

THE FLORIDA CARPENTER ANT, CAMPONOTUS ABDOMINALIS FLORIDANUS (BUCKLEY)

(HYMENOPTERA:FORMICIDAE)¹

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INTRODUCTION: The Florida carpenter ant, Camponotus abdominalis floridanus (Buckley), is the predominant Camponotus sp. in Florida. Smith (1965) states that "this ant undoubtedly ranks as one of the most important house-infesting ants in Florida". Like other carpenter ants, C. a. floridanus excavates galleries in wood that are similar to termite damage, but are distinguished by a clean sandpapered appearance and absence of debris. Wood fiber is not used for food but is hollowed out for nesting sites.

TAXONOMY: This ant was originally described as Formica Floridana by Buckley (1866). It has since undergone several name changes, resulting in considerable confusion. The formal synonymy is:

Formica Floridana Buckley, (1866)
Camponotus atriceps Yankee Forel (1884)
Camponotus atriceps floridanus Mayr (1886) (Creighton, 1950)
Camponotus floridanus (Buckley) (Wheeler, 1910)

The apparent elevation of floridanus to species ranking by Wheeler (1910) is probably in error as his subsequent text references distinctly state that floridanus is a subspecies of abdominalis. Later authors, such as Creighton (1950) and M. R. Smith (1947, 1965), retain the subspecies ranking for floridanus.

DESCRIPTION: Abdominal pedicel consisting of one segment. Acedipore distinctly circular and surrounded by fringe of hairs. Thoracic dorsum, in profile, evenly convex, the epinotum not depressed below the level of the promesonotum. Antennae 12-segmented, the antennal scapes inserted well behind the posterior edge of the clypeus (Fig. 1). Workers polymorphic, ranging in length from 3.5-7.5 mm. Front of the head of the major not obliquely truncate, more or less convex; clypeus convex or angular and distinctly higher than the adjacent portions of the cheeks. Scapes and legs with numerous, long, coarse, brownish or golden erect hairs on all surfaces. Head, thorax, and petiole yellowish-red or reddish, the gaster black (Creighton, 1950).

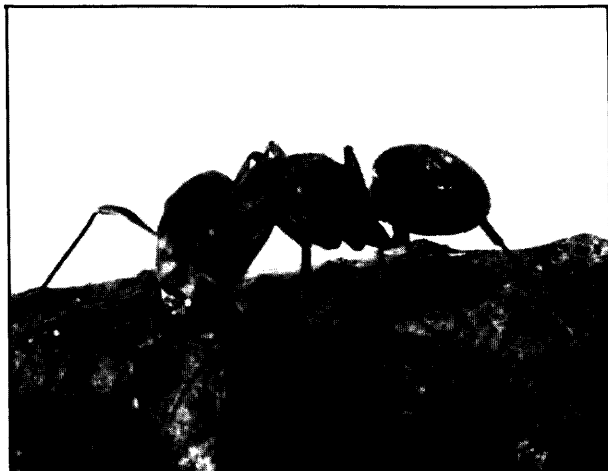


Fig. 1. Camponotus abdominalis floridanus major worker. (DPI Photo #850014-20)

DISTRIBUTION: C. a. floridanus occurs throughout Florida and along the coastal areas of Georgia, South Carolina, North Carolina, and Alabama. Smith (1965) reported it from Horn Island, off the coast of Mississippi.

ECONOMIC IMPORTANCE: Carpenter ants contaminate food and litter buildings by dropping and piling frass from wood excavations, insect parts, or dead ants. They damage wooden structures and their nesting activities can weaken buildings. Their aggressive habits have earned them the local common name "bull dog" ant (Smith 1965) or simply "bull" ants. C. a. floridanus plunder or attack colonies of bees for food or nesting sites (Wheeler 1932, Creighton 1950, Smith 1965). Carpenter ants have been observed to raid and occupy termite sites and may destroy the termite colony in the process (Beard 1973). According to Fowler (1982), extension service surveys indicate increased public interest and concern over carpenter ants.

BIOLOGY AND NESTING HABITS: C. a. floridanus will establish nests in a variety of locations; in or beneath rotten logs and stumps, dead limbs of trees, or under rocks and in buildings. The wood can range from early to later stages of decay and be very moist to dry (Van Pelt 1958). In and around buildings, nests are constructed in roofs, gutters, paneling, flashing and siding, columns and posts, subflooring, porches, window sills, hollow doors, firewood, fireplaces, under shingles, or hollow pipe or other natural hollow area. The galleries are usually excavated in moist or unsound wood that is decayed or damaged; however, damage to dry, sound wood has been reported (Truman et al. 1976, Dukes and Robinson 1982).

Nuptial flights of C. a. floridanus occur from May-August, and new colonies are established by a single mated female (Smith 1965, Van Pelt 1958). The period from egg to larva is 21 days; larva to pupa, 20

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days; and pupa to worker adult, 8 days. The early offspring from a queen are very small workers (Van Pelt 1958); as the colony develops, workers of various sizes are present. Carpenter ant colonies are mature when reproductives are formed (Truman et al. 1976). *C. a. floridanus* will feed on a variety of plant and animal materials: small insects, both dead and live; honeydew from mealybugs, aphids, and scale insects; sweets found in the home such as sugar, syrup, honey, jelly, and also fats, greasy foods, meats, and liver. Van Pelt (1958) theorized that termites may supply food for these ants as they often colonize the same type of wood. *C. a. floridanus* will often carry termites between their mandibles when disturbed while occupying the same locations. Carpenter ants forage up to 100 yards in search of food (Truman et al. 1976). They wander individually and may be active both day and night.

DETECTION AND CONTROL: Carpenter ant control is often difficult because of problems with locating nests and galleries, eliminating high moisture conditions, and applying insecticide in the proper locations. Prior to beginning inspection, it is useful to have information on where the ants have been seen and where they have been most prevalent. A thorough inspection must be made both indoors and outdoors, particularly in areas of high moisture, where wood contacts the soil, improperly ventilated areas, and previously listed nesting sites. The ants often enter buildings by being carried inside with firewood. Frass piles may indicate areas of infestation but are often located some distance from the galleries. The wood debris has a shredded or shaved quality which distinguishes it from most other frass from wood damaging insects.

Insecticidal dust formulations are useful because they penetrate into cracks and crevices in the galleries and are also moved by the ants throughout the nests and galleries. Insecticide should be applied to the nest or gallery areas and also to areas around the nest. It may be necessary to drill holes to inject insecticide into gallery areas and then seal the galleries to ensure ant mortality. When a nest cannot be found, a more general treatment of the premises is necessary. The outside of the foundation, base of trees, fences, shrubs, and other foraging areas should be sprayed with a residual material. Baseboards, doorframes, unused attic space, and other ant habitation areas in the home should be sprayed. Several insecticides are labelled for ant control. Consult your local County Agricultural Extension Agent for approved insecticides for carpenter ant control. Read and follow the label instructions and precautions before using any insecticide.

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