

**A NEW GENUS OF SCELIONIDAE FROM TRINIDAD, W.I.
(HYMENOPTERA: PROCTOTRUPOIDEA)**

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Abstract

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Tanaoscelio cornopis n. gen. and n. sp. (Scelionidae: Scelioninae) is described from Trinidad, W.I. Specimens were reared from eggs of a grasshopper, *Cornops longicorne* (Bruner) (Orthoptera: Acrididae), found in leaf petioles of water hyacinth, *Eichhornia crassipes* (Mart.) Solms. (Monocotyledones: Pontederiaceae). The new genus is compared with the related genus *Scelio* Latreille.

Dr. Zdeněk Bouček of the Commonwealth Institute of Entomology, London, asked me to study and name specimens of an apparently new genus of scelionid wasps collected in Trinidad, W.I., reared from acridid eggs.

In the search for potential natural agents to control the water hyacinth in northern South America a grasshopper, *Cornops longicorne* (Bruner), was found to be one of the promising species (Bennett 1968, 1970). Its effectiveness, however, is reduced to some extent by its natural enemies, predators, and parasites (Bennett and Zwölfer 1968). The scelionid egg parasite described below is known only from Trinidad but it may be well represented over the major part of the South American continent where its acridid host has a very wide range of distribution.

Thanks are expressed to Dr. Bouček for allowing me to describe this very interesting parasitic wasp, and to Mrs. S. J. Bolte of this Institute for making the illustrations.

***Tanaoscelio* n. gen.**

FEMALE, MALE. Head semiglobose, slightly transverse, almost as wide as mesosoma across tegulae; frons not protruded and without distinct depression; vertex goes bluntly over into occiput; preoccipital ridge sharp, running up from base of mandibles and disappearing in median area; eyes very large, bare, outer orbit margined (particularly in its lower half) by carina and row of pits; malar groove not distinct; lateral ocelli distant from eyes by about their diameter; mandibles bidentate; clypeus very small, not angulate and not protruding; maxillary palpi 4-, labial 2-segmented; antenna in female 12-segmented, with semiabrupt 6-segmented club; male antenna 10-segmented, with fifth segment modified.

Mesosoma about as high as wide; anterolateral corners of prothorax sharp and prominent, epomia well developed; sides of prothorax well developed and visible from above; mesoscutum anteriorly without specialized area; notaulices percurrent; scutellum in front with about five short keels (septa) forming a chain of pits (lacunae), posterolateral corners armed with pointed spikes, these partly obscured by dense semidecumbent hairs covering dorsal part of scutellum; hind margin of scutellum without rim, almost cut off, with minute point at meson, also obscured by dense pilosity; metanotum narrow, slightly humped at meson; propodeum rather flattened, posterolateral corners square, separated from posteromedian margin by deep cleavage; wings slightly surpassing third metasomatic segment, hairy, marginal cilia short, yet quite distinct; venation very much like that of some *Scelio* spp., submarginal vein almost attaining middle of wing length, straight, marginalis point-like, not reaching front margin of wing, stigmalis moderately long, not knobbed apically, postmarginalis almost wanting except for an inconspicuous offshoot directed from marginalis towards front margin; dark pigmented "stigma" obscures marginalis and most of stigmalis; other veins, notably basalis and medialis, entirely wanting; hind wing without submarginal vein but with heavily sclerotized short stem basally; legs showing no peculiarities, moderately long, hind metatarsus almost as long as following four segments together; tarsi 5-segmented; tibial spur formula 1-1-1.

Metasoma in both sexes remarkably elongate, twice as long as head and mesosoma together, approximately 6 times as long as wide, segment 2 as long as wide or slightly longer, following segments much longer than wide; 6 visible tergites in female, seventh tergite reduced

to minute subhyaline plate attached to ovipositor and mostly retracted within sixth segment, sensory bristles of seventh tergite very short, almost inconspicuous; 7 visible tergites in male but last two (i.e. 7th + 8th) apparently fused; tergites 1-3 with distinct dorsolateral carinae; first tergite in female without hump, all segments with distinct submarginal ridge in both sexes.

TYPE-SPECIES: *Tanaoscelio cornopis* n. sp. (♀ ♂) — described below.

This peculiar new genus is apparently related to *Scelio* Latreille and a few allied genera which are characterized by sexual disparity in antennal segments (females 12, males 10 segments) and wing venation showing the so-called stigma in fore wing and no submarginal vein in hind wing. The palpal formula, shape of prothorax and propodeum, strongly support this relationship. The armed scutellum, however, will place *Tanaoscelio* into one group of genera (cf. Kieffer, 1926: 265, 266) and the elongate metasoma with dorsolateral carinae into another group headed by *Chromoteleia* Ashmead. Superficial resemblance due to the armed scutellum and elongate metasoma is considered to be a convergence or parallelism rather than a relationship.

From *Scelio* the new genus can be easily distinguished by the remarkably elongate metasoma, with segments 3-6 clearly longer than wide, and by the scutellum which is armed posterolaterally with spikes. The new genus differs distinctly from *Heptascelio* Kieffer and *Pseudoheptascelio* Szabó by the elongate metasomatic segments 3-6; it differs from *Heptascelio* by the 10-segmented antenna in the male (12-segmented in *Heptascelio lugens* Kieffer, the type /male!/ of which was studied recently in USNM, Washington) and from *Pseudoheptascelio* by the thick pseudo-stigma in the fore wing as well as the absence of the submarginal vein in the hind wing. The shape of the scutellum and the metasoma will distinguish *Tanaoscelio* from *Oreiscelio* Kieffer. Other genera of Scelioninae with modified scutellum (cf. Masner, 1968) are not related to *Tanaoscelio*.

***Tanaoscelio cornopis* n. sp.**

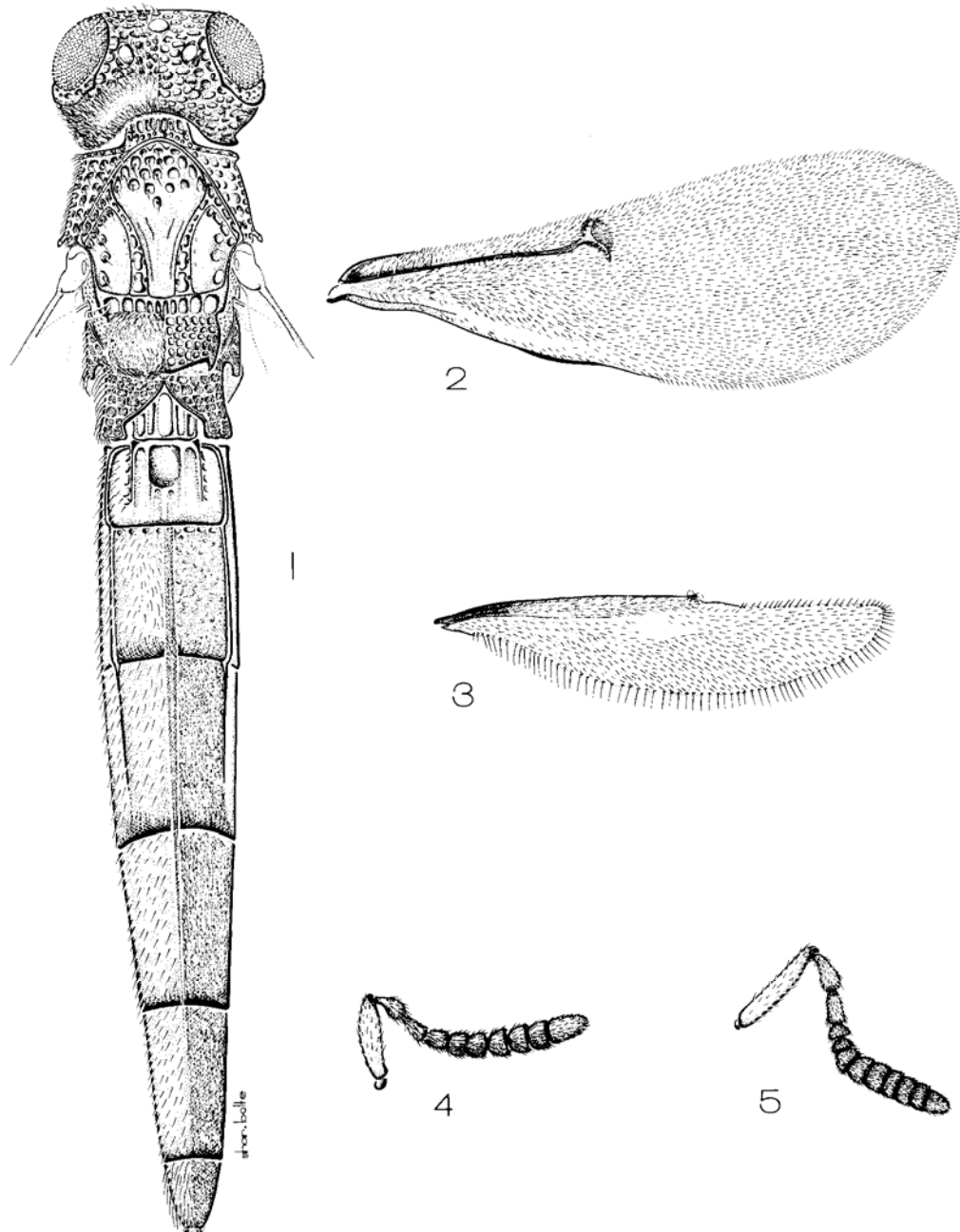
FEMALE (holotype, British Museum Natural History, London); Trinidad, W.I., Debé, May 1970; ex eggs of *Cornops longicorne*, C.I.E., A 4-134; well preserved on a card.

Length, 4.9 mm. Black; mandibles, palpi, scape, and four following segments and tegulae golden-yellow; legs predominantly golden-yellow, femora infuscate medially, coxae predominantly dark brown, lighter at apices; fore wing almost clear but rather heavily infuscate basally.

Head slightly transverse (21:31), rugulose punctate, covered with decumbent or semi-decumbent silvery hairs; frons with little smooth, bare, unmarginated depression above antennal insertion, area above depression up to median ocellus with large punctures; space within ocellar triangle irregularly rugulose without punctures, pilosity more dense, hairs less decumbent; vertex and upper part of temples with sculpturing similar to ocellar region; cheeks with large and deep punctures, these missing on small area adjacent to base of mandibles; pre-occipital ridge bordered with chain of pits; antenna as in Fig. 4.

Dorsal part of prothorax with rough rugae, sides with finer and irregular rugulosity, mostly obscured by dense and silvery hairs, particularly around anterolateral corners (shoulders); mesoscutum anteriorly with two abbreviated parallel keels, with rather deep punctures and dense pilosity on anterior half, almost bare and highly shining on posterior half; median lobe with some longitudinal elements on lower half but almost completely smooth in front of scutellum; scapulae with few punctures and hairs anteriorly, smooth and polished on posterior half; mesopleura with fine rugulose sculpture, with large oblique depression to contain middle femur; scutellum transverse, irregularly rugoso-punctate, covered with very dense semi-decumbent silvery hairs dorsally; propodeum with irregular rugulosity dorsolaterally, with median triangular area flanked by fine carinae running from posterior corners of propodeum towards metanotal tubercle.

First tergite transverse (12:21), with distinct lateral carinae, with 7 or 8 longitudinal percurrent costae at meson; second tergite as long as wide (22:22), with sharp lateral carinae



FIGS. 1-4. *Tanaoscelio cornopis* n. gen. and n. sp. ♀, holotype: 1, pilosity omitted on right half of the body to show sculpture; 2, forewing; 3, hind wing; 4, antenna.
 FIG. 5. *Tanaoscelio cornopis* n. gen. and n. sp. ♂, allotype: antenna.

and fine central carina, otherwise net-like reticulate; tergite 3 elongate (28:22), with similar sculpture as tergite 2 yet generally finer, lateral carinae less prominent, central carina delicate; tergite 4 elongate (28:18) with fine net-like sculpture, polygonal cells somewhat elongate, central carina very faintly indicated, lateral carinae virtually absent; tergite 5 elongate (24:13), finely punctate-aciculate, without carinae; tergite 6 almost triangular, slightly elongate (11:9), with scattered fine punctures; ovipositor not exerted.

MALE (allotype, British Museum Natural History, London), same data as for holotype.

Essentially like female except for the antenna (Fig. 5) which is almost uniformly yellowish brown and the eighth tergite posterolaterally with 2 tiny teeth.

Paratypes: 6 ♀ ♀ + 1 ♂ (British Museum Natural History, London, and Entomology Research Institute, Ottawa, No. 12679), same data as for holotype; 2 ♀ ♀ (Entomology Research Institute, Ottawa), St. Augustine, Trinidad, W.I., VI. 1970, E. J. Rankin 394, C.I.E. A 4834, ex crops of *Cornops longicorne* in stem of *E. crassipes*; 2 ♀ ♀ + 2 ♂ ♂ (Entomology Research Institute, Ottawa and C.I.B.C. West Indian Station, Curcpe, Trinidad), Trinidad, W.I., May 1968, F. D. Bennett, ex eggs of *Cornops longicorne* in *Eichhornia crassipes*.

BIOLOGY. The females oviposit in the host eggs which are in chambers within the leaf petiole above the water level. There are no particular morphological adaptations which would indicate that *Tanaoscelio cornopis* is phoretic or aquatic in habits.

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