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ANOTHER NEW LEPTOTHORAX FROM TEXAS (HYMENOPTERA: FORMICIDAE)[1]

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Leptothorax (*Leptothorax*) *carinatus* n. sp.

Holotype, worker. (Cole Coll. No. TX- 56).

Head length, 0.68 mm.; head width behind eyes, 0.65 mm.; scape length, 0.51 mm.; thoracic length, 0.82 mm.; pronotal width, 0.39 mm.; petiolar length, 0.27 mm.; postpetiolar length, 0.15 mm.; petiolar node length, 0.08 mm.; petiolar node width, 0.14 mm.; postpetiolar node length, 0.13 mm.; postpetiolar node width, 0.29 mm.; length of gaster, 0.90 mm.; total body length, 2.82 mm.

Head longer than broad, sides subparallel, occipital border faintly concave mesally, occipital corners broadly rounded; frontal lobes extending anteriolaterally, the outer margin evenly and very broadly convex; median lobe of clypeus only moderately convex; frontal triangle distinct, faintly impressed, longer than wide; antennae 12-segmented, scape rather robust, basal segment of funiculus about as long as the succeeding three segments taken together, scapes in repose extending nearly to posterior border of head.

Thorax, in profile, posteriorly as far as base of epinotum, very broadly convex, the outline unbroken by impressions; pronotal dorsum meeting anterior declivity at a pronounced sharp angle; mesoepinotal suture absent; base of epinotum descending evenly and gradually from mesonotum, declivity of epinotum steep; epinotal armature consisting of a pair of short, rather blunt teeth, broad at base. Viewed from above, with pronotum broad, narrowing posteriorly, the humeri poorly developed; the sides rather sharply narrowed and impressed at beginning of epinotum; sides of meso-epinotal area subparallel. Viewed in profile, petiolar node strongly developed, the anterior declivity long, faintly concave, rather steep, and meeting apex of

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node in a much rounded angle; posterior declivity short, straight, steep, meeting apex of node in a rounded angle; apex of node broadly convex anteriorly, less so posteriorly, higher in front than behind; anterior peduncle short, venter bearing a well-developed, broad, blunt, downwardly-directed spine; node of postpetiole robust, apex broadly and evenly rounded, anterior surface convex, rather steep, posterior declivity gradual and very faintly convex. Viewed from above, petiolar node broader than long, sharply subrectangular; postpetiolar node massive, much broader than long, slightly more than twice as broad as petiolar node, anterior corners broadly convex, a little wider in front than behind, subrectangular. Femora and tibiae incrassated.

Gaster broadly elliptical; truncate at base, the corners acute.

Head rather smooth and shining, the surface smoothness interrupted by sparse, small, shallow, faint punctures and by numerous fine striae which are longitudinal mesally but which form semicircular whorls on and anterior to the occipital corners; striae somewhat more pronounced on genae. Entire

Figure 1. *Leptothorax* (L.) *carinatus* n. sp., holotype. Thoracic, petiolar, and postpetiolar contours in lateral profile.

thorax (except for pronotal collar), petiole, and postpetiole subopaque, finely and very densely punctulate; pronotal collar shining, finely and transversely striolate; extending across anterior pronotal declivity to the pronotal collar are several transverse rugulae, the upper ones tending to form a definite pronotal carinula; sides of prothorax longitudinally striate; legs and antennae smooth and shining. Gaster smooth and highly shining.

Hairs quite sparse, mostly rather short, stout, blunt, silvery, and largely erect; on dorsum of head sparse, short, scattered; on venter of head short, fine, pointed, subappressed; longer and more delicate on clypeus. Hairs on thorax longer, stouter, blunt, clavate and subclavate, sparse, scattered, erect, absent from lateral surfaces and from epinotal base and declivity; one hair on each epinotal "spine"; absent from venter of petiole and postpetiole and from anterior declivity of petiolar node; longer on petiolar and postpetiolar nodes. Hairs very short, slender, sparse, suberect and appressed on legs. Hairs on gastric dorsum shorter, more numerous, and somewhat more slender and less blunt than on thorax; on venter sparse, short, delicate, appressed and subappressed.

Dorsum of head bears sparse, scattered, short, suberect and subappressed hairs which might be considered to represent a pubescence.

Color a uniform, rich, light tan; distal half of gastric dorsum infuscated.

Paratype, nest queen. (Cole Coll. No. TX-56).

Head length, 0.73 mm.; head width behind eyes, 0.65 mm.; head width in front of eyes, 0.56 mm.; scape length, 0.61 mm.; thoracic length, 1.19 mm.; petiolar length, 0.32; postpetiolar length, 0.20 mm.; length of petiolar node, 0.07 mm.; width of petiolar node, 0.17 mm.; greatest thoracic width, 0.73

mm.; length of postpetiolar node, 0.17 mm.; width of postpetiolar node, 0.37 mm.; length of gaster, 2.06 mm.; total body length, 4.50 mm.

Differing from the holotype largely in the following characteristics, except for the normal sexual traits: Cephalic striae stronger and more dense, except for a central strip between frontal triangle and median ocellus which is relatively free of sculpture as are also the posterior corners and the occipital margin. Thorax mostly without punctures, the sides longitudinally rugulose; scutum smooth and shining with only a very few scattered, longitudinal striae; lateral portions of scutellum densely and longitudinally striate; epinotal base and declivity transversely and densely striatopunctate; sides of epinotum longitudinally striatopunctate; posterior declivities of petiolar and postpetiolar nodes transversely rugulose; anterior declivity of petiolar node transversely stiatopunctate; apex and anterior declivity of postpetiolar node smooth and shining, the sides obliquely striate; viewed from above, postpetiolar node shaped like a posteriorly-directed truncated cone, the anterior margin very broadly convex. In profile, petiolar node more attenuated apically than in holotype, the apical dorsum nearly flat; anterior declivity of petiole transversely striolate. Epinotum with a pair of definite spines which are rather short, broad, and blunt. Hairs shorter and somewhat more abundant than those of holotype, clavate and non-clavate on thoracic dorsum; eyes with sparse, scattered, very short, erect hairs. The color is notably darker than that of holotype, the entire body except the mandibles and appendages being a uniform medium brown; mandibles and appendages a light tan. Pubescence present but very sparse, appressed, and limited to head and gaster.

Type locality. Three nests (TX-43, TX-55, and TX-56) were found beneath stones at an elevation of 5,400 ft. in Limpia Canyon, Davis Mts., Texas, on June 11, 1956, by the writer. One colony (TX-56) contained a nest queen. None of the colonies was very populous, the largest one (TX-56) containing 57 workers. The collections from all three nests (107 workers and one queen) constitute the paratypic series.

Disposition of type material. The holotype, a series of paratypic workers from each colony, and the queen are in the writer's collection. Series of paratypic workers will be deposited in the U.S. National Museum, the Museum of Comparative Zoology (Harvard), and the American Museum of Natural History, and in the collections of W. S. Creighton and R. L. Gregg.

Variation in the paratypic series. The workers of this small species appear to be remarkably consistent in significant structural characteristics and also in their color. Thoracic length varies from 0.69 to 0.87 mm. A few of the specimens bear several transverse striae on the basal face of the epinotum. Other variations are of a very minor nature.

Affinities. The new species appears to be most closely related to *andrei* Emery, which is known only from coastal California. Through the kindness of Dr. M. R. Smith, I have been able to compare workers of the new ant with authenticated specimens of *andrei* in the U. S. Museum. In general conformation, in body size, and in color there are good similarities. The new form is distinctively different, however, in the following respects. The erect hairs are longer, somewhat more numerous, and less clavate, being strikingly so on the gastric dorsum; the suberect and subappressed hairs (pubescence ?) on the cephalic dorsum are all but absent from *andrei;* the thoracic dorsum is less flattened; the distinctive transverse pronotal carinula is lacking from *andrei;* the postpetiole is decidely more massive; the antennal scapes which, in repose, nearly reach the occipital margin are much shorter in *andrei.* The female of *andrei* is unknown. It is my opinion that, in spite of its similarity to *andrei,* the new species shows close affinities with members of the *tricarinatus* complex.

From *nitens* Emery, to which the new ant bears a close superficial resemblance, especially in size and color, it can be separated readily by it large postpetiole as well as by both its body pilosity and cephalic sculpture.