

superior and anterior border, comparable in length to the smallest cephalic ones on the posterior border; sides of pronotum and mesonotum with short, appressed spatulate hairs; pronotal humeri with a pair of long, filiform hairs; two pairs of similar but slightly shorter hairs are present on the sides of the mesonotum; another two pairs of similar but still shorter hairs on the scutellum; petiole and postpetiole with a pair of filiform hairs each. Gaster and legs with rare, short, acuminate hairs similar to those on the mandibles.

**Relationships.** – The general cephalic morphology, the small clavate hairs and the size of the eyes would indicate a close relationship between *Strumigenys schleorum* and *S. studiosi* WEBER, known only from Costa Rica. *S. schleorum*, however, differs in a remarkable way from any other known dacetine by its mandibular morphology. We already suggested that originally short mandibulate dacetines started developing longer mandibles opposing only at the apex and then differentiated the apical morphology to improve prey capture. In this perspective *S. schleorum* is very likely to represent one of the initial stages of this differentiation, with mandibles opposing at the apex only but still retaining the plesiomorphic, serially dentate masticatory margin in a greatly reduced, non-functional, shape. If, on one hand, this explanation accounts for a good proportion of the known variation in dacetine mandibular morphology, it does not help in focusing the phylogenetic position of the amber species described here. Our Fig. 13 shows that the most parsimonious reconstruction of the evolution of dacetine mandibular morphology assumes this change to have occurred at the root of *Protalaridris* but that within *Strumigenys* a certain number of evolutionary inversions must have occurred. Among contemporary species, at least *Strumigenys terroni* from Cameroon shows a visibly different but functionally equivalent morphological organization. Until a cladistic analysis of the whole genus is performed it is useless to speculate when and how many times this phenomenon may have happened and which are the most directly concerned taxa.

*Strumigenys electrina* DE ANDRADE n. sp.

Fig. 24, 25

**Holotype:** Worker in Dominican amber, preserved in the amber collection of the State Museum of Natural History, Stuttgart (Department of Phylogenetic Research), No. Do-3854-1.

**Paratypes:** 4 workers included in the same piece of amber and separate for the present study as Nos. Do-3854-2 to Do-3854-5, the latter without head.

**Additional material:** We refer to this species also the amber specimen Do-3853 examined in the Stuttgart collection but not available for the present study.

**Derivatio nominis:** From the Latin *electrinus* (= made of amber).

**Diagnosis.** – A short mandibulate *Strumigenys* close to *ohioensis* and differing from it in several small characters, such as the teeth being subequal in size and the sculpture coarsely reticulate-punctuate on the legs and missing on the postpetiolar node.

**Worker (Fig. 24).** Measurements (in mm) and indices: total length (mandibles included) holotype 1.88, paratypes 1.84 – 1.88; HL holotype 0.44, paratypes 0.40 – 0.44; HW holotype 0.32, paratypes 0.32 – 0.36; SL holotype and paratypes 0.20; ML holotype and paratypes 0.12; AL holotype and paratypes 0.48; PW holotype and paratypes 0.16; petiole length holotype and paratypes 0.20; petiole maximum width holotype and paratypes 0.08; postpetiole maximum width holotype and paratypes 0.12; gaster maximum width holotype and paratypes

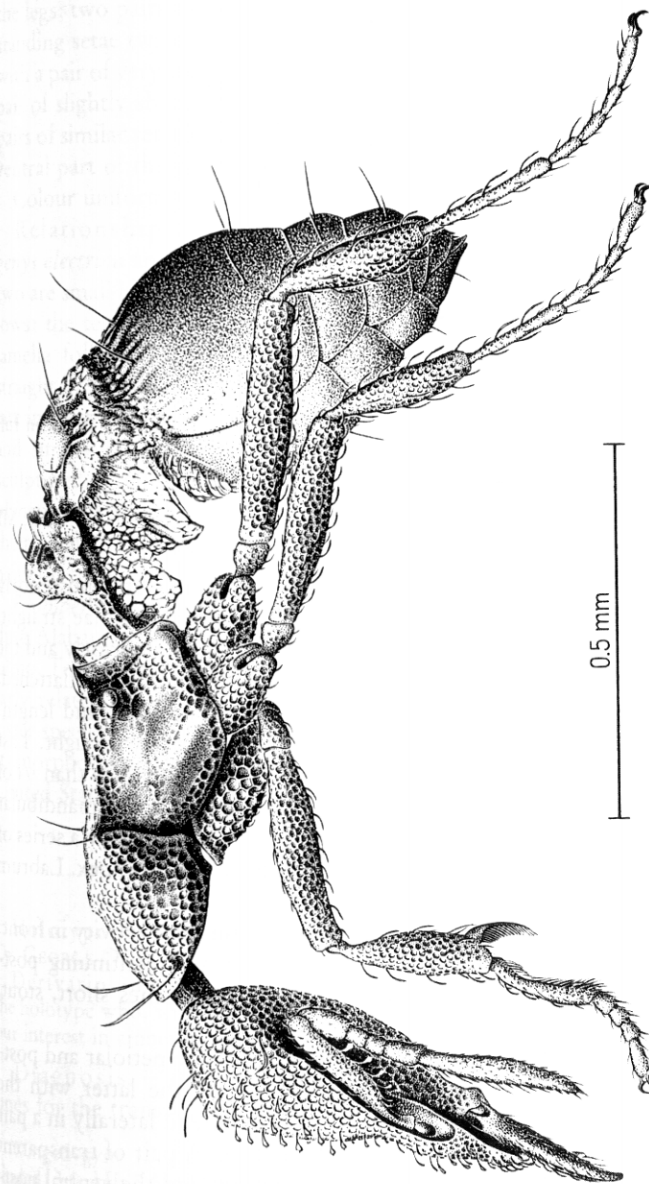


Fig. 24. *Strumigenys electrina* n. sp. Worker, general habitus in lateral view. Reconstruction based on multiple specimens. General shape and most details drawn from the specimen Do-3854-1 (the holotype); Head essentially based on the specimen Do-3854-4; Forelegs: coxa, trochanter, femur and tarsus from Do-3854-1, tibia from Do-3854-4; Mid leg: coxa, trochanter, femur, tarsomeres 3–5 from Do-3854-1, tibia and tarsomeres 1–2 from Do-3854-2 (and, to a lesser extent, Do-3854-1); Hind leg from Do-3854-1; Pilosity particularly from Do-3854-2 but also from Do-3854-1 & -4. Reconstruction and drawing by ARMIN CORAY.

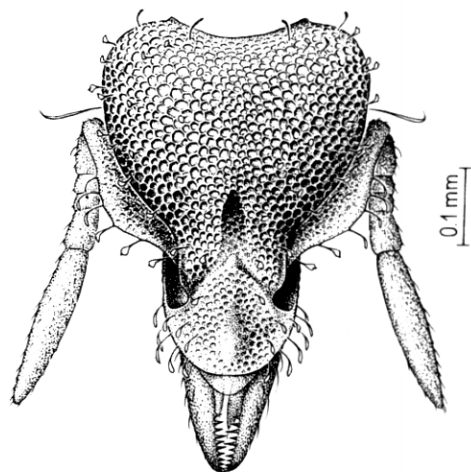


Fig. 25. *Strumigenys electrina* n. sp. Paratype worker (specimen Do-3854-4). Head in full frontal view. Drawing by ARMIN CORAY.

0.28. CI holotype 72.7, paratypes 72.7 – 90.0; SI holotype 62.5, paratypes 55.5 – 62.5; MI holotype 27.3, paratypes 27.3 – 30; SMI holotype and paratypes 166.6.

**Description.** – Head (Fig. 25) with anteriorly converging and posteriorly rounded sides; occipital concavity normally impressed. Preocular laminae straight. Clypeus slightly longer than broad, with convex sides converging anteriorly and the posterior margin medially angulate. Scapes  $\frac{1}{2}$  of head length, short, broad, flattened, but only slightly bent close to the base; their broadest point about at mid length; their external border irregularly convex, the internal border nearly straight. Last funicular joint longer than the rest of the funiculus. Mandibles short, less than  $\frac{1}{4}$  of head length, narrow and with the shape of an elongated triangle; inner mandibular border without visible basal lamella but with a toothless space followed by a series of 11 acute denticles only slightly decreasing in size from the base to the apex. Labrum with a visible pair of anteriorly projecting lobes.

Trunk essentially flattened on the dorsum, with a small pronotal declivity in front; propodeal suture invisible; humeral angles poorly marked and continuing posteriorly in an edge leading to the propodeal spines; propodeal spines short, stout, directed backwards and slightly upwards.

Spongiform processes well developed, covering the sides of the petiolar and postpetiolar nodes, and extending over the whole articulation of the latter with the gaster; on both peduncular nodes the spongiform processes extend laterally in a pair of short lateral wings and ventrally in a long, median process. A pair of transparent infraspinal lamellae run straight between the propodeal spines and the ventral posterior border of the trunk.

Gaster oval and not anteriorly truncated in dorsal view.

**Sculpture:** cephalic dorsum, trunk and legs covered with coarse reticulation, more superficial on the anterior half of the head, trochanters, femora, and tibiae and nearly effaced on the clypeus and on the scapes; mandibles and funiculi punctuate only;

very evident smooth areas on the mesopleurae and on the postpetiolar node; anterior portion of the first gastral tergite strongly costulate.

**Pilosity:** dorsum of the head with sparse, suberect spatulate hairs slightly longer on the sides of the clypeus; a row of similar, longer, hairs on the anterior border of the clypeus; minute, appressed, simple hairs on the mandibles and the funiculi and the legs; two pairs of erect, slightly spatulate setae on the vertical area and a pair of standing setae twice as long protrude from behind the antennal scrobes; pronotum with a pair of very long, feebly spatulate setae close to its anterior border and another pair of slightly shorter, normally acuminate setae on the promesonotal suture; 1–2 pairs of similar setae on the abdominal segments; pairs of shorter, similar setae on the ventral part of the gastral segments.

**Colour** uniformly ochraceous feebly shining.

**Relationships.** – We already mentioned the close similarity between *Strumigenys electrina* and *S. ohioensis* KENNEDY & SCHRAMM. The differences between the two are small but numerous; at least the most important of them can be listed as follows: the teeth of *electrina*, subequal in size and without basal lamella vs. a basal lamella followed by irregular medial teeth in *ohioensis*; the infraspinal lamellae straight in profile in *electrina* and concave in *ohioensis*; the pronotum simply reticulate in *electrina* and irregularly rugose in *ohioensis*; legs deeply reticulate in *electrina* and simply punctate in *ohioensis*; the postpetiolar node smooth in *electrina* and sculptured in *ohioensis*; clypeal piliferous tubercles absent in *electrina* and present in *ohioensis*; presence of pairs of long cephalic, thoracic, and gastral hairs in *electrina* vs. their smaller number and different distribution in *ohioensis*; presence of spatulate hairs on the clypeal sides of *electrina* vs. J-shaped hairs in *ohioensis*.

*S. ohioensis* is reported from soil samples from several states of the U. S. A. including Alabama, Arkansas, Delaware, Illinois, Louisiana, Maryland, North Carolina, Ohio, Tennessee, and Virginia. According to BROWN (1953) *ohioensis* is not particularly related to any other known species and *S. electrina* is likely to represent its sister species. If *electrina* had not been described from Dominican amber, then from its morphology alone, one could easily have supposed provenance from the southern United States.

#### *Acanthognathus poinari* BARONI URBANI n. sp.

Fig. 26, 27

**Holotype:** Winged gyne (unique) from the amber sample H-10-135 in the collection of Dr. GEORGE O. POINAR, JR., University of California, Berkeley, U. S. A.

**Derivatio nominis:** This species is dedicated to GEORGE O. POINAR, JR., the owner of the holotype who, with his enthusiasm for all aspects of amber study, has been able to revive our interest in amber ants.

**Diagnosis.** – An *Acanthognathus* species distinguishable from all other known ones for the transverse rugulation on the posterior cephalic angles.

Winged gyne (Fig. 26). Measurements (in mm) and indices: total length (mandibles included) 3.0; HL 0.68; HW 0.48; SL 0.48; eyes maximum length 0.16; ML 0.48; AL 0.64; PW 0.32; petiole length 0.36; petiole maximum width 0.12; postpetiole length 0.20; postpetiole maximum width 0.16; gaster width 0.56. CI 70.6; SI 100; MI 70.6; SMI 100.

**Description.** – Head (Fig. 27) elongate, with nearly straight sides gradually converging anteriorly, feebly emarginate occipital border and angulate posterior corners. Compound eyes oval, slightly protruding and situated in the middle of the head