

A New Genus and Three New Species of Trichoptera

By K. A. J. WISE

Plant Diseases Division,
Department of Scientific and Industrial Research, Auckland*

ABSTRACT

A new genus is erected for two *Pycnocentrodes* species (Family Sericostomatidae). One new species of *Hydropsyche* (Family Hydropsychidae) and two of *Polyplectropus* (Family Polycentropodidae) are described and a new synonymy in the latter genus is recorded.

INTRODUCTION

The purpose of this paper is to record one new genus, three new species, and one new synonymy.

The description of a new genus is given here to establish the name for use elsewhere. The two species placed in this genus are to be re-described in a future paper.

Two new species are described from specimens discovered amongst material collected in a light trap operated in the vicinity of Titirangi, near Auckland, in the Waitakere Ranges by Mr. C. R. Thomas. Another new species was collected in the Auckland environs by the author.

Mr. D. E. Kimmins, British Museum (Natural History), London, England, and Mr. A. G. McFarlane, of Christchurch, have kindly compared specimens and assisted with information.

FAMILY SERICOSTOMATIDAE

The two species, known as *Pycnocentrodes hamiltoni* Tillyard, 1924, (1924) and *P. olingoides* Tillyard, 1924, are not congeneric with other species of *Pycnocentrodes* Tillyard, 1924. A new genus, erected for these two species, is therefore described from specimens, including types, in the Cawthron Institute collection.

Confluens n.gen.

Ocelli absent; ♂ frons with a small hole on each side. Maxillary palpi, ♂, membranous, apparently two-jointed with transverse suture, as in *Pycnocentrodes*, but appearing as one in internal view; no brush of hairs from base. Wings, ♂ (fig. 1); anterior with a callosity at base, discoidal cell exceedingly narrow and long but abnormal apically, R_{2+3} and R_{4+5} rejoin to form a single stem from which apical forks 1 and 2 both arise, apical forks 1, 2, 3 and 5 present; posterior with R_{2+3} missing or only apical remnant present (as figured), discoidal cell open above, discoidal cross-vein and apical forks 1, 2 and 5 present. Wings, ♀, anterior as *Pycnocentrodes*, discoidal cell normal, apical forks 1, 2, 3 and 5 present; posterior as *Pycnocentria*, short discoidal cell present. Spurs 2. 2. 4.

Type species, *Pycnocentrodes hamiltoni* Tillyard, 1924.

The fusion of R_{2+3} and R_{4+5} beyond the discoidal cell distinguishes this genus from *Pycnocentrodes* and *Pycnocentria*. The two branches of

*Present address: C/o Canterbury Museum, Christchurch.

R_s are very close in the basal portion of the discoidal cell and often fold together giving the appearance of a much shorter cell.

Material examined: *Pycnocentrodes hamiltoni* Till., ♂ holotype, ♀ allotype, 2 ♂♂, 1 ♀, all collected at the type locality, Tokaanu, on the same day.

Pycnocentrodes olingoides Till., ♂ holotype, ♀ allotype, collected at Gouland Downs; 2 ♂♂ collected at Nelson.

FAMILY HYDROPSYCHIDAE

Hydropsyche thomasi n.sp.

A species close to *H. fimbriata* McL. but smaller.

Anterior wing with pale irrorations giving a unicolorous ochreous effect in general view. Without the heavier irrorations and yellow patch on terminal setae of *H. fimbriata* McL.

Length of anterior wing, ♂♂, 9-10 mm. (Length of anterior wing of 27 *H. fimbriata* ♂♂, taken in the same light trap, 10.5-12 mm.).

Genitalia, ♂ (fig. 2). Usual elevation of the dorsal surface of the ninth segment is inconspicuous. Dorsal plate, from the side, with upper angle a rounded protuberance with marginal setae, lower angle produced obliquely downwards in a long point apically, a short inwardly turned point basal to this not visible in side view. Side pieces of ninth segment moderately produced. Penis with apex divided into an upper and lower portion, the upper portion divided by a vertical slit into two rounded lateral pieces. The lower portion of the apex, from beneath, is seen as a wide plate with strongly spinose distal margin, lateral angles not produced basally. Inferior appendages two-jointed, approximately equal in length. The apical joint is narrowed beyond half-way both dorsally and ventrally (less so laterally) resulting in a long apical finger.

Holotype ♂. Auckland: Titirangi, ex light trap 2.II.1953, (*C. R. Thomas*).

Paratypes (all ♂♂). Auckland: Titirangi, ex light trap, 10.XII.1952, 3 spec.; 17.XII.1952, 1 spec.; —.XII. 1952, 1 spec.; —.I. 1953, 7 spec.; 2.II.1953, 1 spec.; 6.II.1953, 2 spec.; 17.II.1953, 2 spec.; —.II.1953, 4 spec.; 9.XII.1953, 1 spec. in alcohol; 10.XII.1953, 1 spec. in alcohol; 12.X.1955, 1 spec.; (*C. R. Thomas*).

Other specimens. Auckland: Titirangi, ex light trap, 6.II.1953, 1 ♂ (*C. R. Thomas*).

All specimens are in the Plant Diseases Division collection except specimens lodged as follows: Auckland Museum, 2 ♂ paratypes; Canterbury Museum, 2 ♂ paratypes; British Museum (Natural History), London, England, 2 ♂ paratypes.

FAMILY POLYCENTROPODIDAE

Polyplectropus puerilis (McLachlan)

1868 *Polycentropus puerilis* McLachlan, *Linn. Soc. Lond. Zool.*, **10**: 204, 213.

1958 *Polyplectropus penicillus* Wise, *Rec. Auck. Inst. Mus.*, **5 (1&2)**: 57. n. syn.

Polyplectropus penicillus was described from specimens in the Auckland Museum collection.

Mr. D. E. Kimmins, British Museum (Natural History) has compared specimens, sent by the author, with specimens of *P. puerilis*

and has advised that they are con-specific. It should be noted that the description and figure of the male genitalia in Mosley and Kimmins (1953) apply to the expanded penis and in Wise (1958) apply to the relaxed penis.

***Polyplectropus waitakerensis* n.sp.**

A species darker than *P. puerilis* McL. Anterior wings dark chocolate brown with creamy yellow markings.

Length of anterior wing. ♂, 8-9 mm., ♀, 9-11 mm.

Genitalia, ♂ (fig. 3). Ninth segment membranous above, not produced in a dorsal plate. Two short inner processes of upper penis cover are widest at the obliquely truncate apex, in lateral view. Outer process with a broad lateral portion and with a long narrow spine arising above. Spine turned inward and downward near base with a bend before apex which is turned up almost horizontally. Penis from above with short apical slit forming two dorsal lobes, a single ventral lobe with rounded apex level with apices of dorsal lobes. Inferior appendage short, broad, obliquely truncate at apex, with strong dorsal concavity and definite dorsal apical angle. On upper surface, inner basal angle with two short darkened protuberances close together.

Holotype ♂. Auckland: Titirangi, ex light trap, 10.XII.1952 (*C. R. Thomas*).

Paratypes. Auckland: Titirangi, ex light trap, 2.XII.1952, 1 ♂; 4.XII.1952, 1 ♂; 5.XII.1952, 2 ♂♂, 2 ♂♂ in alcohol; 10.XII.1952, 1 ♂; 20.XII.1952, 1 ♂ 1 ♀; —.XII.1952, 1 ♀; 15.VI.1953, 1 ♂; —.VIII.1953, 1 ♀; 11.X.1955, 2 ♀♀, (*C. R. Thomas*).

Other specimens. Auckland: Titirangi, ex light trap, 15-24.XII.1952, 5 ♂♂, 2 ♀♀ in alcohol (*C. R. Thomas*).

All specimens are in the Plant Diseases Division collection except specimens lodged as follows: Auckland Museum, 1 ♂ 1 ♀ paratypes; Canterbury Museum, 1 ♂ 1 ♀ paratypes; British Museum (Natural History), 1 ♂ 1 ♀ paratypes.

***Polyplectropus impluvii* n.sp.**

A small species. Anterior wings medium brown, unicolorous except for a few faint, pale marginal spots about apex.

Length of anterior wing. ♂, 7-7.5 mm., ♀, 8.5-9 mm.

Genitalia, ♂ (fig. 4). Ninth segment membranous above, not produced in a dorsal plate. Upper penis cover without inner dorsal processes. Outer process with a broad lateral portion, a long narrow spine arising above. In dorsal view spine appears to be slightly angled near base with a short setose inner projection at the angle. Penis with dorsal and ventral apical lobes truncate and with rounded lateral lobes. Inferior appendages moderately long, reduced before half way, thence slightly tapering, apex rounded. Dorsal basal area clear, almost transparent. On upper surfaces inner basal area with two quadrate plates.

Holotype ♂. Auckland: Mangere ex domestic water tank, 10.IX.1950, (*K. A. J. Wise*).

Paratypes. Auckland: Mangere, ex domestic water tank, 10.IX.1950, 3 ♀♀; 21.IV.1951, 1 ♂; Mangere, at light, 6.II.1951, 1 ♀; Western Springs, 21.I.1950, 1 ♂, (*K. A. J. Wise*).

Other specimens. Auckland: Mangere, at light, —.III.1951, 1 ♂ ; 28.V.1951, 1 ♀, (*K. A. J. Wise*).

All specimens are in the Plant Diseases Division collection except specimens lodged as follows: Auckland Museum, 1 ♂ 1 ♀ paratypes; British Museum (Natural History), 1 ♂ 1 ♀ paratypes.

REFERENCE

TILLYARD, R. J., 1924. Studies of New Zealand Trichoptera, or Caddis-flies. No. 2. Descriptions of New Genera and Species. *Trans. N.Z. Inst.*, 55: 285-314.

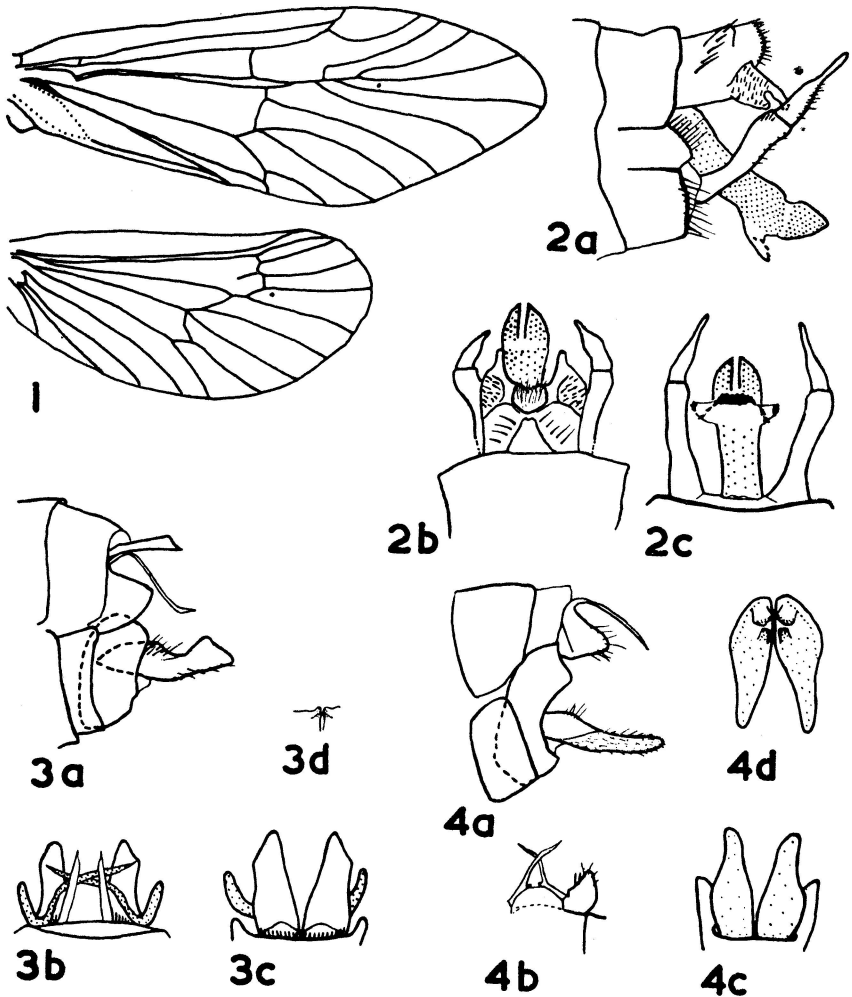


Fig. 1. *Confluens hamiltoni* (Till.). Wings.

Fig. 2. *Hydropsyche thomasi* n.sp. ♂ Genitalia; a, lateral; b, dorsal; c, ventral.

Fig. 3. *Polyplectropus waitakerensis* n.sp. ♂ Genitalia; a, lateral; b, dorsal; c, ventral; d, inner basal areas on upper surface of inferior appendages.

Fig. 4. *Polyplectropus impluvii* n.sp. ♂ Genitalia; a, lateral; b, dorsal (right side damaged, not shown); c, ventral; d, upper surface of inferior appendages.