live (leaking gutters, plumbing, improperly caulked windows, etc.). Do not allow wood members to come into contact with soil. These ants frequently inhabit form lumber the contractor buried in the soil next to the foundation. Remove this wood. Replace any badly damaged wood. Remember, long-term control requires eliminating the moisture problem and wet rotting wood.

## Chemical Control

When ants are nesting in decaying wood, chemical control measures act as a temporary solution by killing the ants. This will slow down the deterioration of wood, but does not correct the primary problem.

Ants nesting in the soil under or around the house and in the yard can also be controlled with insecticides if they have become a serious annoyance.

If chemical control becomes necessary, products containing cyfluthrin labeled for ant control are effective. If label allows indoor use, be certain food or countertops are not treated. Existing stocks of Diazinon or Dursban (chlorpyrifos) can be used for ant control provided all label directions are followed.

If you cannot find the nest or if it is located in an inaccessible place (such as a narrow crawl space), you may wish to consult a professional structural pest control operator.



**(Lower left)** Decay caused by direct wood-soil contact. These sites are ideal entry points for moisture ants to build nests (ALA\*). **(Top right)** Moisture ant nest in a decayed sill plate on the inner side of the foundation in a crawlspace (ALA\*). **(Middle right)** Galleries of a moisture ant nest made from decayed wood glued together with saliva. **(Lower right)** Moisture ants with larvae inside the galleries of the nest. The worker in the center of the photograph is transporting two larvae.

\*Photos by Art Antonelli.



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**▲Warning.** Use pesticides with care. Apply them only to plants, animals, or sites listed on the label. When mixing and applying pesticides, follow all label precautions to protect you and others around you. It is a violation of the law to disregard label directions. If pesticides are spilled on skin or clothing, remove clothing and wash skin thoroughly. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock.

College of Agricultural, Human, and Natural Resource Sciences

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