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The genus *Trigonobothrys* in New Zealand and a redescription of *Achaearanea blattea* (Theridiidae: Araneae)

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ABSTRACT: Three New Zealand species of spiders that have been placed in the genus *Dipoena* Thorell, 1869 are reviewed and shown to belong to other genera. The male of a previously undescribed but illustrated species of *Dipoena* from New Zealand is shown to belong to *Trigonobothrys* Simon, 1889 and to be conspecific with *Phycosoma oecobioides* O.P. Cambridge, 1879, known from the female holotype only. The new combination *Trigonobothrys oecobioides* (O.P. Cambridge, 1879) is proposed, as is the new synonymy of *Phycosoma* O.P. Cambridge, 1879 under *Trigonobothrys*. The female of *T. oecobioides* is redescribed, and the male is described for the first time. *Theridium blatteus* Urquhart, 1886, currently placed in the genus *Dipoena*, is shown to belong to *Achaearanea* Strand, 1929. Another species, *Atkinsonia nana* O.P. Cambridge, 1879, had been placed in *Dipoena*, then transferred to *Euryopis* Menge, 1868, and we agree with this placement.

KEYWORDS: *Dipoena*, *Trigonobothrys oecobioides*, *Achaearanea blattea*, *Euryopis nana*, Theridiidae, Hadrotarsinae, New Zealand, new combination, new synonymy, redescription.

Introduction

Two species of New Zealand theridiid spiders are currently placed in the genus *Dipoena*, with a third species having been placed in this genus previously: *Dipoena blattea* (Urquhart, 1886) in Bryant (1935a); an undescribed species of which the male was illustrated by Forster (1967) and the drawing reproduced by Forster & Forster (1973, 1999) (Fig 1); and *Atkinsonia nana* O.P. Cambridge, 1879, which was temporarily placed in *Dipoena* by Dalmas (1917) and other authors, but subsequently restored to *Atkinsonia* O.P. Cambridge, 1879 by Hickman (1951), before being transferred to *Euryopis* Menge, 1868 by Levi & Levi (1962).

Dipoena and *Euryopis* are members of the theridiid subfamily Hadrotarsinae. Hadrotarsine spiders are typically characterised by specialised ventral setae on the tarsi of leg 1, two pairs of seminal receptacles, and a palmate (dorsoventrally flattened) female palpal claw (Yoshida, 2002).

In the course of spider surveys on islands off the northern coast of New Zealand, one of us (B.M.F.) collected a series of male specimens that matched Forster's (1967) illustration of *Dipoena* sp. Female spiders collected at the same time were associated with these males on the basis of colour pattern. It was subsequently recognised that the female matched the description of *Phycosoma oecobioides* O.P. Cambridge 1879, of which the male was not described. Later examination of specimens held in the Otago Museum, identified as *Dipoena* sp. and labelled as 'sorted by C.L. Wilton', showed that Wilton had also associated male and female specimens, but apparently had not connected them

with *P. oecobioides*. Until recently, this species would have been placed in *Dipoena*. However, Yoshida (2002) revised the Japanese species of Hadrotarsinae and resurrected the genus *Trigonobothrys* from synonymy with *Dipoena*. It is clear that *P. oecobioides* belongs in *Trigonobothrys*.

Specimens of '*Dipoena*' *blattea* were also collected by B.M.F. Several features of this species indicate that it does not belong to *Dipoena*, as placed by Bryant (1933, 1935a), but to *Achaearanea* Strand, 1929.

In this paper we transfer *Phycosoma oecobioides*, the type species for *Phycosoma*, to *Trigonobothrys*, and as a consequence of this we propose that *Phycosoma* O.P. Cambridge, 1879, becomes a junior synonym of *Trigonobothrys*. We redescribe the female, describe the male for the first time, and give a complete taxonomic history of the species. Further, we redescribe *Theridium blatteus* Urquhart, 1886, transfer it to *Achaearanea*, and present its complete taxonomic history.

Methods

All measurements are given in millimetres, except those for eye size and position. Following Jocqué (1991), eye sizes are given as a fraction of the diameter of the anterior median eyes (AME), with the diameter of the AME given in mm in parentheses. Other abbreviations: ALE = anterior lateral eyes, PLE = posterior lateral eyes, and PME = posterior median eyes. Epigyna were cleared by soaking in 10% KOH at room temperature for several hours.

Institutional acronyms used throughout are as follows:

CMNZ Canterbury Museum, Christchurch, N.Z.
MONZ Museum of New Zealand Te Papa Tongarewa, Wellington, N.Z.
OMNZ Otago Museum, Dunedin, N.Z.

Systematics

Family Theridiidae

Genus *Trigonobothrys* Simon, 1889

The generic diagnosis given here is based on Yoshida (2002).

Male carapace often very high and near cylindrical when viewed from above and marked with dorsal grooves and depressions (Fig 1); female carapace if high, only anteriorly. Eye region often projects beyond clypeus and clypeus is often slightly concave. Chelicerae are very small, without teeth; fangs long and flat. Leg 4 is usually slightly the longest. Female palpal claw palmate, but is sometimes reduced or lost. Abdomen often partially covered by a dorsal scutum. Colulus absent (but see below). Female has two pairs of seminal receptacles. Epigynum with small scape. The male palp lacks a medium apophysis and the conductor and embolus are small.

In his key, Yoshida (2002) used 'colulus small with two setae' as a character leading to *Trigonobothrys*. However, he did not mention this character in his generic diagnosis. In an attempt to resolve the issue as to whether or not *Trigonobothrys* has a colulus, we have managed to obtain descriptions of four species he transferred to *Trigonobothrys* (*Dipoena martinae* Roberts, 1983, *D. lineatipes* Bryant, 1933, *Pholcomma japonicum* Yoshida, 1985, and *P. amamiense* Yoshida, 1985). Roberts (1983) did not mention the presence of a colulus in any form in his description of *D. martinae*, but did for other species he placed in *Dipoena*. Levi (1953: 13) states that the colulus is not visible in *D. lineatipes*. Yoshida (1985) appears to have used Levi & Levi (1962) as the basis for his generic diagnosis of *Pholcomma* Thorell, 1869, including the character 'colulus replaced by two setae'. However, in listing the characters from the generic diagnosis that place his new species in *Pholcomma*, and in the species descriptions, Yoshida (1985) does not include two setae replacing the colulus. New Zealand specimens do not appear to have a colulus either. We suggest *Trigonobothrys* is unlikely to have a colulus in the form of two setae or otherwise, but a comprehensive revision of the genus is needed to confirm this.

Trigonobothrys oecobioides (O.P. Cambridge, 1879) new combination

Phycosoma oecobioides O.P. Cambridge, 1879: 692, plate 52, fig 6
Phycosoma oecobioides; Urquhart, 1892: 224. Listed only
Phycosoma oecobioides; Hutton, 1904: 239. Listed only
Phycosoma oecobioides; Dalmas, 1917: 359
Phycosoma oecobioides; Roewer, 1942: 457. Listed only
Phycosoma oecobioides; Parrott, 1946: 71. Listed only
Phycosoma oecobioides; Bonnet, 1958: 3647. Listed only
Euryopis oecobioides (O.P. Cambridge); Levi & Levi, 1962: 26, 40
Dipoena sp.; Forster, 1967: 91, fig 162
Dipoena sp.; Forster & Forster, 1973: 182, fig 115
Dipoena sp.; Forster & Forster, 1999: 182, fig 12.14
Euryopis oecobioides; Platnick, 2002. Listed only

Description (specimens in alcohol)

Female: Measurements taken from a specimen from Double Island (West), Mercury Islands, NZ, 7 Dec 1996, coll. B.M. Fitzgerald (MONZ). ***Cephalothorax***: Dull, brownish yellow, with a dark marginal line; the cephalic region is brown to black, and more strongly pigmented anteriorly, particularly around the anterior median eyes. The anterior median eyes project forward over the clypeus. The clypeus is high and dark. Long slender hairs are present on the cephalic region. The exposed part of the chelicerae is slightly shorter than the clypeus. Chelicerae are without teeth; fangs long and flattened. Carapace length 0.69, height 0.45. ***Eyes***: AME 1.00 (0.70), ALE 0.86, PME 1.00, PLE 1.00; AME–AME 1.43, AME–ALE 0.28, PME–PME 1.00, PME–PLE 1.00, PLE–ALE contiguous. ***Sternum***: Pale brownish yellow, shading to a broad dark margin and slightly longer than wide. Long slender hairs are distributed sparsely over the sternum. Sternum length 0.40, width 0.39. ***Abdomen***: Large, oval, and extending up over the carapace; longer than wide; no dorsal or abdominal scute; clothed in fine long hairs arising from small sclerotized spots; base colour (in alcohol) dark grey to brown with white markings bordered with pale brownish-yellow. Anteriorly, there are two pairs of white markings, the foremost of which often extends as a lateral stripe towards the posterior. The second pair of markings is much smaller. A single serrated stripe extends along the posterior two-thirds of the abdomen to the spinnerets, but this is sometimes broken towards the anterior end, giving the appearance of a white patch behind the paired anterior patches. Abdomen length 1.43. ***Genitalia***: Two pairs of seminal receptacles (Fig 2b). ***Spinnerets***: Small; colulus absent. ***Legs***: 4123. Superior tarsal claws have at least one tooth. A tarsal comb is present on leg 4. See Table 1(a) for leg measurements. ***Palps***: Each with a simple claw without teeth. See Table 1(a) for measurements.

Comments: The female palpal claw is reduced to a simple claw, rather than palmate, ie, dorso-ventrally flattened so that the claw teeth form a single transverse fan, as is characteristic of hadrotarsine genera (Forster *et al.* 1990: 111).

An examination of six MONZ female specimens showed that three had the lateral stripe, two had broken abdominal lateral stripes, and one lacked it completely.

Male (Fig 1): Measurements are from a specimen from Stanley Island, Mercury Islands, NZ, 1–4 Dec 1999, coll. B.M. Fitzgerald (MONZ). ***Cephalothorax***: Distinctively raised with vertical sides, and a grooved pattern on dorsal view that is typical of *Dipoena* (Fig 2a). Carapace length 0.89, height 0.89, width 0.76. ***Eyes***: AME 1.00 (0.70), ALE 0.86, PME 1.14, PLE 1.00; AME–AME 1.28, AME–ALE 0.43, PME–PME 0.86, PME–PLE 1.14, PLE–ALE contiguous. ***Sternum***: Length 0.45, width 0.41. ***Abdomen***: The colour and abdominal pattern of the male is similar to that of the female. The male has a ventral abdominal scutum from the pedicel to the epigastric furrow and a thin scutum on the dorso-anterior part of the abdomen. Abdomen length 1.22. ***Spinnerets***: Small; colulus absent. ***Legs***: 4123. Superior tarsal claws have at least one tooth. Tarsal comb is present on leg 4. See Table 1(b) for leg measurements. ***Palps***: The tibia is short and wide, forming a shallow cup surrounding the base of the cymbium. The radix is absent, but the median apophysis forms a separate sclerite (Fig 2c). See Table 1(b) for measurements.

Comments: The typical pillbox shape of the cephalothorax of males is achieved only at maturity; a penultimate immature male has the cephalothorax of the same form as in females.

An examination of ten MONZ male specimens showed that seven had the abdominal lateral stripe, one had the abdominal lateral stripe broken, while two lacked it entirely.

Comparison with holotype: The holotype is in reasonable condition considering its age, but is missing the palp and leg 1 on the right and legs 3 and 4 on the left. While the colour pattern is very faded, the darker shading behind the ocular area is still evident, as is the dark bordering around the carapace. The dark colouration around the margin of the sternum is still present but only faintly. The abdomen is slightly shrivelled and its dark colour has faded to a pale yellow-brown, but still provides enough contrast with the white markings for the overall colour pattern to be visible. The epigynum closely resembles that found in more recently collected specimens, with the four sub-equal seminal receptacles and v-shaped pair of seminal ducts clearly visible. The only significant difference we could discern between the holotype and more recently collected specimens was the oviform appearance of the sternum. This sternal shape was noted by O.P. Cambridge (1879). In more recent material, the sternum is approximately as wide as long. However, Levi (1953) observed the sternum was 'very narrow in individual alcoholic specimens' in North American *Dipoena* spp. We

have noted this effect in a New Zealand specimen of *T. oecobioides* in the OMNZ collection.

The exact type locality is not known. O.P. Cambridge says only that it 'was received from Mr [A.S.] Atkinson, by whom it was found in New Zealand'.

Material examined

Holotype ♀ of *Phycosoma oecobioides* O.P. Cambridge, 1879, New Zealand, A.S. Atkinson, date unknown. Hope Entomological Collections, Oxford University Museum of Natural History, Oxford, United Kingdom.

North Island: 1♀, Houhora, in scrubland, 24 Aug 1953, B.J. Marples (OMNZ); 1♂, Kohukohu, swept in *Leptocarpus*, 18 Aug 1953, B.J. Marples (OMNZ); 5♂, 2♀, Poor Knights Is, ex leafmould, Dec 1958, F.C. Kinsky [no day of month given] (OMNZ); 2♀, beating manuka, Mimiwhangata, 1200', Dec 1970, J. Darby (OMNZ); 1♂, Tiritiri Matangi Island, 27 Feb 2000, B.M. Fitzgerald (MONZ); 1♀, Thumb Track, Little Barrier Island, 23 Feb 1954, G. Ramsay (OMNZ); 1♂, Cuvier Island, 16 Dec 1996, B.M. Fitzgerald (MONZ); 1♂, Cuvier Island, 26 Mar 1994, B.M. Fitzgerald (MONZ); 2♂, Stanley Island, Mercury Islands, Dec 1999, B.M. Fitzgerald (MONZ); 1♂, Korapuki Island, Mercury Islands, 7 Dec 1995, C.J. Green (MONZ); 2♂, Korapuki Island, Mercury Islands, 26 Feb, 2 Mar 1998, B.M. Fitzgerald (MONZ); 4♀, Double Island, Mercury Islands, 7 Dec 1996, B.M. Fitzgerald (MONZ); 2♂, 2♀, Moutohora (Whale Island), 2–10 Feb 1999, B.M. Fitzgerald (MONZ); 3♂, 1♀, from Citrus, Matamata, 23 Dec 1982, D.J. Court (OMNZ); 1♂, found on trees from Waikaremoana, 11 May 1966, R.W. Hutton (OMNZ); 1♂, Mt Ngamoko track, 3,600' on ferns, 9 Dec 1946, R.R. Forster (OMNZ); 1♀, Desert Rd, 5 Jan 1957, R.R.F. (OMNZ); 2♀, Clifton, ex foliage, 27 Dec 1947, R. Forster (OMNZ); 1♂, 1♀, Bridge Pa, ex foliage, 27 Dec 1946 [no collector] (OMNZ); 1♀, Between Flat Point & Glenburn, Wairarapa, 5 Sept 1970, C.L. Wilton (OMNZ); 1♂, Mangareia, 10 Mar 1958, [? C.L. Wilton] (OMNZ); 1♀, 'Treelands', Himatangi, *P. radiata* ground litter, 5 Dec 1960 [no collector] (OMNZ); 1♂, Wilton's Bush, Wellington, 27 Mar 1960, C.W. O'Brien (OMNZ); 1♂, 2♀ [1♀ parasitized], Fort Hill Bush, Karori, ex foliage, 22 Jan 1947, R. Forster (OMNZ); 1♂, Orongorongo Valley, 15 Mar 1994, P. Berben & J. Alley (MONZ).

South Island: 1♀, Pearse Riv, Motueka Val, 6 Feb 1929, C.L.W. (OMNZ); 2 penultimate ♂, Luggate, 22 Oct 1959, R.R.F. (OMNZ); 1[?], Ashley Gorge, 16 Oct 1949, R.R.F. (OMNZ); 1♀, Taieri Mouth, 14 Jan 1962, B.J. Marples (OMNZ); 1♂, Balmoral Forest, cut [?] 27m *Pinus radiata* branch litter, sample 2, 26 Jan 1961 (OMNZ); 2♀, Allans Beach, ex manuka, 16 July 1953, B.J. Marples (OMNZ); 1♀, Mt Ross, 5 April 1947, R.R. Forster, (OMNZ); 1♀, Homer Tunnel, leafmould from Beech Forest, 24 Jan 1946, R. Forster (OMNZ).

Chatham Islands: 1♂, Titirangi, Chatham Is, ex fern & scrub, 11[?] Feb 1954 [no collector] (OMNZ); 1♂, 1 penultimate ♀, Kaingaroa, Chatham Exp, 28 Jan 1954, R.R.F. (OMNZ).

Habitat preferences

Most specimens collected by B.M.F. were by beating low shrubs, especially manuka (*Leptospermum scoparium*). A specimen from Orongorongo Valley was collected from an emergence trap in hard beech (*Nothofagus truncata*) forest. Males predominated in the samples. Males and females were collected in the same locality only on Moutohora Island; on the other islands sampled by B.M.F., all specimens were of a single sex.

New generic synonymy

The genus *Phycosoma* O.P. Cambridge, 1879 is monotypic, with *P. oecobioides* as its type species. The transfer of *Phycosoma oecobioides* to the genus *Trigonobothrys* means that *Phycosoma* becomes a junior synonym of *Trigonobothrys* and not of *Euryopis* as it currently stands (Levi & Levi, 1962).

Genus *Achaearanea* Strand, 1929

Our generic diagnosis follows Levi (1955) and Levi & Levi (1962). Features that are useful in distinguishing *Achaearanea* from *Dipoena* are given here. Carapace highest near its middle, slightly longer than wide, and narrow in front with anterior lateral eyes usually overhanging border. Chelicerae are slightly longer than the height of the carapace, without teeth, or rarely with a small tooth or keel on the anterior margin. Legs of medium length, in females 1, 4, 2, 3, but in males the second leg is usually longer than the fourth. Abdomen is usually higher than long, frequently with a tubercle on the dorsum (eg, Fig 3a), and often with a pattern of irregular streaks on the sides. Colulus not present. Epigynum often a knob or depression, and females have just one pair of seminal receptacles. Male palp has a spherical tegulum and

the median apophysis is broadly attached to the tegulum or attached to the embolus, forming one sclerite. Cymbium often extends beyond the alveolus.

Achaearanea blattea (Urquhart 1886) new combination

Theridium blatteus* Urquhart, 1886: 190, plate 7, fig 2
Theridium setiger Urquhart, 1886: 196, plate 8, fig 3
Theridium tuberculum Urquhart, 1887: 104
Theridium albo-gullatum [sic] Urquhart, 1887: 108, plate 8, fig 11
Theridium blatteus; Urquhart, 1892: 223. Listed only
Theridion blatteus; Hutton, 1904: 238. Listed only
Dipoena tubercula (Urquhart); Bryant, 1933: 10, figs 16, 42
Dipoena blattea (Urquhart); Bryant, 1935a: 57
Dipoena blattea; Roewer, 1942: 422. Listed only
Dipoena blattea; Parrott, 1946: 69. Listed only
Dipoena blattea; Bonnet, 1956: 1502. Listed only
Dipoena blattea; Platnick, 2002. Listed only

[**Theridium* is an invalid emendation of *Theridion* (Levi & Levi 1962).]

Description (specimens in alcohol)

Female: Measurements are from a specimen from Mokoia Island, NZ, 7 Feb 2000, coll. B.M. Fitzgerald (MONZ). ***Cephalothorax***: Carapace low, and approximately level in height from the eye region back almost to the fovea. Chelicerae with one tooth on the anterior margin. Carapace length 1.00, height 0.32. ***Eyes***: AME 1.00 (0.80), ALE 0.75, PME 1.00, PLE 0.87; AME–AME 0.87, AME–ALE 0.25, PME–PME 0.87, PME–PLE 0.75, PLE–ALE contiguous. ***Sternum***: Length 0.54, width 0.50. ***Abdomen***: There is a small tubercle just posterior to the mid-dorsal point (Fig 3a). It has dark pigment anterior to it and a white patch posterior to it, narrowing into a whitish line that tapers off as it approaches the spinnerets. The ventral surface of the abdomen just anterior and lateral to the spinnerets has two pairs of white spots, somewhat variable in size. There are irregular streaks on the sides. Abdomen length 2.19, height 1.91. ***Genitalia***: The epigynum is a dark brown eminence or fold with a circular orifice at the centre; the female genitalia include a single pair of seminal receptacles (Fig 3b), similarly shaped to those of *A. veruculata* (see Merrett & Rowe (1961)). ***Spinnerets***: Small. ***Legs***: 1423. Leg 4 has a tarsal comb. Each superior claw has a row of finely spaced teeth. See **Table 2(a)** for measurements. ***Palps***: Palpal claw has a row of approximately eight teeth. See **Table 2(a)** for measurements.

Male: Measurements from a specimen from Moutohora (Whale Island), 4–10 Feb 1999, coll. B.M. Fitzgerald (MONZ). ***Cephalothorax***: Similar to female. Carapace length 0.92, height 0.34. ***Eyes***: AME 1.00 (0.70), ALE 1.00, PME 1.14, PLE 1.14; AME–AME 0.86, AME–ALE 0.43, PME–PME 1.00, PME–PLE 0.86, PLE–ALE contiguous. ***Sternum***: Length 0.50, width 0.48. ***Abdomen***: Colour pattern as for female. Tubercle not as pronounced as in female. Colulus not present. Abdomen length 1.16, width 0.98. ***Legs***: 1243. A tarsal comb is present. ***Male palp***: The cymbium extends well beyond the alveolus and the tegulum is spherical (Fig 3c).

Comments: Bryant (1933, 1935a) does not state why she placed this species in *Dipoena*. Unlike *Dipoena*, the head region of both the male and female is very low, the female has only one pair of seminal receptacles, and there is no colulus. Although the types of the spiders described by Urquhart were deposited in the CMNZ, the type of *Theridium blatteus* is not among them (Nicholls *et al.* 2000). While based at the Museum of Comparative Zoology, Harvard University (MCZ), Bryant published three papers (1933, 1935a, 1935b) that included reclassifications of many of Urquhart's species. Of the three species she synonymised under *Theridium blatteus* and transferred to *Dipoena*, only the types for *Theridium albogullatum* and *T. tuberculum* can be found in the CMNZ collections (Nicholls *et al.* 2000). None of Urquhart's material that Bryant examined is still at the MCZ (Laura Leibensperger, pers. comm.). We have examined the types of *T. albogullatum* and *T. tuberculum* and agree with Bryant's (1935a) decision to synonymise these species under *Theridium blatteus* (now *Achaearanea blattea*).

Material examined

Type material: Two ♂ **syntypes** of *Theridium albogullatum*, Te Karaka, Auckland, from webs amongst long grass, June-July, A.T. Urquhart (CMNZ). **Holotype** ♀ of *Theridium tuberculum*, Te Karaka, Auckland, A.T. Urquhart (CMNZ).
North Island: 1 juv, Korapuki Island, Mercury Islands, 4 Dec 1996, B.M. Fitzgerald (MONZ); 1♂, 1 juv, Moutohora (Whale Island), 4 & 10 Feb 1999, B.M. Fitzgerald

(MONZ); 1♀, Mokoia Island, Lake Rotorua, 7 Feb 2000, B.M. Fitzgerald (MONZ).

South Island: 1♀, pitfall trap, Allports Island, Queen Charlotte Sound, May 1997, C. Grose & B.M. Fitzgerald (MONZ); 1♀, pitfall trap, Allports Island, Queen Charlotte Sound, Oct 1997, C. Grose & B.M. Fitzgerald (MONZ); 1 ♀, pitfall trap, Allports Island, Queen Charlotte Sound, Nov 1997, C. Grose & B.M. Fitzgerald (MONZ).

Habitat preferences

The types of all four Urquhart species were collected at Te Karaka, Auckland. Urquhart (1887) noted that *T. albogullatum* was found 'among long grass', but did not indicate habitat preferences for the other three species. Several recent specimens were collected from ground level in regenerating scrub and young forest.

Discussion

In this paper we have resolved several issues. One is the identity of O.P. Cambridge's *Phycosoma oecobioides*, which we show is the female conspecific with the male illustrated by Forster (1967) as *Dipoena* sp. and transfer to *Trigonobothrys*. As *Trigonobothrys* appears to be represented by just a single, widely distributed species in New Zealand, including offshore islands and the Chatham Islands, it is possible that it is an exotic species that reached New Zealand by ballooning or by accidental human introduction, although it has yet to be found outside New Zealand. *Trigonobothrys* may be an example, like *Oxyopes* Latreille, 1804 (Oxyopidae), of a genus with multiple species elsewhere, yet with only a single species in New Zealand (Vink & Sirvid 1998, 2000). *Oxyopes gracilipes* (White, 1849) is one of 14 species recorded for this genus in Australia and is widely distributed there (Vink & Sirvid 2000). It is the only representative of *Oxyopes* in New Zealand, where it is widespread and occupies similar habitat to *T. oecobioides*.

Another issue resolved is the placement of *Theridium blatteus*, which we transfer to *Achaearanea*. This new combination increases the number of known species of *Achaearanea* in New Zealand to three (*A. blattea*, *A. tepidariorum* (C.L. Koch, 1841), and *A. veruculata* (Urquhart, 1886)). Merrett & Rowe (1961) transferred *A. veruculata* from *Theridion* and now the transfer of *A. blattea* emphasises the need to re-examine Urquhart's other New Zealand species of *Theridion* (as *Theridium*), several of which should probably be placed in *Achaearanea*.

Lastly, another species, *Atkinsonia nana* O.P. Cambridge, 1879, was included in *Dipoena* by Dalmas (1917), Bryant (1933), and Parrott (1946). Hickman (1951) reinstated it in the genus *Atkinsonia* and considered it close to *Phoroncidia* Westwood, 1835, partly because it is heavily sclerotised. It was later transferred to *Euryopis* by Levi & Levi (1962) despite the female possessing only one pair of seminal receptacles rather than the two pairs that are characteristic of *Euryopis*. However, characters such as the palmate palpal claw and general body shape are consistent with another undescribed species of *Euryopis* from New Zealand. In the absence of an extensive revision of *Euryopis*, we feel this species is currently correctly placed.

The Hadrotarsinae are currently represented in New Zealand by *Trigonobothrys oecobioides* and *Euryopis nana*. We have examined at least three other undescribed species that appear to belong to this subfamily.

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Table 1. Leg and Palp Measurements of *Trigonobothrys oecobioides*

(a) Female:

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
1	0.49	0.24	0.32	0.30	0.22	1.57
2	0.47	0.22	0.30	0.22	0.20	1.41
3	0.46	0.22	0.26	0.21	0.21	1.36
4	0.64	0.30	0.45	0.43	0.22	2.04
Palp	0.17	0.09	0.12	-	0.22	0.60

(b) Male:

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
1	0.60	0.25	0.44	0.29	0.22	1.80
2	0.56	0.24	0.37	0.26	0.22	1.65
3	0.47	0.21	0.30	0.25	0.19	1.42
4	0.70	0.25	0.50	0.36	0.27	2.08
Palp	0.40	0.14	0.04	-	0.49	1.07

Table 2. Leg and Palp Measurements of *Achaearanea blattea*

(a) Female

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
1	1.56	0.36	1.16	1.12	0.56	4.76
2	1.02	0.36	0.70	0.68	0.46	3.22
3	0.70	0.28	0.42	0.52	0.26	2.18
4	1.24	0.42	0.78	0.76	0.46	3.66
Palp	0.28	0.22	0.24	-	0.30	1.04

(b) Male

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
1	1.84	0.40	1.22	1.44	0.64	5.54
2	1.10	0.44	0.76	0.84	0.48	3.62
3	0.80	0.22	0.38	0.54	0.36	2.30
4	1.12	0.32	0.82	0.74	0.44	3.44
Palp	0.22	0.10	0.10	-	0.38	0.80

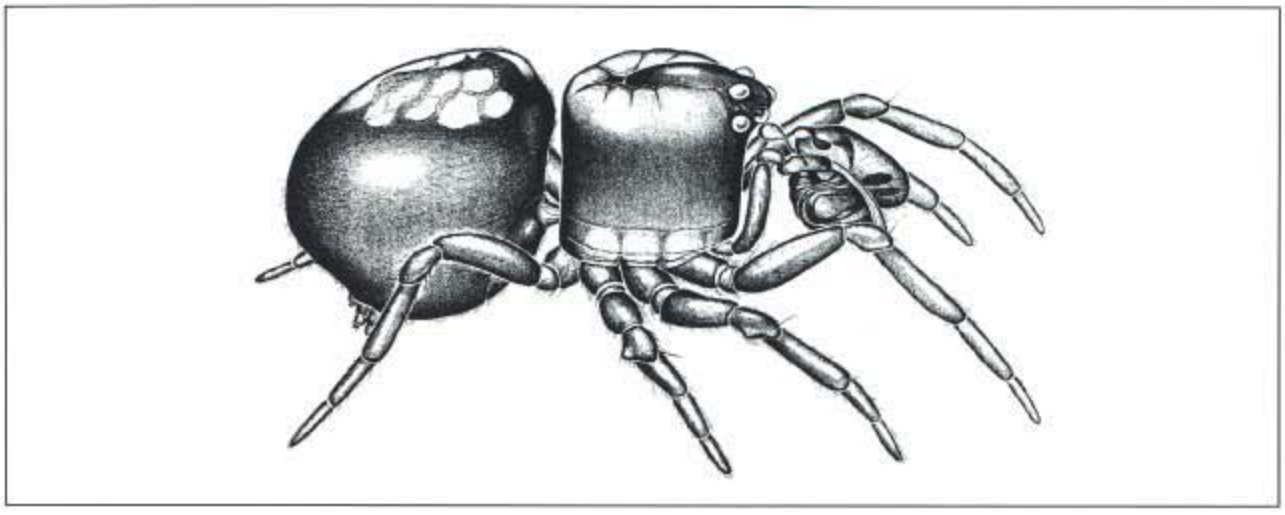

Fig 1. The male of *Trigonobothrys oecobioides*, figured as *Dipoena* sp. by Forster (1967). Body length 2 mm. (Reproduced with permission.)

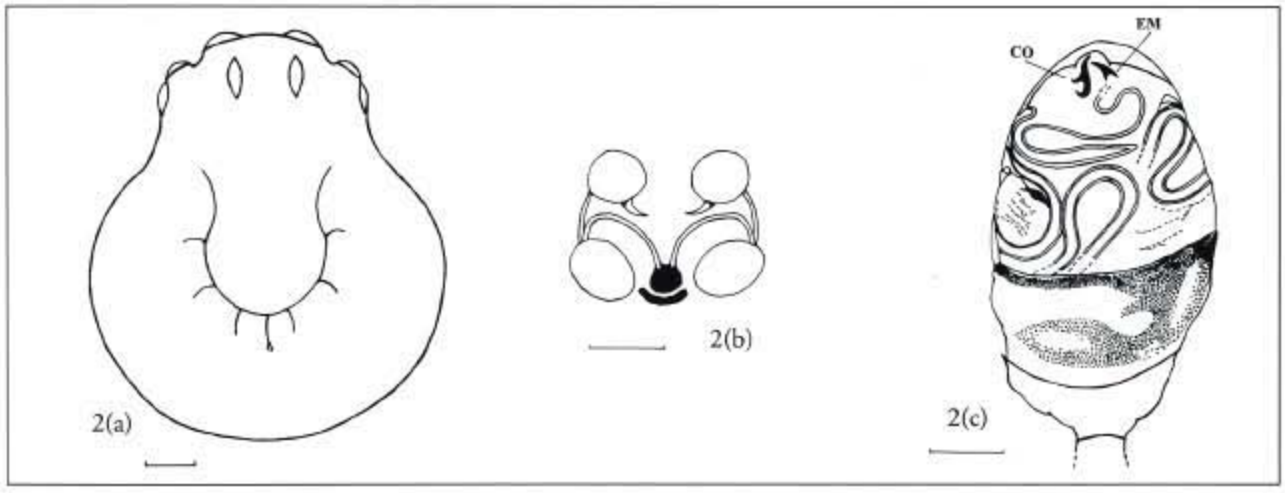

Fig 2. *Trigonobothrys oecobioides*. (a) male carapace, dorsal view, (b) epigynum (cleared), (c) male palp, showing positions of the conductor (CO) and embolus (EM). Scale bars all 0.1 mm.

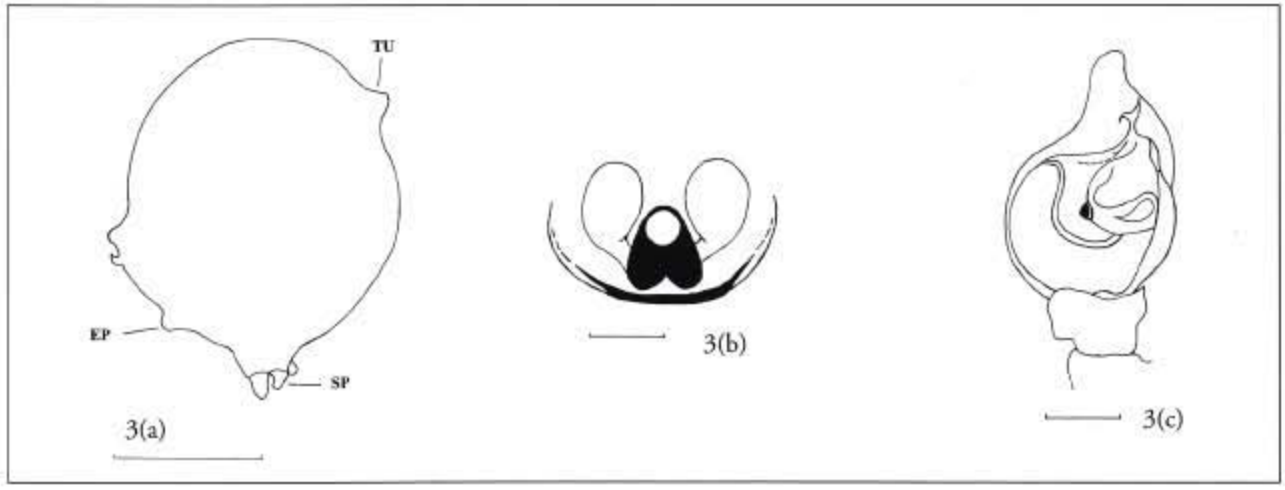

Fig. 3. *Achaearanea blattea*. (a) female abdomen, lateral view, showing positions of the tubercle (TU), epigynum (EP) and spinnerets (SP), (b) epigynum (cleared), (c) male palp. Scale bars: (a) 1 mm, (b) and (c) 0.1 mm.