

A KEY TO THE WORKERS OF VEROMESSOR FOREL OF THE UNITED STATES AND THE DESCRIPTION OF A NEW SUBSPECIES

(Hymenoptera, Formicidae)

MARION R. SMITH

Entomology Research Branch, Agricultural Research Service, U. S. Department of Agriculture, Washington, D. C.

For many years only five species of *Veromessor* were known to occur in the United States, these being *andrei* (Mayr), *chamberlini* (Wheeler), *lobognathus* (Andrews), *pergandei* (Mayr), and *stoddardi* (Emery). In 1951 (Great Basin Nat. 11:94-96) I added a sixth, *lariversi*, from a locality 5 miles west of Pyramid Lake (Washoe County), Nevada. Recently a seventh form, a new subspecies of *stoddardi* was received from Chico (Butte County), California. This is described below. As two *Veromessor* new to science have been found since the appearance of Creighton's *Ants of North America* (1950, Harvard Univ., Mus. Comp. Zool. Bul. 104:94-96), a key for the identification of the workers of all our forms is offered here.

Genus VEROMESSOR Forel

(Key for identification of workers of the forms occurring in the United States)

1. Base of antennal scape dilated to form a prominent, trumpet-shaped structure. (Epinotal spines long, much longer than the distance separating their bases. Thorax very coarsely sculptured, rugulose-reticulate. Color highly variable; commonly reddish brown to blackish.) One of the most common species. Ariz., Calif., Nev., Oreg., and Mex. *andrei* (Mayr)
Base of antennal scape not shaped as described above. 2
2. Epinotal spines short, not longer than the distance separating their bases 3
Epinotal spines long, much longer than the distance separating their bases 6
3. Pronotum longitudinally rugulose. Ammochetae lacking. Color largely reddish brown 4
Pronotum not longitudinally rugulose. Ammochetae well developed. Color not as described 5
4. Base of antennal scape flattened and also noticeably dilated. Dorsal surface of head although possessing coarse punctures in addition to the other sculpture, the punctures are not readily discernible. Calif. (Butte County) *stoddardi chicoensis* M. R. Smith new subspecies
Base of antennal scape not as described above. Dorsal surface of head with coarse scattered punctures in addition to the other sculpture, the

- punctures very conspicuous. Calif. (Monterey County and southward), Mex. *stoddardi stoddardi* (Emery)
5. Color black or piceous brown. Eye not remarkably large and convex but with a rather distinct anteroventral angle. Middle of the anterior border of the clypeus with a projection. Pronotum smooth and shining but with a distinct shagreening. One of the most common species. Ariz., Calif., Nev., Mex. *pergandei* (Mayr)
Color not as described above but of a very light brown that reminds one very much of a callow. Eye remarkably large and convex but lacking the anteroventral angle. Middle of the anterior border of the clypeus without a projection. Calif., Nev. *lariversi* M. R. Smith
6. Base of antennal scape unusually enlarged or dilated. Scape smooth and shining. Median rugulae of the head noticeably diverging posteriorly. Calif. (Santa Cruz Island and mainland areas near Los Angeles) *chamberlini* Wheeler
Base of antennal scape not unusually enlarged or dilated. Scape not smooth and shining. Median rugulae of the head not noticeably diverging posteriorly. Bearing a superficial resemblance to *Pogonomyrmex occidentalis* (Cress). Colo. (Glenwood Springs and Owl Canyon, 20 miles north of Fort Collins) *lobognathus* (Andrews)

Veromessor stoddardi chicoensis M. R. Smith, new subspecies

Worker. Length 6.2 mm.

Head subrectangular, scarcely longer than broad, with rounded posterior corners and distinctly concave posterior border. Cheeks noticeably converging toward the mandibles. Eye placed nearer the anterior than the posterior border of the head, moderately convex, approximately 0.3 mm. at its greatest width. Mandible rather large, subtriangular, with 7 rather blunt teeth. Base of scape curved, flattened and also noticeably broadened; gradually and distinctly enlarged toward the apex, the apex of the scape not attaining the posterior border of the head; last four funicular segments enlarged but not forming a pronounced club. Frontal carina short, posteriorly divergent, not concealing the insertion of the antenna. Frontal area subtriangular, impressed. Middle of the anterior border of the clypeus with an impression or emargination. In profile, promesonotum forming a moderate arch which terminates at the pronounced mesoepinotal constriction which is approximately 0.10 mm. deep and at least twice as long. Base of epinotum lower than the promesonotum and sloping posteriorly to the epinotal spines which are short, even shorter than the distance between their bases. From above, pronotal humeri rounded; promesonotal suture present but not well defined. Legs rather long and slender, with the femora and tibiae only moderately incrassated. In profile, petiole rather small with erect node the anterior surface of which meets the pedicel in a distinct angle; ventral surface of petiole with a poorly defined longitudinal carina. From above, the postpetiole is subpyriform. Gaster oval, without humeri.

Head with finely punctate interspaces between the fairly coarse longitudinal rugulae; also scattered over the head there are some rather

coarse punctures which are best seen only in certain lights. Promesonotum largely longitudinally rugulose, the interspaces finely punctate. Dorsal surface of epinotum transversely rugulose. Side of thorax longitudinally rugulose; the interspaces on the mesopleuron and side of epinotum coarsely punctate thus causing these areas to appear dull or subopaque.

Petiole and postpetiole finely punctate with the dorsal surfaces bearing a few coarse, foveolate impressions. Gaster with a fine shagreening which is not always readily seen.

Body with a moderate amount of erect, coarse, golden hairs of variable length, some of the hairs being rather long. Gula without ammochetae.

Head and thorax a rich reddish brown, gaster blackish except at the base; petiole, postpetiole and legs with infuscated areas.

Type locality: CHICO, BUTTE COUNTY, CALIFORNIA, March 2, 1954, Adrian Wenner.

The workers of this new form were collected in Sec. 17, T22 N, R2E in the Chico area lava flow plateau at an elevation of 450 feet. This is approximately where the foothills of the Sierra Nevada meet the Sacramento Valley at the upper end of the Chico creek alluvial fan. The nest was beneath about a twenty pound stone. It was composed of a series of galleries that led approximately 12 inches into the soil. In summer the soil is baked dry and at this time the ants very probably aestivate.

Described from a holotype and 20 paratype workers which have been placed in the United States National Museum under U.S.N.M. No. 62959.

This polymorphic subspecies varies considerably not only in size but also in color and body proportions. Paratypes show the following variations, the smallest worker is 3.7 mm., the largest 6.7 mm., infuscated areas of variable size and intensity commonly occur on the head, petiole, postpetiole and legs, smaller workers have a longer and narrower head than the larger workers.

Creighton (1953, Amer. Mus. Novitates No. 1612, pp. 17-18) has shown that the typical *stoddardi* is a true harvesting ant with foraging activities very probably of a crepuscular nature. It is quite likely that this new subspecies may have similar habits. Individuals who are especially interested in the taxonomy, biology and distribution of the various forms of *Veromessor*, as well as those of *Novomessor*, are referred to the paper entitled, "A Study of the Ant Genera *Novomessor* and *Veromessor*" by Wheeler and Creighton 1934, Proc. Amer. Acad. Arts and Sci. 69:341-387, 2 pls.
