avoid light, but their large size and more shining surfaces compared with the workers make them easier to spot.

Workers of this species, although not many, have been captured by baiting near Gainesville.

One colony was located at Tall Timbers Research Station in 1974, which failed to yield any major or sexual form.

Perhaps *P. carrolli* is a species which may be losing its major in the evolutionary process. The fewer majors available show rather more morphological variation than is normal in most *Pheidole* species.

This species is named after Dr. John F. Carroll, my friend and colleague during several years of graduate study at the University of Florida.

4. Pheidole crassicornis Emery

P. crassicornis Emery, 1985. Zool. Jahrb., Abt. F. System. 8:289, 296. - Forel, 1901. Soc. Ent. Belg., Ann. 45:350. - Wheeler, 1904. Amer. Mus. Nat. Hist., Bul. 20:302. - Creighton, 1950. Bull. Mus. Comp. Zool. 104:175-176. - Gregg, 1958. N. Y. Ent. Soc., 66:20.

Type locality. Charlotte, North Carolina

Types. Cotypes, M.C.Z. and A.M.N.H.

Range. Southeastern United States

P. crassicornis (fig. 5) differs from *P. diversipilosa* and *P. crassicornis tetra* by the absence of erect and semi-erect hairs on the gaster. *P. crassicornis* can be easily distinguished from all Florida *Pheidole* other than *diversipilosa* by the basally strongly bent and flattened scapes.

Discussion

The finding of *P. crassicornis* at Gainesville and at Tall Timbers Research Station helps the understanding of this group because it is sympatric with *P. diversipilosa* at Tall Timbers. *P. crassicornis* is apparently confined to the northern part of Florida where it occurs in open areas, usually among trees. Its nests seem to be in deep soil. After digging as deep as 60 cm, I was unable to find any chambers of three colonies. The opening at the soil surface is hard to see. The typical craters common to other species were never observed. The major and workers were seen carrying live termites and other small dead arthropods. The workers and a few majors were observed foraging approximately 4 meters or more from the nest opening.

5. Pheidole dentata Mayr

P. morrisi var. *dentata* Mayr 1886. Vehr. Zool. - Bot. Ges. Wein, 36:457.

P. dentata Forel, 1901. Ann. Soc. Ent. Belg., 45:351. - Wheeler, 1904. Amer. Mus. Nat. Hist., Bull. 20:302. - Mitchell and Pierce, 1912. Ent. Soc. Wash., Proc. 14:71. - Smith, 1918. Ent. News, 29:22. - Smith, 1924. Ent. News, 35:77. - Smith, 1930. Fla. Ent. 14:3. - Wheeler, 1932. N.Y. Ent. Soc., 40:6. - Dennis, 1938. Ent. Soc. Amer., Ann. 31:281, 304. - Van Pelt, 1950. Ent. News 61:161-163. -Creighton, 1950. Bull. Mus. Comp. Zool. 104:177. - Wheeler and Wheeler, 1953. Ent. Soc. Wash., Proc. 55:71. - Gregg, 1953. N.Y. Ent. Soc. 66:21-22. - Smith, 1965. U.S. Dept. Agr., Tech. Bul. 1326, pp. 27-28. - Wilson, 1975. Science 190:798:800.

P. dentata var. *faisonica* Forel., 1901. Ann. Ent. Soc. Belg., 45:352.

P. commutata Mayr 1886. Verb. Zool. - Bot. Ges. Wein. 36:459. - Emery, 1895. Zool. Jahrb. Syst., 8:289.

Leptothorax tennesseesis Cole, 1938. Amer. Midland Nat. 19:238.

P. dentata var. *commutata* Wheeler, 1907. Amer. Mus. Nat. Hist., Bull. 7:18. - Wheeler, 1908. Amer. Mus. Nat. Hist., Bull. 24:460-461. - Smith, 1924 Ent. News 35:77. - Cole, 1940. Amer. Midland Nat. 24:29, 44. - Smith, 1951. Cat. Hym. Amer. No. of Mex., U.S.D.A. Mon 2:802.

Type locality. Florida

Types. None in the United States

Range. Southeastern states, Tennessee and Gulf states to Texas.

P. dentata (fig. 30) is a reddish yellow to dark brown species differing from *P. morrisi* by the distinct and sharp propodeal spines. It differs from *P. megacephala* in not having a cordate head and differs from *P. vinelandica* by the larger size and absence of a longitudinal striation on the frontal area, and having the mesonotum transversely impressed in the middle.

Discussion

P. dentata is one of the more common species in Florida. It is easy to understand why this species caused so many misunderstandings in the past. There is much variation, not only in size and color, but also in habitat preference. I have found colonies of small dark colored specimens in wooded areas around Gainesville and large specimens that nest in sandy soil on beaches in south Florida and the Florida Keys. I also found a yellowish variant that inhabits the marshlands of the keys and another variant with quite large majors that vary in color from reddish to very dark brown nesting in open areas around Gainesville. this morphological variation seems to be without taxonomic significance.

Three mated young queens collected at Gainesville were easily reared in the laboratory. All three had majors after 50 days. The species is highly carnivorous and the colonies have a tremendous growth when fed with living arthropods. One of the colonies was inadvertantly left without food and moisture for three weeks. The result was that the adults formed from the stressed broods were intermediate in size and structure between workers and majors. Some of the intermediates were not as active as the normal caste. This is a very interesting species for ecological and laboratory studies. Studies by Wilson (1975) have shown that workers of *P. dentata* use odor trails to recruit nestmates to food discoveries and new nest sites. The same pheromone is used also to recruit major workers to the vicinity of intruders. This type of alarm recruitment proved rather narrowly specific and works best against some of the potentially more important enemies of *P. dentata*, some species of the genus *Solenopsis*.

6. Pheidole dentigula M. R. Smith

P. dentigula Smith, 1927. Ent. News 38:310. - Smith, 1928. Ent. News 39:245-246. - Cole, 1940. Amer. Midland Nat. 24:42, 45. - Smith, 1944. Fla. Ent. 27:14. - Creighton, 1950. Bull. Mus. Comp. Zool., 104:178. - Gregg, 1958. N.Y.