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## Millipedes from Australia, 6: Australiosomatini from Victoria (Diplopoda: Polydesmida: Paradoxosomatidae)

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**ABSTRACT.** Redescriptions of *Hoplatria clavigera* Verhoeff, 1941, and *Hoplatessara pugiona* Verhoeff, 1941. Descriptions of: *Somethus biramus* n.sp., characterized by the length of the tibiotarsal branch of the gonopods, and the small size of the femoral branch, which is reduced to a tiny lappet emanating from near the apex of the seminiferous branch; *Australiosoma laminatum* n.sp., characterized by the laminate expansion of the femoral process of the gonopods; and *Hoplatessara nigrocingulata* n.sp., particularly characterized by the relative length and shape of the femoral process of the gonopods. Two new genera are proposed: *Archicladosoma* and *Isocladosoma*. *Archicladosoma*, type species *A. magnum* n.sp., is of particular interest since it is characterized by what may be regarded as the most ancestral type of gonopods yet recorded in the Australiosomatini, with a distinctly demarcated femoral section, and the tibiotarsus, femoral process and solenomerite unmodified. *Isocladosoma*, type species *I. guttatum* n.sp., has the gonopods split into three branches, all of which emanate almost directly from the prefemur. The genus suggests *Cladethosoma* Chamberlin, 1920, but differs in having the femoral process elongate lanceolate, and in having only a single tibiotarsal branch, which in some species bears an additional spine. A second and third species, *I. pallidulum* n.sp. and *I. maculatum* n.sp., substantiate the characters of the genus. The three species are distinguished mainly by the structure of the tibiotarsus of the gonopods and by their colour pattern.

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Up to now, our information on the occurrence in Victoria of Paradoxosomatidae of the tribe Australiosomatini rested solely on a contribution by Verhoeff (1941), who described three species: *Hoplatessara pugiona* Verhoeff, from Whittlesea, and *Hoplatria clavigera* Verhoeff and *Cladethosoma forceps* (Verhoeff), both from 'Gippsland'.

The present paper, which is a sequel to a previous paper treating the Antichiropodini of Victoria (Jeekel, 1982a), is based primarily on material of the Australiosomatini collected by the author and his wife between 11 and 18 November 1980 in the coastal area of Victoria between Melbourne and the New South Wales border (Jeekel, 1981).

Important additional material was obtained on loan from the American Museum of Natural History, New York. Unfortunately, most of the samples in this collection were lacking data on locality, date and collector, the tubes containing only small labels with collection numbers. However, there can be little doubt that the material was obtained in Victoria by Ch. Barrett, probably somewhere to the east or north-east

of Melbourne. Evidence for this is found in the facts that the collection contained material of *Hoplatria clavigera*, that it contained the type material of *Pogonosternum coniferum* Jeekel, 1965, and other samples of species of *Pogonosternum*, a genus now known to focus in eastern Victoria, and that the collection showed a certain coherence. Although the uncertainty with regard to the provenance of the material is much to be regretted, some species represented are taxonomically so important that it would be unwise to ignore their existence altogether. At least with regard to millipedes, Victoria is one of Australia's most undercollected areas, and under the circumstances all data on the composition of its fauna should be welcomed even when incomplete.

Finally, some incidental samples received on loan from the South Australian Museum, Adelaide, are also included.

The holotypes of the new species *Somethus biramus*, *Isocladosoma guttatum* and *I. pallidulum* will be deposited in the Australian Museum, Sydney.

**Key to the Victorian Genera of the Tribe Australiosomatini  
(Based on Victorian Species only)**

1. Acropodite of gonopods split deeply, almost to the base, into two main branches.  
Pattern of somites essentially transversely banded ..... *Somethus* Chamberlin  
— Acropodite of gonopods deeply split into three or four main branches ..... 2
2. Acropodite consisting of three branches: solenomerite, femoral process and tibiotarsus ..... 3  
— Acropodite consisting of four branches: solenomerite, femoral process and two tibiotarsal processes ..... 6
3. Femoral section of gonopods distinctly demarcated by a constriction. Base of tibiotarsus situated quite distinctly distad of base of femoral process. Somites longitudinally banded ..... *Archicladosoma* n.gen.  
— Femoral section of gonopods indistinct, not demarcated by a constriction. Base of tibiotarsus about at same level as that of femoral process ..... 4
4. Solenomerite with an additional preapical process containing a loop of the spermal channel. Somites almost unicolorous ..... *Australiosoma* Brölemann  
— Solenomerite without preapical process; spermal channel following an essentially straight course towards apex of solenomerite ..... 5
5. Solenomerite exceeding both tibiotarsus and femoral process in length. Acropodite with undivided femoral section ..... *Hoplatria* Verhoeff  
— Femoral process overreaching apices of solenomerite and tibiotarsus. Acropodite without distinct femoral section: divided down to distal end of prefemur ..  
..... *Isocladosoma* n.gen.
6. Solenomerite apically trilobate. Femoral process distally laminate, apically rounded. Tibiotarsus consisting of two solid prongs, having towards their apex a typical undulate structure ..... *Hoplatessara* Verhoeff  
— Solenomerite apically rounded. Femoral process distally laminate, but ending apically in a somewhat recurved uncus. Tibiotarsus consisting of two lanceolate processes ..... *Cladethosoma* Chamberlin

***Archicladosoma* n.gen.**

**Diagnosis.** Medium-sized Australiosomatini with 20 somites and a normal pore formula. Head with vertex transversely flattened in male, evenly convex in female. Antennae of moderate length, weakly clavate, antennomeres mostly subcylindrical, the 6th elongate obconical.

Somites rather weakly constricted. Waist rather narrow, rather weakly longitudinally ribbed. Metatergites smooth, hairless. Transverse furrow present from 5th somite onwards (faintly indicated on 4th), rather well impressed. Pleural keels weakly developed in male, a little more prominent in female, totally absent from 8th somite onwards.

Paranota weakly developed.

Sternites a little longer than wide in male, about as long as wide in female. Sternal cones weakly developed. Sternite of 5th somite with process between anterior legs. Legs rather long. First leg of male a little more incrassate and with ventral femoral tubercle. Tibial and tarsal scapulae present up to legs of 17th somite.

Gonopods with prefemur ovoid, its axis making a wide angle with axis of acropodite. Acropodite with distinctly demarcated femoral section, bearing on its latero-anterior side a long spinelike femoral process. Postfemoral section demarcated from femur by a distinct constriction. Tibiotarsus and solenomerite well developed; tibiotarsus a curved spine, solenomerite a solid process tapering towards apex. Spermal channel running along medioanterior side of acropodite, straight towards apex of solenomerite.

**Type-species.** *Archicladosoma magnum* n.sp.

**Remarks.** The discovery of this genus is of considerable importance to the evaluation of the phylogenetic significance of various gonopod characters in the Australiosomatini. *Archicladosoma* seems to represent a primitive type of gonopods, as is indicated by the fact that the femur is distinctly demarcated distally from the postfemur, and that the base of the femoral process is situated much more proximally than the tibiotarsus. A somewhat similar condition is found only in *Gigantowales* Verhoeff, 1937, in which,

however, the postfemur is strongly reduced and the tibiotarsus consists of two separate elongate spiniform processes. In all other Australiosomatini the tibiotarsus arises from about the same level as the femoral process, or even much closer to the base of the acropodite, in which case solenomerite and femoral process appear to be coalesced over some distance.

It seems obvious that in its gonopods *Archicladosoma* approaches the ancestral type from which the Australiosomatine genera descended. The genus will play an important role in the eventual phylogenetic analysis of the tribe.

The discovery of the genus substantiates the previously observed phenomenon (Jeekal, 1981:46) that within the entire range of the Australiosomatini the Queensland representatives are characterized by having the most derivative types of gonopods, whereas the genera with a more simple gonopod structure are found only in the south-eastern part of the Australian mainland.

*Archicladosoma magnum* n.sp.

**Material.** Australia, without locality (a 6042), ♂ holotype, 1 ♀ paratype (American Museum of Natural History, New York).

**Description.** *Colour:* Head dark castaneous in upper and lateral parts, frontal and clypeal areas paler, yellowish brown. Antennae dark castaneous; antennomeres distally annulate with yellow; 6th and 7th antennomeres particularly infusate but tip whitish. Collum dark castaneous, with a broad median yellowish brown band, scarcely widening caudad. In the posterior half, median band bisected by a faint dark median line. Lateral margin of collum pale brownish. Somites dorsally dark castaneous, prosomites a shade paler, with two rather broad paramedian yellowish bands, in total a little wider than half width of metasomites, separated by a narrow dark median line. Yellow bands almost parallel-sided. Lateral and ventral part of somites, ventrad of upper level of paranota, yellowish brown, darker only along posterior margin of lateral sides. Sternites and legs yellowish brown. Anal somite dorsally yellowish, including entire epiproct, laterally dark castaneous. Paraprocts castaneous, lateral margins paler; hypoproct yellowish brown.

*Width:* ♂ 3.7 mm; ♀: 3.4 mm.

*Head and antennae:* Labrum moderately deeply and rather narrowly emarginate. Clypeus weakly convex, moderately but widely impressed towards labrum; lateral margin about straight, with a rather weak notch near labrum. Headplate rather coarsely rugulose up to middle of frontal area, upper part of frontal area more smooth, rather shiny, with some fine wrinkles. Pubescence rather dense in clypeus to moderate in frontal region; lateral sclerites almost hairless; vertex hairless. Setae of moderate length. Antennal sockets separated by 1.25 times the diameter of a socket or by 0.65 times length of 2nd antennomere. Postantennal groove of moderate depth and width; wall in front moderately prominent. Postantennal bean-

shaped area distinctly demarcated and somewhat inflated. Vertex not demarcated from frons, transversely faintly convex in middle, a little more convex laterally; vertex longitudinally weakly and almost evenly convex. Vertigial sulcus moderately impressed, with fine transverse wrinkles, reaching scarcely below upper level of antennal sockets. Antennae of moderate length, moderately slender, weakly clavate. 2nd to 5th antennomeres subcylindrical, each widening a little distad, 6th elongate obconical. Relative length of antennomeres 2 to 6: 0.90, 1.00, 0.85, 0.85, 0.80. Pubescence moderate in proximal antennomeres, becoming dense in distal ones.

*Collum* (Figs 1,2): As wide as head, subtrapezoidal in dorsal outline. Anterior margin straight in middle, weakly convex more laterally, and straight or scarcely concave towards sides. Posterior margin very weakly and widely emarginate in middle, faintly convex towards sides. Lateral margin rather narrowly and evenly rounded. Surface of collum rather shiny, faintly rugulose, hairless. Surface transversely weakly convex in middle, distinctly more convex towards sides, sides almost perpendicular; longitudinally weakly convex, slightly more so in posterior half. Marginal rim laterally narrow, weakly raised; premarginal furrow fading away towards middle of anterior border.

*Somites:* Constriction rather weak. Waist sharply demarcated from prosomites, rather narrow, dorsally rather weakly longitudinally ribbed, laterodorsally weakly striate down to level of paranota, and faintly striolate below that level. Prosomites dulled by fine cellular structure, dorsally also finely and irregularly wrinkled. Metatergites more shiny, weakly leathery-rugulose, hairless. Transverse furrow distinct on 5th to 17th somites, faintly indicated on 4th. Furrow rather well impressed, without apparent sculpture, disappearing laterally at a distance from dorsal delimitation of paranota equal to about dorsoventral width of a poriferous paranotum. Sides rather finely rugulose, especially underneath paranota; rather densely rugulose-granulose in somites 2 to 4. Pleural keels quite weakly developed. In 2nd to 4th somites a weak swelling dorsally demarcated by a faint furrow; in 5th to 7th somites only a swelling near posterior margin, caudally faintly demarcated.

*Paranota* (Figs 1-4): Second somite scarcely wider than collum, 3rd scarcely narrower than 2nd and about as wide as 4th. Paranota of 2nd somite without angular anterior edge: latero-anterior margin narrowly and evenly rounded, without lateral tooth. Lateral border widely and almost evenly rounded, scarcely diverging caudad. Caudal edge subangular, scarcely produced caudad. Posterior border almost obsolete. Paranota ridgelike, situated on a low level and scarcely visible from above. In lateral aspect straight and sloping a little cephalad. Marginal rim narrow, of even width. Paranota of 3rd and 4th somites with lateral margin widely convex, in 4th somite very weakly convex halfway. Posterior edges bluntly subangular and



**Figs 1-5.** *Archicladosoma magnum* n.gen., n.sp., holotype ♂. 1: left side of head, collum and 2nd to 4th somites, lateral aspect; 2: left side of head, collum and 2nd and 3rd somites, dorsal aspect; 3: left side of 11th and 12th somites, lateral aspect; 4: same, dorsal aspect; 5: right gonopod, medial aspect.

caudally not produced. Posterior margin almost obsolete. Dorsal demarcation in lateral aspect almost straight, premarginal furrow turning rather abruptly upward near waist and at posterior margin of somite, paralleling it shortly. Paranota of 5th and subsequent somites weakly developed; lateral margins of poreless and poriferous paranota widely convex. Posterior edge subangular, narrowly rounded and caudally not produced. In 14th to 17th somites the caudal edge becomes a little more angular and faintly produced caudad, but not projecting behind margin of somites. Posterior border almost obsolete. In lateral aspect the upper margin of the paranota is straight or faintly concave in poreless somites, slightly convex in poriferous ones. Dorsal furrow anteriorly not reaching waist, posteriorly ending near caudal margin of somite, paralleling margin quite shortly. Paranota ventrally demarcated by a depression in posterior two-fifths of their length. Ventral demarcation converging convexly with dorsal demarcation, meeting it in an acute angle. Pores in a rather small oval pit, situated about halfway in between dorsal and ventral demarcations. Dorsoventral width of paranota moderate, the poreless about two thirds of width of the poriferous ones.

*Sternites and legs:* Sternites of middle somites a little longer than wide (ratio 1.15:1.00). Cross-impressions moderately developed; longitudinal impression rather wide, transverse more furrowlike. Sternal cones present on postgonopodial somites up to the 16th, weakly developed at posterior side of caudal coxae of each somite: a low rounded cone directed caudad and a little ventrad. Near anterior coxae of each somite the cones are only indicated. Pubescence of sternites rather dense, especially near margins of coxal sockets; setae of moderate length. Sternite of 4th somite rather broad, transversely rather widely concave; pubescence rather dense, setae longish. Sternite of 5th somite with a short and broad process between anterior coxae, about half as wide as long, and a little broader than distance between coxae. Anterior surface in profile faintly convex, process directed a little caudad and not projecting in front of sternite. Posterior margin widely concave. Sides of process very short, diverging distad. Apex very broadly triangular, its anterior side with transverse brush of short setae. Pubescence on caudal surface rather dense, setae longish. Behind process a faint transverse impression. Posterior half of sternite flattened, without median impression, sloping in caudal direction; pubescence moderate, with longish setae. Sternite of 6th somite flattened and not raised above level of metasomal ring, except a little quite near coxal sockets. Coxal sockets widely separated. No longitudinal or transverse impressions. Pubescence moderate to rather sparse, setae longish. Sternite of 7th somite without apparent pregonopodial ridge, caudal margin behind gonopod aperture with some sparse setae. Sternite of 8th somite scarcely modified, longitudinal impression wider than normal, anterior coxae a little more widely separated than posterior. Legs longish, moderately stout. Femora scarcely arched. Prefemora,

especially in anterior part of body, incrassate and dorsally rather strongly convex. First pair of legs not much thicker than the following, femur with the usual strongly-developed ventral tubercle. Coxae of 2nd pair slightly medially produced. Coxae of legs of 6th somite not particularly elongate, but those of anterior pair medially with a short rounded cone. Relative length of podomeres 2 to 6 in legs of middle part of body: 0.65, 1.00, 0.60, 0.60, 0.70. Ventral pubescence on all podomeres rather dense, with setae of moderate length. Dorsal pubescence apparent only on tibiae and tarsi. Scopulae present on all legs except last two pairs.

*Anal somite:* Dorsal profile straight or faintly convex. Epiproct longish, moderately thick and moderately wide. Sides weakly concave, converging moderately strongly, a preapical narrowing not conspicuous. Apex rather narrowly truncate, weakly emarginate. Setae not on tubercles. Paraprocts with moderately wide and rather low rims. Setae not on tubercles. Hypoproct broad, triangular to ogival, with sides weakly rounded, and apex more strongly rounded. Setae not on tubercles.

*Gonopods* (Fig. 5): Coxa of moderate size, tapering slightly towards apex. Prefemur elongate-ovoid, its distal lateral demarcation almost transverse on axis of telopodite. Femoral section short, distally demarcated by a distinct constriction. Femoral process strongly developed, arising from latero-anterior side of femur, gradually tapering towards end. Postfemoral section relatively strongly developed, protruding at base somewhat in medio-caudal direction. Tibiotarsus a simple, slightly curved lanceolate process, tapering towards apex. Solenomerite strongly developed, its apex acuminate. Spermial channel running along medio-anterior side of telopodite.

*Female:* Antennae separated by 1.3 times diameter of a socket or by 0.65 times length of 2nd antennomere. Vertex transversely evenly convex, longitudinally rather convex. Relative length of antennomeres 2 to 6: 0.90, 1.00, 0.90, 0.90, 0.80. Collum transversely almost evenly convex, in the middle faintly flattened. Somites with pleural keels in 4th somite more prominent than in male; dorsal furrow quite concave and anteriorly prolonged in dorsal direction. Sternites about as long as wide. Cross-impressions weakly developed, no sternal cones. Pubescence rather sparse, setae of moderate length. Legs much more slender than in male. Pubescence sparse in proximal podomeres, to moderate in distal ones. Relative length of podomeres 2 to 6 in middle part of body: 0.60, 1.00, 0.45, 0.45, 0.85. Coxae of 2nd leg not medio-distally produced; at posterior side a quite low bluntly conical process pointing in a slightly medial direction. Ventral side of 3rd somite without particular sculpture; anteriorly with a very weak, blunt median cone, pointing cephalad, separating two quite wide paramedian emarginations; lateral edge of emarginations not produced cephalad.

**Remarks.** Material of this or a closely related species was collected at Sta. 93, Ferntree Gully Nat.

Park, 18 km ENE Dandenong, 18.xi.1980 (along nature track in temperate rainforest with tree-ferns, under logs and litter and in rotting trees), leg. C.A.W. Jeekel & A.M. Jeekel, 2 ♀.

The colour of these specimens is brighter than of the type specimens, obviously due to their more recent preservation. Head dark, almost blackish brown, somewhat paler in clypeal and labral areas. A paler spot at posterior side of antennal sockets. Antennae brown, with intersegmental membranes brownish; distal half of 5th, 6th and 7th antennomeres infusate; tip whitish. Collum blackish brown, with a median yellowish band, widening slightly in caudal direction and about half width of collum at posterior margin. Lateral margin of collum narrowly yellowish. Somites also blackish brown; median yellowish band a little wider than half the width of the metasomites, faintly constricted at waist. Poreless paranota entirely, poriferous paranota in their posterior half yellowish. Sides brown, fading to pale brown towards venter. Venter, sternites and three proximal podomeres yellowish brown; three distal podomeres infusate, tip of tarsi pale. Median band medially bisected by a dark stripe which is not pigmented brown but owes its colour to translucency in the absence of pigment. Anal somite with epiproct and the part in front of it entirely yellowish; rest blackish brown, fading to pale brown. Paraprocts rather dark brown without distinct paler margins; hypoproct pale brownish.

Width 3.3 and 3.5 mm. Morphologically these specimens agree entirely with the female paratype, except that the coxae of the 2nd pair of legs are slightly incrassate, but lack a conical production on their posterior side. Anterior margin of 3rd somite ventrally rather narrowly emarginate, with a distinct but low triangular median tooth produced cephalad.

Since the extent of variation in the epigynal structure of the species is unknown little can be said on the taxonomic status of these two specimens.

### *Hoplatria* Verhoeff

*Hoplatria* Verhoeff, 1941: 13.—Jeekel, 1968:24.

**Remarks.** This monotypic genus is characterized by having the acropodite of the gonopods deeply split into three main branches as in the foregoing genus, but distinct in having the tibiotarsus emanating from about the same level as the femoral process, its base being closer to the base of the acropodite than in *Archicladosoma*. Moreover, a distinct constriction marking the distal end of the femur is lacking.

*Hoplatria* is certainly closely related to *Australiosoma* Brölemann, 1913, as indicated by the position of the femoral process and the tibiotarsus; even the curve of the tibiotarsus suggests the condition seen in *Australiosoma*. It is separated on account of the absence of an additional process of the solenomerite containing a loop of the spermal channel, and furthermore by the

solenomerite's projecting well distad of the femoral process.

Homologization of the gonopod branches by Verhoeff was incorrect: his tibiotarsus is actually the femoral process, the true tibiotarsus was named by him '*Parsolaenomerit*'.

### *Hoplatria clavigera* Verhoeff

*Hoplatria clavigera* Verhoeff, 1941: 13, figs 5, 6.

**Previous record.** Gippsland.

**Material.** Australia, without locality (A 5763, 4595 (b)), 2 ♂ (American Museum of Natural History, New York).

**Description.** *Colour:* Head, including lateral sclerites dark brown, pale brownish around antennal sockets, particularly the bean-shaped area, and in labral area. Antennae also dark brown, without apparent annulation, tips whitish. Collum dark brown, anterior margin paler, lateral margin yellowish. Somites dorsally dark brown, paranota entirely yellowish. Lateral sides, venter and sternites and proximal podomeres pale brown, distal podomeres dark brown. Anal somite and paraprocts dark brown, epiproct dorsally and ventrally yellow and hypoproct yellow. Margins of paraprocts pale brownish. Posterior margin of somites slightly paler.

*Width:* 3.4–3.5 mm.

*Head and antennae:* Labrum rather widely and weakly emarginate. Clypeus rather weakly convex, but strongly impressed towards labrum. Lateral margins widely rounded, with a weak notch near labrum. Surface of headplate rather coarsely punctate and rugulose in clypeal and frontal parts, otherwise smooth and shiny. Pubescence rather dense in clypeal, moderate in frontal region, vertex hairless. Lateral parts sparsely pubescent. Hairs of moderate length to longish. Antennal sockets separated by 1.3 times diameter of a socket or by 0.7 times length of 2nd antennomere. Postantennal groove rather deep, and moderately wide, wall in front rather strongly prominent. Bean-shaped postantennal area distinctly demarcated and a little inflated. Vertex transversely faintly concave in middle, laterally moderately convex, with a faint lateral swelling; longitudinally evenly and widely convex. Sulcus moderately impressed, in particular halfway, reaching downward to upper level of antennal sockets; with some fine transverse wrinkles. Antennae rather long and stoutish, a little clavate; antennomeres 2 to 4 subcylindrical, widening somewhat distad, 5th and 6th more oblong-obconical. Relative length of antennomeres 2 to 6: 0.95, 1.00, 1.00, 0.90, 0.75. Pubescence rather dense in proximal antennomeres to dense in distal ones.

*Collum* (Figs 6–7): Subtrapezoidal in dorsal outline, a little wider than head. Anterior border straight in middle, widely and weakly rounded more laterally, and again straight towards sides. Posterior border widely

and weakly emarginate in middle, straight laterally. Lateral margin evenly and rather widely rounded. Surface of collum shiny, with some fine irregular wrinkles, hairless; transversely faintly convex in middle, more strongly convex towards sides, sides almost perpendicular; longitudinally widely and almost evenly convex. Marginal rim laterally rather narrow, rather weakly raised, premarginal furrow gradually fading away towards middle of anterior border.

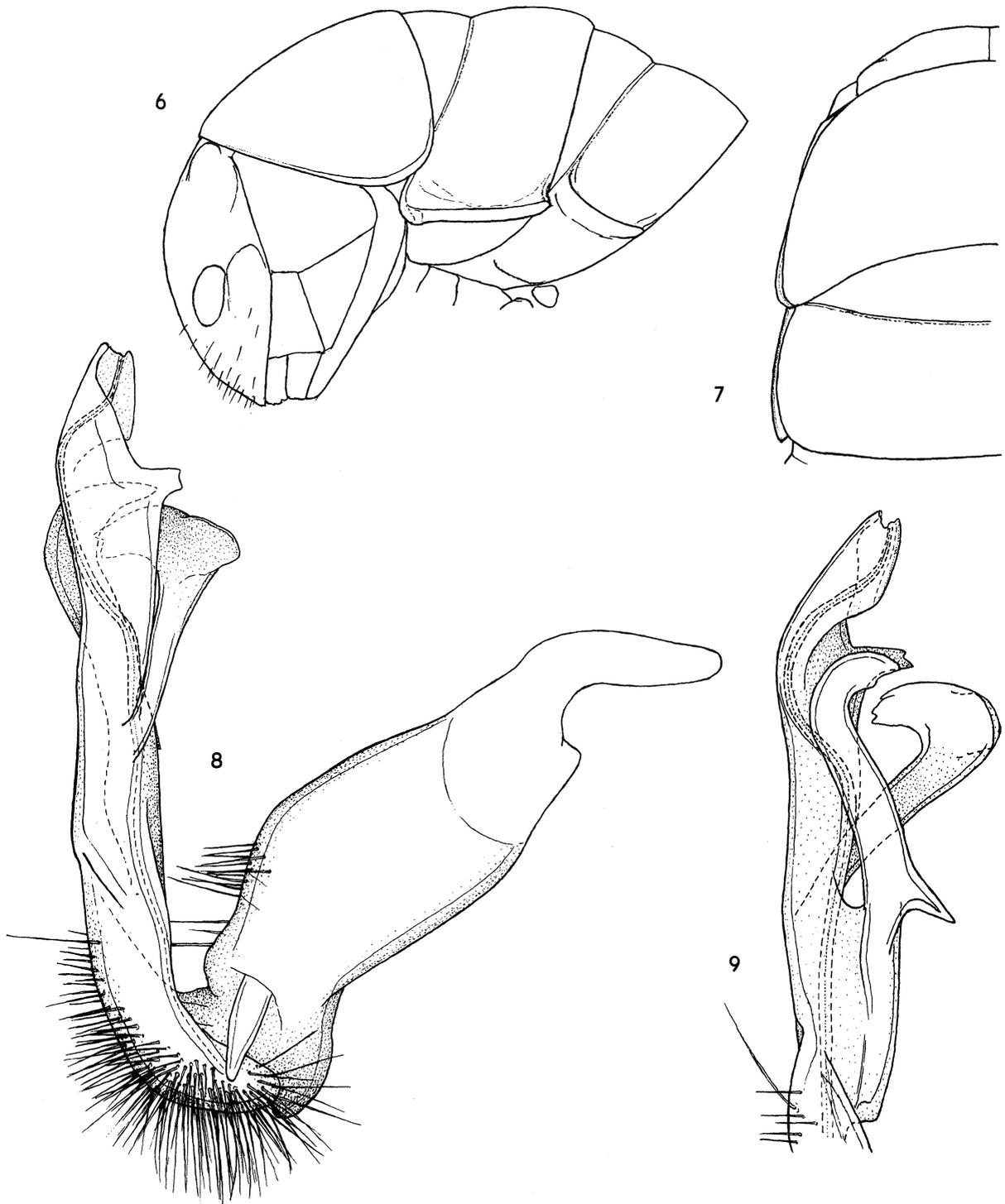
*Somites:* Constriction rather weak; waist rather narrow, distinctly demarcated from prosomites. Waist dorsally striate, subcarinate, more laterally striate, and from level of paranota downward finely striolate. Prosomites very dull with a pronounced cellular structure, almost silky. Metatergites more shiny, with irregular wrinkles, hairless. Transverse sulcus well impressed, faintly sculptured, present from 5th to 17th somite, in middle somites separated from dorsal delimitation of paranota by about half the width of a poriferous paranotum. Sides mostly wrinkled, up to about 7th somite also finely granulate. Pleural keels represented in somites 2 to 5 by rather weak granulate ridges, dorsally faintly demarcated by a furrow. In the 6th and 7th somites developed especially near posterior margin as a small somewhat prominent rounded lappet, subangular, not produced. Pleural keels absent from 8th somite onwards.

*Paranota* (figs 6–7): 2nd somite faintly wider than collum; 3rd faintly wider than 2nd; 4th equal to 3rd. Paranota of 2nd somite with anterior border moderately convex, thrust forward a little. Latero-anterior edge rather wide, subangular, with a faint tooth. Lateral border widely convex, most convex in caudal half, diverging slightly caudad. Posterior edge acutely angular, caudally produced and projecting a little behind margin of somite. Posterior border short, about straight. In lateral aspect paranota situated on a low level, but lateral margin visible from above. Margin of paranota of moderate, even width, sloping a little cephalad, straight, with posterior end faintly turned upwards. Premarginal furrow posteriorly shortly paralleling posterior margin of somite. Paranota of 3rd and 4th somites subsimilar, widely and almost evenly convex, in 4th a little less convex. Posterior edge about rectangular, quite narrowly rounded, and weakly produced caudad, in 3rd somite projecting faintly behind margin of somite, in 4th not at all. Upper demarcation of paranota concave, anteriorly turning upward gradually towards waist, and posteriorly abruptly upward and paralleling posterior margin of somite shortly. Ventral demarcation present over two-thirds of length of paranota; paranota of 4th somite a little thicker than those of 3rd somite. Paranota of 5th and subsequent somites rather weakly developed. Lateral border weakly convex, anteriorly and posteriorly a little more convex. Posterior edge widely subangular, narrowly rounded, scarcely produced caudad in anterior somites, a little more so from 15th somite onwards and faintly projecting behind caudal margin in 17th and 18th somites. Dorsal demarcation in lateral aspect straight

or faintly concave in poreless paranota, faintly convex in poriferous ones, turning upward anteriorly rather abruptly near waist, but not reaching waist. Premarginal furrow caudally curving abruptly upwards, and paralleling posterior margin of somite over a small distance. Ventral demarcation by a depression visible in posterior half of paranota only, converging convexly and meeting upper demarcation in an acute angle. Dorsoventral diameter of paranota moderate, poreless somites about two-thirds of poriferous ones. Pores situated in a small pit, about halfway between dorsal and ventral demarcations of paranota.

*Sternites and legs:* Sternites of middle somites longer than wide (ratio 1.25:1.00). Cross-impressions rather well developed, longitudinal impression rather wide, transverse one more furrowlike. No sternal cones. Pubescence arranged mainly in four quadrants, rather dense, with longish setae. Sternite of 4th somite rather wide, rather deeply transversely excavate. Pubescence rather dense with longish setae. Sternite of 5th somite with a subquadrate process between anterior coxae. Process a little narrower than distance between coxal sockets, a little wider than long, its sides faintly converging distad, apex widely rounded. Anterior side in profile weakly convex, perpendicular, scarcely projecting in front of sternite. At apex a dense brush of short setae. Posterior side in profile weakly concave, moderately densely set with longish setae. Transverse furrow well impressed. Posterior half of sternite weakly transversely concave, not sloping caudad. Setae long. Sternite of 6th somite flattened but not down to level of ventral side of metasomal ring. No longitudinal furrow or impression. Between the anterior coxal sockets a low transverse wall, followed by a rather wide and moderately deep transverse impression. Between posterior coxae a weak transverse wall. Pubescence moderate, with long setae. Sternite of 7th somite with a weak, scarcely defined wall in front of gonopod aperture. Sternite of 8th somite anteriorly scarcely raised; the transverse impression weak; the posterior half with a wide median impression. Coxae of 6th somite and anterior coxae of 8th somite distinctly more widely separated. Legs of moderate length, rather stout, incrassate, with femora scarcely arched, prefemora dorsally rather strongly convex. Relative length of podomeres 2 to 6 in middle part of body: 0.65, 1.00, 0.55, 0.55, 0.70. Ventral pubescence of podomeres rather dense, with moderate to longish setae. Dorsal pubescence apparent in the four distal podomeres, sparser and setae shorter. Scopulae present up to legs of 16th somite, absent in those of 17th, thinning out gradually in legs of posterior half of body. First leg strongly incrassate, with a strong ventro-femoral tubercle. Coxa of 2nd leg without distal prominence. Coxae of legs of 6th somite scarcely elongate, medially faintly produced.

*Anal somite:* Upper profile widely and faintly convex. Epiproct longish, moderately thick, moderately wide. Sides widely converging concavely, nearly parallel at end. A faint stepwise narrowing near apex. Apex



**Figs 6-9.** *Hoplatria clavigera* Verhoeff, ♂. **6:** left side of head, collum and 2nd and 3rd somites, lateral aspect; **7:** left side of head, collum and 2nd somite, dorsal aspect; **8:** right gonopod, medial aspect; **9:** acropodite of left gonopod, caudal aspect.

rather narrowly truncate, faintly emarginate. Setae not on tubercles. Paraprocts with rims of moderate width and height. Setae not on tubercles or these abortive. Hypoproct broadly triangular, sides widely convex, end more narrowly rounded. Setae not on tubercles.

*Gonopods* (Figs 8, 9): Coxa longish, rather stout, tapering a little towards apex. Prefemur elongate-ovoid, almost in line with axis of acropodite; distal demarcation quite oblique. Femoral process relatively small, ribbonlike, somewhat sigmoidally curved, near its base

a spinelike process pointing laterad and proximad. Tibiotarsus narrow at base, widening distally, twisted around anterior side of solenomerite towards lateral and finally caudal side; its apex serrate. Solenomerite relatively strongly developed, laminate, with a slightly bifid lobe about halfway pointing cephalad; apex truncate and a little emarginate. Spermial channel running along medio-anterior side of acropodite.

*Female:* Unknown.

**Remarks.** The material at hand matches the description and drawings published by Verhoeff quite well. In the gonopods there is a slight difference: the small lobe of the solenomerite is illustrated by Verhoeff as simply acuminate, instead of bifid.

The present description was made to extend and supplement the rather brief diagnosis by Verhoeff.

### *Australiosoma* Brölemann

*Australiosoma* Brölemann, 1913: 89.—Jeekel, 1968: 24; 1982b:137.

**Remarks.** This genus was briefly treated in a recent paper, where a key to its three described species was given, and its relationships discussed.

*Australiosoma* appears to focus geographically in south-eastern New South Wales. According to as yet unpublished data it extends northward into the New England area. The present record indicates that the genus crosses the NSW-Victorian border southward.

### *Australiosoma laminatum* n.sp.

**Material.** Australia, without locality (A 5763, 4588d), ♂ holotype, 4 ♂ paratypes, 1 ♀ paratype, 6 juv. ♂ paratypes, 3 juv. ♀ paratypes. (American Museum of Natural History, New York).

Australia, without locality (A 5763, 4587), 3 ♂ paratypes, 1 ♀ paratype, 1 juv. ♂ paratype. (American Museum of Natural History, New York).

**Description.** *Colour:* Head and antennae dark castaneous; labral area, a ring around antennal sockets including bean-shaped postantennal area, and sutures of lateral sclerites brownish yellow. Tips of antennae whitish, annulation of antennomeres very vague. Collum dark castaneous, lateral margin scarcely paler. Somites dark castaneous, anterior part of prosomites and posterior part of metatergites a little paler. Paranota brownish yellow, especially in their posterior half. Venter, sternites and legs pale brownish, three distal podomeres somewhat infuscate. Anal somite dark castaneous; epiproct entirely yellowish. Paraprocts dark castaneous, lateral margins as well as hypoproct pale brown.

*Width:* ♂: 2.4–2.9 mm; ♀: 3.2 mm; juv. ♂ (19 somites): 1.8–2.3 mm; juv. ♀ (19 s.): 2.0 mm; juv. ♂ (18 s.): 1.4–2.1 mm; juv. ♀ (18 s.): 1.2–1.5 mm.

*Head and antennae:* Labrum moderately deeply and rather widely emarginate. Clypeus rather strongly impressed towards labrum; lateral margin faintly

convex, with a rather weak notch above labrum. Pubescence of headplate with setae of moderate length or a little longish. Antennal sockets separated by 1.35 times the diameter of a socket or by 0.6 times length of 2nd antennomere. Postantennal bean-shaped area distinctly demarcated and somewhat inflated. Wall in front of postantennal groove moderately prominent. Vertex transversely faintly concave in the middle, rather convex laterally, but without lateral swelling. Vertigial sulcus weakly to moderately impressed. Relative length of antennomeres 2 to 6: 1.00, 0.95, 0.90, 0.85, 0.75. Pubescence of distal antennomeres dense, setae of moderate length.

*Collum:* Anterior border laterally faintly emarginate. Lateral border rather narrowly rounded. Surface of collum longitudinally evenly and widely convex, transversely weakly convex in middle, gradually more strongly convex towards sides; sides perpendicular or even faintly incurved. Marginal rim laterally rather narrow; premarginal furrow gradually disappearing towards level of lateral edge of vertex.

*Somites:* Waist of moderate width to narrowish, dorsally distinctly striate (not carinate), from level of paranota downward finely striate. Prosomites dull, and with minute longitudinal striate. Transverse furrow of metatergites also indicated on 18th somite, in most tergites deeply impressed, with a sculpture of fine longitudinal striolae, reaching laterad to quite near (about half the diameter of a poreless paranotum) dorsal demarcation of paranota. Sides rather finely coriaceous, subgranulose, up to 4th somite minutely granular. Pleural keels up to 4th somite represented by weak granulate ridges, dorsally demarcated by a faint furrow; in 5th somite a weakly defined longitudinal swelling, gradually less developed on 6th and 7th somites and absent from 8th onwards.

*Paranota:* 2nd somite a little wider than collum; 3rd somite scarcely wider than 2nd, 4th a little wider than 3rd. Paranota of 2nd somite rather weakly prominent, on a rather low level, but lateral margin visible from above. Anterior border moderately convex, a little shouldered at base, but otherwise transverse on longitudinal axis. Lateral edge scarcely angular, narrowly rounded with a faint indication of a lateral tooth. Lateral border faintly convex, anteriorly and posteriorly a little more so, diverging a little caudad. Posterior edge slightly acutely angular, caudally produced and projecting a little behind margin of somite. Posterior border short, faintly concave. Margin in lateral aspect straight, weakly sloping cephalad, of even moderate width. Premarginal furrow anteriorly curving evenly and narrowly upward, posteriorly abruptly upward and paralleling posterior margin of somite over some distance. Paranota of 3rd and 4th somites widely convex, in 4th a little more convex anteriorly and posteriorly. Posterior edge in 3rd somite a little acutely angular, produced and projecting weakly behind margin of somite. In 4th somite posterior edge widely subangular and not caudally produced. Posterior margin short, scarcely concave in 3rd somite, about

straight or a little convex in 4th. In lateral aspect dorsal demarcation about straight, sloping a little cephalad; premarginal furrow curving anteriorly rather abruptly upward in 3rd somite, more gradually so in 4th. Posteriorly furrow curves abruptly upward, paralleling posterior margin of somite over quite some distance. Dorsoventral width of paranota of 3rd and 4th somites considerably wider than in 2nd somite, in particular in 4th somite. Paranota of 5th and subsequent somites weakly developed. Poreless paranota widely convex laterally, a little more strongly so at anterior end. Posterior edge subangular, narrowly rounded, faintly produced caudad except in 14th somite where more angular, weakly produced, but not projecting behind caudal margin of somite. Posterior margin short, about straight. Poriferous paranota a little more prominent, and a little more convex near caudal edge. Posterior edge widely subangular, narrowly rounded, becoming acutely angular in 16th and subsequent somites, projecting behind posterior margin of somite in 13th and 15th to 19th somites and especially in 17th and 18th. Paranota in lateral aspect with upper demarcation straight or a little concave in poreless, faintly convex in poriferous somites. Upper furrow ending anteriorly near waist, scarcely curving upward, and posteriorly curving abruptly upward, paralleling caudal margin of somite over a length of about one-third of distance between external margin of paranota and the median line. Dorsoventral width of paranota moderate, poriferous paranota about one-and-a-half times wider than the poreless. Ventral demarcation only present in posterior half of paranota, converging convexly towards dorsal demarcation and forming an acute angle. Angle a little wider in poriferous somites than in poreless ones. Ventral demarcation in poreless somites less convex than in poriferous ones. Pores situated quite near ventral demarcation, in a weakly impressed and relatively small pit.

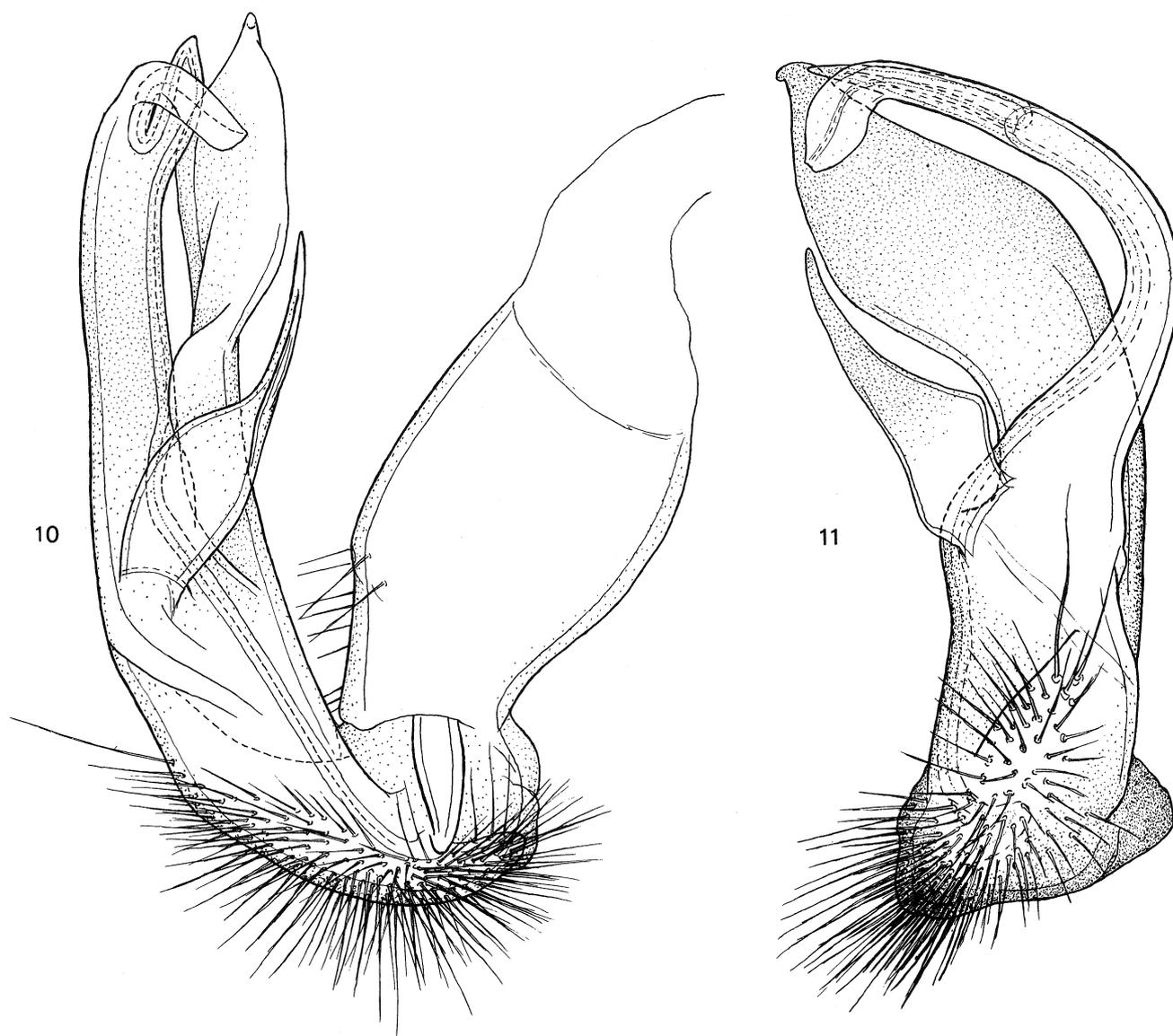
*Sternites and legs:* Sternites of middle somites a little longer than wide (ratio 1.1:1.0). Cross-impressions moderately developed; longitudinal impression rather weak and wide, transverse deeper and more furrowlike. No sternal cones. Pubescence moderate, setae of moderate length. Sternite of 4th somite rather wide, widely transversely concave. Pubescence moderate. Sternite of 5th somite with a subquadrate process between anterior legs; process about as long as wide or slightly shorter than wide, a little narrower than distance between coxae. Lateral edges narrowly rounded, apex rather weakly convex. Process directed downward and a little cephalad, projecting very slightly in front of sternite. Anterior surface in profile straight at base, convex distally; apex with a brush of short setae. Posterior side moderately widely concave, pubescence moderate with longish setae. Behind process a deep transverse furrow. Posterior half of sternite with transverse wall between coxal sockets, without median impression, rather densely set with long setae. Coxal sockets not particularly raised; coxa not prolonged. Sternite of 6th somite a little raised anteriorly and

posteriorly, with a weak transverse impression. Anteriorly with no longitudinal impression, posteriorly with a median impression down to level of metasomal ring. Coxal sockets pressed aside a little, not particularly raised, coxae not elongate. Pubescence rather dense with long setae. Sternite of 7th somite with a narrow but rather distinct pregonopodial wall. Sternite of 8th somite weakly raised; anterior part flat, without longitudinal impression. Transverse impression faint. Posterior half very weakly transversely concave. Anterior coxae pressed aside a little. Setation moderate, with setae of moderate length. Legs of moderate length and thickness. Prefemora incrassate, but dorsally only moderately convex. Femora scarcely or not arched. Ventral pubescence moderate to rather dense, dorsal pubescence only apparent in tarsi, where moderately dense. Scopulae thinning out in posterior somites and present up to legs of 17th somite. First pair of legs incrassate, with a ventro-femoral tubercle. Coxae of 2nd pair of legs medially rounded, not distally produced. Relative length of podomeres 2 to 6 in middle somites: 0.70, 1.00, 0.60, 0.65, 0.70.

*Anal somite:* Dorsal profile faintly convex, anteriorly faintly impressed. Epiproct rather thick, of moderate length, rather wide. Sides weakly concave, converging moderately strongly. Near apex epiproct is slightly narrowed, sides becoming almost parallel. Apex straight-truncate, edges narrowly rounded. Setae not on tubercles. Paraprocts with setae not on tubercles. Hypoproct broad, semicircular, setae not on tubercles.

*Gonopods* (Figs 10,11): Coxa stout, tapering towards apex. Prefemur elongate-ovoid, almost in line with axis of acropodite; lateral distal demarcation quite oblique. Femoral process broadly laminate, apically acuminate. Tibiotarsus slightly sigmoidally curved in medial aspect, widening a little distad of base, but otherwise gradually tapering towards the pointed apex. Solenomerite strongly developed, curving widely mesad, bearing near the apex a strong spinelike process containing a loop of the spermal channel. Apex of solenomerite laminate, slightly expanded. Spermal channel running along medio-anterior side of acropodite.

*Female:* Clypeus moderately impressed. Vertex transversely moderately and evenly convex. Antennal sockets separated by 1.25 times diameter of a socket or by 0.6 times length of 2nd antennomere. Relative length of antennomeres 2 to 6: 1.00, 0.90, 0.90, 0.90, 0.80. Collum transversely widely convex, only slightly flattened in middle; sides perpendicular. Pleural keels distinct up to 4th somite, represented by raised crests with a posterior edge which in 3rd somite is slightly produced caudad. In 5th somite a swelling, not sharply demarcated. Pleural keels absent from 6th somite onwards. Sternites of middle somites broader than long (ratio 1.15:1.00). Cross-impressions weaker than in male; transverse impression distinct only between coxae of subsequent legs. Legs not incrassate, femora straight. Ventral pubescence of podomeres weaker than in male. Relative length of podomeres 2 to 6 in middle somites:



**Figs 10 & 11.** *Australiosoma laminatum* n.sp., holotype ♂. **10:** right gonopod, medial aspect; **11:** telopodite of left gonopod, caudal aspect.

0.75, 1.00, 0.55, 0.55, 0.75. Epigynal structure with ventral side of 3rd somite widely emarginate behind each coxa, lateral edge of emargination scarcely produced cephalad, the margin not raised, and ventral surface of 3rd somite without particular sculpture. Median tooth low, pointing cephalad. Coxa of 2nd leg swollen, with a rather long laterocaudal spinelike process pointing laterad.

**Remarks.** This species approaches *A. michaelsoni* (Attems) in the absence of a pair of yellowish dorsal bands, but is distinct in being larger (width of ♂ of *A. michaelsoni*: 1.5–1.7 mm). The two other species, *A. rainbowi* Brölemann and *A. clavigerum* (Verhoeff), are considerably larger: width of ♂ 4.0 mm or more. *A. clavigerum* has a three-pronged solenomerite, and both

species differ from *A. laminatum* in having a rod-like and distally more or less truncate femoral process.

In characters not mentioned the description of *A. clavigerum* applies (Jeekel, 1982b).

#### *Somethus* Chamberlin

*Somethus* Chamberlin, 1920: 128.—Jeekel, 1968:27; 1979:651.

**Remarks.** The type species of this genus, *S. fuscipes* Chamberlin, 1920, was described from 'Australia' without specification of locality. It was redescribed by Jeekel (1979) but unfortunately the characters of the gonopods had to remain obscure. In the meantime, material of two species, one of which matching the

verbal description of the gonopods by Chamberlin quite well, was obtained in Tasmania (Jeekel, in preparation). Moreover, a species of *Somethus* was discovered among material from South Australia (Jeekel, in press), so that the taxonomic status of the genus can be regarded as sufficiently clarified.

*Somethus biramus* n.sp.

**Material.** Sta. 82, New South Wales, Boydtown, 5 km SSW Eden, 12.xi.1980 (rather wet eucalyptus forest, disturbed, under logs), 7 ♂ paratypes, 2 ♀ paratypes, 1 juv. ♀ paratype.

Sta. 84., Victoria, Drummer State Forest, 15 km E Cann River, 13.xi.1980 (eucalyptus forest along Princes Highway, under logs), 3 ♂ paratypes.

Sta. 85., Victoria, 13 km SE Buchan, 14.xi.1980 (eucalyptus forest, state forest, under logs), ♂ holotype, 3 ♂ paratypes, 4 ♀ paratypes.

Cave M49, Murrindal, 22.vii.1967, leg. A. Spate (BS 1608), 1 ♂, 1 ♀ paratypes (South Australian Museum, Adelaide).

The Basin, Slocomes Cave Ba1, 10.vii.1976, leg. A. Davey VSA, 1 ♂ paratype (South Australian Museum, Adelaide).

**Description.** *Colour:* Head dark brown; labral area, a ring around antennal sockets and sutures of lateral sclerites brownish yellow. Antennae brown, intersegmental membranes brownish yellow, tip whitish. Collum blackish brown, with a narrow yellow stripe along anterior margin and a similar stripe along posterior margin, widest medially and tapering towards sides. Somites blackish brown; posterior half of metatergites, posterior half of paranota, and a larger posterior part of sides brownish yellow. Medial part of prosomites, mostly concealed by anterior somite, with a rounded yellowish spot. Venter and sternites pale brownish. Legs dark brown, the ventral side a little paler; distal margins of podomeres and intersegmental membranes brownish yellow; tip of tarsi also brownish yellow. Anal somite dark brown; epiproct and narrow margins of ring yellow. Paraprocts brown with yellow margins. Hypoproct pale brownish.

*Width:* ♂: 2.5–3.2 mm; ♀: 2.7–3.4 mm, juv. ♀ (19 somites): 2.1 mm. The two specimens from the cave near Murrindal are larger than the other specimens (♂: 3.2 mm; ♀: 3.4 mm, against 2.9 and 3.0 respectively as a maximum value in the other samples).

*Head and antennae:* Labrum moderately deeply and rather widely emarginate. Clypeus moderately convex, strongly impressed towards labrum, surface somewhat rugulose and impressed punctate. Lateral border faintly convex, with a weak notch near labrum. Frons somewhat rugulose, pitted. Antennal sockets separated by 1.35 times diameter of a socket or by 0.65 times length of 2nd antennomere. Pubescence moderate in clypeus to sparse in frons and lateral sclerites; setae of moderate length. Postantennal beanshaped area obsolete, only some wrinkles. Postantennal groove of moderate width and depth; wall in front moderately

prominent. Vertex smooth, shiny, transversely faintly concave in middle, laterally moderately convex, without swelling. Vertigial sulcus moderately impressed, down to upper level of sockets, with fine transverse wrinkles. Vertex hairless. Antennae longish, moderately stout. Antennomeres subcylindrical, each distally widening, 5th and 6th a little more obconical, weakly clavate. Pubescence rather weak in proximal antennomeres, to rather dense in distal ones. Relative length of antennomeres 2 to 6: 1.00, 0.95, 0.90, 0.85, 0.85.

*Collum:* As wide as head, subtrapezoidal in dorsal outline. Anterior border straight, more laterally widely rounded and straight again towards sides. Posterior border widely and weakly emarginate in middle, weakly convex more laterally, and straight with a weak but distinct notch towards sides. Lateral border rather widely and almost evenly rounded. Surface smooth or with some weak wrinkles, shiny, with some weak setae near anterior margin and some more in middle. Surface transversely faintly convex in middle, more strongly rounded laterally, sides almost perpendicular, longitudinally weakly and almost evenly convex. Marginal rim narrow, weakly raised. Premarginal furrow disappearing gradually towards middle of anterior border.

*Somites:* Constriction rather weak. Waist rather narrow to narrow, sharply demarcated from prosomites, distinctly striate-subcarinate to beaded dorsally, finely striate from level of paranota downward. Prosomites dulled by a fine cellular structure. Metatergites shiny, smooth or somewhat irregularly wrinkled, hairless or with a transverse row of up to six weak setae in front of transverse furrow. Transverse furrow present from 5th to 17th somite, faintly indicated also on 18th somite, moderately well impressed, with a fine sculpture, disappearing laterally at a distance about equal to diameter of a poreless paranotum. Sides rugulose, in anterior somites up to 7th especially in lower part also granulate. Pleural keels represented by crenulate ridges, dorsally demarcated by a curved furrow, ending in a weakly pronounced edge in 3rd somite. In 5th somite only a weak swelling, not demarcated, in 6th and 7th somites only a weak swelling above posterior legs.

*Paranota:* 2nd somite a little wider than collum; 3rd as wide as 2nd, and a little narrower than 4th. Paranota of 2nd somite weakly developed, ridgelike, sloping a little laterad, situated on a low level, but lateral border visible from above. Anterior border widely convex, transverse, not shouldered. Lateral edge widely angular, with a faint lateral tooth. Lateral border anteriorly vaguely convex, almost straight, posterior half more convex, scarcely diverging caudad. Posterior edge slightly acutely angular, produced distinctly caudad and projecting a little behind posterior margin of the somite. Posterior border rather short, slightly convex. Paranota in lateral aspect with marginal rim of moderate and about even width, straight and sloping faintly cephalad, posterior half curving gradually a little upward. Premarginal furrow anteriorly and posteriorly curving abruptly upward, posteriorly paralleling caudal margin

of somite shortly. Paranota of 3rd somite anteriorly rather widely, posteriorly more widely convex. Posterior edge about rectangular, weakly produced caudad, projecting faintly behind margin of somite. Posterior border straight, short. Dorsal demarcation in lateral aspect faintly concave; upper furrow curving abruptly upwards towards waist, posteriorly paralleling margin of somite shortly. Paranota of 4th somite similar to those of 3rd, but in dorsal aspect especially posteriorly less convex. In lateral aspect dorsal demarcation weakly concave, the furrow curving more gradually upward anteriorly. Ventral demarcation of paranota of 3rd and 4th somites present in posterior three-fifths; dorsoventral diameter moderate. Paranota of 5th and subsequent somites weakly developed. Lateral border weakly convex, anteriorly a little more strongly rounded, and in poriferous somites posteriorly also a little more convex. Posterior edge widely angular in 5th somite, acutely angular and weakly produced caudad from 6th somite onwards, and projecting faintly caudad of margin of somite from about 12th somite up to 18th. Posterior border short, about straight. In lateral aspect, dorsal demarcation weakly concave in poreless paranota and straight or faintly convex in poriferous ones. Upper furrow running anteriorly to near waist, anterior end curving briefly a little upward, posteriorly curving abruptly upward and paralleling posterior margin of somite shortly to scarcely. Ventral demarcation in poriferous paranota present in posterior half, in poreless paranota a little less, curving gradually upward and meeting upper demarcation in an acute angle. Ventral demarcation weakly convex and very similar in poriferous and poreless paranota. Dorsoventral width of paranota moderate, in poreless somites about two-thirds of that in poriferous somites. Pores rather large, situated in an oval pit about halfway between dorsal and ventral demarcations.

*Sternites and legs:* Sternites of middle somites longer than wide (ratio 1.35 : 1.00). Cross-impressions moderately developed, transverse and longitudinal impressions both rather wide, the transverse becoming furrowlike only between subsequent coxal sockets. No sternal cones. Pubescence moderate, concentrated especially on coxal sockets; setae on minute granules, of moderate length. Sternite of 4th somite wide, deeply transversely excavated, with median part about level with ventral side of metasomal ring. Pubescence moderate, setae longish. Sternite of 5th somite with a process arising between and a little in front of anterior coxal sockets. Process subquadrate to subparabolical, about as long as wide, and as wide as distance between coxal sockets. Sides converging distad a little, edges rounded, apex weakly convex. Process directed ventrad and a little cephalad, projecting distinctly in front of sternite. Anterior side in profile widely convex; apex with a brush of short setae. Posterior side straight at base, widely concave distally; pubescence sparse and setae unapparent. Transverse furrow deep. Posterior part with a median furrow, raised a little towards coxal sockets. Pubescence moderate, setae longish. Sternite

of 6th somite with coxal sockets pressed aside a little, sockets not raised, coxae not elongate. Sternite flat, only a faintly raised wall between anterior coxae. Behind it a weak transverse impression. Posterior half less raised, but only a semicircular medio-caudal area is level with ventral side of the metasomal ring. Pubescence moderate, setae longish. Sternite of 7th somite with a rather weakly prominent, finely granular wall laterocephalad of gonopod aperture. Coxae of ambulatory legs pressed aside a little. Sternite of 8th somite anteriorly flattened, without longitudinal impression, sloping a little cephalad down to ventral level of metasomal ring. Transverse impression obsolete except between subsequent coxae. Posterior half of sternite with longitudinal impression a little wider, otherwise not modified. Anterior coxae a little more widely separated than posterior. Pubescence rather sparse to moderate. Legs of moderate length and thickness. Prefemora dorsally rather convex; femora scarcely arched. Ventral pubescence rather dense, with setae of moderate length to longish. Dorsal pubescence moderate on tarsi, otherwise unapparent. Scopulae present up to legs of about 15th somite, gradually thinning out in postgonopodial legs. Relative length of podomeres 2 to 6 in legs of middle somites: 0.65, 1.00, 0.60, 0.65, 0.70. First leg rather strongly incrassate, with a ventral femoral tubercle. Coxa of 2nd leg medially a little inflated, not distally produced.

*Anal somite:* Dorsal profile weakly and evenly convex. Epiproct rather thick, broad and of moderate length. Sides weakly concave, almost straight, converging weakly towards apex, without abrupt constriction near apex, but near apex a little convex. Apex broadly truncate, distinctly but not deeply emarginate, edges a little produced, narrowly rounded. Setae on abortive granules. Paraprocts with moderately high and wide rims, setae on weak granules. Hypoproct broadly subtriangular, sides almost straight or a little convex, apex moderately widely rounded. Setae not on tubercles.

*Gonopods* (Fig. 12): Coxa of moderate length, rather stout, apically provided with a number of rounded tubercles at medio-anterior side. Prefemur ovoid, its longitudinal axis making a wide angle with axis of acropodite; latero-distal demarcation quite oblique. Acropodite with a small but distinct undivided femoral section. Tibiotarsus long, rodlike, tapering at apex, which is curved slightly medio-caudad. Tibiotarsus nearly as long as seminiferous branch. The latter also strongly elongate, slender, bearing near its end a strongly reduced femoral process, and a conical process containing a loop of the spermal channel. End of solenomerite curving abruptly caudad and finally mesad, its apex finely tapering. Spermal channel running along medial side of acropodite, curving towards latero-caudal side before entering subterminal process.

*Female:* Clypeus longitudinally rather convex, rather strongly impressed towards labrum. Antennal sockets separated by 1.2 times diameter of a socket or

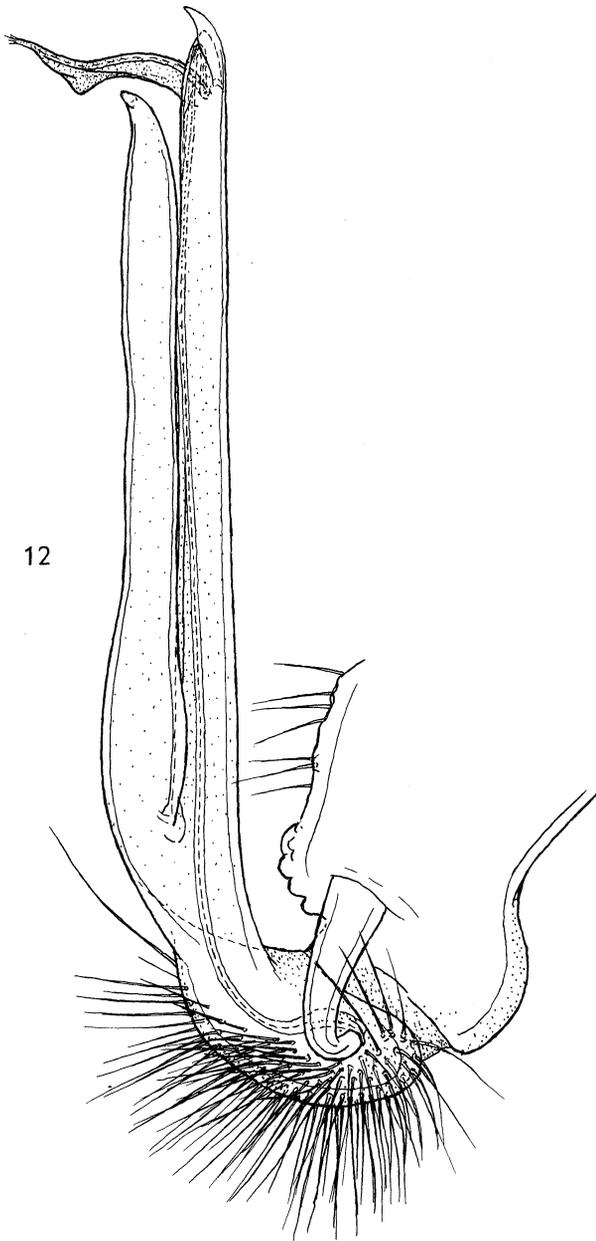


Fig 12. *Somethus biramus* n.sp., holotype ♂, right gonopod, medial aspect.

by 0.65 times length of 2nd antennomere. Vertex transversely evenly convex. Relative length of antennomeres 2 to 6: 1.00, 0.90, 0.80, 0.80, 0.80. Collum transversely almost evenly convex. Pleural keels up to 4th somite as in male, absent from 5th somite onwards. Sternites of middle somites as long as wide. Cross-impressions weakly developed, wide, furrowlike only between subsequent coxal sockets. Pubescence rather sparse. Legs not incrassate, femora straight. Relative length of podomeres 2 to 6 in middle somites: 0.75, 1.00, 0.55, 0.55, 0.80. Ventral pubescence less dense than in male. Coxa of 2nd leg medially and caudally callously inflated, but without process. Ventral

side of 3rd somite with paramedian emarginations quite shallow, lateral edges not produced cephalad. Median point scarcely produced, but a small median crest or lobe projects downward. Surface without apparent sculpture.

**Remarks.** This species is well characterized in particular by the structure of the gonopods, in which the femoral process is strongly reduced, resulting in an essentially two-branched telopodite. The other known species have a considerably larger femoral process, which arises distinctly more proximally. The length and shape of the tibiotarsal branch are also quite characteristic.

### *Cladethosoma* Chamberlin

*Cladethosoma* Chamberlin, 1920: 105.—Jeekel, 1979; 1982b: 141.

*Leucotessara* Verhoeff, 1928: 90, 92.—Jeekel, 1968: 24.

*Walestessara* Verhoeff, 1937: 137.

**Remarks.** This genus was briefly treated recently (Jeekel, 1982b), and a key to the species provided. Five species have been described from the central area of coastal New South Wales northward to Wallangra, the sixth belongs to the Victorian fauna and was recorded from Gippsland.

In the gonopods the genus shows much similarity with *Hoplatessara* in having the acropodite of the gonopods deeply split into four main branches: solenomerite, femoral process and two tibiotarsal prongs. It is distinguished by the apex of the solenomerite's being simply rounded, with the spermal channel near its end simply a little recurved and by the shape of the femoral process, which is either rodlike or laminate, generally ending in an uncate spine. The tibiotarsal branches are more or less folded lanceolate laminae instead of solid rods.

In the field the species are mostly distinguished by having a pair of light-coloured longitudinal bands, which in the Victorian species diverge caudad enclosing a dark triangle on each metasomite.

### *Cladethosoma forceps* (Verhoeff)

*Hoplatessara* (*Walestessara*) *forceps* Verhoeff, 1941: 14, fig. 7.

**Remarks.** This species was described from Gippsland, without further data. It was not represented in the material covered here.

### *Isocladosoma* n.gen.

**Diagnosis.** Rather small to medium-sized Australiosomatini with 20 somites and a normal pore formula. Head with vertex transversely flattened in male, almost evenly convex in female. Antennae of moderate length, stoutish, distinctly clavate; antennomeres subobconical to obconical.

Somites rather weakly to moderately constricted. Waist rather narrow, dorsally rather coarsely 'beaded'.

Metatergites smooth, hairless. Transverse furrow present from 5th somite onwards, well impressed. Pleural keels moderately developed up to 4th somite, weak or absent in a few subsequent somites, absent from 8th somite onwards.

Paranota rather weakly developed.

Sternites distinctly longer than wide in male, about as long as wide in female. No sternal cones. Sternite of 5th somite with a process between anterior legs. Legs of moderate length. First leg of male incrassate, with a distinct ventral femoral tubercle. Scopulae disappearing in middle third of the body.

Gonopods with coxa stoutish and short in relation to length of telopodite. Prefemur ovoid, rounded, its distal demarcation almost transverse on axis of telopodite; angle between prefemur and acropodite relatively narrow. Femoral section of acropodite vestigial; acropodite split to base into three main elements: solenomerite, femoral process and tibiotarsus. Femoral process arising from lateroanterior side of acropodite, consisting of a simple curved rod, tapering distally, apex acuminate and reaching a little distad of the other two elements of the acropodite. Solenomerite

also of simple structure: widening a little towards middle, apex slightly spatulate. Spermal channel running straight towards apex of solenomerite, without loop. Tibiotarsus arising mesocaudad of acropodite, either rodlike and distally truncate, or more complex, with a distal expansion and the presence of a lateral spinelike process arising about halfway its length.

**Type-species.** *Isocladosoma guttatum* n.sp.

**Remarks.** This genus is unique among the Australiosomatini in the almost complete loss of the femorite of the gonopods, combined with the condition that the three main elements of the acropodite arise from almost the same level. This type of gonopods may be derived from the more primitive type as represented by *Archicladosoma* by assuming a reduction of the femorite. Some relationship seems to exist also with genera like *Cladethosoma*, in particular with *C. gladiator* Jeekal, 1982, and *Heterocladosoma*, especially *H. transversetaeniatum* (L. Koch, 1867), in which the femoral process is also simply rodlike. But in these genera the tibiotarsus is deeply split into two branches and the femoral process is coalesced in its basal part with the base of the solenomerite.

#### Key to the Species of *Isocladosoma*

1. Tibiotarsus of gonopods rodlike, without branches, distally truncate ..... *I. maculatum* n.sp.
- Tibiotarsus of gonopods more complex, widening distally and bearing about halfway along its length a medial spine ..... 2
2. Spinelike process of tibiotarsus short, not nearly reaching apex. Apex itself recurved, uncate. Median pale colour interrupted in waist area of somites, and before middle of collum ..... *I. guttatum* n.sp.
- Spinelike process of tibiotarsus almost reaching apex. Apex itself curved a little, but not uncate. Median pale colour of somites and collum constricted in waist area of somites and on collum but uninterrupted ..... *I. pallidulum* n.sp.

#### *Isocladosoma guttatum* n.sp.

**Material.** Sta. 88, Glenaladale Nat. Park, 28 km WNW Bairnsdale, 15.xi.1980 (dry rainforest along creek, along nature track, under logs and stones and in litter), ♂ holotype, 1 ♂ paratype, 1 juv. ♂ paratype (18 somites), 4 ♀ paratypes.

**Description.** *Colour:* Head dark, almost blackish brown, darkest in vertigial region. Lower clypeal and labral areas, a narrow ring around antennal sockets, postantennal groove, lateral part of head plate and lateral sclerites brown. Antennae dark brown, 6th antennomere blackish; distal annuli of antennomeres narrow pale brown, tip of antennae whitish. Collum blackish brown, a small triangular spot at middle of anterior border and a broad triangle, pointing cephalad and reaching medially about halfway towards anterior border, and about as wide caudally as two-thirds of total

width of collum, brownish yellow. Somites blackish brown dorsally, including paranota. Metatergites with a large median brownish yellow spot, about as wide as three-quarters of total width of metatergites, anteriorly not reaching waist. In posterior somites (about 17th to 19th), posterior border of metatergites narrowly infusate. Prosomites except waist area also brownish yellow. Sides below paranota, venter, sternites and legs pale brown, dorsal side of 3rd to 5th podomeres and 6th podomere entirely infusate; tip of tarsi pale, proximal podomeres faintly annulate with paler colour. Anal somite blackish brown; epiproct yellowish, yellowish colour extending medially in a pointed triangle on the ring. Paraprocts blackish brown, margins yellowish brown. Hypoproct pale brown.

*Width:* ♂ 2.7 mm; ♀ 2.9–3.0 mm; juv. ♂ (18s.): 1.6 mm.

*Head and antennae:* Labrum faintly but widely emarginate. Clypeus moderately convex, rather strongly

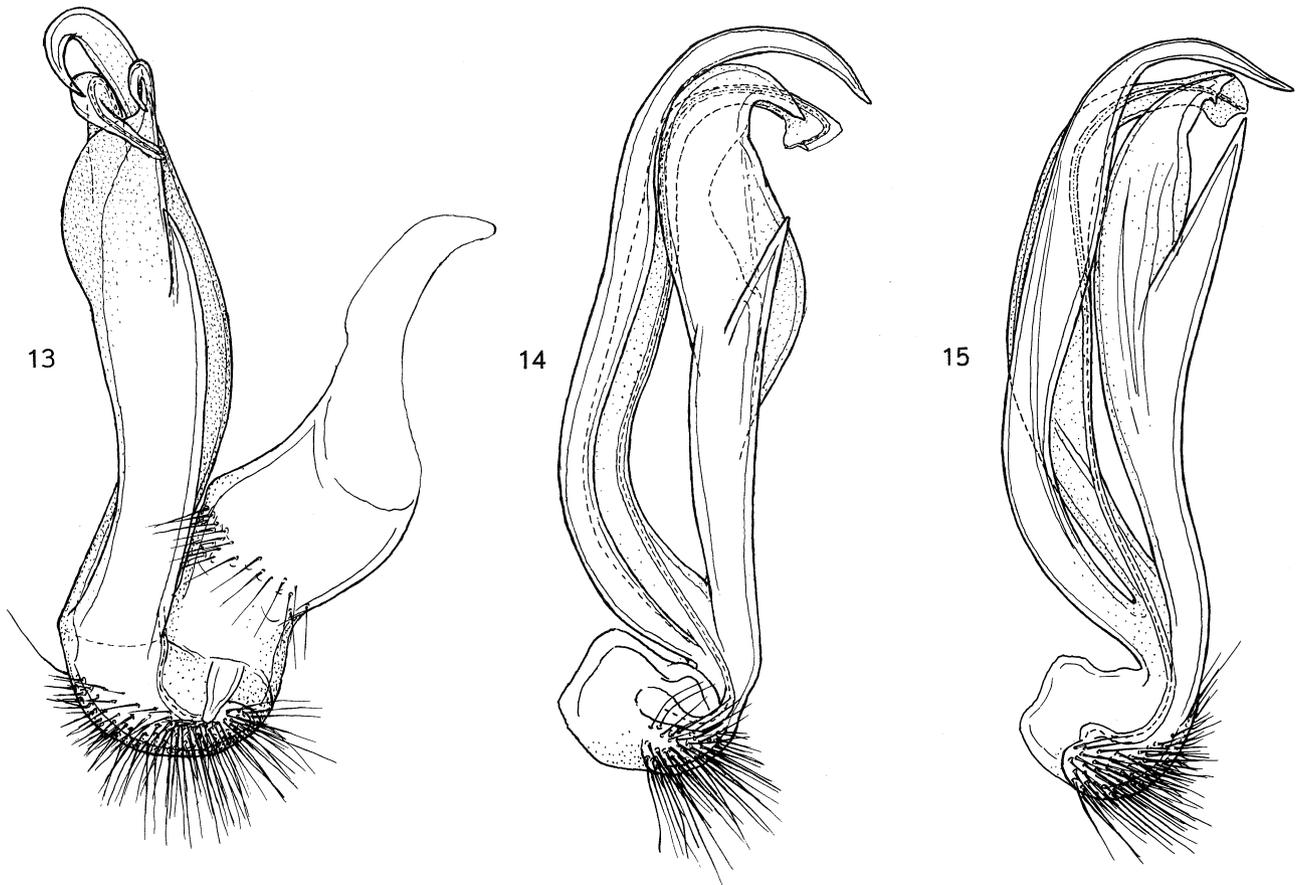
impressed towards labrum; lateral margin weakly convex, with a distinct notch near labrum. Headplate rather coarsely rugulose-punctate in lower part of clypeus, sparsely punctate in frontal region, otherwise smooth or somewhat wrinkled, shiny. Pubescence moderate in lower clypeal area, sparse in upper part of clypeus, frons, lateral parts and lateral sclerites; vertex hairless. Setae of moderate length to a little longish. Antennal sockets separated by 1.35 times diameter of a socket or by 0.7 times length of 2nd antennomere. Postantennal bean-shaped area narrow, rather distinctly demarcated and scarcely inflated. Postantennal groove moderately deep and rather wide; wall in front moderately prominent. Vertex longitudinally widely and evenly convex, transversely weakly concave in middle, laterally rather convex with a weakly raised but distinct swelling at latero-posterior edge. Vertigial sulcus moderately impressed, with some fine transverse wrinkles, reaching upper level of antennal sockets. Antennae of moderate length, somewhat stout, distinctly clavate. Antennomeres subcylindrical, each widening distad, becoming more obconical from 4th onwards, especially 5th; 6th antennomere faintly inflated. Relative length of antennomeres 2 to 6: 0.95, 1.00, 0.95, 0.85, 0.80. Pubescence moderate in proximal antennomeres, becoming rather dense in distal ones.

*Collum:* A little wider than head, subtrapezoidal in dorsal outline. Anterior border straight or faintly concave in middle, widely rounded more laterally, and straight or faintly concave again towards sides. Posterior border faintly concave in middle, widely rounded towards sides. Lateral border rather widely, asymmetrically rounded, strongest rounding anteriorly. Surface of collum shiny, smooth or very slightly rugulose, with fine median line; hairless. Surface transversely faintly convex, or almost flat in the middle, rather strongly convex laterally, sides perpendicular, longitudinally widely and evenly convex. Marginal rim laterally rather narrow, weakly raised, premarginal furrow disappearing at level of edge of vertex.

*Somites:* Constriction rather weak to moderate. Waist rather narrow, distinctly demarcated from prosomite, dorsally rather coarsely 'beaded', and from about level of paranota downward finely striate. Prosomite somewhat dulled by fine cellular structure, finely striolate. Metatergites smooth, or weakly and irregularly wrinkled, shiny, hairless. Transverse furrow present from 5th to 17th somite, faintly indicated on 18th. Furrow well impressed, with faint longitudinal striation, disappearing laterally at a distance from dorsal demarcation of paranota equal to about width of a poreless paranotum. Sides smooth or with some irregular wrinkles; those up to 4th somite minutely granular. Pleural keels represented by curved crenulate ridges in 2nd to 4th somite, dorsally demarcated by a furrow. In 5th somite only a weak longitudinal swelling, not demarcated. In 6th and 7th somites a strong longitudinal swelling, not demarcated, but especially prominent above the posterior legs. Pleural keels absent from 8th somite onwards.

*Paranota:* Second somite scarcely wider than collum; 3rd a little narrower than 2nd and about as wide as 4th. Paranota of 2nd somite with anterior border rather widely rounded, slightly thrust forward. Lateral edge subangular, narrowly rounded, with a weak, rounded lateroventral tooth. Lateral border straight from above, weakly rounded in caudal half, faintly diverging caudad. Caudal edge angular, quite narrowly rounded, slightly produced caudad, but hardly projecting behind margin of somite. Paranota ridgelike, situated on a rather low level, weakly prominent, lateral margin scarcely visible from above. In lateral aspect straight in anterior half, faintly curving upward a little in posterior half: margin of moderate and subequal width, faintly sloping cephalad. Premarginal furrow curving abruptly upward anteriorly towards waist, caudally rather abruptly, paralleling caudal margin of somite rather briefly. Paranota of 3rd somite from above laterally widely and almost evenly rounded, but almost straight near caudal edge. Posterior edge about rectangular, subacuminate, produced a little caudad and projecting scarcely beyond margin of somite. Posterior margin short, weakly emarginate. Paranota weakly prominent, of moderate dorsoventral width. Ventral demarcation weak. Upper furrow straight caudally, curving widely upward in anterior half towards waist. Paranota of 4th somite similar to those of 3rd, but laterally more evenly and a little more strongly rounded. Posterior edge more widely angular, narrowly rounded, slightly produced but not projecting. Dorsoventral width a little larger than in 3rd somite. Upper furrow in lateral aspect with a wider curve towards waist. Paranota of 5th and subsequent somites rather weakly prominent. Lateral border in dorsal aspect widely and almost evenly rounded, in poriferous somites a little more strongly convex at pore area. Posterior edge widely angular, acuminate, slightly produced but not projecting behind margin of somite. In 19th somite posterior edge almost obsolete. Posterior margin quite short, weakly emarginate. Paranota in lateral aspect with upper furrow widely and weakly convex in poriferous somites, straight or a little concave in poreless ones; furrow running cephalad close to waist, caudad to near caudal margin of somite, but not paralleling caudal margin of somite. Dorsoventral width of paranota moderate, in poriferous somites one-and-a-half times larger than in poreless ones. Ventral demarcation by a depression distinct either in caudal half (poriferous somites) or in caudal third (poreless somites), slightly convex, converging in a rather acute angle with dorsal demarcation and meeting it in a pointed edge. Pores situated almost in between dorsal and ventral demarcations, or slightly closer to ventral demarcation, in a small ovoid excavation.

*Sternites and legs:* Sternites of middle somites longer than wide (ratio 1.3 : 1.0). Cross-impressions well developed, with longitudinal and transverse impressions almost equally wide, transverse becoming furrowlike only between successive coxal sockets. No sternal cones, Pubescence moderate to rather dense; setae of moderate



**Figs 13, 14 & 15.** *Isocladosoma guttatum* n.gen., n.sp., holotype ♂. **13:** right gonopod, medial aspect; **14:** telopodite of left gonopod, anterior aspect. **15:** *Isocladosoma pallidulum* n.sp., holotype ♂, telopodite of left gonopod, anterior aspect.

length to longish. Sternite of 4th somite relatively wide, rather deeply transversely concave, with a faint median furrow; coxal sockets slightly raised. Pubescence moderately dense. Sternite of 5th somite with a longish, parabolically rounded process between anterior coxae; process at base slightly wider than intercoxal space, its length about equal to its largest width. Process in profile directed downward and cephalad, projecting well in front of anterior margin of sternite. Anterior side in profile straight at base, rather strongly convex halfway and straight again in distal half. Anterior side of apex with a transverse brush of short setae. Posterior side in profile widely concave, basis a little convex. Pubescence moderate to rather sparse, setae longish. Transverse furrow well impressed. Posterior half of sternite a convex transverse wall without median impression, moderately pubescent with longish setae. Posterior coxae somewhat pressed aside, but coxal sockets scarcely raised. Sternite of 6th somite flattened, with coxae well separated. Anterior half faintly convex, posterior half flat and not raised above ventral level of metasomal ring. No longitudinal impression; transverse impression weak. Coxal sockets scarcely raised. Pubescence rather sparse, mostly present along anterior border of sternite; setae longish. Sternite of 7th somite

in front of gonopod aperture with a weakly raised, somewhat callous wall. Coxae of ambulatory legs pressed aside a little. Sternite of 8th somite anteriorly flattened, raised only a little above ventral level of metasomal ring. Anterior coxae distinctly more widely separated than posterior ones. Coxal sockets raised a little. Longitudinal impression absent. Transverse impression faint, a little more distinct between the successive coxal sockets. Posterior half of sternite with a wide longitudinal impression, well raised near coxal sockets. Pubescence rather sparse. Legs of middle part of body of moderate length, somewhat incrassate. Prefemora dorsally rather strongly convex; femora ventrally faintly arched. Relative length of podomeres 2 to 6: 0.80, 1.00, 0.60, 0.65, 0.75. Ventral pubescence on all podomeres rather dense to moderate, setae of moderate length to longish. Dorsal pubescence apparent only in tarsi and, though much less, in tibiae. Scopulae dense in anterior legs up to about those of 8th somite, thinning out in legs of subsequent somites to become absent from legs of 15th to 18th somites. Legs of first pair strongly incrassate, and with elongate ventral femoral tubercle. Legs of 2nd pair with coxae medially slightly produced in a thick, low rounded cone.

*Anal somite:* Upper profile faintly convex, faintly impressed in front of base of epiproct. Epiproct of moderate length, and moderately thick, rather broad. Sides of epiproct straight, except at base where a little concave, weakly converging towards apex. Just beyond halfway a slight stepwise narrowing and from there the sides converge convexly towards the apex, which is rather broad and straight truncate. Setae not on tubercles. Paraprocts with rims of moderate width and height; setae not on tubercles. Hypoproct rather broadly triangular to subparabolical. Sides almost straight, apex widely rounded. Setae not on tubercles.

*Gonopods* (Figs 13, 14): Femoral process apically a little recurved. Solenomerite slender, scarcely widening halfway along its length. Tibiotarsus with rather broad stem, widening halfway along its length; its distal half bearing a broad, rounded lamella on caudal side. Apex uncatate and a little recurved. Halfway along its length the tibiotarsus bears on its mediocephalic side a relatively short spine pointing distad.

*Female:* Clypeus rather strongly impressed towards labrum. Vertex transversely evenly convex; collum transversely almost evenly convex, faintly flattened in middle. Antennal sockets separated by 1.5 times diameter of a socket or by 0.85 times length of 2nd antennomere. Relative length of antennomeres 2 to 6: 1.00, 0.90, 0.80, 0.85, 0.75. Pleural keels a little more strongly developed than in male, but caudally rounded, absent from 5th somite onwards. Sternites of middle somites as long as wide. Cross-impressions moderately developed, rather wide, sharp and furrowlike only between successive coxal sockets. Pubescence moderate, setae in part rather long. Legs much more slender than in male; femora straight; ventral pubescence moderately dense. Relative length of podomeres 2 to 6: 0.75, 1.00, 0.65, 0.55, 0.75. Coxae of 2nd legs medially and caudally somewhat callously inflated, opposite coxae medially contiguous. At mediocaudal side a low small swelling; from laterocaudal side arises a strong pointed spine, pointing laterad and a little caudad. Epigynal structure consisting of two wide emarginations embracing coxae, medially separated by a low pointed triangle; lateral side of emarginations a little raised.

*Isocladosoma pallidulum* n.sp.

**Material.** Sta. 92, Gonyah Gonyah, 32 km SSW Morwell, 17.xi.1980 (timber track along Grand Ridge Road, temperate rainforest with tree ferns, under logs and litter and in rotting trees), ♂ holotype, 1 ♂ paratype, 1 fragm. of ♀ paratype, 1 juv. ♀ (19 somites) paratype.

**Description.** *Colour:* This species has essentially the same colour pattern as the type species, but the lighter parts have extended at the expense of the dark-coloured areas. Moreover the light colour is yellowish white, and the dark colour sepia brown. Head with vertex sepia, finely areolated with minute whitish spots. Remaining parts of head diluted sepia to yellowish white. Antennae pale sepia, antennomeres distally

annulate with yellowish white; 6th antennomere infusate; tip of antennae whitish. Collum with two lateral sepia spots, medially separated by an anterior smaller yellowish white triangle and a posterior larger triangle merging just in front of the middle. Lateral margins narrowly yellowish white. Somites with a large yellowish white median band, broadest at caudal margin of each metatergite, and having a width there equal to about three-quarters of total width of metasomite, narrowest at waist. Remaining lateral part of tergites, including paranota, sepia-coloured; posterior edges of poriferous paranota a shade paler. Sides diluted sepia; venter and sternites beige. Basal podomeres beige, femora except for distal part vaguely infusate. Three distal podomeres sepia, with large distal yellowish white annuli. Anal somite with rather wide yellowish white median band, widest at base of epiproct. Epiproct entirely yellowish white. Lateral sides of anal somite sepia, ventral half beige. Paraprocts sepia, margins whitish. Hypoproct beige.

*Width:* ♂: 2.4–2.5 mm; ♀: 2.9 mm; juv. ♀ (19 somites): 2.1 mm.

*Head and antennae:* Labrum moderately deeply and rather widely emarginate. Antennal sockets separated by 1.35 times diameter of a socket or by 0.65 times length of 2nd antennomere. Vertigial furrow faintly impressed in anterior part of vertex, not reaching upper level of antennal sockets. Relative length of antennomeres 2 to 6: 1.00, 0.95, 0.85, 0.85, 0.75.

*Collum:* Anterior border faintly convex towards sides. Sides almost evenly rounded. Surface of collum transversely a little incurved at lateral margin.

*Somites:* Pleural keels of 5th somite almost obsolete.

*Paranota:* 2nd somite a little narrower than collum; 3rd somite scarcely narrower than 2nd and as wide as 4th. Paranota of 2nd somite with anterior border weakly convex, scarcely thrust forward. Lateroanterior edge angular. Paranota of 5th and subsequent somites with posterior edge minute, acutely angular. Posterior margin quite short, more distinctly emarginate than in preceding species.

*Sternites and legs:* Sternites of middle somites 1.4 times longer than wide. Pubescence as in preceding species but a little less dense. Relative length of podomeres 2 to 6: 0.70, 1.00, 0.55, 0.65, 0.90. Scopulae less dense than in preceding species, absent from legs of 11th somite onwards. Ventral pubescence as in preceding species, but a little less dense.

*Anal somite:* Epiproct more or less parabolically rounded; sides convex near apex and with a slight stepwise narrowing there; apex faintly emarginate. Hypoproct almost evenly semicircularly rounded.

*Gonopods* (Fig. 15): Tibiotarsus with a large spinelike process reaching distad to near its apex. Apex of tibiotarsus curving a little mesad, widening a little and ending in three tiny lobes. Solenomerite widening a little halfway.

*Female:* (only the caudal half of a specimen available). Sternites 1.05 times longer than wide.

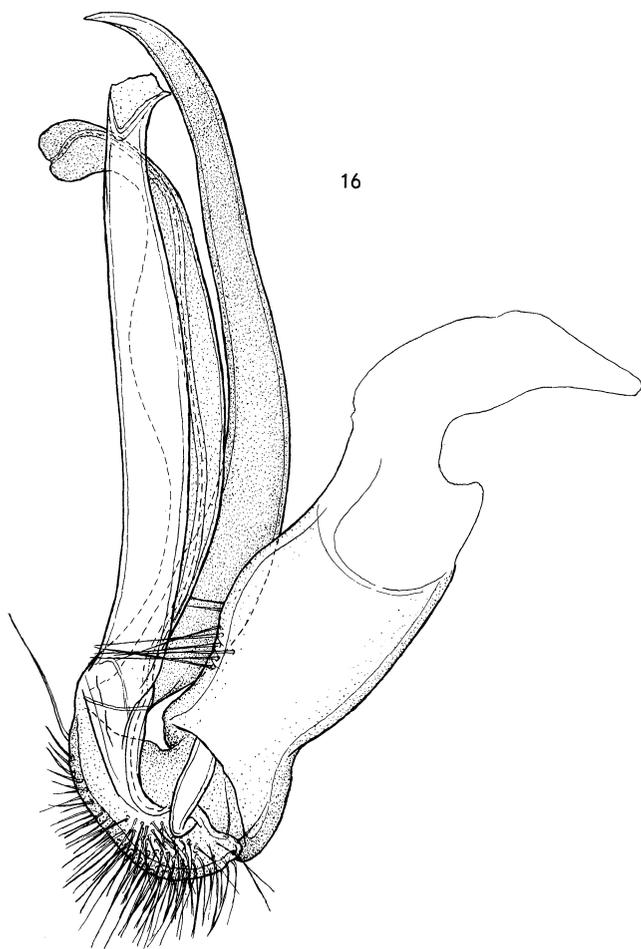


Fig. 16. *Isocladosoma maculatum* n.sp., holotype ♂, right gonopod, medial aspect.

Relative length of podomeres 2 to 6: 0.80, 1.00, 0.55, 0.55, 0.75.

**Remarks.** In the points not mentioned the description of *I. guttatum* applies. Although this species approaches *I. guttatum* in the structure of the gonopods, it is quite distinct in its colour pattern and in some morphological details like the development of the scopulae of the legs of the male.

#### *Isocladosoma maculatum* n.sp.

**Material.** Australia, without locality (a 6042), ♂ holotype, 1 ♂ paratype, 3 ♀ paratypes (American Museum of Natural History, New York).

**Description.** *Colour:* The material has suffered from preservation, but the colour pattern as far as recognisable seems exactly the same as in *I. guttatum*.

*Width:* ♂ 2.4 mm; ♀ 2.7–3.0 mm.

*Head and antennae:* Labrum rather weakly and widely emarginate. Clypeus moderately impressed towards labrum. Lower clypeus rather weakly and sparsely punctate; pubescence also more sparse.

Antennal sockets separated by 1.3 times diameter of a socket or by 0.8 times length of 2nd antennomere. Lateral swellings of vertex scarcely defined. Vertigial sulcus weak in lower part of vertex, not reaching upper level of antennal sockets. Relative length of antennomeres 2 to 6: 0.95, 1.00, 1.00, 0.90, 0.90.

*Collum:* Anterior border straight in middle, and straight towards sides.

*Sternites and legs:* Sternites of middle somites 1.4 times longer than wide. Relative length of podomeres 2 to 6: 0.80, 1.00, 0.60, 0.60, 0.80.

*Gonopods* (Fig. 16): Tibiotarsus slender, scarcely widening from base onwards, faintly tapering towards apex, which is irregularly truncate. No lateral spine. Solenomerite widening a little towards middle of length. Femoral process apically not recurved.

*Female:* Clypeus rather weakly impressed towards labrum. Antennal sockets separated by 1.2 times diameter of a socket or by 0.85 times length of 2nd antennomere. Relative length of antennomeres 2 to 6: 1.00, 0.90, 0.90, 0.85, 0.85. Sternites of middle somites scarcely longer than wide. Relative length of podomeres 2 to 6: 0.80, 1.00, 0.60, 0.55, 0.70. Coxa of 2nd legs without a distinct lateral spine, only with a little subconical lateral projection.

**Remarks.** In the points not mentioned the description of *I. guttatum* applies.

This species is quite similar to *I. guttatum* in colour and morphology, and can be properly distinguished only by the characters of the gonopods. The absence of the spine on the coxa of the 2nd pair of legs of the female may serve to distinguish the females.

#### *Hoplatessara* Verhoeff

*Hoplatessara* Verhoeff, 1928: 89, 92.—Jeekel, 1968: 25.

*Hoplatessaropus* Verhoeff, 1941: 9 (as subgenus of *Hoplatessara*).

**Remarks.** In the current concept, initiated by Jeekel (1968), this genus has six described species, which as far as geographical data are available occur in an area ranging from the Blue Mountains in New South Wales down to the surroundings of Melbourne.

*Hoplatessara* belongs to the group of Australiosomatini in which the telopodite of the gonopods is deeply split into four branches, the tibiotarsus consisting of two lanceolate prongs connected only at the very base. In this regard the genus agrees with *Cladethosoma*, but it is distinct in having the apex of the solenomerite trilobate, or exceptionally bilobate, with the spermal channel making a loop in the middle lobe before terminating in the most proximal lobe. The tibiotarsal prongs are solid, more or less circular in cross section, and in a number of species have a peculiar undulate structure towards their apex. The femoral process is lamellate, transversely flattened, and more or less spatulate apically, lacking the uncate process of *Cladethosoma*.

In the field the species may be recognized by a colour pattern showing a transverse annulation of black and dark reddish brown to yellowish brown. Morphologically they are rather similar, differing from each other mainly in the structure of the gonopods: the relative length of the four branches and the outline of the femoral process.

Various authors of species have used different names for the branches into which the telopodite of the gonopods is divided. To facilitate a comparison of the descriptions and drawings the terms used are listed hereunder.

<i>anulata</i> (Attems, 1931)	<i>femoral process</i> 'Tarsus'	<i>tibiotarsus</i> 'Seitenäste der Tibia'
<i>clavigera</i> Verhoeff, 1928	tibiotarsus	lateral rami of femur
<i>froggatti</i> (Brölemann, 1913)	tarsal branch	tibial branch
<i>luxuriosa</i> (Silvestri, 1895), in Jeekel, 1956	femoral process	tibiotarsus
<i>musgravei</i> Verhoeff, 1928	tibiotarsus	lateral rami of the femur
<i>pugiona</i> Verhoeff, 1941	'Tibiotarsus'	'Parsolänomerite'

**Key to the Species of *Hoplatessara***

1. Solenomerite apically bilobate or trilobate, with a rather long spinelike preapical process, more or less paralleling direction of apex. Femoral process scarcely reaching distad of solenomerite ..... 2
  - Solenomerite apically trilobate, without preapical accessory branch. Femoral process generally overreaching solenomerite, sometimes quite considerably ..... 3
2. Larger species: width of male 4.5 mm. Apex of solenomerite trilobate. Preapical spine of solenomerite curves a little proximad and crosses apex of solenomerite on its anterior side ..... *H. anulata* (Attems)
  - Smaller species: width of male 3.4–3.5 mm. Apex of solenomerite bilobate. Preapical spine of the solenomerite (i.e. enlarged distal lobe of apex) parallels distal part of solenomerite; both point mesad. .... *H. luxuriosa* (Silvestri)
3. Femoral process greatly expanding in distal direction, overreaching solenomerite by about one-third of total length of acropodite. Tibiotarsal branches quite unequal in length; shorter branch about two-thirds of length of longer one ... *H. clavigera* Verhoeff
  - Femoral process generally overreaching solenomerite, but by much less than one-third of total length of acropodite. Tibiotarsal branches less different in length ..... 4
4. Femoral process in anterior or posterior aspect of equal width from base to apex; distal part not widening conspicuously. Process overreaches the solenomerite distinctly ..... *H. pugiona* Verhoeff
  - Femoral process spatulate; rather narrow over most of its length and widening distally rather abruptly in a rhomboid, subquadrate or rounded apical lamina. Process reaches only a little distad of solenomerite ..... 5
5. Solenomerite not conspicuously widening in its distal half ..... *H. froggatti* (Brölemann)
  - Solenomerite has an abrupt laminate expansion on its lateral side just distad of half its length ..... 6
6. Apical lamina of femoral process sharply set off from its stem by a distinct constriction, margin of lamina irregularly serrulate. Proximad of the constriction femoral process has on its medial side a lobe covered with fine conical scales .... *H. nigrocingulata* n.sp.
  - Stem of femoral process widens gradually towards apical lamina; margin of lamina not serrulate ..... *H. musgravei* Verhoeff

*Hoplatessara pugiona* Verhoeff

*Hoplatessara (Hoplatessarus) pugiona* Verhoeff, 1941: 14, fig. 8.

**Previous record.** Whittlesea ('Whettlere').

**Material.** Belgrave, 3.ii.1924, leg. Ch. Barrett (a 6045), 1 ♂, 2 ♀, 1 fragm. of ♀. (American Museum of Natural History, New York).

Sta. 93, Ferntree Gully Nat. Park, 18 km NNE Dandenong, 18.xi.1980 (along nature track in temperate rainforest with tree ferns, under logs and litter and in rotting trees), 1 ♀.

**Description.** *Colour:* Head dark brown or blackish; lower part of the clypeus and antennal sockets paler brown to yellowish. Antennae brown, darkest in distal parts of antennomeres; distal margins of antennomeres scarcely annulated with yellowish, the membranes pale; antennal tip whitish. Collum dark brown to blackish; anterior margin with a narrow yellow band fading away towards the sides; posterior margin with a similar, somewhat broader yellow band, broadest in middle, narrowing laterally. Somites brown to blackish; posterior half of metatergites yellow, sharply demarcated. Posterior half of paranota yellowish; lower and posterior parts of sides, venter, sternites and three proximal podomeres paler brown to yellowish; three distal podomeres infusate. Anal somite blackish brown, epiproct yellow. Paraprocts brown, margins yellowish. Hypoproct yellow.

*Width:* ♂ 3.9 mm; ♀ 4.0–4.1 mm.

**Head and antennae:** Labrum moderately widely and moderately deeply emarginate. Clypeus rather convex, rather strongly impressed towards labrum. Lateral margin of clypeus widely convex, with distinct notch near labrum. Headplate punctate and rugulose in clypeal and lower frontal areas, smooth or slightly rugulose and shiny in upper frontal and vertigial parts. Pubescence rather sparse in clypeal and frontal regions, sparse on lateral sclerites; setae of moderate length to shortish. Vertex hairless. Antennal sockets separated by 1.3 times diameter of a socket or by 0.7 times length of 2nd antennomere. Postantennal groove rather deep and moderately wide, wall in front moderately prominent. Bean-shaped area at posterior side of sockets obsolete. Vertex transversely flat or even a little concave in middle, rather convex laterally but without lateral swelling. Vertigial sulcus moderately impressed, running downward to just above upper level of antennal sockets. Antennae of moderate length, stoutish, somewhat clavate. 2nd and 3rd antennomeres subcylindrical, each widening distad; 4th, 5th and 6th more obconical in shape. Relative length of antennomeres 2 to 6: 1.00, 0.95, 0.90, 0.85, 0.80. Pubescence moderate in proximal antennomeres to rather dense in distal ones.

**Collum:** A little wider than head, subtrapexoidal in dorsal outline. Anterior border straight or even faintly concave in middle, widely and weakly rounded more laterally, and straight or faintly concave towards sides. Posterior border weakly and widely concave in middle, widely rounded more laterally and straight towards sides.

Lateral border rather widely and evenly rounded. Surface of collum smooth or with some irregular wrinkles, shiny, hairless. Surface transversely faintly convex or almost flat in middle, rather strongly convex laterally, sides almost perpendicular. Marginal rim laterally narrow, weakly raised; premarginal furrow distinct up to level of lateral edges of vertex, fading away towards middle of anterior border.

**Somites:** Constriction rather weak. Waist narrow, sharply demarcated from prosomites, dorsally distinctly striate to subcarinate, faintly striate below level of paranota. Prosomites dull, with fine cellular structure. Metatergites shiny, smooth or faintly rugulose, hairless. Transverse furrow present from 5th to 18th somites, rather strongly impressed, with faint sculpture, disappearing laterally at a distance from upper demarcation of paranota about equal to half dorsoventral diameter of a poriferous paranotum. Sides smooth or irregularly wrinkled, up to 4th somite minutely granular. Pleural keels represented up to 4th somite by a granulate ridge, dorsally demarcated by a furrow, in 3rd somite caudally slightly angular, in 4th without posterior edge. In 5th to 7th somites only scarcely-defined longitudinal swellings.

**Paranota:** Second somite a little wider than collum; 3rd scarcely wider than 2nd and as wide as 4th. Paranota of 2nd somite with anterior border weakly convex, about transverse. Latero-anterior edge widely angular, with a blunt latero-ventral tooth. Lateral margin almost straight, anteriorly weakly convex, posteriorly a little more strongly rounded. Lateral margin faintly diverging caudad. Posterior edge subangular, narrowly rounded, faintly produced and projecting. Posterior margin quite short, weakly convex. Paranota on a low level, lateral margin just visible from above. In lateral aspect margin narrow, more or less straight and of even width. Premarginal furrow curving abruptly upward anteriorly, and rather abruptly caudally, briefly paralleling caudal margin of tergite. Paranota of 3rd and 4th somites with lateral border in dorsal aspect widely and almost evenly convex, more widely rounded in 4th. Caudal edges subangular, narrowly rounded in a wide angle, weakly produced caudad and scarcely projecting caudad of posterior margin of somite. Posterior border short, weakly rounded. In lateral aspect paranota of the 3rd and 4th somites much wider dorso-ventrally than those of 2nd somite. Dorsal demarcation straight, curving upwards anteriorly towards waist and more abruptly so near the posterior margin; premarginal furrow briefly paralleling posterior margin of tergite. Ventral demarcation by a depression distinct in more than half length of paranota, curving upwards in an acute angle towards dorsal demarcation. Paranota of 5th and subsequent somites weakly prominent. Lateral border from above widely rounded; anteriorly, and in poriferous somites also posteriorly, a little more convex. Posterior edge subangular, narrowly rounded, slightly produced caudad; projecting slightly behind margin of somite from about 15th to 18th somite. Caudal angle a little wider than 90°. Posterior margin short, a little concave. In

lateral aspect dorsal demarcation faintly convex in poriferous somites and straight or faintly concave in poreless ones. Premarginal furrow running towards waist, curving upward anteriorly, but not reaching waist; furrow curving upwards abruptly at caudal border and briefly paralleling caudal margin of tergite. Paranota dorso-ventrally moderately wide; poreless paranota about two-thirds of width of poriferous ones. Ventral demarcation more or less straight, converging rather strongly towards upper margin, and meeting it in an acute, more or less narrowly rounded angle; angle in poreless somites narrower than in poriferous ones. Pores in a small ovoid excavation, situated a little closer to ventral demarcation than to dorsal.

*Sternites and legs:* Sternites of middle somites longer than wide (ratio 1.3:1.0). Cross-impressions well developed, transverse impression a little narrower than longitudinal one. No sternal cones. Pubescence moderate to rather dense; setae of moderate length. Sternite of 4th somite rather wide, with a wide but not deep longitudinal impression. Sternite of 5th somite with broad shovel-like process, which is a little wider than distance between anterior coxae, and about one-and-a-half times as broad as long. Process widely parabolically rounded to subpentagonal with a quite wide distal angle. Process directed cephalad and a little ventrad, projecting well in front of anterior border of sternite. Anterior surface widely convex; posterior surface in profile convex at base, widely concave distally. Apex anteriorly with a dense transverse brush of short setae; posterior surface sparsely set with longish hairs. Behind process a rather deep transverse furrow. Posterior half of sternite consisting of a rounded wall between coxal sockets, medially hardly impressed. Pubescence rather sparse; setae longish. Sternite of 6th somite entirely flattened, not raised above level of ventral side of metasomal ring. Transverse impression weak and wide, no longitudinal impression. Coxal sockets rather widely separated, not particularly raised. Pubescence rather sparse, moderate at anterior margin and near coxal sockets; setae of moderate length to rather long. Sternite of 7th somite with a weak transverse ridge on each side in front of gonopod aperture. Coxae pressed aside a little. (8th somite missing.) Legs moderately long, stoutish. Femora faintly arched; prefemora rather strongly convex dorsally. Ventral pubescence rather dense on all podomeres; setae of moderate length. Dorsal pubescence apparent only in tibiae and tarsi. Scopulae present on anterior legs, absent from 14th somite onwards (somites 8 to 13 missing). Relative length of podomeres 2 to 6: 0.70, 1.00, 0.65, 0.65, 0.80. First leg strongly incrassate and with the usual ventral femoral tubercle. Coxa of 2nd leg mediolaterally shortly truncate. Coxae of 6th somite medially faintly produced, rounded.

*Anal somite:* Upper profile weakly convex, with a rather faint and wide depression in front of base of epiproct. Epiproct longish, rather thick dorso-ventrally, broad. Sides rather weakly converging, straight or widely concave, not entirely parallel near apex, and without stepwise narrowing. Setae not on tubercles. Apex broadly

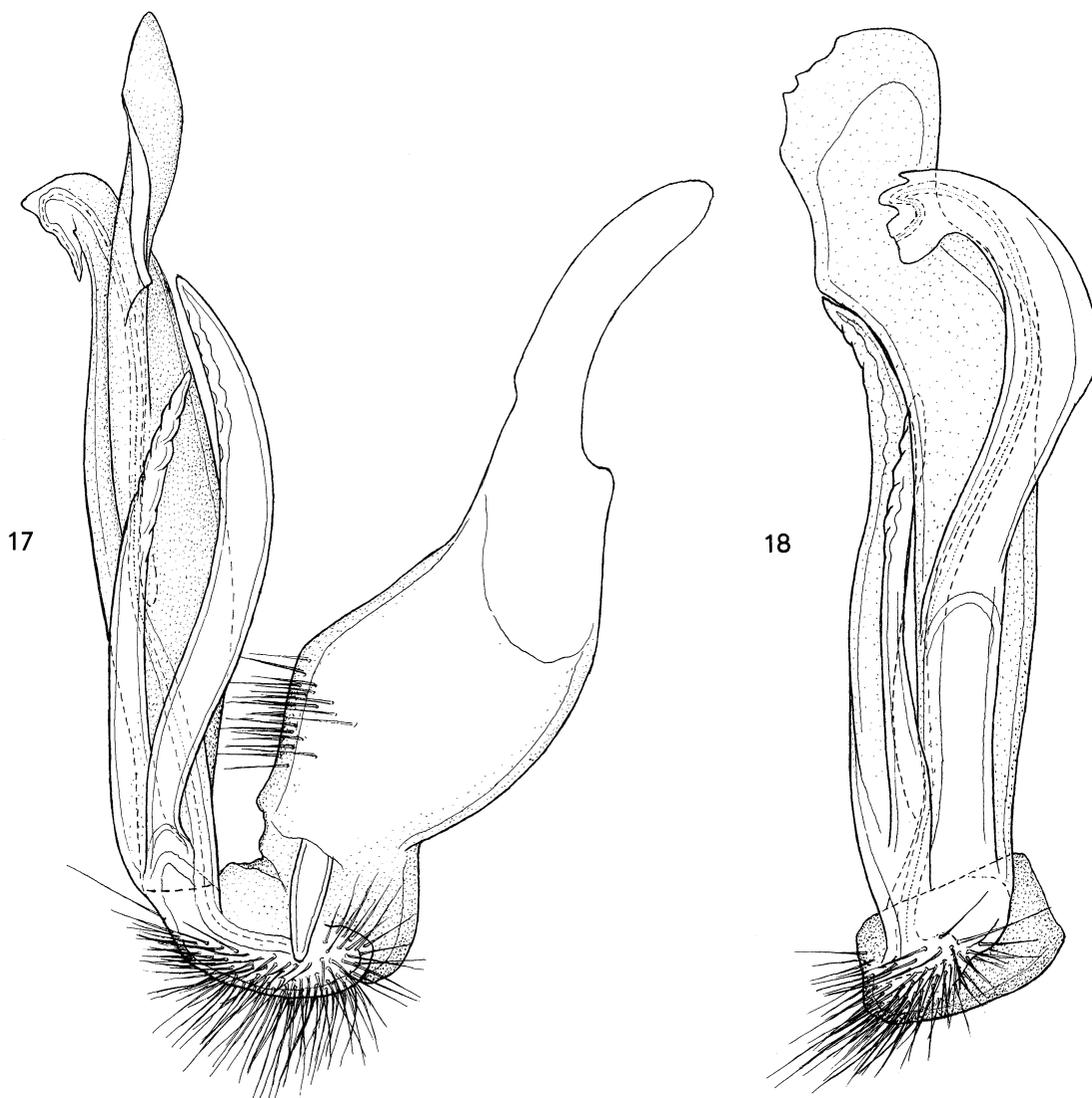
truncate, scarcely emarginate, edges narrowly rounded. Ventral side a little concave. Paraprocts with moderately wide and rather low marginal rims. Setae on weak swellings. Hypoproct broadly parabolically or almost semicircularly rounded. Setae not on tubercles.

*Gonopods* (Figs 17, 18): Tibiotarsal branches differing a little in length: medio-anterior branch longer than latero-posterior one. Undulate structure distinct in both branches. Junction of solenomerite and femoral process situated at about two-fifths of length of femoral process. Solenomerite showing only a slight expansion halfway; its apex three-pronged, distal prong short. Femoral process projecting distinctly distad of solenomerite, its transverse width remaining equal over most of its length, apex irregularly serrate, not expanded.

*Female:* Clypeus only slightly less impressed than in male. Vertex transversely almost evenly convex. Antennal sockets separated by 1.5 times diameter of a socket or by 0.8 times length of 2nd antennomere. Relative length of antennomeres 2 to 6: 1.00, 0.95, 0.90, 0.75, 0.70. Collum transversely widely and almost evenly convex, only slightly less convex in middle. Pleural keels in 2nd somite caudally rounded and a little produced, in 3rd somite caudally rather prominent, narrowly rounded but not produced, in 4th somite caudally widely rounded. In 5th somite only a faint longitudinal swelling; none in subsequent somites. Sternites a little longer than wide (ratio 1.1:1.0). Cross-impressions with transverse impression rather deep and narrow; longitudinal impression wide. Legs not incrassate, femora straight, prefemora much more weakly convex on dorsal side. Ventral pubescence present on all podomeres but distinctly more sparse than in male. Relative length of podomeres 2 to 6: 0.80, 1.00, 0.55, 0.55, 0.75. Epigynal structure absent: anterior side of venter of 3rd somite faintly emarginate, without median process. Coxae of 2nd pair of legs with two rounded cones on posterior side: a medio-caudal low and rounded conical process pointing caudad, and a latero-caudal and more distally situated similar process, which is a little longer, is more acuminate-subconial, and points caudo-laterad.

**Remarks.** The above description was made to extend the rather brief account by Verhoeff. It is obvious that Verhoeff misinterpreted the structure of the femoral process (called tibiotarsus in his description), and described its apex as 'stabartig verdünnt'. This observation was based on an examination of the gonopod in a medial aspect only, and in such a position the laminate apex suggests a narrow process. In an anterior or posterior aspect the true shape of the apex becomes apparent.

*H. pugiona* seems to come nearest to *H. clavigera* Verhoeff, 1928, from an unknown locality, probably in New South Wales, with which it agrees in the general shape of the femoral process. In *H. clavigera*, however, the process is much longer in relation to the length of the solenomerite and the tibiotarsal branches, and overreaches the apex of the solenomerite by one-third of the total length of the acropodite.



**Figs 17 & 18.** *Hoplatessara pugiona* Verhoeff, ♂. **17:** right gonopod, medial aspect; **18:** telopodite of left gonopod, caudal aspect.

***Hoplatessara nigrocingulata* n.sp.**

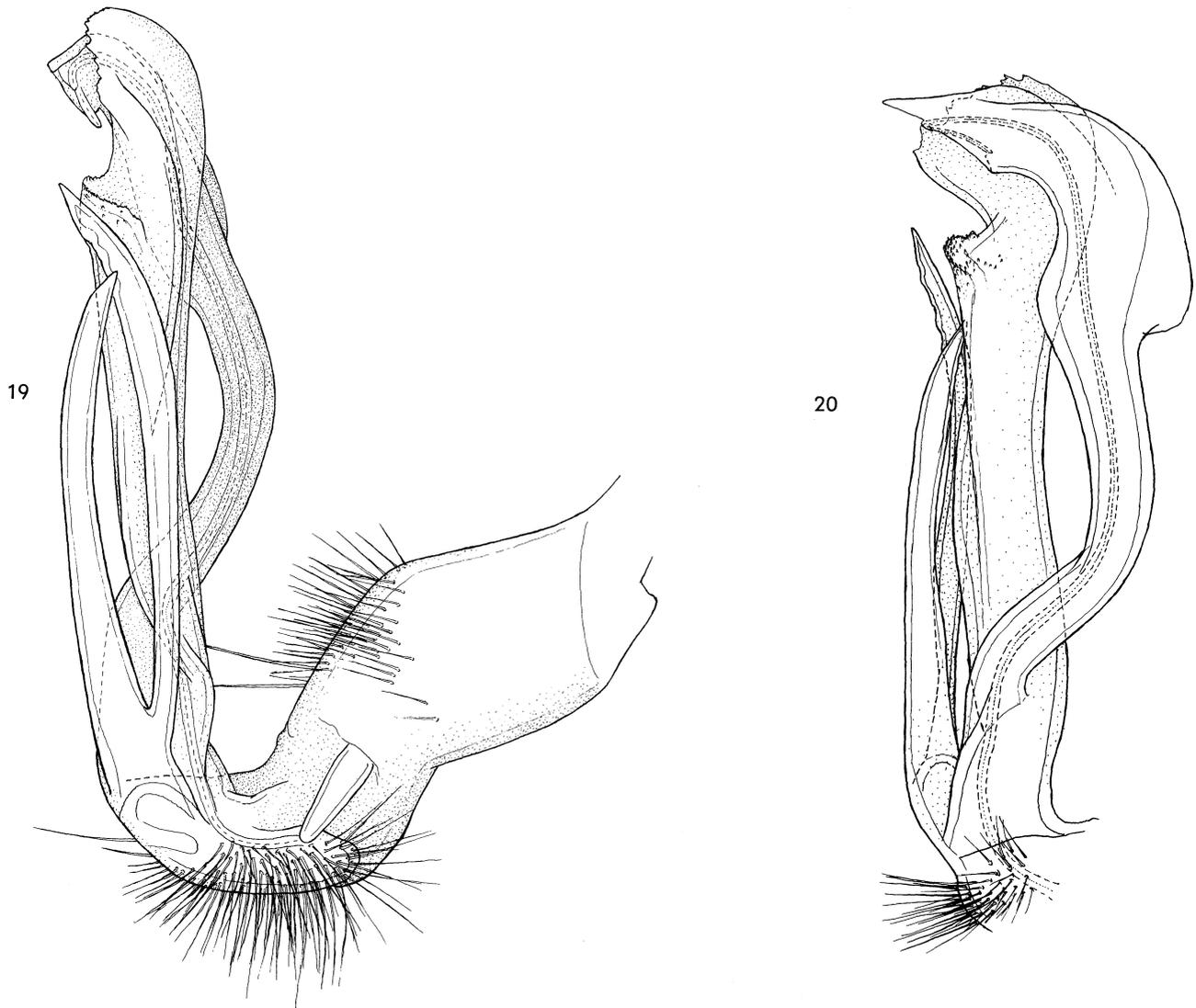
**Material.** Australia, without locality (A 5763, 4588d), ♂ holotype (American Museum of Natural History, New York). Australia, without locality (A 5763, 4598), ♂ paratype (American Museum of Natural History, New York).

**Description.** *Colour:* Vertex, frontal and upper clypeal region brownish black; lower part of clypeus, a narrow ring around antennal sockets and lateral parts of head brown to orange brown. Antennae with basal antennomere orange brown, remaining antennomeres brown, infuscate towards their distal end; intersegmental membranes pale, antennal tip whitish. Collum blackish brown, with rather narrow brown anterior and lateral margins, posterior border up to two-fifths of length of collum, brown, marginal zone narrowing laterad. Somites with anterior part of prosomites and metasomites

including paranota and sides brown to orange brown; waist and parts of pro- and metasomites adjacent to waist blackish brown; on metatergites blackish colour extends over one-fifth of their length. Lower part of sides, venter, sternites and three proximal podomeres orange brown to yellowish; three distal podomeres brown, tip of tarsi pale. Anal somite and paraprocts blackish brown; entire epiproct including a medio-dorsal part of anal ring, margins of paraprocts and entire hypoproct orange brown to yellowish.

*Width:* ♂ 4.1–4.2 mm.

*Head and antennae:* Labrum weakly and widely emarginate. Lateral margin of clypeus faintly convex, without distinct notch near labrum. Pubescence moderately dense in clypeal and lower frontal area, upper frons and vertex hairless; setae shortish. Antennal sockets separated by 1.4 times diameter of a socket or by 0.6 times length of 2nd antennomere. Bean-shaped



**Figs 19 & 20.** *Hoplatessara nigrocingulata* n.sp., holotype ♂. **19:** right gonopod, medial aspect; **20:** telopodite of left gonopod, caudal aspect.

area behind antennal sockets vaguely indicated, not swollen. Vertical sulcus rather well impressed, scarcely reaching upper level of antennal sockets. Relative length of antennomeres 2 to 6: 1.00, 1.00, 0.90, 0.90, 0.75. Pubescence rather dense in proximal antennomeres to dense in distal ones.

**Collum:** Anterior border straight in middle, widely rounded more laterally and straight again along sides. Posterior border widely and relatively deeply emarginate in middle, straight or faintly convex laterally. Surface longitudinally weakly and almost evenly convex; transversely weakly convex in middle, more strongly convex laterally, sides almost perpendicular.

**Somites:** Waist rather narrow, dorsally distinctly striate, striation becoming finer and weaker on sides down to level of stigmata. Sides smooth or very finely rugulose, dispersedly granular near posterior border, up to 5th somite granular all over. Pleural keels represented

in 2nd and 3rd somites by faint, scarcely demarcated ridges, caudally not raised or produced. In 4th to 7th somite only weakly defined longitudinal swelling, which in 7th somite is distinct only above the posterior pair of legs.

**Paranota:** Anterior border in 2nd somite straight. Latero-anterior edge narrowly rounded, with a faint lateral tooth. Lateral border in dorsal aspect straight or faintly convex, a little more convex in posterior half. Posterior edge narrowly rounded, faintly produced caudad and projecting a little behind margin of somite. Posterior margin obsolete. Paranota of 2nd somite not visible from above, except posterior edge. In lateral aspect margin rather narrow, straight, curving a little upwards in caudal half. Paranota of 3rd and 4th somites with upper demarcation widely concave, curving upwards anteriorly, and turning abruptly upwards caudally near posterior margin. Paranota of 5th and

subsequent somites with posterior edges projecting slightly caudad of margin in 14th and 16th to 18th somites only. Ventral demarcation of paranota about straight or sometimes even a little concave, converging not strongly, and meeting upper demarcation in a quite acute, almost pointed angle.

**Sternites and legs:** Ratio of length and width 1.3:1.0. Setae of moderate length to longish. Process of 5th sternite parabolically rounded, without apical angle. Ridge in front of gonopod aperture in 7th somite moderately prominent. Sternite of 8th somite with anterior coxal sockets a little more separated than posterior ones. Anterior half of sternite flat, not raised above ventral level of metasomal ring; coxal sockets not raised. Transverse impression faint. Posterior half more normally raised and with a distinct median impression, which is rather wide. Pubescence moderate to rather dense; setae of moderate length with a few long ones. Legs rather long and stoutish. Dorsal pubescence conspicuous on all podomeres. Scopulae well developed in anterior legs, but thinning out rapidly in postgonopodial somites and absent from 13th to 14th somite onwards. Relative length of podomeres 2 to 6: 0.65, 1.00, 0.60, 0.60, 0.70.

**Anal somite:** Upper profile straight or faintly convex, without distinct basal impression. Epiproct of moderate length and width, rather broadly truncate. Sides straight or faintly convex, converging moderately, not parallel near apex and with faintly indicated stepwise narrowing near apex.

**Gonopods** (Figs 19, 20): Tibiotarsal branches differing a little in length as in preceding species; undulate structure developed only in the longer of the two branches. Junction of solenomerite and femoral process situated at about one-fifth of length of femoral process. Solenomerite abruptly expanded distally. Apex three-pronged, but distal prong clearly longer than other two lobes, which are recurved cephalad. Femoral process spatulate, widening distally, with a medial lobe covered with minute scales, and a distal rounded and irregularly serrulate apex; apex scarcely projecting distad of solenomerite.

**Female:** Unknown.

**Remarks.** In the points not mentioned the description of *H. pugiona* applies. According to the shape of the femoral process *H. nigrocingulata* belongs in a group of species which has *H. anulata* (Attems, 1931) and *H. musgravei* Verhoeff, 1928, from the Blue Mountains, *H. froggatti* (Brölemann, 1913), from Mt. Sassafras, all in New South Wales, and *H. luxuriosa* (Silvestri, 1895) from an unknown locality. In all these species, the apex of the femoral process is spatulate, consisting of a long, narrowish stem, which widens apically more or less abruptly to form a rounded or ovoid blade. In most species the apical lamina is marked proximally by a constriction, which appears to be absent only in *H. musgravei*. The latter species may be distinguished from *H. nigrocingulata* also by the fact that the femoral process reaches distinctly farther distad than the solenomerite. In *H. froggatti* the solenomerite

apparently lacks the large laminate expansion which is characteristic for *H. nigrocingulata* and *H. musgravei*. In general aspect the gonopods of *H. anulata* are quite similar to those of *H. nigrocingulata*, and the only clear distinctive character is found in the supplementary spine emanating from the solenomerite just proximad of its apex. Finally, *H. luxuriosa* distinguishes itself from all other species of *Hoplatessara* by the fact that the distal prong of the apex of the solenomerite is widely separated from the other two prongs, appearing as a separate preterminal process of the solenomerite.

### Some Aspects of the Distribution of the Victorian Paradoxosomatidae

With the completion of the present study of the Paradoxosomatidae of Victoria the number of known species is elevated from five to fifteen plus one subspecies. The Victorian list now looks as follows:

#### Antichiropodini

*Pogonosternum nigrovirgatum nigrovirgatum* (Carl, 1902)

*P. n. infusum* Jeekel, 1982

*P. coniferum* Jeekel, 1965

*P. laetificum* Jeekel, 1982

*P. adrianae* Jeekel, 1982

*Dicranogonus pix* Jeekel, 1982

#### Australiosomatini

*Archicladosoma magnum* n.sp.

*Hoplatria clavigera* Verhoeff, 1941

*Australiosoma laminatum* n.sp.

*Somethus biramus* n.sp.

*Cladethosoma forceps* (Verhoeff, 1941)

*Isocladosoma guttatum* n.sp.

*I. pallidulum* n.sp.

*I. maculatum* n.sp.

*Hoplatessara pugiona* Verhoeff, 1941

*H. nigrocingulata* n.sp.

As far as known, all the species are endemic, with one exception: the range of *S. biramus* extends into the extreme south of New South Wales.

The rate of endemism of genera is lower, which is of course not surprising considering the fact that Victoria is a political concept rather than a physical-geographic unit. On the available (partly not yet published) information, only *Archicladosoma*, *Hoplatria* and *Isocladosoma* fall into this category: three genera out of nine.

*Pogonosternum* and *Dicranogonus* have as yet undescribed representatives in NW Tasmania and on the islands of the Furneaux group respectively (Jeekel, in preparation). The only other faunistic connection between Victoria and Tasmania concerns the genus *Somethus*, which has two species in N and NW Tasmania. This genus is, moreover, also represented in South Australia (Jeekel, in press) and appears to be the south-eastern Australian genus with the largest area of distribution.

*Australiosoma*, *Cladethosoma* and *Hoplatessara* are Victorian elements with north-eastern connections. Their range extends northward to the New England region (*Australiosoma*), southern Queensland (*Cladethosoma*) and the Blue Mountains (*Hoplatessara*). Since these three genera show their greatest diversity in New South Wales, it seems likely that the Victorian representatives are intruders from the north which reached Victoria through migration along the Great Dividing Range.

The genera *Pogonosternum*, *Dicranogonus*, *Archicladosoma*, *Hoplatria*, *Somethus* and *Isocladosoma* are probably to be regarded as endemics of a southern Australian area, which includes besides Victoria also Tasmania and South Australia. It seems likely that Victoria was a centre of dispersal, from which *Pogonosternum*, *Dicranogonus* and *Somethus* migrated towards the south and west. The distributional picture of *Pogonosternum* and *Somethus* suggests a route of dispersal from Victoria to north-west Tasmania. The distribution of *Dicranogonus* seems to indicate that migration from Victoria southward towards Tasmania along a north-eastern route was blocked south of the Furneaux group.

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