



3 mm in length and the minor workers 2 mm in length. The head is a darker red brown than the body and the gaster is darker brown on both castes. There are long, upright, yellow hairs sparsely scattered over most of the body. The oval-shaped head, of the minor worker, and larger heart-shaped head of the major worker have antennae that are twelve segmented with a 3-segmented club. The antennal scape is longer than the head in the minors we received and shorter than the head in the major workers. The sculpturing on the face is different in the two castes. There are small wrinkles on the lower face on either side of where the antennae are inserted in the minor worker (Figure 3), but on the major workers there is more sculpturing across the entire lower face (Figure 4). Mandibles contain 5 – 7 teeth.

The thorax has a ‘broken back’ look and is pitted on the last two segments. When viewed in profile, the middle segment is lower than the first and the last segment drops down even further and has two short spines on either side.

The abdomen has two pedicel nodes. The first is elongated with a stalk attaching to the thorax. This segment is also pitted. The post petiole is rounded when viewed from above and has a smooth surface with a few hairs.



**Figure 2.** Bigheaded ant, *Pheidole megacephala* Fabricius), foraging tubes on a palm tree. Arrows indicate two of the foraging tubes. Photograph by R.H. Scheffrahn, University of Florida. Used with permission.

**BIOLOGY:**

*Pheidole megacephala* is an omnivorous ant, preying on other insects as well as feeding on any human or animal food of plant or animal origin. In Hawaii, BHA tends mealybugs on pineapple to harvest their honeydew. They do not sting but will bite if the nest is disturbed. The bite is not painful.



**Figure 3.** *Pheidole megacephala*, minor worker. Frontal head view. ©CAES Rose Hiskes

This ant usually nests in the soil. In Florida it constructs foraging tubes of plant debris to move around above ground (Figure 2). Where large nests are found near buildings, workers frequently forage in buildings for food. Trails of workers can be seen moving long distances between food sources and the nest.

Outdoor colonies can get very large and displace native as well as other exotic ant species with their aggressive behavior. There are multiple queens per colony. It is not known if they will overwinter outdoors in New England.

In buildings BHA can nest in wall voids, suspended ceilings and other spaces. They

do no structural damage. It remains to be seen if they can nest in large potted plants.



**Figure 4.** *Pheidole megacephala*, major worker. Angled head view. ©CAES, Rose Hiskes

This ant may be moving around the globe in soils associated with potted houseplants or agricultural products (Stefan Cover, personal communication). The structure in which they were found in Connecticut has many large palm and other houseplants. Many houseplants are produced in the tropics where this ant is present in large numbers.

#### MANAGEMENT:

In buildings, removing food sources should help reduce ant populations. Since BHA will eat spilled food crumbs, keeping kitchens and eating areas clean and vacuumed is necessary. Be sure food waste garbage cans are sealed tightly. Keeping the building as free as possible of other insects will reduce food available to these ants. Also controlling living insects on house plants such as aphids, mealybugs or scales, which secrete honeydew, is needed as well.

Trials in pineapple fields in Hawaii showed Amdro in bait stations managed BHA populations well (Taniguchi, Thompson and Sipes, 2006).

Field trials in Florida concluded that 28 days post treatment, MaxForce Fire Ant Bait with fipronil, provided the best suppression of BHA (Warner, Yang and Scheffrahn, 2008).

In Connecticut, the BHA has only been reported to date as being in a building. If true, this limits the re-infestation of ants from outside the treatment area. Both Amdro and MaxForce are labelled for use in buildings in Connecticut. More research is needed to find the pathway by which BHA arrived here and to see if we can get eradication using newer, possibly more effective, products.

Voucher specimens of *Pheidole megacephala* were deposited in the following collections: The Connecticut Agricultural Experiment Station, New Haven; The University of Connecticut, Entomology Collection; and the California Academy of Sciences, San Francisco.



**Figure 5.** *Pheidole megacephala*, major worker. Lateral view. ©CAES, Rose Hiskes

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