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**A NEW LEPTOTHORAX FROM TEXAS
(HYMENOPTERA: FORMICIDAE)¹**

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Leptothorax (Leptothorax) hispidus n. sp.

Holotype, worker (Cole Coll. No. TX-52).

Head length, from anterior clypeal border to median occipital border, 0.92 mm.; head width, just behind eyes, 0.77 mm.; scape length, 0.82 mm.; thoracic length, 1.36 mm.; pronotal width, 0.56 mm.; petiolar length, including peduncles, 0.39 mm.; width of petiolar node, 0.22 mm.; length of postpetiolar node, 0.27 mm.; width of postpetiolar node, 0.34 mm.; overall body length, 4.30 mm.

Head broader behind than in front, broadest just behind the eyes; sides subparallel; occipital border and corners broadly and evenly convex. Median lobe of clypeus subtriangular, not prominently convex, the anterior border broadly but not deeply emarginate. Frontal lobes broad, thin, with rather evenly rounded lateral border, not projecting upward. Frontal area subrectangular. Antennae with 12 segments, the terminal three forming a distinct club; scape robust, its tip reaching the occipital border. Eyes prominent, convex.

Thorax, viewed from above, with a very faint but distinct mesoepinotal suture; viewed in profile, the dorsum somewhat flattened, but broadly and faintly concave in the region of the mesoepinotal suture. Epinotal spines very short, dentiform. Petiole, in profile, with a node which descends gradually, evenly, and slightly concavely to the anterior peduncle, and slopes convexly posteriorly to the short and steep posterior declivity; anterior portion higher than posterior one; anterior peduncle with a small, distinct, triangular, ventral tooth; posterior peduncle thick and short. Postpetiole, in profile, with a rather abruptly ascending anterior face and a broadly convex crest. Viewed from above, the petiole, including its peduncles, is about twice as long as broad at its widest part, the node subobovate. Postpetiole, viewed from above, about $1\frac{1}{2}$ times as broad as the petiole, subcuboidal. Femora moderately incrassate. Gaster elliptical, truncate anteriorly.

Head (except clypeus and mandibles), thorax, petiole, and postpetiole moderately strongly rugulose and weakly reticulose, the interspaces densely and finely granulose and rather shining; between eyes and antennal sockets are coarser, widely-spaced, parallel rugae. Mandibles longitudinally striate and shining; clypeus longitudinally rugulose, the interspaces smooth and shining. Antennal scapes striato-granulose and dull; legs finely coriaceous and shining. Thoracic dorsum densely granulose and longitudinally rugulose, the rugulae fine and rather faint through median portion of pronotum.

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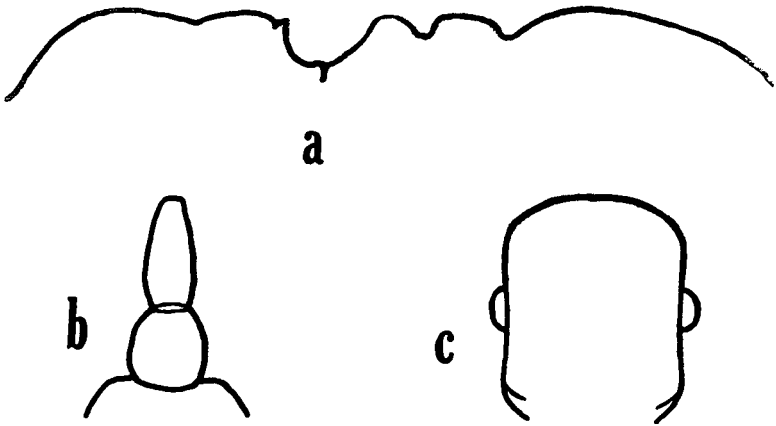


Fig. 1. *Leptothorax* (*L.*) *hispidus* n. sp. a, profile showing dorsal contours of thorax, petiole, postpetiole, and gaster; b, dorsal view of petiole and postpetiole; c, frontal view of head showing contours.

much coarser on base of epinotum; epinotal declivity transversely striato-granulose and much more shining. Dorsum of petiolar and postpetiolar nodes densely and coarsely granulose, the lateral surfaces of the nodes with a few irregular rugulae which have a longitudinal trend. Sides of thorax granulose, weakly reticulose and more strongly rugulose, especially on the prothorax where the rugulae are gently and evenly curved upward; the rugulae become notably reticulose on the sides of the mesothorax and become transverse on the sides of the posterior portion of the epinotum, just behind the spiracles, where they extend to the epinotal declivity. Dorsum of first gastric segment finely striolate and densely and finely coriaceous, most obviously so near the base.

Dorsum of entire body with very abundant, stout, blunt, silvery, erect hairs which are shortest on the head, longer (but variable in length) on thorax, petiole, postpetiole, and gaster, and which give a brush-like appearance to the body. Hairs abundant, erect and suberect on scapes; numerous, suberect and appressed on funiculi which have a dense, rather long, and silvery pubescence. The legs and the venter of the head, thorax, and gaster with the hairs abundant but pointed and more delicate. Eyes with numerous very short hairs. Hairs sparse on venter of postpetiole and absent from venter of petiole. Hairs on dorsum of petiole, postpetiole, and gaster somewhat reclinate.

Color of vertex and frons of head and of thorax, petiole, postpetiole, and appendages a very deep reddish brown; gaster somewhat darker. Remainder of head (including mandibles and entire venter) as well as the pronotal collar a light reddish brown.

Paratype—nest queen (Cole Coll. No. TX-52).

Head length, 1.00 mm.; head width (just behind the eyes), 0.95 mm.; scape length, 0.87 mm.; thoracic length, 2.04 mm.; petiolar length, 0.56 mm.; width of petiolar node, 0.34 mm.; postpetiolar length, 0.36 mm.; width of postpetiolar node, 0.46 mm.; overall body length, 6.09 mm.

Head subquadrate, no wider behind than in front of eyes; occipital border broadly and evenly rounded; sides subparallel. Eyes strongly convex. Ocelli prominent. Antennal scapes in repose extend nearly to the occipital margin. Other cephalic characteristics like those of holotype.

Viewed in profile, scutum nearly flat, separated from the broadly convex scutum by a distinct impression. Basal and declivious faces of epinotum subequal in length. Epinotal spines very short, dentiform, very broad basally, acute apically. Petiolar node with the rather steeply sloping anterior face broadly and slightly concave, evenly rounded apically and sloping gradually posteriorly to the lower part of the declivity which descends abruptly to the peduncle. Postpetiole like that of holotype. Thorax, viewed from above, notably broader than head, the widest part being at the tegulae posteriorly from which the thorax narrows evenly to the epinotal declivity. Epinotal spines joined at their bases by an even, broadly concave surface. Petiole broadest across its node, subpyriform in outline; postpetiole transversely subrectangular.

Gaster broadly elliptical, truncate basally.

Cephalic and thoracic sculpture, as well as that of petiole and postpetiole, similar to that of worker, but interrugal granulation is faint and the surface is more shining. Entire scutum covered with coarse, widely space, piligerous punctures. Dorsum of first gastric segment with long, straight, fine, closely-spaced, longitudinal striae which are more dense in the basal third, become less obvious in the median third, and fade out in the distal third. These striae notably dull the otherwise shining surface.

Pilosity like that of the holotype, except less coarse, slightly more abundant, and in general less blunt. Eyes bear several short hairs.

Color similar to that of the holotype, but posterior portion of head paler, and hence does not contrast so sharply with the anterior portion, and anterior part of thorax lighter than that of holotype.

Type locality.—The holotype and large series of paratypic workers, together with three paratypic nest queens, were collected by the writer, on June 11, 1956, from six nests² at an elevation of approximately 5,400 ft. in Limpia Canyon, Davis Mts., Texas. Each shallow nest was in moist, loamy soil beneath a stone in a low, shaded, grassy and sparsely-wooded area. The station, which was entirely surrounded by arid slopes, was only of about 100 square yards in area and represented a rather distinctive ecologic unit.

Disposition of types.—The holotype, a large series of paratypic workers, and the three paratypic queens are in the writer's collection. Series of paratypic workers have been deposited in the Museum of Comparative Zoology (Harvard), the U. S. National Museum, the American Museum of Natural History, the Kennedy Collection of Ohio State University and the private collections of W. S. Creighton, R. E. Gregg, and Mary Talbot.

Variation in the paratypic series.—Total body length of the workers varies from 3.70 mm. to 4.40 mm.; with head length, head width, scape length, and thoracic length of the smallest worker measuring, respectively, 0.85, 0.65, 0.73, and 1.16 mm.; and of the largest worker 0.97, 0.79, 0.82, and 1.39 mm. In some workers the mesoepinotal impression is stronger and the thoracic dorsum less flattened. Variation in other characteristics is negligible. The bicolored head is a constant feature. Except for a slight variation in color density, the three queens are very similar.

²Cole Coll. No. TX-46, 52, 60, 61, 62, and 63.

Affinities.—This handsome, brushy-surfaced, bicolored species appears to be most closely related to *L. silvestrii* (Santschi), but the two species differ markedly from each other. In size and basic sculpturing the workers are somewhat similar. Both species have the dorsum of the basal gastric segment notably coriaceous, but the condition is considerably more emphasized in *hispidus*. Among a long list of contrasts, the following ones are the most obvious: in *silvestrii* the body color is uniformly light to dark yellow, the hind femora are greatly incrassated, the thoracic dorsum lacks any trace of a mesoepinotal impression, the postpetiole viewed from above is transversely rectangular, the epinotal spines are long, and body hairs are relatively sparse; in *hispidus* the head is distinctly bicolored and the remainder of the body a very deep reddish brown which appears black to the unaided eye, the hind femora are not notably incrassated, the thorax bears a small but distinct mesoepinotal impression, the postpetiole viewed from above is cuboidal, the epinotal spines are very short and dentiform, and the body hairs are very dense, almost universally distributed, and form a distinctive brush-like investiture dorsally.

The female of *hispidus* differs chiefly from that of *silvestrii* in body color and in the dull, densely coriaceous and finely striate dorsum of the basal gastric segment which contrasts sharply with the smooth and shining counterpart of the female of *silvestrii*.

I have hesitated to describe the single male, which was taken from one of the colonies, because of its unusually small size. This *Leptothorax* male is considerably smaller than it seems it should be in comparison with the size of the female of *hispidus*, so there is always the possibility that it may represent another species.

I have recently examined series of workers, conspecific with *hispidus*, collected by Dr. W. S. Creighton from Diamante Pass, Arteaga, Coahuila, Mexico (6,800 ft.) and from 30 mi. E. of Sombrerete, Zacatecas, Mexico (6,900 ft.). The latter record extends the known range southward nearly into the tropics. *L. hispidus* is apparently a plateau species.