

The localities where I made collections of this form in New Mexico are as follows: 10 mi. S. of Mountainair, 6,650 ft.; 9 mi. W. of Glenrio, 3,900 ft.; Galesteo, 6,000 ft.; 7 mi. W. of Magdalena, 6,850 ft.; 12 mi. W. of Hope, 5,200 ft.; 2 mi. N. of San Juan, 5,900 ft.; 18 mi. S. of Bayard, 6,000 ft.; White Sands Natl. Monument, 3,800 ft.; 10 mi. S. of Santa Fe, 6,500 ft.; 15 mi. E. of Silver City, 5,800 ft.

Pheidole xerophila tucsonica Wheeler. The range of this ant seems to be restricted to the southern portion of the state where it is a rather common dweller in some arid sections. It constructed small domed mounds or shallow craters at the following localities: 18 mi. SE. of Bayard, 6,000 ft.; 11 mi. N. of Las Cruces, 4,450 ft.; 23 mi. N. of Las Cruces, 4,300 ft.; 7 mi. W. of Deming, 4,525 ft.; 30 mi. E. of Carlsbad, 3,200 ft.

STUDIES OF NEW MEXICO ANTS. VI. THE GENERA MONOMORIUM, SOLENOPSIS, MYRMECINA, AND TRACHYMYRMEX (HYMENOPTERA: FORMICIDAE)¹

A. C. COLE

The University of Tennessee, Knoxville, Tennessee

Genus MONOMORIUM Mayr

Monomorium (Monomorium) minimum (Buckley). This well-known species, which is apparently the only member of its genus in the state, was collected from beneath stones and small craters in both moist and dry areas at the higher elevations as follows: Sapello Canyon, Beulah, 8,000 ft.; Dailey Canyon, Beulah, 8,000 ft.; 25 mi. E. of Gallup, 7,200 ft.; Albuquerque, 5,000 ft.; 10 mi. S. of Mountainair, 6,650 ft.; Water Canyon, 16 mi. W. of Socorro, 6,550 ft.; Black Canyon, Black Mts., 6,600 ft.; Bandelier Natl. Monument, 6,050 ft., 6,350 ft.; 12 mi. E. of Taos, 7,250 ft.; Tesuque Canyon, near Santa Fe, 7,600 ft.; 20 mi. E. of Alma, 6,400 ft.

Genus SOLENOPSIS Westwood

Solenopsis (Solenopsis) aurea Wheeler. I believe this species to be the most common one of its subgenus in the state. It nests in arid sections under both stones and small (frequently multiple) craters. Colonies were sampled at the following localities: 18 mi. SE. of Bayard, 6,000 ft.; 6 mi. N. of Las Cruces, 4,200 ft.; 23 mi. N. of Las Cruces, 4,500 ft.; 31 mi. N. of Las Cruces; 6 mi. W. of Deming, 5,600 ft.; 6 mi. NW. of Deming, 4,550 ft.; 17 mi. E. of Deming, 4,300 ft.; Malpais Lava Beds, near Carrizozo; 9 mi. W. of Glenrio, 3,900 ft.; 14 mi. W. of Hope, 4,800 ft.; 20 mi. W. of Hope, 5,150 ft.; 13 mi. N. of Carlsbad, 3,300 ft.; White Sands Natl. Monument, 3,800 ft.

Solenopsis (S.) geminata (Fabricius). One colony of what I believe represents this species was nesting beneath a stone in very dry, level, stony soil 13 mi. N. of Carlsbad, 3,300 ft.

Solenopsis (S.) xyloni McCook. A single nest was found under a stone in a very arid, rocky area with creosote bush, yucca, cacti, and ocotillo, at Carlsbad Caverns Natl. Park, 4,150 ft.

Solenopsis (Diplorhoptrum) krockowi Wheeler. Nests of this distinctive little yellow species were beneath stones at the following places: White Sands Nat. Monument, 3,700 ft.; 12 mi. W. of Hope, 5,200 ft.; 25 mi. W. of Hope, 5,350 ft.; 20 mi. N. of Bernardo, 6,550 ft.; Datil, 7,500 ft.

¹Contribution No. 77, Department of Zoology and Entomology, The University of Tennessee. These studies were supported in part by grants from the Penrose Fund of the American Philosophical Society.

Solenopsis (D.) molesta validiuscula Emery. The most common member of its genus in the state, this ant was found nesting under stones or at the base of grass clumps in most places between elevations of 6,500 to 8,700 ft., but only in the northern third of the state.

Genus MYRMECINA Curtis

Myrmecina americana Emery. Brown (1951) synonymized *M. americana brevispinosa* Emery with this species. The ant appears to be uncommon in the state and was taken under small stones at only two localities, namely, 10 mi. S. of Mountainair, 6,650 ft. and 5 mi. S. of Mescalera, 6,950 ft.

Genus TRACHYMYRMEX Forel

Trachymyrmex smithi neomexicanus Cole. Described from workers collected near Las Cruces during the summer of 1951, this subspecies was found in 1952 to be common in the general area of Las Cruces where it was taken at the following points: 4 mi. N. (4,950 ft.), 6 mi. N. (4,200 ft.), 11 mi. N. (4,450 ft.), and 23 mi. N. (4,500 ft.) of Las Cruces. Nests were also discovered in a similar habitat 3 mi. E. of Tularosa, 4,800 ft. All of those observed were in very sandy soil and some were marked by a peripheral semicircle of sand and chaff and a circlet of twigs and dry acacia leaves around the entrance. Both males and females were taken during the summer of 1952 and are herewith described for the first time.

Female (dealate); length, 6.0-6.5 mm. Antennal scapes extending beyond posterior corners of the head by the length of the first funicular segment. Median groove on vertex of head more pronounced than in the worker and bordered by higher carinulae. Median superior spines of pronotum absent. Anterior portion of pronotum with a single, coarse, transverse ruga. Scutum irregularly, coarsely, and longitudinally rugose; flattened dorsally, with numerous coarse, curved, golden hairs. Scutellum coarsely, irregularly, longitudinally rugose, with a few coarse, curved, golden hairs; posterior border sinuate and depressed, the corners somewhat elevated. Epinotum similar to that of worker. Epinotal spines shorter than distance between their bases. Petiole and postpetiole as in worker. Gaster with fewer and less elevated tubercles than in worker. Color as in the worker.

Male; length, 5.0-5.7 mm. Head, excluding eyes and mandibles, a little longer than broad, broader behind than in front, broadest between the eyes, posterior border nearly straight. Mandibles prominent, with two large, sharp, apical teeth; basal teeth indistinct, blunt. Clypeus with median lobe flat, anterior border medianly, and rather narrowly and sharply excized; each lateral lobe reduced to a sharp, narrow, anterior ridge, the facial cavity behind each one extending backward between the compound eye and antennal insertion, being long, broad, deep, and with sharp margins, the outer margin forming a deep, narrow, broadly curved ridge which curves medianly and joins the upper end of the frontal carina. Frontal carinae prominent, the lateral margin turned sharply downward over the antennal insertion, the tip rather acute. The center of the head above the antennal insertions with a single, median, subhemispherical convexity. Posterior corners of head with short, irregular, rather blunt spinules.

Lateral inferior pair of pronotal spines prominent, blunt; median superior pair and lateral superior pair very small, acute. Mayrian furrows prominent, rather deep. Scutellum similar to that of female. Epinotum with base shorter than declivity; spines shorter than distance between their bases, broad at the base, tuberculate. Petiole similar to that of female and worker but broader in proportion to its length. Postpetiole tuberculate, twice as broad as long, less than twice as broad as the petiole, subpentagonal, the posterior border broadly excized. Legs without tubercles.

Gaster elliptical, covered with small tubercles. Entire body and appendages opaque, granulose. Coarse, irregular rugae radiate from ocellar triangle and from compound eyes. Facial cavities with a few irregular, oblique rugules.

(Continued on page 316)

STUDIES OF NEW MEXICO ANTS. VI

(Continued from page 300)

Scutum and scutellum coarsely and longitudinally rugose. Pilosity similar to that of female. Body dark blackish brown; mandibles, antennal scapes, palpi, and genitalia light brown. Wings smoky brown, furrows and vein margins darker.

LITERATURE CITED

- Brown, W. L. 1951. New synonymy of a few genera and species of ants.
Bull. Brooklyn Ent. Soc., 46:103.