A REVISION OF THE GENUS HOROUTA KNIGHT WITH DESCRIPTION OF TWO NEW SPECIES AND NOTES ON OTHER SPECIES OF DELTOCEPHALINAE (HEMIPTERA: CICADELLIDAE)

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Summary

The monotypic New Zealand genus Horouta Knight is expanded by the transfer of four Australian species described by G.W. Kirkaldy and the addition of two new species. A revised diagnosis of the genus and key to species are given. New combinations proposed are Horouta aristarche (Kirkaldy), Horouta perparvus (Kirkaldy), Horouta lotis (Kirkaldy) (all from Deltocephalus) and Horouta austrina (Kirkaldy) (from Lonatura). New species described are Horouta jahmoi sp. nov. and Horouta spinosa sp. nov. The genus now contains six Australian species and a single species from New Zealand. Other new combinations proposed are Micrelloides polemon (Kirkaldy), Arawa centralis (Evans) and Arawa decoloratus (Evans) all transferred from Deltocephalus. Micrelloides molaris Evans is synonymised with M. polemon and placed in the tribe Paralimnini. A checklist of species of Arawa Knight is given.

Keywords: Auchenorrhyncha, Cicadomorpha, Membracoidea, Deltocephalini, Paralimnini, Athysanini

INTRODUCTION

In his many publications on the Australian leafhopper fauna, J.W. Evans often used the nominal genus to place species within a subfamily intending that these placements would be reviewed at a later date. Examples are the Tartessinae, which were mainly placed in the genus Tartessus Stål, later reviewed by F. Evans (1981), the Idiocerinae in the genus Idiocerus Lewis, later reviewed by Webb (1983), the Macropsinae in the genus Macropsis Lewis, currently under review by L. Semeraro, and the Deltocephalinae in the genus Deltocephalus Burmeister. Several Australian deltocephaline species described by Kirkaldy (1906, 1907) were placed by Evans (1966) in the genus Deltocephalus. In so doing, Evans (1966) stated that a critical study was needed to determine which of the species ascribed to that genus were truly congeneric with the type, D. pulicaris Fallèn. The genus Horouta (Cicadellidae: Deltocephalinae) was created by Knight (1975) for the single New Zealand species H. inconstans Knight. Three of Kirkaldy's species placed in Deltocephalus by Evans represent species of Horouta and Lonatura austrina Kirkaldy also belongs in Horouta. These nomenclatural changes are proposed below together with the descriptions of two new Australian species of Horouta.

The following abbreviations are used in this paper: AM: The Australian Museum, Sydney, NSW; ASCU: Agricultural Scientific Collections Unit, NSW Agriculture, Orange, NSW; BMNH: The Natural History Museum, London; BPBM: Bernice P. Bishop Museum, Honolulu, Hawaii; JWE: J.W. Evans collection, Australian Museum; MOV: Museum of Victoria, Melbourne, Victoria; NSW: New South Wales; NT: Northern Territory; NZ: New Zealand; NZAC: New Zealand Arthropod Collection, Auckland, NZ; QDPI: Queensland Dept of Primary Industries, Indooroopilly, Qld; Qld: Queensland; SA: South Australia; Tas: Tasmania; WA: Western Australia.

TRIBE DELTOCEPHALINAE

Genus Horouta Knight

Horouta Knight 1975: 205
Type species, by original designation, Horouta inconstans Knight 1975 (NZ)

Diagnosis (after Knight 1975): Short robust species, 2-3mm long, brachypterous, semibrachypterous or, occasionally, macropterous. Head wider than pronotum. Vertex shagreen, convex, lateral length greater than length against eyes, slightly less than width at base; anterior margin angularly rounded in dorsal aspect, smoothly rounded to face in lateral aspect. Face shagreen, approximately as long as wide; lateral margins slightly sinuate beneath eyes. Frontoclypeus broad, laterofrontal sutures extending above antennae to outer margin of ocelli. Anteclypeus distinct, narrowing slightly towards apex. Margin of gena adjacent to anteclypeus as wide as ocellar area. Ocelli marginal, small, separated from eye by twice own diameter. Pronotum as long as vertex or slightly shorter, lateral margins very short, non-carinate; posterior margin shallowly concave. Tegmina in macropterous forms reaching apex of abdomen with broad appendix, outer subapical cell absent, inner subapical cell usually closed; in subbrachypterous
forms reaching base of tenth segment; in brachypterous forms reaching to second or third visible abdominal tergite, venation and clavus distinct, appendix absent. Hindwings strongly reduced in brachypterous forms. Hind femoral setal pattern 2:2:1.

Male genitalia. Pygofer longer than wide, lateral lobes relatively narrow, apically rounded, bearing numerous but not dense spine-like setae on apical half, lacking processes (except for one species). Tenth segment small membranous. Subgenital plates triangular, reaching apex of pygophore, a uniseriate row of spine-like setae along lateral margin. Parameres short with apical process linear, apically rounded, curving in line with preapical shoulder which is roundly right-angled, not prominent. Connective with arms parallel, closely apposed, apices contiguous; stem very short, fused with aedeagus. Aedeagus robust basally, curving dorsally, with lateral processes present.

Notes: The genus Horouta was diagnosed by Knight (1975) based on the single New Zealand species H. inconstans Knight and this diagnosis applies to the following species which are differentiated from each other primarily by the arrangement of the lateral processes of the aedeagus. All six species are known mainly from brachypterous adults and the occurrence of macropters in the Australian species is uncommon. Knight (1975) discusses brachyptery in the type species H. inconstans as being normally restricted to the female, which occurs in both forms, and being characteristic of populations at higher altitudes. Brachyptery in the male is said to be only found in males with parasitic infection. However, as noted below, brachyptery is common in males and females in other species of Horouta.

Horouta inconstans Knight
(Figures 1, 11-12)

Horouta inconstans Knight (1975: 206)
Holotype: male (examined), 3.2km N. of Hermitage, Hooker Valley, Mount Cook National Park, Canterbury Province, New Zealand, 1037m, on tussock grass and low plants, 11.ii.1972, W.J.K. and P.S.B. (NZAC)


Description (after Knight 1975): Brachyptery, semi brachypterous or macropterous, pale testaceous, usually lacking markings, occasionally with brown mottling or with dark triangular marks at apex of vertex. Male genitalia as in generic diagnosis. Aedeagus as in Figures 11-12, bearing a single pair of linear, basal processes and apex produced beyond gonopore as elongate, linear process extending basad.

Notes: This New Zealand species differs from the
Australian species by the presence of an elongate apical process on the aedeagus.

**Horouta aristarche** (Kirkaldy), comb. nov.  
(Figures 2, 13-14)

**Driotura aristarche** Kirkaldy (1907: 59)  
**Horouta aristarche** (Kirkaldy), new combination  
Type material examined: Lectotype male (examined), designated by Fletcher and Condello (1993: 37), Mittagong, NSW, i.1905, Koebele (BPBM); Paralectotypes: 4 females, same data as lectotype (BPBM)

Other material examined: New South Wales: 1 male, Razorback Mt. near Camden, 9.xi.1979, G.R.Brown (ASCU); 1 male Wally Newton’s, Nadgee Nature Reserve, South Coast, 10-12.v.1979, M.J.Fletcher (ASCU); 4 males 4 females, Pearl Beach, near Woy Woy, 10.ii.1995, A. Westcott and F. Swindley, mercury vapour lamp (ASCU); 4 males 11 females, Pearl Beach, near Woy Woy, 11-12.ii.1995, M.J. Fletcher, J.A. Macdonald, R. Hoile and P.S. Gillespie, m.v.lamp (ASCU); 1 male, Bowral, i.1963, R. O’Brien (ASCU); 1 female, Pearl Beach, near Woy Woy, 11.ii.1995, M.J. Fletcher, by sweeping (ASCU); Victoria: 1 male, Rose River, via Whitfield, 18.iii.1963, A. Neboss (NMV); 1 male, Toolangi, 16.iv.1986, J.A.Osmelak (ASCU); Queensland: 1 male, Mt. Tamborine, 10.x.1979, J.F.Donaldson (QDPI); 1 male, Springbrook, ii.1974, I.D.Galloway (QDPI); 1 male, Bunya Mountains, 18-19.xi.1967, G. Monteith (UQIC).

Description: Head pale beige in female, whitish in male, with extensive dark brown to black markings on anteclypeus, lora, frontoclypeus and vertex. Pronotum dark brown anteriorly with light brown pattern, more extensive in female, and broadly white posteriorly. Tegmen pattern with dark brown and light brown except for broad white band across posterior margin. Abdomen dark brown with lines of pale spots.

Male genitalia: as in generic diagnosis except for aedeagus (Figures 13-14) which is elongate, narrow and curved anterodorsally, bearing two subequal elongate basal processes which cross over each other in lateral view.

Notes: This species, which is only known as a brachypterous form, can easily be distinguished from other species of *Horouta* by the broad whitish band on the hind margins of the pronotum, tegmina and usually abdominal tergite 9. The arrangement of the aedeagal processes, which cross over each other in lateral view, is also diagnostic.

**Horouta perparvus** (Kirkaldy), comb. nov.  
(Figures 3, 15-16)

**Deltocephalus perparvus** Kirkaldy (1906: 330)  
**Horouta perparvus** (Kirkaldy), new combination
Type material examined: Lectotype male (examined), Mittagong, NSW, i.1905, Koebele (BPBM), designated by Fletcher and Condello (1993: 48); Paralectotypes: 4 males 13 females 2 sex unknown, Mittagong, NSW, i.1905, Koebele (BPBM)

Other material examined: New South Wales: 5 males 11 females, Cowra, J.A. Osmelak, on tomatoes, (1 female, 5.xi.1987, 1 male, 12.xi.1987, 1 male 1 female, 19.xi.1987, 2 females, 26.xi.1987, 2 males 1 female, 10.xii.1987, 1 male 1 female, 17.xii.1987, 1 male 1 female, 31.xii.1987) (ASCU); 1 male, Sydney, i.1905, Koebele (BPBM); 1 male, Araluen, 23.x.1989, S. McDougall, sticky trap in nectarine orchard (ASCU); Victoria: 4 males 1 female, Toolangi, J.A. Osmelak, on tomatoes (2 males, 2.i.1985, 1 male, 22.i.1985, 1 male, 31.xii.1986, 1 female, 27.xii.1984) (ASCU); 1 male, Myrtleford, 10.iv.1972, A. Neboiss, m.v. trap, Eucalyptus spp. (NMV); 4 males, Tatura, J.A. Osmelak, on tomatoes (1 male, 5.xii.1986, 2 males, 2.xi.1987) (ASCU)

Description: Brachypterous or macropterous. Colour variable, testaceous with or without pale or dark brown markings or pale dorsally and dark brown to black ventrally. Tegmen of macropters pale translucent with dark brown margins to cells. Tegmen of brachypters evenly testaceous translucent or brown with testaceous veins.

Male genitalia: As in generic diagnosis except for aedeagus (Figures 15-16) which bears two pairs of processes, the proximal being slightly over half length of distal processes.

Note: This is a common, widespread and variable species, usually brachypterous although macropters are reasonably common. The species differs from other species of Horouta by the arrangement of the preapical processes of the aedeagus, although some minor variation is noted in the disposition of the distal pair relative to the aedeagal shaft. In lateral view, the basal pair does not overlap the more distal pair as in H. aristarche.

**Horouta australa (Kirkaldy), comb. nov.**
(Figures 4, 17-18)

**Lonatura australa** Kirkaldy (1907: 62)
**Horouta australa** (Kirkaldy), new combination

Lectotype: female (examined), here designated, Sydney, NSW, ii.1905, coll: Koebele (BPBM)

Paralectotype: sex unknown, Bundaberg, Qld, ix-xii.1904, coll: Perkins (not found in BPBM)

Material examined: Queensland: 2 males, Moolooka, 1944, E. Riek (AM); 1 male, same data as previous (JWE); 1 male Moolooka, xi.1944, E. Riek (JWE); 3 males, Moolooka, viii.1944, E.F. Riek (BMNH)

Description: Pale testaceous except for frontoclypeal brown with lateral pale striping, gena sometimes brown around bases of antennae and brown occipital suture extending to level with front of eyes. Tegmen subbrachypterous, about twice as long as broad, reaching to 10th abdominal segment, testaceous hyaline on basal half, thence hyaline to subapical smoky brown band and whitish apical margin.

Male genitalia: As in generic diagnosis except for aedeagus (Figures 17-18) which bears only one pair of basal processes.

Note: Evans (1966) and Fletcher and Condello (1993) state that none of the type series was located in BPBM for examination. However, a female specimen matching Kirkaldy's (1907) published type data from Sydney has been found in the unsorted Deltocephalinae in BPBM and is here recognised as one of the missing syntypes and designated as lectotype to provide a diagnostic basis for the species. The specimen also matches Kirkaldy's (1907) description and male specimens identified as this species by J.W. Evans in the JWE collection. The male genitalia place the species into *Horouta*. The structure of the head and brachypterous tegmina support this placement. It differs from all other species of the genus, except for the type species, by bearing only a single pair of aedeagal processes. The transfer of this species to *Horouta* from *Lonatura* also represents a transfer of the species from the Tribe Paralimnini.

**Horouta lotis** (Kirkaldy), comb. nov.
(Figures 5, 19-20)

**Deltocephalus lotis** Kirkaldy (1907: 56)
**Horouta lotis** (Kirkaldy), new combination

Holotype, by monotypy, female (examined), Mittagong, NSW, i.1905, coll: Koebele (BPBM)

Other material examined: Victoria: 1 male, Toolangi, 30.xii.1987, J.A. Osmelak, on tomatoes (ASCU); Tasmania: 1 male, Condominion Creek, SW Tas, 15.i.1971, A. Neboiss (MOV)

Description: Macropterous or brachypterous. Black or very dark brown with distinctive cream striping on frontoclypeus and distinct longitudinal and transverse markings on vertex and anteriorly on pronotum.
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Ventral surface and legs dark brown with cream markings. Tegmen testaceous along veins and in centre of cells, otherwise broadly dark brown.

Male genitalia: As in generic diagnosis except for aedeagus (Figures 19-20) Proximal pair of aedeagal processes directed towards hind edge of shaft, barely reaching or reaching just beyond base of distal pair of processes. Both pairs more or less parallel to shaft in posterior view.

Notes: This species is immediately recognisable by its dark colouration and cream pattern, particularly distinct on the vertex, as shown in Figure 5. The male genitalia are very similar to those of H. perparvus with two pairs of aedeagal processes but the distal pair in H. perparvus diverge, in posterior view, from the shaft while in H. lotis they are more or less parallel to the shaft. In addition, the proximal pair in H. perparvus are often curved dorsally and extend beyond the base of the distal pair while in H. lotis they are shorter, barely reaching the base of the distal pair, and are straight rather than curved dorsally.

The holotype female of H. lotis is brachypterous and the two males are macropterous. Despite the low number of specimens, this is consistent with the occurrence of brachyptery in H. inconstans as discussed by Knight (1975). The localities at which these three known specimens have been collected are distant from each other indicating that the species is quite widespread in Australia although it is clearly uncommon. The holotype is from Mittagong, NSW, indicated by the presence of a handwritten "M" in red ink on a printed "Sydney, NSW" label. This was standard practice by Kirkaldy as detailed by Medler (1987) and Fletcher and Condello (1993).

Horouta jahmoi sp. nov.
(Figures 6, 21-22)

Holotype: male, Cowra, NSW, 19.xi.1987, J.A. Osmelak, ex tomatoes (ASCU)
Paratype: male, Cowra, NSW, 21.xi.1986, J.A. Osmelak (ASCU)

Description: Small, brachypterous species, ventrally dark brown to black with pale yellowish spotting on femora and tibiae. Face dark brown with yellowish striping on all parts. Vertex pale testaceous with line of six dark brown marginal flecks. Pronotum and mesonotum pale testaceous. Tegmen almost square in outline, pale testaceous with paler veins, dark brown smudge in clavus and indistinct brown motting distally on anterior margin.

Male genitalia: as in generic diagnosis except for aedeagus which is shown in Figures 21-22. Basal aedeagal processes sinuate in lateral view (Figure 21), strongly outwardly convex in posterior view (Figure 22).

Notes: The only two specimens of this species were collected as part of a survey of insects associated with tomato big bud phytoplasma. It is possible that both a macropterous and a brachypterous form occur since this dimorphy is found in the other species of the genus. Knight’s (1975) statement that brachyptery is normally restricted to the females is consistent with these two macropters being males. Both specimens in the type series have damaged tegmina.

Etymology: The species name is derived from the initials of John Osmelak who collected the type specimens and whose contribution to understanding tomato big bud phytoplasma in Australia, and the leafhoppers associated with this disease, is recognised here.

Horouta spinosa sp. nov.
(Figures 7, 23-25)

Holotype: male, Pearl Beach, near Woy Woy, NSW, 17.ix.1974, M.J. Fletcher, at mercury vapour light (ASCU)
Paratype: male, Mount Tamborine, S.E. Qld, 6-17.iii.1981, yellow pan trap, open forest (QDPI)

Description: Small brachypterous species, ventrally dark brown to black with pale yellowish spotting on femora and tibiae. Face dark brown with yellowish striping on all parts. Vertex pale testaceous with line of six dark brown marginal flecks. Pronotum and mesonotum pale testaceous. Tegmen almost square in outline, pale testaceous with paler veins, dark brown smudge in clavus and indistinct brown motting distally on anterior margin.

Male genitalia: Pygofer with hind margin incurved, bearing elongate marginal spur on each side, directed transversely and almost reaching other margin of pygofer (Figure 25). Subgenital plates as in generic diagnosis. Parameres with preapical shoulder directed posteriorly parallel with and about half length of apical process so that gap between is almost quadrat. Aedeagus with shaft curving evenly in apical half, with both pairs of elongate triangular processes almost straight and directed posteriorly.

Notes: This species differs from other species of Horouta by bearing pygofer processes. Despite this,
the structure of the aedeagus, with two pairs of preapical processes, and the morphology of the head and tegmina indicate that this species is otherwise typical of *Horotua*. The known specimens are fully brachypterous and bear the dorsally pale, ventrally dark coloration found in most other species.

**Etymology:** The specific name reflects the presence of spur-like pygofer processes, diagnostic for this species.

**DISCUSSION**

The changes proposed above increase the size of the genus from a single species to seven of which six are Australian and one, the type species, is from New Zealand. This also changes the status of the genus from an endemic New Zealand genus to being an Australian genus with a single representation across the Tasman.

It is also interesting to note that Knight (1975) included *Deltocephalus* in the New Zealand fauna with two species in the subgenus *Recilia* Edwards. Subsequent authors, including Oman, *et al.* (1990) recognise *Recilia* as a genus in its own right so that *Deltocephalus* is no longer represented in the New Zealand fauna. Those Australian species currently remaining in combination with the generic name *Deltocephalus* are not congeneric with *D. pulicaris* and future publications will reassign them to more appropriate genera. These species are *D. arunda* Jacobi, *D. chlorippe* (Kirkaldy), *D. lucindae* Kirkaldy and *D. viridellus* Evans.

**NOTES ON OTHER DELTOCEPHALINAE**

Continuing research on the Australian Deltocephalinae has shown that no Australian species belongs in *Deltocephalus*. Of those listed in Deltocephalus by Day and Fletcher (1994), *D. centralis* Evans and *D. decoloratus* Evans belong in the genus *Recilia* Knight (Tribe Athysanini) and *D. polemon* Kirkaldy is a senior synonym of *Micrelloides molaris* Evans (see discussion of tribal placement below). These new combinations are proposed below.

**Micrelloides polemon** (Kirkaldy), comb. nov.

( Figures 8, 26-31)

*Deltocephalus polemon* Kirkaldy (1907: 58). Lectotype male (examined), designated by Fletcher and Condello (1993: 50), Cairns, Queensland, viii.1904 (BPB)


**Description.** Face dark brown with pale transverse striping, shagreen. Vertex cream finely margined anteriorly with dark brown interrupted medially. Pronotum cream with longitudinal browning stripes extending onto mesonotum. Tegmen pale brown, darker around margins of cells with whitish veins and costal margin broadly greenish yellow over basal half. Anteclypeus almost parallel sided, reaching to level with maxillary plates apically. Maxillary plates broad between lora and face margin. Vertex expansive, triangular with clearly visible occipital suture extending almost to anterior margin, meeting face at acute angle anteriorly, margin not carinate, with ocelli placed at half an ocellar width from edge of eye. Pronotum short. Tegmina with five apical cells, the third almost triangular, and three closed preapical cells, the outer stalked at both ends. Clavus with one crossvein connecting outer claval vein with suture. Fore femora narrowing over apical third with marginal row of fine setae. Hind tibia somewhat flattened with outer margins bearing row of strong spines on enlarged bases and with smaller intercalary spines within and between the marginal rows. Inner margins also strongly spined.

Male genitalia: Pygofer (Figure 26) posteriorly produced as broad lobe covered in macrosetae. Subgenital plates (Figure 27) short, broad, apically emarginate with submarginal row of four setae on outer lobe and internal ridge articulating with parameres. Paramere (Figure 28) simple with boot shaped apex and small rounded preapical lobe. Connective (Figure 29) broadly arcuate, stem absent. Aedeagus (Figures 30, 31) forming open ring with gonopore mounted at apex of short tube on dorsal side of ring, elongate, broad, posterior extension beyond gonopore tube and with two linear, elongate, diverging basal processes on opposite side of ring from gonopore.

Note: Tribal placement of *Micrelloides* is problematic. Evans established the genus *Micrelloides* Evans (1973) and placed it in the Hecalinae (= Deltocephalinae: Hecalini) based on the expanded vertex and similarity of the genus with *Alospangbergiella* Evans (1973) although the structures of the genitalia are very different. The structure of the basal connective, with widely spaced arms articulated directly with the base of the aedeagus without a basal stem indicates affinity with species of *Soractellus* Evans which was included in the Paralimmini by Day and Fletcher (1994). Fletcher and Larivière (2001) placed the genus in the Athysanini despite the absence of a basal stem. This would seem
to be an error and the genus is here placed in the Paralimnini close to Soractellus with which M. molaris shares similarity in the structure of the male genitalia and terminal venation.

**TRIBE ATHYSANINI**

*Arawa centralis* (Evans), comb. nov.

(Figure 9)

*Deltocephalus centralis* Evans (1966: 242)

Holotype female (examined), Standley Chasm, McDonnell Ranges, NT, 28 vi.1939, A. Musgrave (AM)

Other material examined: 1 specimen (lacking abdomen, mounted with holotype), 2 females (mounted together), same data as holotype (AM); 1 female, Lower Portland, NSW, 2 x.1939, A. Musgrave (AM).

Notes: Despite the lack of male genitalia, the stubby shape with wide vertex broadly rounded to the face indicates that the species belongs in *Arawa* which is widespread in drier parts of Australia.

*Arawa decoloratus* (Evans), comb. nov.

(Figure 10)

*Deltocephalus decoloratus* Evans (1942: 148)

Holotype male (examined), Dedari, WA, i.1936, R.E. Turner (BMNH)


**CHECKLIST OF SPECIES OF ARAWA KNIGHT**

The following species are currently placed in the genus *Arawa* Knight:

*Arawa centralis* (Evans) comb. nov.

*Deltocephalus centralis* Evans (1966: 242)

Distribution: NT, NSW

*Arawa decoloratus* (Evans) comb. nov.

*Deltocephalus decoloratus* Evans (1942: 148)

Distribution: WA

*Arawa detracta* (Walker)

*Iassus detractus* Walker (1858: 271)

*Coelidia detracta* (Walker), (Metcalf 1964: 46)

*Euscelis detractus* (Walker), (Evans 1977: 118)

*Arawa detracta* (Walker), (Day and Fletcher 1994: 1205)

Distribution: Tas.

*Arawa dugdalei* Knight

*Arawa dugdalei* Knight (1975: 181)

Distribution: NZ

*Arawa novella* Metcalf

*Deltocephalus montanus* Evans (1938: 16), preoccupied by *Deltocephalus montanus* Distant (1908)

*Deltocephalus novellus* Metcalf (1968: 1167), nom nov. for *Deltocephalus montanus* Evans

*Arawa novella* (Metcalf), (Knight 1975: 183)

Distribution: NSW, Tas, SA, NZ

*Arawa pulchra* Knight

*Arawa pulchra* Knight (1975: 185)

Distribution: NSW, Vic, WA, NZ

*Arawa salubris* Knight

*Arawa salubris* Knight (1975: 180)

Distribution: NZ

*Arawa taedius* (Kirkaldy)

*Phrynomorphus taedius* Kirkaldy (1906: 326)

*Deltocephalus taedius* (Kirkaldy), (Evans 1966: 238)

*Arawa taedius* (Kirkaldy), (Fletcher and Condello 1993: 52) *nomen dubium*

Distribution: Qld

*Arawa variegata* Knight

*Arawa variegata* Knight (1975: 180)

Distribution: NZ

Notes: Of the eight recognised species currently placed in *Arawa*, three are endemic to New Zealand, three are endemic to Australia and the remaining two are shared between the two countries. However, at least five undescribed species are known in the Australian fauna and a comprehensive revision of the genus, based on the male genitalia, is needed.

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