

Death Valley Natl. Mon., 4 Nov. 1967 (R. R. Snelling, No. 67-281; LACM); Stovepipe Wells, Death Valley Natl. Mon., 12 Mar. 1931 (A. H. Sturtevant; USNM). *San Bernardino Co.*: Otis, 16 Sept. 1908 (J. C. Bradley; AMNH, MCZ; cotypes of *lugubris*).

Ecology. Little is known about this species. The type locality is Mojave Desert Creosote Bush Desert. Most of the samples available are from areas of Saltbush-Greasewood Desert. Nests are located in fine sand, with a crateriform tumulus up to 10 cm in diameter. Workers forage both matinally and crepuscularly and are general food gatherers. Repletes have been collected from nests in Death Valley.

Within Death Valley, where the species is common, the elevation range is from -200' to 1600'. At Ashford Mill, in Death Valley, I found workers departing from the nest and running along a single trail toward a foraging area. The trail was very poorly defined and it is not certain it can be properly called a trail. It might be that this was merely the most commonly used route to a known foraging area.

Since the sexual forms are unknown, it follows that nothing is known of flight activities. Presumably mating flights take place after spring and/or autumnal rains.

Discussion. As indicated in my discussion of *yuma*, I do not accept the synonymy of that form with *lugubris* as proposed by Creighton (1956). The worker of this species is easily recognized by the characteristics given above under *Diagnosis*. The sexual forms are unknown.

Myrmecocystus perimeces new species

Figures 234-240

Diagnosis. Worker: Recognizable by the unusually elongate, narrow head; antennal scape without erect hairs; hind tibia without erect hairs on outer face. *Female:* mesoscutum with entire disc with scattered coarse, setigerous punctures only; thoracic pleura with abundant long, erect hairs; clypeus only moderately shiny, densely shagreened, punctures obscure; crest of petiolar scale only slightly excised. *Male:* unknown.

WORKER. Measurements. HL 0.80-1.16 (1.06); HW 0.56-0.93 (0.80); SL 0.80-1.10 (1.00); WL 1.1-1.7 (1.4); PW 0.43-0.73 (0.56).

Head: In all sizes distinctly longer than wide, CI 70-81 (75); in full face view, sides straight, only slightly narrowed toward mandibular insertions; occiput barely convex, occipital corners rounded; as long or longer than scape, SI 94-100 (94). Eye small, about as long as first flagellomere; OMD 1.67-2.14 (2.00) × EL. Mandibles septendentate.

Thorax: Slender, PW 0.38-0.47 (0.40) × WL. Mesonotum, in profile, convex, rather sharply sloping behind. Basal face of propodeum broadly rounded into posterior face.

Petiole: Scale erect; in profile, about twice higher than thick, weakly cuneate; in frontal view, crest narrow, weakly or not at all notched in middle; from above, no more than twice wider than thick.

Vestiture: Pubescence very short, scattered, on head, a minute area on vertex denser than elsewhere on head; very fine, rather sparse on pronotum, denser on meso- and metanotum, and especially on pleura and propodeum. First two gastric terga with short, fine abundant pubescence not obscuring surface, remaining segments with a few scattered appressed hairs.

Scape, inner face of fore femur, outer faces of middle and hind tibiae and sides of head without erect hairs; clypeal disc and frons with a few scattered short, erect hairs; occiput with 16-24 erect hairs, less than MOD. Pronotum and mesonotum each with a few hairs (>10), shorter than on occiput; propodeum with a variable number (usually >10) of very fine erect hairs. First two terga with scattered short, stiff hairs on disc; following segments with scattered longer hairs.

Integument: Clypeus polished, with sparse, coarse punctures; remainder moderately to strongly shiny, but not polished, lightly shagreened, with sparse to scattered fine punctures, denser on frontal lobes. Thorax rather strongly shiny, lightly shagreened; propodeum duller, more conspicuously shagreened. Gaster shiny, lightly shagreened.

Color: Uniformly light to dark brownish, appendages lighter; mandibles and lower part of cheeks yellowish.

FEMALE. Measurements. HL 1.63; HW 1.73; SL 1.53; EL 0.43; OMD 0.63; WL 3.7; PW 2.2.

Head: Broader than long, CI 94; in full face view, sides straight, converging slightly toward mandibular insertions; occiput slightly, evenly convex, corners well rounded; longer than scape, SI 94. Eye small, slightly longer than first flagellomere; OMD 1.46 × EL. Ocelli subequal; IOD 4.3 × OD; OOD 4.0 × OD. Mandible with seven teeth. Penultimate segment of maxillary palp broadest at base, strongly tapering toward apex; segments three and four ribbon-like, about equally broad throughout their lengths.

Thorax: Robust, PW 0.59 × WL. Apical two-thirds of mesocutum, in profile, barely convex, posterior margin below anterior margin of scutellum; scutellum barely convex, except at extreme base, strongly sloping toward rear; propodeum with broad shallow impression at summit of declivity.

Petiole: In profile elongate-cuneate, anterior and posterior faces strongly sloping toward crest; in frontal view, sides of crest rounded, middle shallowly excised; in dorsal view, about twice as wide as thick.

Vestiture: Pubescence sparse on clypeus, malar area and frons, dense on occiput, but not concealing surface; sparse and short on most of pronotum, conspicuously longer and denser along dorsal margin; long,

sparse on sides of mesoscutum and pleura, absent from mesoscutal disc; sparse on scutellum and metanotum; slightly shorter, sparse on propodeum, denser above and around gland opening; abundant on discs of first four gastric terga and sterna.

Scape with about 20 fully erect hairs on outer face. In frontal view, sides of head without erect hairs; occiput with numerous stiff, erect hairs less than $0.5 \times$ MOD, with a few longer hairs in ocellar area; frontal lobes with numerous short, fine hairs; clypeus with sparse hairs of variable length. Mesoscutum with sparse long hairs about half as long as MOD; scutellum with sparse longer hairs of variable length, some longer than MOD; metanotum and propodeum with sparse hairs about as long as those of scutum; numerous long hairs on mesopleura, many as long as or longer than, MOD. Numerous short hairs on petiolar scale: Gastric terga with numerous short, stiff hairs, shortest on first, becoming a little longer caudad, those of first segment less than $0.5 \times$ MOD. Inner face of fore femur without conspicuous long erect hairs, though a few short, fine hairs are visible; outer faces of mid and hind tibiae with abundant erect hairs.

Integument: Face shiny, finely shagreened, but clypeus conspicuously duller, much more strongly shagreened, clypeus with scattered coarse punctures; frontal lobes finely, closely punctate; frons with fine, scattered punctures; malar area with scattered punctures, denser below, coarser than those of frontal lobes; occiput densely, finely punctate. Mesoscutal disc polished, with scattered coarse punctures; parapsis with well separated punctures about equal to those of clypeus; scutellum slightly shiny, uniformly closely punctate, punctures equal to those of lateral area of mesoscutum; pleurae and propodeum duller than scutellum, roughened, with scattered coarse, setigerous punctures and denser, finer punctures; propodeum and terga densely micropunctate.

Color: Uniformly blackish-brown; mandibles, apical middle of clypeus, lower part of cheeks, flagellum and legs lighter.

MALE. Unknown.

Type Material. Holotype and paratype workers (from two colonies), El Molino, 0.5 mi. S, Bahía San Quintín, 0–50', Baja Calif., MEXICO, 29 March 1970 (E. M. Fisher), in LACM. Additional paratypes, all Baja Calif.: 1♀, same data as holotype, stray; 32 workers, Bahía San Quintín, 21 May 1952 (W. S. Creighton; LACM); 25 workers, San Antonio del Mar, 0', 27 May 1952 (W. S. Creighton; LACM). Paratypes in AMNH, LACM, MCZ, USNM.

Distribution. Known only from coastal sand dunes around Bahía San Quintín, northern Baja California, Mexico (Fig. 368).

Additional Locality. MEXICO. Baja California: Ensenada, 1 Apr. 1931 (A. H. Sturtevant; USNM).

Etymology. *Mekos* (Gr., length) + *peri-* (Gr., excessive), because of the exceptionally elongate head.

Ecology. Coastal sand dunes. The series from San Antonio del Mar bears the notation: "circular crater 4 inches diameter in sand."

Probably similar to other species of *Eremnocystus*, a crepuscular and/or matinal forager. The single dealate female, taken in March, indicates a mating flight following spring rains (Table 6).

Discussion. This unique species does not appear to be closely related to other members of the subgenus *Eremnocystus*. The greatly elongated head is diagnostic in all sizes of the worker caste. The mesoscutal sculpturation of the female is most similar to that of *yuma*, but *perimeces* may be immediately separated from that, and all other species, by the finely and closely roughened clypeus which is not at all shiny. All other species, whose females are known, have the greater part of the clypeus shiny, very lightly shagreened, with scattered, conspicuous punctures.

Myrmecocystus (Eremnocystus) tenuinodis
new species

Figures 241–247

Myrmecocystus lugubris, Creighton 1956. Amer. Mus. Novitates 1807:1–4. (in part, misidentification)

Diagnosis. Worker: Petiole strongly compressed; fully erect hairs present on propodeal dorsum, often present on scape; femora, including inner face of fore and dorsal face of hind femora, and tibiae with abundant erect hairs. *Female:* Mesoscutum shiny, median area with scattered punctures, parapsis with denser, but still sparse punctures; fore femur with reclinate or erect hairs on all surfaces; fore and hind wings with erect membrane hairs; forewing without fringe hairs; hind wing with fringe hairs on posterior margin. *Male:* Unknown.

WORKER. Measurements. HL 0.70–1.03 (0.83); HW 0.63–1.00 (0.76); SL 0.73–1.03 (0.86); WL 0.86–1.43 (1.03); PW 0.40–0.63 (0.50).

Head: In all sizes varying from distinctly to slightly broader than long, CI 82–96 (92), slightly shorter than, or as long as scape, SI 100–113 (104); in frontal view sides straight or feebly convex in largest workers; occiput, in frontal view, barely convex, sides broadly rounded. Eye small, barely longer than first flagellomere; OMD 1.39–1.68 (1.43) \times EL. Mandible septendentate.

Thorax: Moderately robust, PW 0.42–0.50 (0.48) \times WL. Mesonotum, in profile, gently convex, not abruptly sloping behind. Propodeum higher than long, basal face broadly rounded into posterior face, latter about twice as long as former.

Petiole: Scale erect, about thrice higher than thick; crest sharp; crest, in frontal view, narrowed above,