

THE INDO-AUSTRALIAN SPECIES OF THE ANT
GENUS *STRUMIGENYS* FR. SMITH: *S. CHAPMANI*
NEW SPECIES¹

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This paper is a further contribution in a series which, when complete, will cover the world fauna of the dacetine ant genus *Strumigenys* Fr. Smith. Previous parts, the first three of which include explanations of the abbreviations used for citing measurements and indices, are in *Psyche* 60: 1-5; 60: 85-89 (1953), and 60: 160-166 (1954); *Jour. N.Y. Ent. Soc.* 61: 53-59; 61: 101-110 (1953); 61: 189-200 (1954), and in press.

Strumigenys chapmani, new species
(Text-fig. 1)

Holotype worker: TL 2.8, HL 0.76, ML 0.24 (Full exposed L mandibles 0.27 mm., cited because the mandibles tilt dorsad from the general plane of the cephalic dorsum at an angle approaching 30°, so that they appear foreshortened in the view at which HL is measured in the standard way. In fig. 1, the head is shown as slightly tilted forward, so that the head is a bit shorter and the mandibles a bit longer than as seen at standard HL position.) Head width across occipital lobes 0.68 mm. WL 0.70, exposed scape L 0.30-0.31, funiculus L 0.46 mm., greatest perpendicular depth of head (near posterior quarter of length) about 0.30 mm.; index of cephalic depression (head depth/HL × 100) 39-40, CI 89, MI 31-32.

Head shape as in text-figure 1; bottom of posterior excision with a fine, low translucent lamella. Dorsal surface of head just inside of and parallel to the dorsal scrobe (lateral cephalic) border on each side with a shallow sulcus or broad depression. Occipital lobes massive, with convex apical surfaces. Antennal scrobes deep, overhung by strong, lamellar dorsal borders. Eyes situated a little in front of

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the midlength on the dorsal sides of the ventral scrobe borders, fairly well developed, but not visible from direct dorsal view. A feeble vertical groove in front of the eye terminates the preocular lamina on each side, but does not

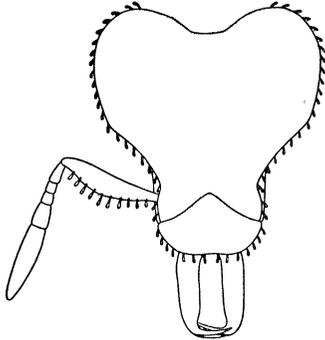


Figure 1. *Strumigenys chapmani* new species, paratype worker, dorsal view of head, showing pilosity of outline only. Teeth on ventral side of mandibular apex omitted. (F. Y. Cheng).

interrupt the rearward extension of the scrobe itself and does not induce any excision or concavity of the dorsal scrobe border directly above.

Ventral surface of head just behind the eyes with a broad, deep, arcuate transverse postoral groove or sulcus; behind this, the ventral surface of the occipital lobes are convex. Preocular laminae subparallel, continuing the lateral clypeal borders posteriad. Clypeus nearly half again as broad as long, broadly subpentagonal, feebly convex over the mandibular insertions and posteromedially; anterior border nearly straight, but strongly impressed in the center.

Mandibles short, stout, depressed, dorsally tilted and very feebly arched as seen from the side, approximately parallel at full closure; inner margins with cultrate translucent borders reaching from near bases to beginning of subapical narrowed portions. Apex of mandible bearing a long, straight, slender dorsal tooth (length 0.11-0.12 mm.) which I interpret as a secondarily migrated preapical tooth that has assumed an apparent apical position. Ven-

tral to this tooth, and even slightly basad, is found what I consider to be the true apical fork, crowded into a new position, consisting of two principal spiniform teeth and two acute, but small, intercalary teeth. The distal (dorsal) of the two larger teeth is $2/3$, the proximal about half the length of the large false apical tooth. From direct dorsal view, the true ventral apical tooth appears like a preapical tooth, being situated a bit basad of the false apical tooth, but on the ventral edge of the inner border in contrast to the usual position of preapical teeth in the genus. The ventral tooth is not shown in the figure, although it would normally be at least partly visible in the same view. Altogether, the apical armature reveals its aberrant relationships only on close, critical examination, and the total effect is not strikingly different from that of other species of *Strumigenys*, several of which lack preapical dentition. The basal lamella present as a stout, blunt projection forming a continuation of the inner margin; normally covered entirely by the clypeus at mandibular closure. From ventral view, the basal portion of each mandible is excavated to receive an axehead-shaped lateral lobe of the labrum. Labrum deeply cleft in the middle, the two labral concicles short and subacute, bearing divergent trigger-hairs which curve to follow the mandibles to a little beyond the midlength of the latter. Palpi as usual for the genus.

Antennal scapes very short, exposed length slightly less than the breadth of the head at the level of their insertions and less than half the maximum distance across the occipital lobes, moderately incrassate, with nearly straight posterior border and gently arcuate anterior border. Funiculus stout, the apical segment taking up very slightly more than half its length; segments II and III appearing nearly as broad as long in some views and slightly broader than long in others, together about equalling in length IV; the basal segment very slightly longer, but more slender, than IV.

Alitrunk compact, high in profile, but rather narrow; pronotum less than half as broad as head, disc convex in both directions, narrowly rounded in front and with a low margin here; no humeral angles. Seen from the side, promesonotum forms a high, strongly arched hump, with the

posterior mesonotum sloping through a feeble convexity posteriorly. Metanotal groove obsolete; propodeum extremely feebly convex in dorsal outline, beginning at the foot of the posterior mesonotal slope and itself sloping posteriorly, but much more gently so. Propodeal teeth long (0.10 mm.) and stout, acute, obliquely elevated; infradental lamellae very narrow, concave, widening below into low, convex metapleural lobes.

Petiole with very slender peduncle, longer than the subglobose free portion of the node, which is about as broad as long and has a feeble longitudinal carinula running over each dorsolateral surface. Posterior neck of petiole partly covered by the narrow spongiform collar, which widens a bit on each side to form a broadly rounded posterolateral spongiform lobe. Midventral spongy strip well developed. Postpetiole moderate in size, slightly broader than long and distinctly broader than the petiole, its disc convex and surrounded by spongiform margins; well developed spongiform masses posterolaterally and ventrally. Gaster with ventral surface much more strongly convex than dorsum; anterior spongiform margin narrow dorsally, its edge gently raised and convex in the middle. Basal gastric costulae rather irregular and indefinite, extending about $\frac{1}{4}$ the length of the basal tergite; gastric surface otherwise smooth and shining.

Head, including scapes and dorsal surfaces of mandibles, dorsum of alitrunk, legs and petiole densely and finely granulose-punctulate, opaque. Much of sides of alitrunk and dorsal surface of postpetiole with punctulation partially effaced, weakly shining to subopaque.

Cephalic dorsum, mandibles, scapes and promesonotum with a regular and dense pilosity consisting of small, numerous, subappressed to subreclinate, spatulate to inverted-spoon-shaped hairs, on the dorsum of the head appearing like small oval scales. Anterior scape border with a regular, prominent row of outstanding narrowly spoon-shaped hairs, prevailing slightly slightly oblique apicad. Specialized erect pilosity of head and alitrunk lacking, except for a single weakly differentiated suberect spatulate hair on the extremity of each occipital lobe. Propodeum, anterior of petiolar node and legs with a sparse growth of small.

subreclinate spatulate hairs; legs also with a few fine, erect subclavate hairs. Long (up to 0.13 mm.) sturdy erect hairs, distinctly spatulate apically and mostly posteriorly inclined: one pair on petiolar node; 3-4 pairs, some shorter, on postpetiole; about four ragged transverse rows of 4-6 hairs each on the gastric dorsum. Gastric apex with a few fine erect hairs. Underside of head with small, fine appressed hairs.

Color uniform medium ferruginous; legs, mandibles and antennae appearing a little lighter and more yellowish.

Paratype workers: Four specimens from the type nest. TL 2.63-2.85 mm., HL 0.72-0.76 mm., ML 0.22-0.24 mm., WL 0.66-0.71 mm.; CI 89-91, MI 31-32. Outside the minor variation in dimensions and proportions, as cited, the length and proportions of the antennae and antennal segments appear to vary very slightly, and there are some small differences in position, size and direction of hairs. Everything considered, the variation in this series is remarkably slight. Further series of this species, seen belatedly and reviewed more hastily, do not seem to vary much, if any, from the type nest series.

Female not seen.

Male from type nest: TL 2.58 mm., CI about 76, length of forewing about 2.25 mm. Mandibles reduced and inserted far apart, but very strongly incurved, falcate, with very acute, simple, opposable apices, their shafts broadened just beyond the bases and externally bluntly subangulate, somewhat as in the workers of certain *Labidogenys* species.

Notauli very indistinct near point of convergence; parapsidal furrows distinct; anterior mesonotum with a median longitudinal furrow; scutellum convex and salient. Propodeal teeth represented by two low subangular welts. Petiole and postpetiole formed as in worker, but spongiform appendages reduced to cariniform vestiges. Basal gastric costulae absent. Gaster and most of meso- and metapleura smooth and shining; nodes and fore coxae very feebly punctulate and shining; remainder of body densely punctulate, opaque. Head and alitrunk with short, fine appressed hairs, curved and inconspicuous; gaster with a few very small, fine, suberect and reclinate hairs, more abundant at apex.

General body color castaneous, head brownish-black; pronotum dark ferruginous, mesonotum with lighter markings anteriorly and along parapsidal furrows; legs, mandibles and antennae sordid yellow-brown. Forewing with R + Sc, Stigma, 2r, Rsf₁, Mf₁, M + CuA and CuA persisting, but scarcely pigmented. Rs and M indicated apically by long grooves. Hind wing with 4 subapical hamuli. Wings densely microtrichiate. Volsellae not especially distinctive; penis valves each with about 15 serrations. A second male taken in the type nest was smaller, but otherwise similar.

Holotype worker, and worker and male paratypes taken from a single nest, Horns of Negros [Cuernos Mts.] near Dumaguete, Negros Oriental, Philippine Islands, at about 1500 feet altitude (J. W. Chapman). Holotype deposited in the Museum of Comparative Zoology; paratypes in U. S. National Museum, California Academy of Sciences, and elsewhere. Several series of this species, collected by Dr. Chapman and D. Empeso in the Cuernos Mts. at or near the type locality, were examined after the descriptions had been drawn up. Although this additional material slightly extends the range of variation in dimensions and proportions, the total variation away from the holotype is hardly worth recording.

S. chapmani is a species apparently totally different and distinct from any of the known groups of the genus anywhere in the world. Even its affinities with the remainder of the Indo-Papuasian fauna must be considered as more or less arbitrarily drawn. If the interpretation of the apical mandibular dentition given above is correct, a tentative relationship may be suggested with the *loriae* and *szalayi* groups; the form and tilt of the mandibles also suggests that of certain members of the "Labidogenys" complex.