

**STUDIES OF NEW MEXICO ANTS. XIV.  
A DESCRIPTION OF A NEW SPECIES OF PHEIDOLE  
WESTWOOD (HYMENOPTERA: FORMICIDAE)**

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The University of Tennessee, Knoxville**Pheidole sciara* n. sp.*Holotype*, soldier (Cole Coll. No. NM-92).

Length of head from anterior clypeal border to occipital emargination, 1.5 mm.; greatest width of head, 1.3 mm.; length of thorax, petiole, and postpetiole combined, 2.2 mm.; length of gaster, 1.95 mm.

*Head*—Posterior corners rather broadly rounded. Antennal scapes reaching about two-thirds of the distance from their base to the occipital corners of the head, bent laterally at the base and flattened at the base, the flattened part no wider than the distal unflattened portion. Completely opaque except for the glossy mandibles and clypeus; longitudinally and irregularly rugulose for the complete distance to the vertex, the rugulae rather widely separated and tending to form weak reticulations on the frontal surface, the spaces between the rugulae densely and finely punctate except for the occipital corners and margin from which punctures are largely absent. The entire surface, except for the clypeus, eyes, and sides of the head, with numerous, yellow, appressed, suberect, and erect hairs; the hairs on the occipital corners long, coarse, blunt, and somewhat reclinate; those elsewhere shorter; those on the sides of the head appressed; those on the antennal scapes few and suberect on the outer margin, appressed elsewhere; those bordering the frontal carinae long and sharp. Color a reddish brown; the occipital corners, vertex, antennae, and mandibles somewhat darker.

*Thorax*—Humeral angles of pronotum rather well developed. Epinotal spines short, thick at the base, sharp at the tip, and extending backward and outward. Pronotum with irregular, transverse rugae which tend to form weak reticulations, the interrugal spaces densely and finely punctate. Basal face of epinotum, in the portion anterior to the interspinal space, with a few, fine, transverse rugulae the interspaces of which are finely punctate. Thorax elsewhere densely and finely punctate. Entire thorax, petiole, and postpetiole opaque. Upper surface of petiolar node with a couple of fine transverse rugulae; the petiole elsewhere, as well as the entire postpetiole, densely and finely punctate. Hairs on the pronotum, mesonotum, and the nodes of the petiole and postpetiole, coarse, numerous, yellow, long, erect, blunt, and of uneven length; shorter and very sparse on margins of basal face of epinotum; absent from meso- and epipleurae, declivity of epinotum, and the petiole and postpetiole except for their nodes; those on the legs erect and suberect only on the flexor surface of the femora. Color a dark reddish brown, somewhat darker than the head; legs and anterior portion of pronotum slightly lighter; petiole and postpetiole a very dark reddish brown.

*Gaster*—Densely covered with numerous, long, widely-spaced, erect, coarse, blunt, yellow hairs. Pubescence scattered, scarce dorsally, long, completely appressed. Entire surface opaque, without perceptible sculpturing. Color black, with a slightly grayish cast.

*Paratype*, worker (Cole Coll. No. NM-92).

Total length, 2.7 mm.

The head is densely punctate and densely and irregularly rugulose; the dorsum of the pronotum is longitudinally and irregularly rugulose; the rest of the thorax, as well as the petiole and postpetiole, are densely punctate. The head, thorax, petiole, and postpetiole are opaque. The gaster is faintly

shining. Except for its rather uniform, dull, black, rougher surface and its larger size, the worker does not appear to differ significantly from that of *crassicornis* Emery. It differs from the worker of *crassicornis tetra* Wheeler in its greater size, darker color, and completely opaque head and thorax and duller gaster.

*Type locality*—The type nest was in an open, sandy semidesert area near Lordsburg, New Mexico, and was surmounted by a small semicircular crater of sand. From this colony the writer collected a long series of soldiers and workers, all of which are a part of the paratype series, on July 31, 1954. Comparing well with the paratype series are collections of soldiers and workers taken from nests in a similar type of habitat 6 mi. N.W. of Deming, New Mexico, 4,550 ft. (H-456) and 9 mi. W. of Glenrio, New Mexico, 3,500 ft. (J-5).

*Disposition of type material*—The holotype and series of paratypes are in the writer's collection. Paratype soldiers and workers will be deposited in the Museum of Comparative Zoology, the U. S. National Museum, the American Museum of Natural History, and in the collections of W. S. Creighton and R. E. Gregg.

*Variation in the type series*—Size differences within the two castes are insignificantly slight. The color is quite constant. Some of the soldiers and workers of the J-5 nest series have the head and thorax slightly less opaque and the gaster finely shagreened and faintly shining.

*Affinities*—That the new species is a member of the *crassicornis* complex would appear to be evident from the shape and length of the antennal scapes. The soldier caste differs from that of *crassicornis* Emery and *crassicornis tetra* Wheeler in several respects, the most obvious of which is its nearly total opacity. It also differs from both other forms in its uniformly larger size, its completely, longitudinally rugulo-punctate head, and its longer and coarser pilosity. The thoracic hair pattern is almost identical with that of *crassicornis*, but the soldier of the new species differs from that of *crassicornis* in the darker color, the completely sculptured head (the posterior half of the head of *crassicornis* is smooth and shining), the longer and coarser erect hairs, and the dull instead of highly shining gaster, in addition to those points of difference which have already been noted for both *crassicornis* and the subspecies *tetra*. From the soldier of *crassicornis tetra* the soldier of the new species differs in the more broadly rounded posterior corners of the head, the coarser and more abundant thoracic sculpturing and pilosity, and the longer, more uneven in length, coarser, blunter, and more widely spaced (hence less numerous) gastric hairs.

*Discussion*—My first collections of representatives of the new species were made in New Mexico during the summer of 1952. In a previous paper (Cole, 1953, p. 297) it is noted that these collections probably represent a new form of *Pheidole*, but that there was, at that time, insufficient material with which to validate the population. During the summer of 1954, while in New Mexico, I found a strong colony in the southwestern part of the state. As a result of a study of a series from this nest and because of the geographic locations of all of the colonies which have been found, I now feel convinced that a new species population is represented and should be named. There is no evidence from the known distributional patterns of the new form, *crassicornis* Emery, and *crassicornis tetra* Wheeler that the new population should be assigned other than specific rank. Intergrades of the new species with other described populations are apparently unknown.

*Acknowledgment*—I wish to express my appreciation to the

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#### LITERATURE CITED

Cole, A. C. 1953. Studies of New Mexico ants. V. The genus *Pheidole* with synonymy (Hymenoptera:Formicidae). *Jour. Tenn. Acad. Sci.*, 28: 297-299.

### STUDIES OF NEW MEXICO ANTS. XV. ADDITIONS, CORRECTIONS, AND NEW SYNONYMY.

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#### ADDITIONS

The following additional records should be noted. Most of these resulted during a brief collecting period in New Mexico while I was en route to study Nevada ants, in the summer of 1954, with the aid of a grant from the American Philosophical Society.

*Trachymyrmex smithi neomexicanus* Cole, numerous males and females taken from nests at the type locality (6 mi. N. of Las Cruces) on August 1, 1954; *Pogonomyrmex apache* Wheeler, nests in the Organ Mts., near Las Cruces; *Myrmica striolagaster* Cole, Capulin Mt. Natl. Monument, 7,200 ft.; *Leptothorax canadensis* Prov., Bandelier Natl. Monument; *Pheidole militcida* Wheeler, Las Cruces; *Pheidole sitarches sortis* Wheeler, Organ Mts., near Las Cruces, and Lordsburg; *Formica limata* Wheeler, Cimarron Canyon, 7,100 ft.

Among the Cimarron Canyon collections of *Formica wheeleri* Creighton, my determinations of which were verified by Dr. Creighton, the males taken with associated workers are much larger than one would expect them to be inasmuch as the females of this species are diminutive. Because of the size difference in these two castes, I shall make no attempt to describe the male until more data are available. The enslaved species in the nests which I found was *F. fusca* L.

My collections of *Stenammas* were submitted to Dr. M. R. Smith, who is revising the genus. Only one determinable species was found in New Mexico. This proved to be a new one and it is being described by Dr. Smith. Nests were observed at Sapello Canyon, Beulah area, at 7,500 ft., and at Bandelier National Monument, at 6,200 ft.

All series of *Lasius* were loaned to Dr. E. O. Wilson, who is revising the genus. The reader is referred to Dr. Wilson's forthcoming paper for a presentation of the names and distribution of these forms.

#### CORRECTIONS

In my papers on New Mexico ants which have been published at the time of this writing, the following corrections should be made.

In Part II, p. 83, line 3, "Mescalera" should read "Mescalero"; Part III, p. 84, under *Eciton opacithorax* Emery, "Mountain-