

A new *Canthyloscelis* from New Zealand (Diptera, Canthyloscelidae)¹

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Abstract

There is a single female specimen of *Canthyloscelis* collected in New Zealand and deposited in the Bishop Museum. This specimen is peculiar having the antenna distinctly shorter than head and thorax together and is named as *brevicornis*, new to science.

INTRODUCTION

The latest revision of Canthyloscelidae (=Corynoscelidae, Hyperoscelidae) was given by HUTSON (1977). This family has been composed of the following 2 genera and 8 species.

Genus *Hyperoscelis* HARDY and NAGATOMI, 1960 (= *Corynoscelis* BOHEMAN, 1858): *eximia* BOHEMAN, 1858 (= *insignis* HARDY and NAGATOMI, 1960) (from Sweden, Czechoslovakia, Siberia and Japan); *veternosa* MAMAIEV and KRIVOSHEINA, 1969 (from Finland, Rumania and Ukraine).

Genus *Canthyloscelis* EDWARDS, 1922: subgenus *Araucoscelis* EDWARDS, 1922: *pectinata* EDWARDS, 1930 and *pictipennis* EDWARDS, 1930 (= *apicata* EDWARDS, 1934; *valdiviana* TOLLET, 1959) (from South Chile and Patagonia); subgenus *Canthyloscelis* EDWARDS, 1922: *antennata* EDWARDS, 1922, *balaena* HUTSON, 1977, *claripennis* EDWARDS, 1922 and *nigricoxa* EDWARDS, 1922 (from New Zealand).

NAGATOMI and SAIGUSA (in prep.) redescribe 2 Japanese species of *Hyperoscelis*, illustrate their male genitalia, revive *insignis* as a subspecies of *eximia* and record *veternosa* from Japan (Hokkaido).

This paper adds a new *Canthyloscelis* species from New Zealand, although any known species of *Canthyloscelis* have not been examined and their identity has been acquired through the literature (EDWARDS, 1922, 1930; HUTSON, 1977).

GEOGRAPHICAL DISTRIBUTION OF CANTHYLOSCELIDAE

The family Canthyloscelidae is distributed as follows: Genus *Hyperoscelis*: Europe (Sweden, Finland, Czechoslovakia, Rumania and Ukraine), Siberia and Japan (Hokkaido, Honshu, Shikoku and Kyushu) (2 species and 1 subspecies).

1. Partial results of a field work by the B. P. Bishop Museum, Honolulu.

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Genus *Canthyloscelis*: subgenus *Araucoscelis*: South Chile and Patagonia (2 species); subgenus *Canthyloscelis*: New Zealand (5 species).

It may be difficult to consider that the Canthyloscelidae arose at a time when the six continents were isolated. It is possible that this family goes back in origin to the time of the continent Pangaea or of Laurasia and Gondwana. It seems that this family is a relict among the Diptera and had become extinct in many places on earth as had done several groups of the lower Brachycera discussed by NAGATOMI (1982).

DESCRIPTIVE NOTES

Genus *Canthyloscelis* EDWARDS

Canthyloscelis EDWARDS, 1922, Ann. Mag. nat. Hist., 9: 268. Type-species: *Canthyloscelis antennata* EDWARDS, 1922 from New Zealand (by original designation).

Canthyloscelis (s. lat.) differs from *Hyperoscelis* in having the following characters: "claw thickened basally and with several teeth; base of vein M_2 absent and not connected with vein M_1 ; antenna not shorter than thorax [usually as long as or longer than head and thorax together] and basal joint of antennal flagellum longer than wide" (NAGATOMI and SAIGUSA, in prep.) In *Hyperoscelis*, claw simple; vein M_2 complete and connected with vein M_1 ; antenna distinctly shorter than thorax and basal joint of antennal flagellum not longer than wide.

Canthyloscelis is divided into 2 subgenera, *Canthyloscelis* (s. str.) (5 species from New Zealand) and *C. (Araucoscelis)* (2 species from South Chile and Patagonia).

In *Canthyloscelis* (s. str.), two ocelli present (median ocellus absent), cheek well developed below eye, vein R_{4+5} usual and slender, vein M_{3+4} arising from anal cell, vein 1A shorter than in *C. (Araucoscelis)*, and some of male abdominal segments reduced. In *C. (Araucoscelis)*, three ocelli present (small median ocellus present), cheek not developed below eye, vein R_{4+5} thickened, vein M_{3+4} arising from basal cell, vein 1A longer than in *Canthyloscelis* (s. str.), and male abdominal segment not reduced (except segment 7).

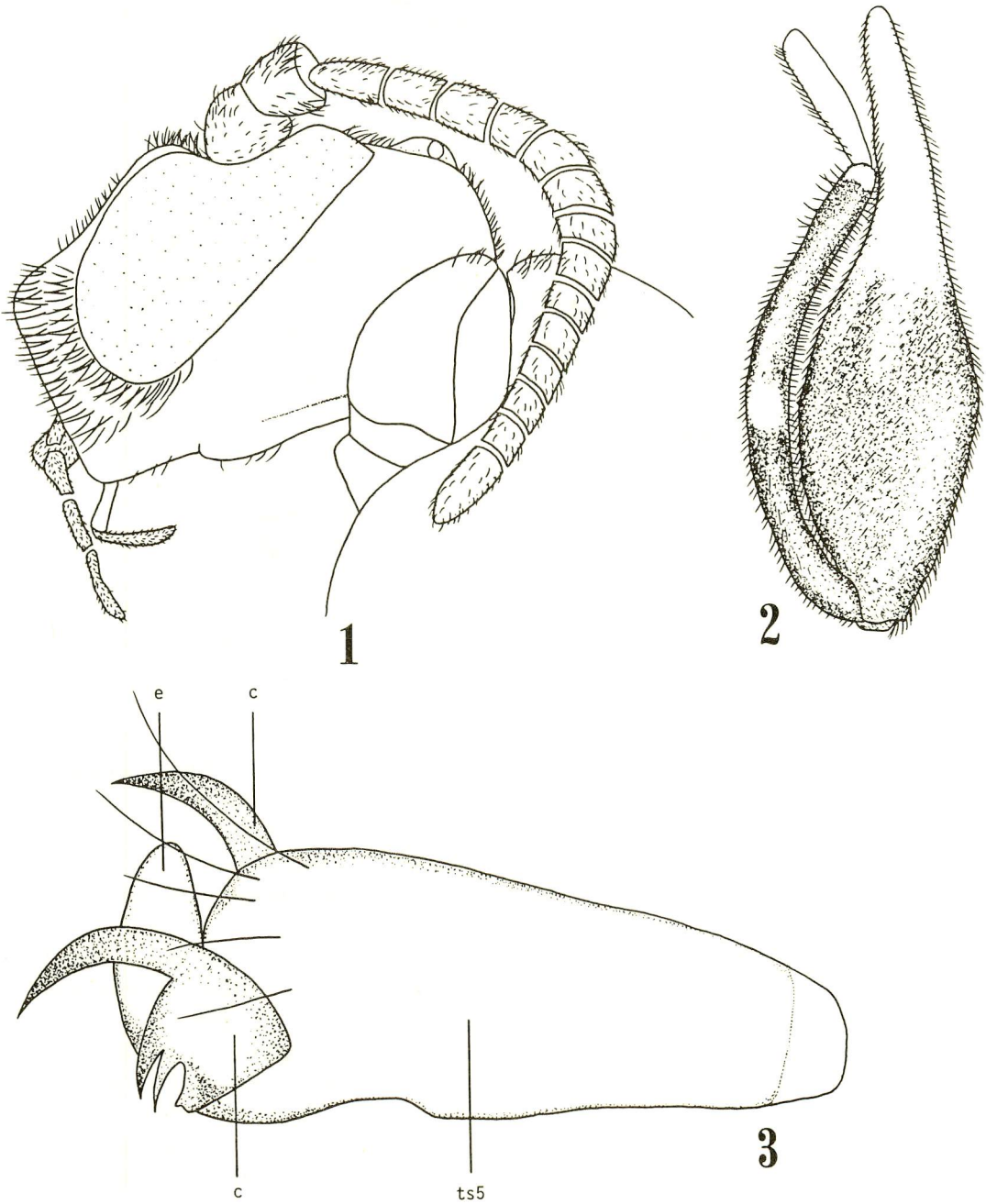
In 5 known species of *Canthyloscelis* (s. str.), antennal flagellum (in both sexes) neither pectinate nor serrate. In *C. (Araucoscelis) pectinata* (only in male), flagellar joints 1-9 pectinate but in *C. (A.) pictipennis* (male) flagellar joints "slightly serrate."

Besides the distinguishing characters between *Canthyloscelis* and *Hyperoscelis* mentioned above, *C. brevicornis* differs from the generic diagnosis of *Hyperoscelis* given by NAGATOMI and SAIGUSA (in prep.) (based on *eximia insignis* and *veternosa*) in the following points: Head: face except lower part does not protrude beyond eye margin; median ocellus absent and ocellar tubercle widely separated from eye; middle occiput viewed from the side shorter than minor axis of eye.

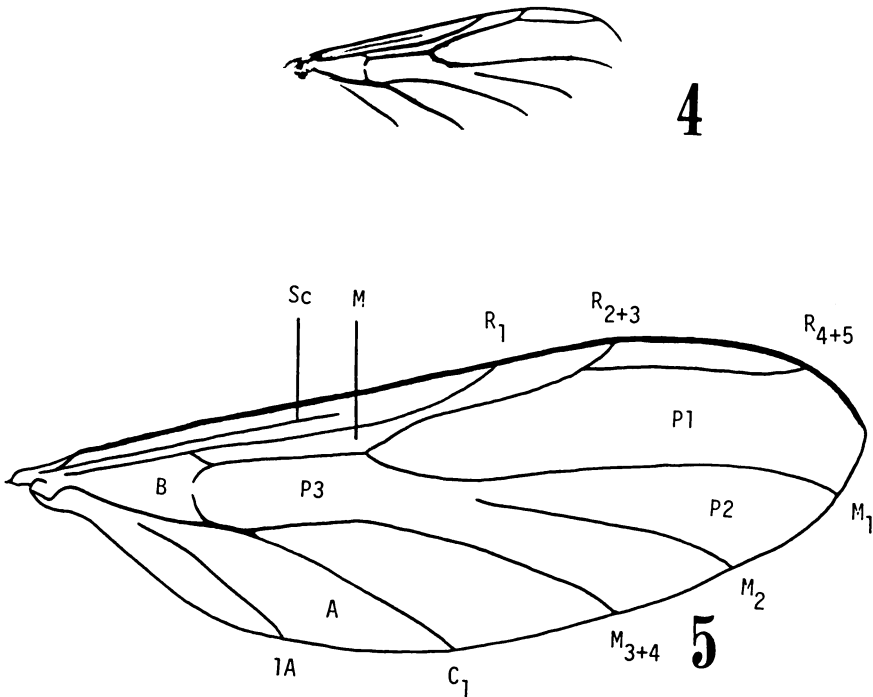
Wing: costa ending at wing tip; subcosta longer than in *Hyperoscelis* species; vein 1A arising nearly from the middle of posterior vein of basal cell.

Legs: hind tibia curved all over (ventral surface concave); mid tibia (probably as well as fore tibia) without terminal spur.

Abdomen: tapering posteriorly and not flattened dorso-ventrally.



Figs. 1-3. *Canthyloscelis brevicornis*, female. 1: head (including anterior part of thorax), lateral view; 2: hind femur, tibia and basitarsus, anterior view; 3: hind tarsal segment 5, dorso-lateral view (c: claw; e: empodium; ts5: tarsal segment 5).



Figs. 4-5. *Canthyloscelis brevicornis*, female wing (A: anal cell; B: basal cell; M: marginal cell; P1, P2, P3: 1st, 2nd, 3rd posterior cell respectively).

Canthyloscelis (Canthyloscelis) brevicornis NAGATOMI, new species

(Figs. 1-5)

This species (female) is peculiar having the antenna not longer than thorax and the eyes touching above antenna.

It must be noted that the females of *balaena* and *nigricoxa* are unknown. In *balaena* (male) "Eyes narrowly separated above antennae" and "Hind basitarsus more than twice length of second tarsal segment", while in *nigricoxa* (male) "Eyes almost touching above antennae" and "Hind basitarsus about equal in length to second tarsal segment" (after HUTSON, 1977) In *brevicornis* (female), hind tarsal segment 1 nearly twice as long as segment 2.

It is highly probable in the male of *brevicornis* that the antenna is distinctly shorter than the head and thorax together and the eyes are connected with each other above antenna.

Head (Fig. 1): yellowish brown, but ocellar tubercle blackened and antenna especially flagellum darkened; head including eyes and appendages covered with short yellowish brown pile; head (including lower protruded part of face) 1.5 times as long as wide from a direct frontal view; head 0.6 times as long as its height and 1.7 times as long as minor axis of eye from a lateral view; face at narrowest point 0.1 times as wide as

face just below antenna and 0.09 times as wide as one eye; total length of antenna 1.3 times length of mesonotum; in antennal flagellum, basal joint 1.2 times as long as wide and last joint 1.8 times as long as wide; last joint of palpus 4 times as long as wide.

Thorax: yellowish brown; mesonotum without darker stripes; pleura except upper part may be darkened; thorax covered with short yellowish brown pile which is absent on sterno- and hypo- (except anterior parts), ptero-, metapleura, and postscutellum; halter yellowish brown.

Wing (Figs. 4-5): membrane may be tinged with brown and may have a darker subapical band in 1st and 2nd posterior cells (from middle of vein R_{4+5} to apex of vein M_2): this band is faint at least in the specimen on hand and may easily be overlooked; wing above and below covered with microtrichia which is absent on costal and subcostal cells (except apical portion) and basal cell (except along median longitudinal line); wing margin between R_1 and R_{2+3} 3.5 times as long as vein R_{2+3} ; basal section of R_{2-5} (vein between M and P1) 1.2 times as long as vein R_{4+5} ; 2nd section of $R_{2-5} + M_{1-2}$ (vein between M and P3) 0.8 times as long as vein R_{4+5} .

Legs (fore legs except coxae lacking) (Figs. 2-3): yellowish brown; apical about half of hind femur darkened; hind tibia may be darkened but may have a yellowish brown middle part; swollen part of hind femur with several minute teeth along ventral margin; legs short yellowish brown pilose; hind tarsal claw with 3 (or possibly 4) teeth; relative length of segments (excluding coxa and trochanter) of fore leg?, of mid leg 102-100-43-17-13-9-15, of hind leg 178-143-39-22-17-11-15 and in hind leg viewed from the side relative width of femur, tibia, and tarsal segments 1-3, 54-15-9-7-7 (tarsal segment 1, 0.2, segment 2, 0.3, segment 3, 0.4 times as wide as long).

Abdomen: dark brown; above and below clothed with yellowish brown pile.

Length: body 4.0 mm; wing 5.3; mid tibia 1.2.

Male. Unknown.

Distribution. New Zealand.

Holotype: female, 19.2 km NW Moana, Westland, 12. iii. 1960, C. W. O'BRIEN, deposited in Bishop Museum, Honolulu.

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