

## THE NEOTROPICAL SPECIES OF THE ANT GENUS STRUMIGENYS FR. SMITH: GROUP OF MARGINIVENTRIS SANTSCHI

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The present paper is a continuation of my series on the New World fauna of the dacetine ant genus *Strumigenys* Fr. Smith. Earlier parts, containing keys to the abbreviations for measurements and proportions, may be found in Jour. New York Ent. Soc. **61**: 53-59, 101-110 (1953). Other parts have been published in the same journal, or are in press.

The present section deals with two species, *S. marginiventris* Santschi and *S. longispinosa* new species. The first of these has been considered as a subspecies of *S. fusca* Emery by Santschi, but actually, *marginiventris* is not close to *fusca* at all. *S. longispinosa* shares with *S. marginiventris* the general head form of the *cordovens* group and the single preapical tooth.

It is supposed that *S. marginiventris* and *S. longispinosa* are related to each other and to the *cordovens* group, but, like all other assumed relationships among the New World *Strumigenys*, this one would bear much further thought and examination. The two species are similar in general size and habitus, and both are so far known from the Panama-Colombia area, where they have been collected on few occasions. Nothing direct is known of their biology, except that they are rain forest inhabitants.

### *Strumigenys longispinosa* new species

(Figs. 1, 2)

HOLOTYPE WORKER: TL 3.5, HL 0.80, ML 0.72, WL 0.81 mm.; CI 74, MI 90. (One paratype worker: TL 3.4, HL 0.78, ML 0.71, WL 0.80 mm.; CI 72, MI 91.) Head much like that of *marginiventris* and the majority of neotropical *Strumigenys* in general shape, deeply and semicircularly excised behind, slightly dorsoventrally depressed, the dorsum very weakly convex. Antennal scrobe narrow, shallow and ill-defined, bounded by a weak carina above, posteriorly not quite extending as far as the point of greatest lateral expansion of the occipital lobe. Scrobe split anteriorly by a sharp longitudinal carina which extends posteriorly to the eye. Eye fairly large and convex, with 7-8 ommatidia in the greatest diameter (not quite so large as the eye of *marginiventris*); side of head immediately in front of eye mod-



erately but distinctly concavely excavated, so that eye appears more protuberant and slightly prosopient. Clypeal disc weakly concave, anterior border broadly and feebly rounded. Labral lobes short and truncate apically, the pair of trigger hairs arising from them fine, divergent, half or a little more as long as the mandibles.

Mandibles very long and slender, shafts nearly straight; external borders very weakly convex, drawn in rather sharply at the insertions and, near the apices, curving very evenly into the apical fork. Inner border practically straight, so that the inner and outer borders of the shaft are parallel or very nearly so from the basal constriction to the preapical tooth, distal to which the shaft narrows a little more strongly until the fork. Armature of each mandible consisting of an apical fork of two very long, slender spiniform teeth (the ventral tooth slightly longer) bent inward at approximately a right angle; no intercalary teeth or denticles; and a single straight, acute preapical tooth, about half as long as the dorsal apical tooth, situated precisely at the first apical quarter of the mandibular length. No other teeth or denticles on the mandibles with the exception of the hidden basal process.

Antennal scape (L 0.70 mm.) longer than the distance from its insertion to the posterior border of the occipital lobe on the same side, very nearly straight and quite slender, almost imperceptibly thickened at about the basal quarter. Funiculus (L 0.83 mm.) very slender; apical segment (V) about as long as or very slightly shorter than I-IV taken together; basal segment (I) shorter than IV, but longer than II plus III; II and III slender, subequal.

Alitrunk slender; promesonotum in lateral-view profile with a horizontal, only weakly convex outline; posterior mesonotum gently concave; dorsum of propodeum extremely weakly convex. Pronotum as seen from above with a distinct, arched anterior border, subangulate humeri, each with a low piligerous tubercle, and straight, submarginate, posteriorly convergent dorsolateral borders, below which the sides of the pronotum bulge behind the humeri, so that the anterior half of the alitrunk seen from above forms a circular outline. Both promesonotal and metanotal sutures obliterated, the latter marked by a weak constriction when the alitrunk is seen from above. Propodeal teeth spiniform, exceptionally long, slender, straight and acute, divergent and directed dorsad from the plane of the propodeal dorsum at an angle of about  $30^\circ$  or slightly more; much longer than the distance between the centers of their bases, longer than the propodeal declivity beneath them, and about as long as the postpetiolar disc is wide. Each tooth subtended beneath by a cariniform vestige of infradental lamella bordering each side of the steep, concave propodeal declivity.

Petiole subclaviform, peduncle long and slender, nearly as long as the long, low node, and only weakly set off from it. Node seen from above oval,  $2/3$  as broad as long and about  $5/6$  as broad as the small postpetiolar disc. Petiolar spongiform tissues reduced to a thin, loose band along the upper half of the posterior nodal margin, and a small, narrow ventral strip beneath the node. Postpetiolar disc nearly twice as broad as long, with



rounded, sharply marginate sides, its surface convex, smooth and shining; laterally and ventrally with voluminous spongiform appendages.

Mandibles, clypeus, antennal scapes and legs very finely and densely punctulate-granulose. Head, alitrunk and petiole finely and densely punctulate, with superimposed fine, mostly indistinct longitudinal rugulae; lower pleura of alitrunk with sculpture more or less effaced. Basal gastric costulae 15-17, strong and distinctly separated, extending about  $\frac{1}{4}$  the length of the basigastric segment. Remainder of gaster smooth and shining. Mesonotum with a fine median longitudinal carina.

Ground pilosity of head consisting of fairly abundant, slender, weakly clavate, arched, reclinate or decumbent hairs, longest toward the occiput. Anterior clypeal border with 12 spatulate hairs, curved mesad, the central pair longest. Scapes each with 10 curved, very weakly clavate hairs, decumbent in an apical direction along the anterior border; other decumbent slender hairs directed apicad on other surfaces. Six longer erect hairs on the posterior cephalic dorsum are little if at all apically enlarged, arranged in a row of four across the vertex posterior to the eyes, and a pair just in front of the occipital excision. Ground pilosity of alitrunk like that of head, but sparser; 4 long, straggling flagellate hairs, one on each humeral tubercle, and one on each posterolateral margin of the pronotum, straddling the mesonotum. Nodes of peduncle and dorsum of gaster with moderately abundant, well-spaced, long, straggling, erect and recurved flagellate hairs. General color light ferruginous, gaster very slightly darker, more tan.

Holotype worker (N. A. Weber Collection) taken by Dr. Weber on Barro Colorado Island, Panama Canal Zone (Weber Cat. No. 1139). The paratype included in the measurements above (MCZ) was taken with the holotype. Three additional paratypes (Weber Collection, USNM, MCZ) were seen belatedly. One of these was taken with the holotype, and the second is also from Barro Colorado (E. C. Williams, Jr. leg., No. 65-2); a third, found among MCZ unidentified miscellany, was taken at Quipo, Panama (J. Zetek leg.).

*S. longispinosa* resembles *S. marginiventris* in its slender form and long mandibles with a single slender preapical tooth on each, but *longispinosa* lacks the marginate gaster and the dorsi-gastric striolation of *marginiventris*. There are many other differences in proportions and minor characters. From the *cordovens* group of *Strumigenys*, which also boasts very long, slender mandibles, *longispinosa* can be distinguished at a glance by means of its single preapical tooth and its long, slender propodeal spines.

Weber (1952, Amer. Mus. Novitates, 1554: 3) gives the ecological data for the type collection on Barro Colorado; the ants



nested in the soil of the rain forest, below the soil cover, and the nest was surmounted by a small crater.

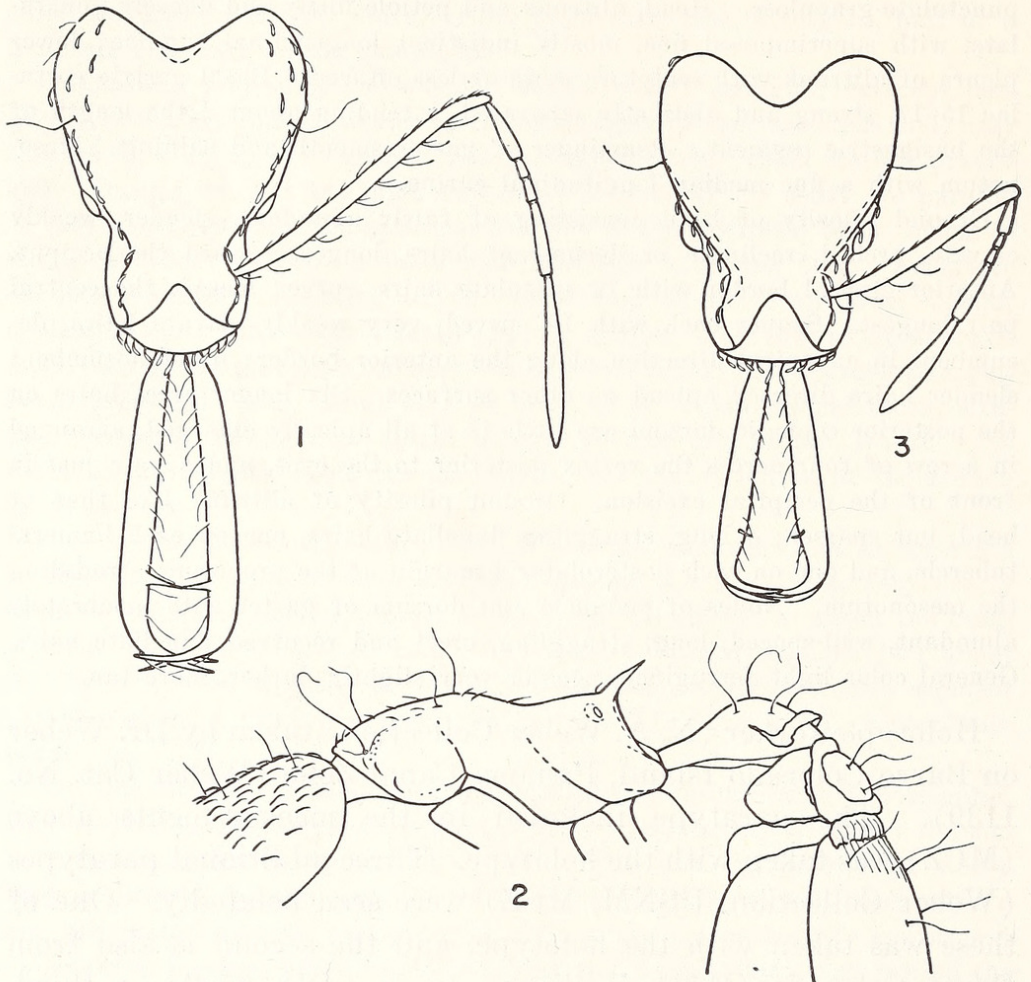


FIG. 1. *Strumigenys longispinosa* new species, paratype worker from Barro Colorado Island, Panama, head and mandibles from dorsal view. FIG. 2. Same, alitrunk and nodes in side view. FIG. 3. *S. marginiventris* Santschi, worker from Barro Colorado Island, head and mandibles from dorsal view. In Figs. 1 and 3, only the prominent pilosity near the borders of the outlines is shown. All drawn to the same scale. Drawings by Nancy Buffler.

***Strumigenys marginiventris* Santschi new status**  
(Fig. 3)

*Strumigenys* (*Strumigenys*) *fusca* st. *marginiventris* Santschi, 1931, Rev. Ent., Rio de Janeiro, 1: 275, worker. Type loc.: France Field, Panama. Type in Basel Naturhistorisches Museum, not seen.

WORKER: TL 2.9–3.2, HL 0.68–0.73, HW 0.54–0.59 (CI 78–82), ML 0.51–0.57 (MI 75–79), WL 0.68–0.72 mm. Form of head and mandibles shown



in Fig. 3. Apical fork without intercalary denticles or teeth; the single preapical tooth weak and arising from the dorsal surface of the blade, not from the inner margin proper. Alitrunk much like that of *S. longispinosa* (Fig. 2), but the propodeal teeth are not quite so long, and they are involved in a broad infradental lamella which becomes convex below. Petiole similar to that of *longispinosa*, but the node a trifle higher and a bit more distinctly set off from its peduncle. Postpetiolar node longitudinally striolate, sericeous-opaque.

Conformation of gaster unique in this genus. Tergum of basal segment depressed, only gently convex discad, on each side drawn out into a strong, upturned dorsolateral margin that runs back to or nearly to the posterior border of the segment. This margin is distinct from, and situated well above the true lateral tergal border. Since the basal segment takes up nearly its entire length, the gaster thus acquires a rather peculiar plate-like dorsal aspect. The dorsal surface of the gaster is very finely and densely punctulate-striolate anteriorly, and is here sericeous-opaque, while in the posterior half, the punctulae are dense, but the striolation is suppressed, and the surface is feebly shining. The basigastric costulae are distinct also, and extend about  $\frac{1}{4}$  the length of the basal segment. The gastric dorsum also bears numerous (36-40 or more) but not crowded fine, erect flagellate hairs, the longest averaging about 0.22 mm. long, or more than half the greatest depth of the gaster. Petiolar node with 2 pairs, postpetiolar node with 4 pairs of decumbent flagellate hairs, and two pairs of flagellar hairs on the alitrunk placed as in *longispinosa*. The stiffly erect, slender, clavate head hairs are limited to a single pair on the middle occiput; pilosity otherwise mostly similar to that of *longispinosa*; though the shorter scapes naturally bear fewer hairs.

Head and alitrunk densely punctulate-granulose, overlain by weak, fine, predominantly longitudinal rugulation. Legs and most of mandibles punctulate-granulose, mostly opaque, with a light decumbent pilosity. Color ferruginous yellow.

FEMALE (dealate): TL 3.4-3.6, HL 0.73-0.78, HW 0.60-0.65 (CI 83-84), ML 0.57-0.59 (MI 76-78), WL 0.80-0.83 mm. The female shows the caste differences usual for the genus. The longitudinal rugules over the mesonotum are distinct, and some long, fine hairs arise here, too. The sculpture of the gastric dorsum is more distinct than in the worker, and leans more toward longitudinal striolation. The erect flagellate hairs appreciably more numerous, perhaps 50-70 or more in number.

MALE: Unknown.

I have studied material of *S. marginiventris* from the Panama Canal Zone: Barro Colorado Island (K. W. Cooper leg., 1 worker; J. Zetek leg., female and several workers). Frijoles (E. J. Brundage leg., 1 worker). Colombia: Sevilla, Magdalena (G. Salt leg., 2 females and 9 workers, "small colony in soil near or



among harvester ants of N. 349.''). The Sevilla series averages slightly smaller than the Canal Zone samples in both castes.

Although Santschi placed *marginiventris* as a race of *S. fusca* Emery, these two forms are not closely related. I have seen the type of *S. fusca* recently, and this is a member of the *S. louisianae* group close to, and possibly conspecific with, *S. unidentata* Mayr. There should be no difficulty in distinguishing *S. marginiventris* from all other species of the genus, since no others are known with the laterally marginate gaster.



Brown, William L. 1957. "The Neotropical Species of the Ant Genus *Strumigenys* Fr. Smith: Group of *Marginiventris* Santschi." *Journal of the New York Entomological Society* 65, 123–128.

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