

STRUMIGENYS SISYRATA species nov.

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DIAGNOSIS: A very distinct species within the genus, belonging to a group of its own, perhaps most closely related to the *godeffroyi*, *doriae*, and *szalayi* groups in form of head and mandibles, but immediately distinguishable from these and all other known *Strumigenys* species by means of the coat of thick "spongiform" material covering the truncus, including the pronotum. Also unique in the genus is the peculiar petiole, with its very slender peduncle and anteriorly-directed, sponge-covered, conical nodal apex; further characteristic are large size; needle-like propodeal teeth; the shallowly concave posterior dorsum of the head, with sharp lateral margins; the voluminous, striate spongiform appendages smothering the postpetiole; the long legs; and the sparse, very long flagellate hairs of body and legs. An undescribed species of *Strumigenys* from northern Queensland also has a spongiform coat extending well onto the truncus, but in this case the pronotum is left free; the Queensland species also differs widely in having the pronotum flat, smooth and laterally marginate, as well as in many other characters.

FURTHER DESCRIPTION OF HOLOTYPE WORKER: total length (TL) 4.9, head length (HL) 1.15, head width (HW) 0.94 (cephalic index 82), mandible length (ML) 0.70, mandibulo-cephalic index (MI) 61, length of truncus (WL) 1.22, scape length 0.88, greatest diameter of eye 0.10 mm.

Head shape as in Fig. 1. Dorsum gently convex over the narrowest parts of the head, centered at about the level of the eyes, this convexity with a hint of a median longitudinal sulcus. Behind the convex area, the whole of the dorsum is shallowly but distinctly concave, including the surfaces of both occipital lobes and the vertex between. Dorsolateral borders of head distinctly marginate, including occipital lobes; lobes behind with blunt margins becoming sharp (lamelliform) in the median excision. Eyes strongly convex, obliquely prosopient, each with about 45 facets. Preocular carinae subparallel; no preocular excision. Mandibles as shown in Fig. 1 and 1a, each with a stout conical preapical tooth; at its base, each mandible has a pocket on the ventral side to receive the triangular lateral lobe of the labrum. Labral trigger hairs reaching beyond preapical teeth of closed mandibles. Underside of head only feebly convex, almost flat, postoral groove scarcely developed, represented only by a very shallow impression.

Truncus, petiole, postpetiole and front of gaster shown in side view in Fig. 2. The chitinous "spongiform" mantle is the most extensive and heavily developed one in the genus; in fact, there is nothing to equal it among all of the ants. Of the dorsal and lateral truncal surfaces, only the lower mesopleura are left uncovered. Much of the truncal mantle is composed of more or less discrete but crowded, sordid yellowish flocculae with concave outer faces, these completely and rather deeply cover the underlying cuticular surface. As can be seen in Fig. 2, only a part of the propodeal teeth project through the rounded propodeal mass, which here covers most of the declivitous surface. Promesonotal suture marked by a corresponding seam in the mantle; a broad and deep impression at the metanotal groove.

Seen from above. pronotum with anterior part of mesonotum subcircular in outline, about 0.60 mm wide, or almost twice the width of the propodeum; the latter widest posteriorly. Propodeal teeth very slender as seen from above, divergent. Sides of propodeum each with a broad, deep longitudinal sulcus just below mid-height in the mantle. Bulla of metapleural gland covered with matle, but meatus free, slit-like, opening caudad. Spiracles of truncus not visible. Propleural tracts very distinct; long subovoid, impressed, lined and rimmed with a white substance.

Petiole entirely remarkable in form, with straight slender petiole and forwardly-inclined, bluntly conical node, the latter completely covered with a spongiform mass that is flocculent in front and "striate" or arranged in fine, longitudinal areolation behind. The node with its mantle is about as wide as the propodeum (ca. 0.38 mm).

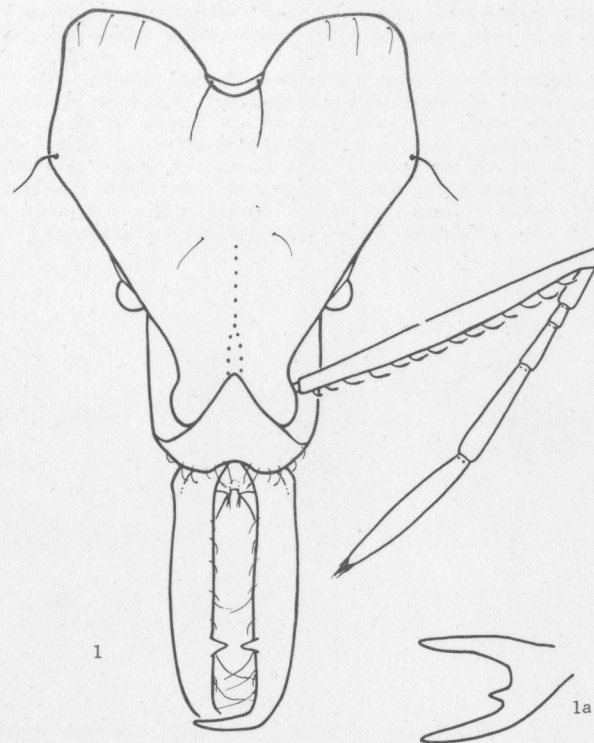


Figure 1. *Strumigenys sisyрата* sp. nov., holotype worker, full-face view of head; most smaller hairs omitted. Fig. 1a, enlarged end-on view of left mandible, to show apical fork with intercalary tooth. Drawing by Nancy Buffler and the author.

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(OVER)

The postpetiole with mantle is about 0.50 mm wide, with only a small crescent of its disc exposed, this longitudinally striate and opaque. Both petiole and postpetiole carry voluminous lobes of areolate tissue beneath. Gaster 0.67 mm wide, its basal tergum connected to postpetiole by short spongiform costae; anteroventral face with a spongiform pad bearded with numerous fine, soft pendant hairs. Legs very long and slender; posterior metatarsus 0.95 mm long.

Head densely reticulate-punctulate, opaque, dorsum with fine, crooked rugulae superimposed, predominantly longitudinal, strongest toward the back of the occipital lobes, where a few interspaces are weakly shining. Anterior coxae, mesopleura, petiolar peduncle and gaster smooth and shining. Clypeus weakly shining mesad, finely and densely punctulate and opaque laterad, as are also the entire scapes. Mandibles, antennal funiculi and middle and hind coxae variably punctulate, weakly shining to opaque. Legs finely and densely punctulate and covered with fine appressed pubescence, predominantly opaque.

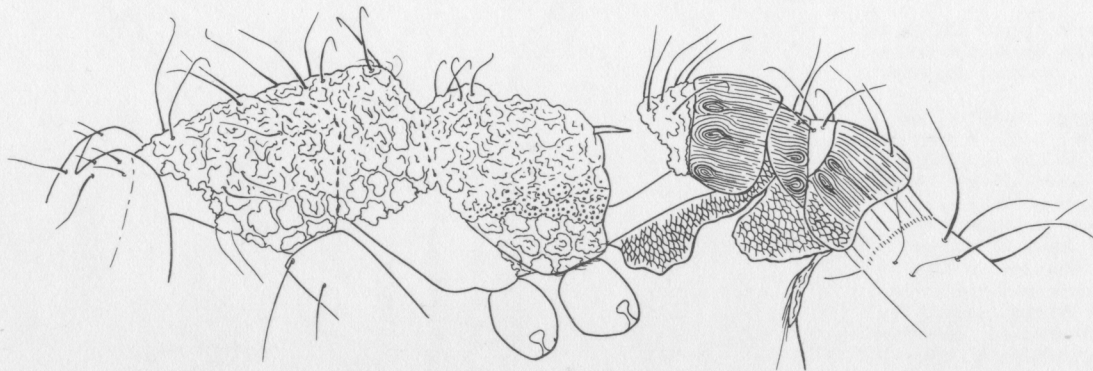


Figure 2. *Strumigenys sisyrata*, sp. nov., holotype worker, side view of truncus, petiole and postpetiole with adjacent structures. Drawing by Nancy Buffler.

Ground pilosity largely suppressed, consisting of a sparse and inconspicuous sprinkling of short, fine, curved, appressed and subappressed hairs on dorsum of head, especially fringing anterior and anterolateral dorsal borders, on truncal dorsum and on mandibles and scapes. Fine straight appressed hairs on underside of head. Inner mandibular margins, underside of gaster and gastric apex with the usual fine hairs. Head also has symmetrically placed long, fine subflagellate hairs, as shown on Fig. 1; longer hairs of this type arranged sparsely over truncus, nodes and gaster, as well as most segments of the legs, where the longest hairs, on the extensor surfaces of the posterior tibiae and metatarsi, exceed 0.6 mm. Color yellowish ferruginous throughout.

HOLOTYPE WORKER a unique deposited in the Museum of Comparative Zoology at Harvard University, Cambridge, Massachusetts. TYPE LOCALITY: rain forest between the Busu and Bupu rivers, Huon Peninsula, near Lae, New Guinea, 6 May 1955 (E. O. Wilson leg., Notebook No. 971). This tract is described by Wilson, 1959, *Psyche* 65: 26 ff. Accession No. 971 consisted of stray ants taken under a small rotting log found in a comparatively open part of the forest with thin leaf litter.

The specific name is based on a Greek word, transliterated *sisyra*, referring to a shaggy coat, usually made of the skin of a sheep or goat, worn by ancient shepherds.