

# FOREST Pest LEAFLET

## Carpenter Ants

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Fig. 1. Winged adult.



### Introduction

Large black ants of genus *Camponotus* are referred to as carpenter ants. About 20 species are known in North America, three of which are common in British Columbia.<sup>1</sup> They tunnel in dead and dying trees, or in wooden struc-

tures, and forage omnivorously in the general area of the colony. Nest building activities may cause serious damage to wood in service. Their presence in houses is a nuisance.

Ants may be discouraged or controlled with proper building and sanitary practices.

<sup>1</sup> *Camponotus herculeanus modoc* Wheeler (Formicidae, Hymenoptera)  
*C. laevigatus* (Smith) Wheeler (Formicidae, Hymenoptera)  
*C. vicinus* Mayr\* Wheeler (Formicidae, Hymenoptera)  
 \**vicinus* has a reddish thorax. **It does not tunnel** in wooden structures, it lives in rotting wood.



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## Host

Carpenter ants are mainly predators, consuming a variety of insects; sugary substances are frequently sought after. They do not consume wood but only excavate nest galleries. Aphids are tended for honeydew or other exudations. A number of insects, most frequently a small roach, may live with ants.

## Description

**Egg:** elongate, elliptical, translucent white; about 0.5 mm (1/64 inch) long.

**Larva:** soft, legless, translucent yellow-white; varying in size, depending upon ultimate adult form i.e., male, female, worker; gourd-shaped body.

**Pupa:** creamy-white; in elliptical, papery, light-brown cocoons.

**Adult:** shiny black; Queens 15-20 mm (5/8-3/4 inches), long. winged until mating flight is completed; males 10 mm (3/8 inches), winged; workers 6-10 mm (1/4-3/8 inches).

Ants have elbowed antennae, large heads with strong mandibles, constrictions between head and thorax and between thorax and abdomen. Wings are translucent with prominent venation, the front wings noticeably larger than the hind wings.

Numerous other species of small ants of varying colors may be found in and around buildings but do not cause serious structural damage.



Fig. 2. Wingless adult.



Fig. 3. An aphid colony being attended and protected by carpenter ants in return for honeydew.

**Note:** Termites superficially resemble ants but have straight antennae (no elbow) and are not prominently constricted between head and thorax or thorax and abdomen. Their wings are finely veined and there is little difference in size of front and hind wings. Earwigs, which may be found hiding in damaged wood, have prominent “pincers” at the end of the abdomen.

## Life History and Habits

Carpenter ants excavate galleries in dead wood, either in the forest or in wood in use. They may also nest in debris or within walls. Particles of wood are removed from galleries and generally discarded outside the nest area.

Winged adults swarm during May and June, often in enormous numbers. They mate in nuptial flights. Each "queen" selects a suitable spot to lay her eggs, usually in rotting wood. Larvae hatch in about 10 days to several months, depending on temperature.

Ants are social insects with specialized duties according to age and form. Various stages of development occur simultaneously. Queens may live as long as 15 years; workers and males are shorter-lived.

Carpenter ant nests may contain small apterous crickets (which feed on secretions of the ants' bodies), staphylinid beetles, dipterous scavengers or parasitic worms.

## Detection

Foraging carpenter ants may be the first indication of a nearby infestation. Observations of their routes of travel may lead to the nest. Since ants eject excavated wood particles from the nest, piles of "sawdust" at the base of posts, along sills or elsewhere are indicators. Nests located within walls, attics or other enclosed areas may not have the telltale "sawdust" visible but, under quiet conditions, rustling sounds may indicate the presence of ants. Unused openings to a nest are sometimes closed with plugs of fibrous wood.

## Damage

Unrestricted carpenter ant activity in a building may lead to serious structural damage. Accessible foodstuffs may be polluted by ants carrying disease germs from one area to another, or their presence may be objectionable.

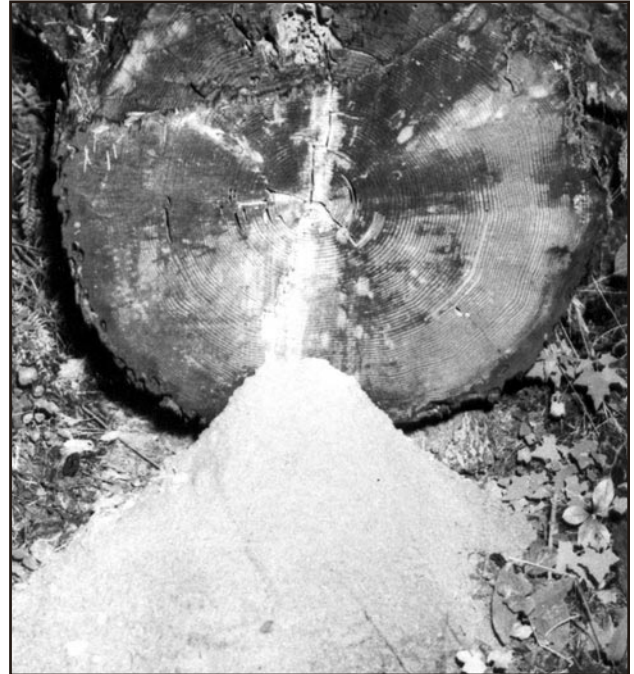


Fig. 4. Boring dust ejected by carpenter ants.



Fig. 5. Carpenter ant damage to a plank.

## Hazard Levels

An occasional flying carpenter ant during the late spring or early summer is no cause for concern. However, a large number of winged ants in or around buildings, or any number of foraging ants, should be promptly investigated.

## Precautionary Measures

The following measures will help to discourage carpenter ants and some of the other less damaging species.

1. Building sites and adjacent areas should be cleared of stumps, partially rotted or damaged trees, old logs and any other woody debris, including grade stakes and wooden forms after use.
2. Only sound, properly treated lumber should be used in new construction. Salvage lumber, logs, etc., require very close inspection to guard against the introduction or encouragement of ants and other important insect pests.
3. Buildings should be placed on concrete or masonry foundations with adequate crawl spaces where applicable.
4. Basements, crawl spaces or adjacent buildings should be kept free of old lumber and debris and, in particular, firewood.
5. Foodstuffs, both human and animal, should be protected against insects.
6. General sanitation of buildings and adjacent grounds will discourage carpenter ants and numerous other insects. Shrubbery, trees, or debris should be kept from close contact with the outside of buildings. Wooden construction should be kept free of soil.

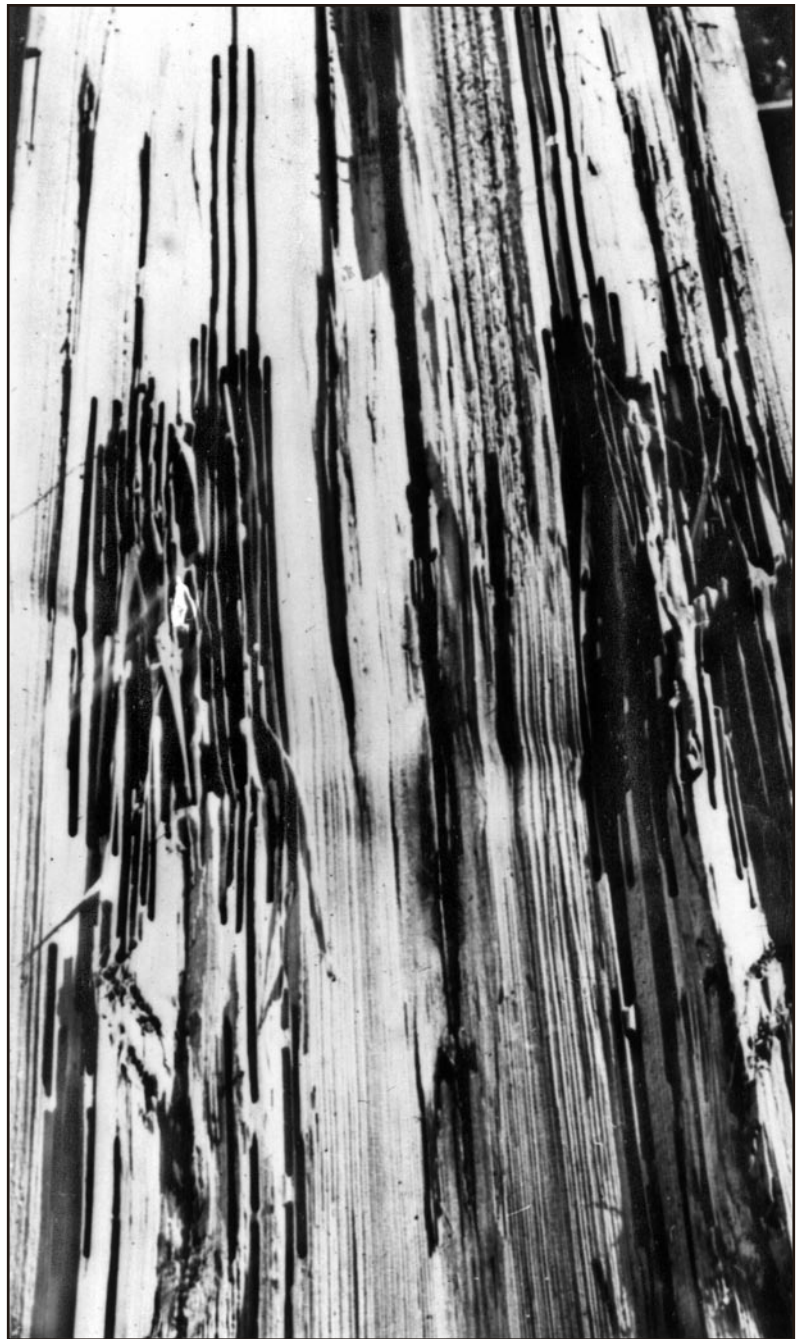


Fig. 6. Damage to a power pole.

## Control Measures

The following measures will help in the control of established ant colonies.

1. Be sure you have the pest properly identified before control measures are commenced. The Canadian Forestry Service laboratory can be of assistance.
2. Buildings should be upgraded in accordance with the previous sec-

tion - carpenter ants sometimes move if the hospitality is poor.

3. Badly damaged building components may need replacement.
4. Chemicals may be used, the more toxic of which should be applied by licensed applicators, in accordance with current restrictions. They will have proper protective devices to safeguard you and themselves.

Household sprays may be used according to the maker's instructions for minor infestations. Commercial ant traps are designed so that the insecticide will be carried to the nest before taking effect.

Liquid preservatives such as creosote, pentachlorophenol or copper from copper naphanate in solution may be used to treat posts, timbers and sills. While not particularly effective against the insect itself, preservatives help prevent rot which encourages the entry of ants. Timbers, etc., may be drilled with a quarter-inch drill at intervals of 18 inches at a downward angle and the liquid funneled in. **Pay close attention to ventilation and listed precautions on the container.** Prevent blowback by wrapping the funnel spout or other devices (an oil can is good) with cloth. Some preservatives are not easily painted over or may have a lingering odor.

Nests outdoors in stumps, trees or other nest locations may be treated by drilling a cavity and pouring a liberal amount of kerosene or fuel into the nest area. **These are flammable substances: exercise caution.**

Nests in walls may require removal of wallboard or other material before treatment.

Treatments by a professional exterminator should be followed by precautionary measures to discourage reinfestation at a future date.

Ants which nest in a building and feed outside, i.e., on sap, nectar, honeydew of insects, carrion, etc., may be treated at the feeding site.

## References

- McNay, C.G. 1959. Ants and their control in Canada. Can. Dep. Agr. Pub. 1055, 5pp.
- Smith, D.N. 1957. Carpenter ant infestation and its control. Can. Dep. Agr. Pub. 1013, 5pp.

## Additional Information

Additional copies of this and other Forest Pest Leaflets, as well as additional scientific details and identification services, are available by contacting:

Natural Resources Canada  
Canadian Forest Service  
Pacific Forestry Centre  
506 West Burnside Road  
Victoria, B.C. V8Z 1M5  
<http://www.pfc.cfs.nrcan.gc.ca>  
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