Longest occipital and mesoscutal hairs no more than 0.75 × MOD; first three terga often conspicuously pubescent laterad (especially Mexican populations) ..... *depilis* Forel

8. Longest occipital and mesoscutal hairs no more than 0.5 × MOD ..... 9
   Longest occipital and mesoscutal hairs at least 0.75 × MOD, often equal to MOD ..... *koso,* n. sp.
9. First three terga without conspicuous appressed pubescence or with apubescent median areas of first and second segments larger than lateral, pubescent areas ..... *mimicus* Wheeler and *romainei* Cole (see DISCUSSIONS)
   First tergum largely apubescent, second and third with numerous appressed hairs over a larger area than median, apubescent area ..... *flaviceps* Wheeler

### *Melliger* Group

### ***Myrmecocystus (Endiodioctes) intonsus*** new species

Figures 70–72

*Diagnosis. Worker:* Abundantly hairy, with ten or more fully erect hairs on malar area in frontal view and on scape, femora and tibiae; erect pronotal hairs blunt, stiff, short, longest hairs less than 0.5 × MOD; HW of majors less than 1.7 mm, head of majors orbiculate; third tergum shiny, with scattered pubescence. *Female* and *male* unknown.

WORKER. *Measurements.* HL 1.00–1.70 (1.70); HW 0.86–1.63 (1.63); SL 1.06–1.60 (1.60); WL 1.3–2.2 (2.2); PW 0.63–1.06 (1.06).

*Head:* Longer than broad to broader than long in larger workers, CI 86–102 (96); shorter, to longer, than scape, SI 96–131 (98). In frontal view widest at lower eye margin in small workers, the sides straight and slightly convergent toward mandibular bases; in progressively larger workers widest point becomes lower and sides more convex, largest workers with strongly orbiculate head. Occiput, in frontal view, flattened in middle, broadly rounded onto sides, not at all angulate. Eye small, barely longer than first flagellomere; OMD 1.50–2.00 (1.91) × EL. Mandible septendentate.

*Thorax:* Moderately robust, PW 0.44–0.56 (0.46) × WL. Smaller workers with distinct, flattened basal propodeal face, broadly rounded into longer posterior face; larger workers with basal face convex and merging into posterior face.

*Petiole:* In profile, thick, posterior face flat, anterior face abruptly sloping toward crest in upper third, crest narrowly rounded; in frontal view crest flat or slightly convex; from above, about 1.5 × wider than long.

*Vestiture:* Pubescence sparse on most of head, a little denser on occiput, conspicuously denser on frontal lobes; dense on thorax; dense and conspicuous on discs of first two terga; sparse on sides of first two terga and on all of remaining segments.

Erect hairs abundant on head, with ten or more present on malar area in frontal view; longest occipital hairs half, or more, as long as minimum eye diameter. Erect thoracic hairs abundant on all dorsal faces and posterior face of propodeum; longest pronotal hairs less than half minimum eye diameter; mesonotal hairs about as long as those of propodeum. Petiolar scale with numerous short hairs on marginal surfaces. Terga with abundant discal hairs, progressively longer on succeeding segments, those of first segment shorter than hairs of hind tibia. Appendages abundantly hairy; scape with hairs on all faces; fore femur with at least ten erect hairs on inner face.

*Integument:* Head moderately shiny, all areas, including clypeus, lightly shagreened; frontal lobes densely and finely punctate; clypeus with sparse, coarse, setigerous punctures; head elsewhere with scattered fine, shallow punctures. Thorax slightly shiny, closely and coarsely shagreened, propodeum duller. First two terga slightly shiny, densely shagreened, with scattered setigerous punctures and coarse poriform punctures; third and following segments shiny, subpolished, very lightly shagreened, with sparse fine punctures.

*Color:* Head and alitrunk dark brownish ferruginous; mandibles and lower half, or less, of face yellowish; propodeum often more infuscated; gaster blackish; appendages lighter than thorax.

FEMALE and MALE unknown.

*Type Material.* Holotype and 151 worker paratypes: 12.4 mi S La Paz, 100′, Baja California Sur, MEXICO, 2 March 1969 (R. R. Snelling; No. 69–71); holotype and most paratypes in LACM; three paratypes to each of the following: AMNH, GCW, MCZ, USNM.

*Distribution.* Known only from southern Baja California Sur (Fig. 360).

*Additional Localities* (not paratypes). MEXICO. *Baja California Sur:* 72 mi NW La Paz, 100′, 1 March 1969 (R. R. Snelling; No. 69–66; LACM); 27 km NE Todos Santos, 700′, 8 October 1975 (R. R. Snelling; No. 75–59, 60, 61; LACM); La Burrera, 17 October 1968 (E. L. Sleeper; LACM); 3.7 mi W La Burrera, 1400′ (R. R. Snelling; LACM).

*Etymology.* L., *intonsus,* unshaved, having reference to the abundance of erect hairs on all surfaces.

*Ecology.* The type series was taken from a nest in sandy soil at the edge of an arroyo in a dense stand of mixed cardón, mesquite and palo blanco. The crateriform tumulus was about 4½″ diam. Workers were actively foraging at midday, ambient temperature approximately 70°F, returning with miscellaneous insect fragments. Other ant species taken at this station: *Pogonomyrmex californicus* (Buckley), *Pheidole vistana* Forel, *Solenopsis xyloni* McCook, *Conomyrma bicolor* (Wheeler) and *Forelius foetidus* (Buckley).

At 72 mi NW of La Paz, the site was an alkali playa with mesquite and cholla. A single worker was found here, shortly before sunset, at secretory glands on cholla. Other ant species encountered were: *Pseudomyrmex* sp.; *Veromessor juliana* (Pergande), *Crematogaster californica* Emery?, *Xiphomyrmex spinosus* Pergande, *Acromyrmex versicolor* (Pergande), *Camponotus mina* Forel and *C. festinatus* (Buckley).

Workers were observed also near La Burrera and Todos Santos. Nests were situated in sandy soil and were surmounted by low, regularly crateriform tumuli. One exceptional nest had the entrance sited in a clump of grass. Foragers were active during the hot part of the day in early October, with ambiant midday temperatures in excess of 90°F. Many workers were seen at the flowers of a prostrate *Euphorbia*.

*Discussion.* This ant appears to be a depauperate derivative of *placodops* which it closely resembles, especially in the strongly orbiculate head of the major workers. In addition to the much smaller size it differs from *placodops,* and other species in the *melliger* group, by the sparsely pubescent third and fourth terga. There is also a resemblance to such species as *koso* and *romainei* in the *romainei* group, but these have far fewer erect hairs on the malar area and the longest pronotal hairs are, in the major workers, more than 0.5 × MOD. The sexual forms are unknown and, until they become available, the relationships of this species will remain obscure.

### *Myrmecocystus (Endiodioctes) melliger* Forel

Figures 34–42

? *Formica melligera* Llave 1832. Reg. Trim. Collect. Mem. Hist. Lit., p. 463; Lucas 1860. Rev. Mag. Zool., pp. 269–280 *(in part).*

*Myrmecocystus melliger* Forel 1886. Ann. Soc. Entomol. Belg. 30:201–202. ♀ *(in part);* Emery 1893. Zool. Jahrb. Syst. 7:666–667; Wheeler 1908. Bull. Amer. Mus. Nat. Hist. 24:348–349. ♀ *(in part),* Wheeler 1912. Psyche 19:175 *(in part);* Creighton 1950. Bull. Mus. Comp. Zool. 104: 444–445 *(in part);* Cook 1953. Ants of Calif.; Palo Alto, pp. 341–342; Wheeler and Wheeler 1968. Ann. Entomol. Soc. Amer. 61:211–213 *(larva);* Snelling 1969. Contr. Sci., L.A.C.M. 170:4, 8, 9.

*Myrmecocystus melliger mendax* var. *comatus* Wheeler 1908. Bull. Amer. Mus. Nat. Hist. 24:352; Wheeler 1912. Psyche 19:173; Smith 1936. Journ. N.Y. Entomol. Soc. 44:170.

*Myrmecocystus comatus* Creighton 1950. Bull. Mus. Comp. Zool. 104:442.

*Diagnosis. Worker:* HW 0.8–1.8 mm; malar area with numerous erect hairs; longest hairs of occiput, pronotum and disc of second tergum exceeding EL; long pronotal hairs flexuous and somewhat curled apicad. *Female:* HW 2.0 mm; malar area with numerous fully erect hairs; hairs of occiput and scutal disc equal to or exceeding MOD; malar area uniformly finely punctate. *Male:* Apparently inseparable from those *mendax* and *placodops*.

WORKER. *Measurements.* HL 0.95–1.90; HW 0.88–1.87; SL 1.25–2.05; WL 1.5–3.1; PW 0.6–1.3.

*Head:* Distinctly to slightly longer than broad, CI 75–97 (88), distinctly shorter than scape, SI 111–147; in frontal view sides straight to slightly convex, slightly convergent toward mandibular insertions. Occiput evenly convex, broadly rounded at sides. Eye small, 0.92–1.00 × first flagellomere; OMD 1.54–2.14 × EL. Mandible with seven teeth.

*Thorax:* Slender to moderately robust, PW 0.38–0.48 × WL. Propodeum, in profile, about as high as long, basal face sloping and broadly rounded into posterior face.

*Petiole:* In profile, thick, not at all cuneate, summit broadly rounded; crest, in frontal view, narrow, evenly rounded from side to side, without median notch.

*Vestiture:* (Based on workers with PW in excess of 0.8 mm). Cephalic pubescence general, but sparse, especially on malar area, densest on frontal lobes and occiput. Thoracic pubescence least abundant on dorsum, concealing surface only on propodeum, as a rule. First three (minors) or four terga densely pubescent.

Malar area with 15+ fully erect, short hairs; longest occipital hairs distinctly exceeding EL, in large workers often with apices of some distinctly curled; area between eye and frontal lobe with numerous short, fine, erect hairs. Pronotum with abundant erect hairs, longest exceeding EL and some curled at apex; mesonotum with shorter, flexuous hairs, slightly shorter than MOD; basal face of propodeum with numerous flexuous hairs, longest about equal to EL. Petiole with numerous flexuous hairs on sides and crest, longest more than 0.5 × MOD. Abdominal terga with abundant slender flexuous hairs, longest on disc of second tergum in excess of MOD, often equal to EL. Scape, all surfaces of femora and tibiae with abundant erect hairs, longest hairs on middle and hind tibiae equal to, or exceeding, maximum width of respective segments.

*Integument:* Head moderately shiny, lightly shagreened; frontal lobes sharply, uniformly micropunctate, interspaces 0.5–1.0 × puncture diameter; face with abundant micropunctures, separated by 1.5–2.5 × puncture diameter; malar area more distinctly shagreened, more sparsely punctate; vertex and occiput densely micropunctate. Frontal triangle and clypeus shiny, sparsely, coarsely punctate. Entire head with scattered coarse punctures and some occipital hairs arising from poriform punctures. Thorax slightly shiny, closely shagreened, densely micropunctate and with numerous coarse punctures; propodeum duller, more densely shagreened and micropunctate. First three (minors) or four terga moderately shiny, densely shagreened and micropunctate, with numerous setigerous poriform punctures, especially first two segments.

*Color:* Brownish ferruginous, head, pronotum and scape more reddish; gaster blackish brown.

FEMALE. *Measurements.* HL 1.93–1.98; HW 2.0–2.03; SL 1.87; WL 4.2–4.3; PW 2.6–2.8.