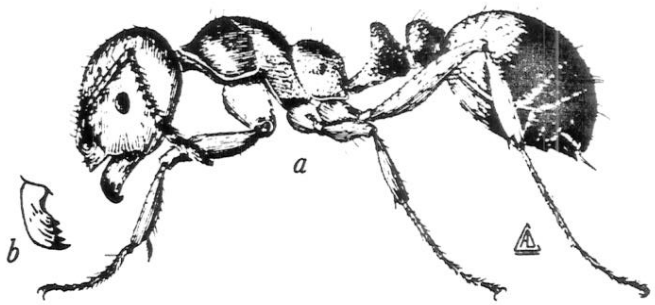
PCO

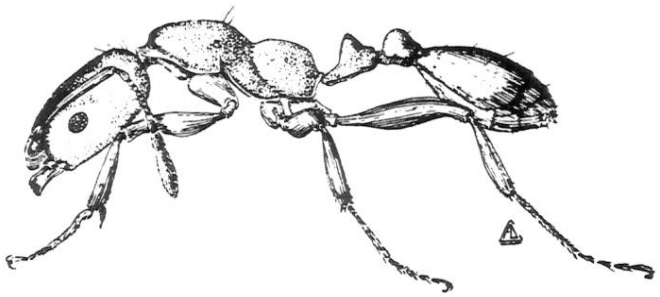
THE OFFICIAL MAGAZINE OF THE
FLORIDA PEST CONTROL ASSOCIATION

APRIL 1990

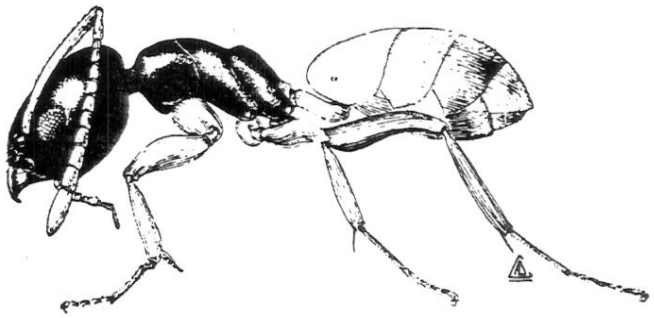
FLORIDA CARPENTER ANT *Camponotus Floridanus*



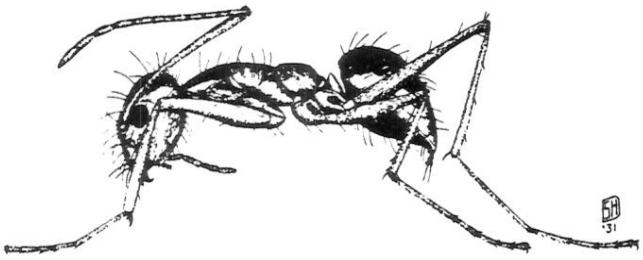
RED IMPORTED FIRE ANT *Solenopsis invicta*



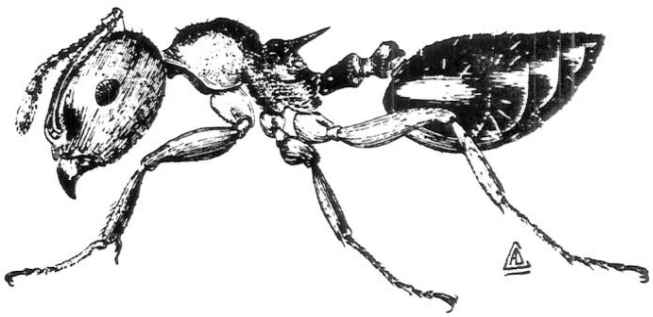
PHARAOH ANT *Monomorium pharanonis*



GHOST ANT *Tapinoma melanocephalum*



CRAZY ANT *Paratrechina longicornis*



ACROBATIC ANT *Crematogaster sp.*

Tracking Florida's Ants

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TRACKING ANTS IN FLORIDA

THE RESULTS OF A FLORIDA ANT SURVEY AND A KEY TO COMMON STRUCTURE-INVADING ANTS

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Deyrup et al. 1989 listed 165 species of ants in Florida, an intimidating number of possible structure-invading species. The senior author's research over the past five years showed that only a small fraction of these were important to the pest control industry, only a handful are structure invading species. The authors reported survey results from south Florida and compared them with results from North Florida. The results were used to develop a key (Table 5.) which relies on size, color, behavior and habitat information to identify the most common structure-invading ants of Florida.

Pest control companies (Table 1.) collected 61 specimens found inside structures in Broward County from Sept. 1988 to Sept. 1989. We identified the species listed in Table 2. Table 3. shows the frequency distribution of common ants; this can only be regarded as an estimate because sampling efforts were not equal throughout the study. Nonetheless the survey revealed interesting results. **Tapinoma melancephalum** (called ghost ants because of the way they move; no common name has been assigned) was the most frequently collected species. This ant is not described in pest control textbooks. Consider this a cautionary tale; it is important to examine pest control reference materials within the context of time, location, and thoroughness of research. (The distribution of pest species responds dynamically to the environment; therefore they change with time and location).

Overall, there was not much difference between collections from north and south Florida. Table 4. shows the frequency distribution from Alachua County, a Northern Florida county (Bieman and Bloomcamp 1987). The similarity of species composition of structure-invading ants between two sites separated by 300 miles suggests a common pattern for the entire state.

The ghost ant and acrobatic ant (**Crematogaster spp.**) were the only ants not to show up in both surveys. The ghost ant prefers tropical habitats and can easily live outside in south Florida. However, the more temperate climate of north Florida probably acts as barrier to it. Ghost ants have invaded north Florida structures (Nickerson and Bloomcamp 1988) but they probably were transported on plants from the south.

Acrobatic ants live in south Florida (Deyrup et al. 1989), but were not represented in our collection.

The red imported fire ant dominated in north Florida and the same may eventually occur in the south as their populations increase to the levels occurring in north Florida.

All the common ants readily live on the outside of buildings in Florida which makes movement between structures highly probable. Therefore, it is important to treat the structure's periphery. North of the sunbelt, temperature probably prevents many of these species from moving outdoors; infestations in these regions would result more from human transport than migrations.

The key (Table 5.) uses characters that the unaided eye

WOJCIK BIEMAN

can perceive in the field; it is designed to aid technicians at job site. Only ants which frequently invade structures were included. Usually less common ants are incidental invaders and do not require pest control treatment. Misidentifications are possible because some incidental invaders share characteristics with common ants. This is especially true for south Florida where 29% of the species found would be considered incidental. Key users may avoid mistaken identity if they rely on more than one characteristic for species determination.

We wish to thank the cooperating pest control companies (Table 1.) for their efforts in collecting specimens and greatly appreciate the work of **Mr. C. Holifield** and **Ms. S. Tomblin of Rid-It Pest Control** in coordinating this project. We thank **Dr. R.S. Patterson** of USDA-ARS for allowing **Dr. D. P. Wojcik** to participate in this project. We also thank **Ms. L. Bundy, Dr. P.G. Koehler, Dr. T. H. Atkinson,** and **Dr. T.J. Shapas** for reviewing the manuscript. The research was supported in part by the **Shulton Research Division,** a division of **American Cyanamid Company.**

continued on P 12

TRACKING ANTS IN FLORIDA – RESULTS OF SURVEY

from p 11

Table 1. **COOPERATING COMPANIES.**

BIOMANAGEMENT
PEST CONTROL SPECIALISTS
PREFERRED PEST CONTROL
WESTERN PEST CONTROL
REID'S PEST CONTROL
RID-IT PEST CONTROL
U.S. POWER SPRAY

Table 2. **SPECIES COLLECTED DURING SURVEY**

1. *Tapinoma melancocephalum* (GHOST ANT)
2. *Monomorium pharaonis* (PHAROAH ANT)
3. *M. Floricola*
4. *Solenopsis invicta* (RED IMPORTED FIRE ANT)
5. *Camponotus floridanus* (FLORIDA CARPENTER ANT)
6. *C. americanus*
7. *Paratrechina longicornis* (CRAZY ANT)
8. *P. parvula*
9. *Tetramorium simillimum*
10. *Pheidole floridana*
11. *Pseudomyrmex mexicanus*

Table 3. **SOUTH FLORIDA FREQUENCY DISTRIBUTION.**

GHOST ANT	23%
PHARAOH ANT	15%
RED IMPORTED FIRE ANT	13%
FLORIDA CARPENTER ANT	10%
CRAZY ANT	10%
OTHER SPECIES	29%

Table 4. **NORTH FLORIDA FREQUENCY DISTRIBUTION (from Bieman and Bloomcamp 1987).**

RED IMPORTED FIRE ANT	32%
FLORIDA CARPENTER ANT	19%
PHARAOH ANT	16%
CRAZY ANT	15%
ACROBATIC ANT	9%
OTHER SPECIES	9%

Table 5. **A KEY TO COMMON FLORIDA STRUCTURE-INVADING ANTS.**

1. ANTS Larger than or equal to 1/4 inch **FIG. 1 CARPENTER ANT**
Phys. Char: Often several worker sizes (1/4-3/4 inch); red and black=Florida carpenter ant & only black=black carpenter ant;
Behavior & habitat: Often winged individual; usually only few foragers; bites only-no pustules; nests associated with sawdust, water damage, fire wood, structural wood or trees.
B. Ants less than 1/4inch...go to 2.

2. A. Ants not all same size (large ants nearly 1/4 inch) and dark **(FIG. 2) RED IMPORTED FIRE ANT.**
Physical characteristics several worker sizes greater than 1/8 inch and less than 1/4 inch; red & black
Behavior & habitat: Bites and stings-pustules; many often aggregate on food; frequently crawl on floors, amongst clothing in drawers and closets; ground nester; also nests inside (under carpet & insulation) & on roofs (under shingles and air conditioners.
B. Ants usually the same size and colors vary..go to 3.

3. Many small pale ants found with a few larger individuals. **(FIG. 3) PHARAOH ANT**
COMMENT: Infrequently queens come out with workers *see 6A for phys. char. and behavior & habitat information.
B. Ants all the same size...go to 4.

4. A. Dark small to medium same sized ants (1/8-1/4 inch) that sting when irritated...**(FIG. 2) RED IMPORTED FIRE ANT**
COMMENT: Often you may find one size; check 2A for detail.
B. Small ants (less than or equal to 1/8 inch) which vary in color...go to 5.

5. A. Very small ants (1/16 inch) with dark heads & thoraxes and translucent abdomens **(FIG. 4) GHOST ANT.**
Physical characteristics: One worker size; color & size as above; waist not visible from above.
Behavior & habitat: moves quickly and erratically; found frequently on exterior walls.
B. Small ants not of the above description ...go to 6.
6. A. Pale red or yellow ants **(FIG. 2) PHARAOH ANT**
Physical characteristics: small (1/12 inch); one worker size; color as above.
Behavior & habitat: Forms trails to food; many aggregate; easily disturbed; associated with walls (inside and especially outside); nest in almost any crevice including potted plants; frequently on flat roofs.
B. Dark ants..go to 7

7. A. Quick erratic moving ants with long legs and antennae **(FIG. 5) CRAZY ANT**
Physical characteristics: small (1/10 inch); one worker size; dark; shape as above.
Behavior & habitat; movement as above; often feeds on sweets and garbage; usually an outside ant moving in; nests in cracks and crevices.
B. Ants move more or less straight and have moderate sized appendages...go to 8.

8. Heart shaped abdomen..**(FIG. 6) ACROBATIC ANT**
Physical characteristics: Small (1/10 inch); one worker size; dark; spines on thorax; abdomen shape as above.
Behavior & habitat: sometimes carries abdomen over back; nests in cavities inside wood.
B. Ants not described in key...not common house invading ants.

Literature cited

Bieman, D. and L. Bloomcamp. 1987. Ant key for over-the-phone identification. Pest. Management 6:25-7.

Deyrup, M., C. Johnson, G. C. Wheeler, and J. Wheeler. 1989. A preliminary list of the ants of Florida. Fla. Entomol. 72:91-101.

Nickerson, J.C. and C.L. Bloomcamp. 1988. ***Tampinoma melanocephalum*** *(Fabricius) (Hymenoptera; Formicidae). Fla. Dept. Agriculture & Consumer Services Division of Plant Industry. Entomology. Cir. No. 307.*

TRACKING ANTS IN FLORIDA

FIG. 1 FLORIDA CARPENTER ANT

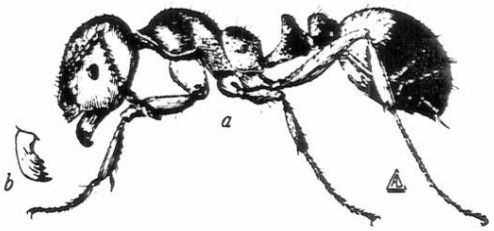

FIG. 2 RED IMPORTED FIRE ANT

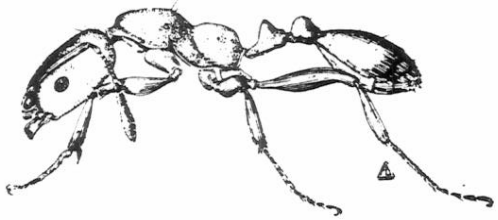

FIG. 3 PHARAOH ANT

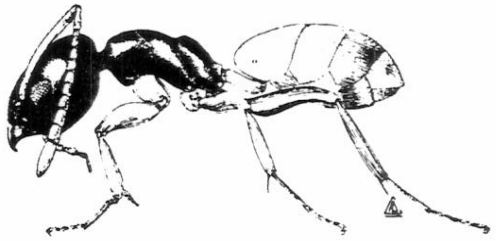

FIG.4 GHOST ANT

FIG. 5 CRAZY ANT

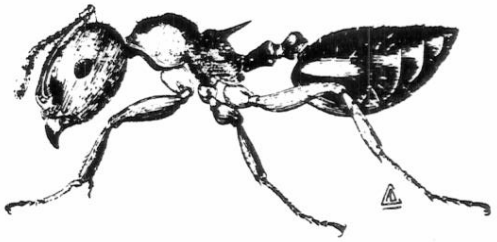

FIG. 6 ACROBATIC ANT