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# A review of the Water spider family Pisauridae in Australia and New Caledonia with descriptions of four new genera and 23 new species

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## ABSTRACT

The family Pisauridae for Australia and the western Pacific is revised. The Australian fauna includes *Dolomedes*, *Megadolomedes*, *Hygropoda*, *Perenethis*, *Dendrolycosa* and *Inola* along with 3 new genera, *Tasmomedes*, gen. nov., *Ornodolomedes*, gen. nov., and *Mangromedes*, gen. nov. *Dolomedes* in the region includes 16 species, four of which are known – *Dolomedes facetus* L. Koch, 1876, *Dolomedes albicomus* L. Koch, 1867, *Dolomedes instabilis* L. Koch, 1876 and *Dolomedes flaminus* L. Koch, 1867–plus 9 that are new: *Dolomedes vicque* sp. nov. from Victoria to Queensland, *Dolomedes briangreenei* sp. nov. and *Dolomedes venmani* sp. nov. in New South Wales and Queensland, *Dolomedes alexandri* sp. nov., from the Australian Capital Territory, *Dolomedes pedder* sp. nov. and *Dolomedes lizturnerae* sp. nov. from Tasmania, *Dolomedes wollemi* sp. nov. from New South Wales, *Dolomedes mankorlod* sp. nov. from the Northern Territory, *Dolomedes karijini* sp. nov. from Western Australia. Of those, *Dolomedes flaminus* remains the most perplexing as no further material has been located from the Brisbane area from which it putatively came prior to 1867; the locality is presumed wrong. *Dolomedes stilatus* Karsch, 1878 is a synonym of *Perenethis venusta* L. Koch, 1878. *Dolomedes habilis* Hogg, 1906 is a junior synonym of *Dolomedes instabilis*. *Dolomedes chroesus* Strand, 1911 is removed from the fauna of Australia because of misidentifications. The newly rediscovered *Dolomedes eberhardarum* Strand, 1913 from Tasmania and Victoria is transferred to the new genus, *Tasmomedes*. A new species of *Megadolomedes*, *Megadolomedes johndouglassi* is described from Tasmania and Victoria; *Megadolomedes trux* Lamb, 1911 is restored as the northern relative of *Megadolomedes australianus* (L. Koch, 1865); *Megadolomedes nord* sp. nov. is described from Cape York. *Nilus kochi* Roewer, 1951 is rediscovered in mangroves in Queensland and with a new species from the Northern Territory (*Mangromedes porusus* sp. nov.), is transferred to *Mangromedes*, gen. nov. A new genus, *Ornodolomedes*, is described in which the spiders hunt freely at night on leaves on rainforest and closed eucalypt forest; the spiders have bold carapace and abdominal patterns. The genus includes 10 new species, from Queensland, *Ornodolomedes mickfanningi* sp. nov., *Ornodolomedes benrevelli* sp. nov., *Ornodolomedes gorenpul* sp. nov., *Ornodolomedes yalangi* sp. nov., *Ornodolomedes nebulosus* sp. nov., *Ornodolomedes xypee* sp. nov. and *Ornodolomedes marshi* sp. nov.; *Ornodolomedes staricki* sp. nov. from Victoria; from Western Australia, *Ornodolomedes nicholsoni* sp. nov., and *Ornodolomedes southcotti* sp. nov. from South Australia. In *Dendrolycosa*, the male of *Dendrolycosa icadia* (L. Koch, 1878) is described for the first time and one new species, *Dendrolycosa kakadu* sp. nov. is described from the Northern Territory. *Dendrolycosa yuka* Jäger, 2011 is considered African, not Australian. The male of *Hygropoda lineata* (Thorell, 1881) is described for the first time. The widespread species *Perenethis venusta* L. Koch, 1878 is described and figured and a diagnosis of *Inola* is provided. The New Caledonian fauna includes 3 species of *Dolomedes* (*Dolomedes titan* Berland, 1924, *Dolomedes neocaledonicus* Berland, 1924, *Dolomedes lafoensis* Berland, 1924), *Dendrolycosa icadia*, *Bradystichus* Simon, 1880 and a new genus, *Caledomedes*, gen. nov. Males and females of *Dolomedes titan* and *Dolomedes neocaledonicus* are redescribed and figured; *Dolomedes lafoensis* is reviewed. The New Hebrides *Do. naja* Berland, 1938 is probably a synonym of *Do. facetus*. The misplaced lycosid *Anoteropsis flavovittata* is transferred to a new genus *Caledomedes*. The enigmatic *Bradystichus* is reviewed. All 11 genera and 39 species are diagnosed and mapped; all genera are keyed and keys to species of genera with more than two species are provided. □ *Taxonomy, Morphology, Distribution, New Species, Pisauridae.*

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Spiders of a number of families are strongly associated with water, from the intertidal mygalomorph *Idioctis* (see Raven 1988), through intertidal araneomorphs of the family Desidae (*Desis*, *Paratheuma*), Anyphaenidae (*Amaurobioides*, see Ceccarelli *et al.*, 2016) to the Diving spiders (*Agryoneta aquatica* (Clerck 1757)) of the Cybaeidae.

Many araneomorphs build webs on or near water or even bind to the water's meniscus, e.g. *Tetragnatha* and *Nanometa*, Tetragnathidae (pers. obs, RJR). Some lycosids (e.g. *Lycosa lapidosa* (pers. obs.)) and sparassids (*Heteropoda* spp.) range readily off rocks onto the water surface (pers. obs, RJR) and both have taken, as prey, the Cane Toad (*Rhinella marina*) as well as native Australian frogs. In Tasmania, a female lycosid *Diahogna martensi* (Karsch, 1878) was noted hunting freely on small ponds (pers. obs, RJR). However, in Australia, perhaps the better known of the spider families associated with water, albeit in some cases loosely, are the Pisauridae which include one of Australia's largest spiders, *Megadolomedes trux* Lamb, 1911 (see *Megadolomedes australianus* (L. Koch, 1865) in Davies & Raven, 1980). Those giants of the waterways hunt from the underside of rocks and logs beside slow moving streams, as well as large man-made pipes. When disturbed or hunting prey, the giant female, several times the size of the tiny male, dives readily to the substrate where she remains for long periods (at least 30 minutes), her abdomen clothed in a silver cloak of air (pers. obs., RJR).

Pisaurids include spiders that hunt freely, like *Megadolomedes*, and also spiders that build sheet webs, e.g. *Inola* and *Dendrolycosa*. To date, only one genus, *Megadolomedes*, was considered endemic: however, the family was unrevised. The genus *Dolomedes* is cosmopolitan but several Australian genera (*Perenethis*, *Dendrolycosa*, *Hygropoda*) are also found in Asia. Maternal pisaurids are quickly recognised when they are seen carrying the egg sac in the chelicerae (Figs 1a, 17b). Like the Lycosidae, most have large eyes in the posterior eye row (Figs 2, 3a-h, 4a-h) and are considered sighted hunters; a reflective layer (tapetum) in the eyes strongly reflects light in the night. Despite the common

name, Water Spiders, they can also be found long distances (kilometres) from standing water. However, the term "Nursery web spiders" is unchecked in a number of these genera; the only behaviour that remains true to all seems to be that of holding the egg sac in the chelicerae. Nevertheless, this usage of the term "Water spiders" is common in Australia and appears in the Atlas of Living Australia ([www.ala.org.au](http://www.ala.org.au)) which derives its taxonomy from the Australian Faunal Directory ([www.environment.gov.au/online-resources/fauna](http://www.environment.gov.au/online-resources/fauna)). Pisaurids, notably *Dolomedes* and *Megadolomedes*, are well known for their predation of fish and frogs (see detailed review by Nyffeler & Pusey 2014).

This is not a comprehensive revision, as it does not revise all collections, at least in Australia, or treat all genera exhaustively; some species were not described because they are known only from females. The classification, genera and groups are functional and informative. There is no indication that they are phylogenetic. The inclusion of highly divergent species in an otherwise morphologically conservative group substantially broadens the genus concept. The monophyly of most of the genera and species groups, with the possible exception of *Dolomedes*, is unequivocal. Some genera may well lie within others, in which case, a "parent" genus is potentially paraphyletic.

Brief introductions are given with each genus with only an overview initially.

To date, the Australian Pisauridae have included 7 genera and 16 species (World Spider Catalog, 2017): *Dendrolycosa* (2), *Dolomedes* (7/8), *Hygropoda* (1), *Inola* (4), *Megadolomedes* (1), *Nilus* (1), *Perenethis* (1). Davies (1985) listed only 14 species and did not include *Dendrolycosa kochi* Simon, 1898 but included the Indonesian *Dolomedes chroesus* Strand, 1911. In Australia, the family has been unrevised, save for Davies & Raven (1980), Davies (1982), and Tio & Humphrey (2010).

Although few species of *Dolomedes* have been described from Australia, they seem to be a focal point of historical challenges: the oldest true *Dolomedes*, *Dolomedes flaminius* has not been relocated at the type locality and may not have

been from Australia (see Remarks of *Dolomedes flaminius*); the male syntype of *Dolomedes facetus* (from Rockhampton) was considered lost and subsequently a mismatched male from New Guinea was described by Chrysanthus (1967). Also, the holotype female of *Dolomedes instabilis* is lost. The epigynes, colour and body patterns of a number of Australian *Dolomedes* species described here are all very similar.

## MATERIAL AND METHODS

**Abbreviations.** AER, anterior eye row; AME, anterior median eyes; ALE anterior lateral eyes; c. a, the often chelate apophysis retrolateral on the median apophysis; fe., female; ITC, inferior tarsal claw; juv., juvenile; ma., male; MOQ, median coular quadrangle; penult., penultimate; PER, posterior eye row; PLE, posterior lateral eyes; PME, posterior median eyes; RCH, retrocoxal hymen, a pallid unsclerotised zone retrolaterally on coxa I, used by Raven *et al.* (2002); STC, superior or paired tarsal claw. Palp terminology follows Silva & Griswold (2013b): BAC, basal apophysis of cymbium; DTP, distal tegular projection; CD, copulatory duct; CO, copulatory orifice; FD, fertilisation duct; RTA, retrolateral tibial apophysis; VTA, ventral tibial apophysis. The view RTAmax, for the male palp presents the RTA at its maximal width; often the RTA when viewed laterally is not most informative. Additional Terms: the caput “shoulder” is the narrowing of the carapace to form the caput; the dorsal and ventral lobes on the RTA are termed upper and lower (i.e. relative to a normally orientated palpal tibia) to avoid misunderstanding that they are not on the dorsal and ventral faces of the tibia. Chelical dentition is presented as 3p, 4r indicating three teeth on the promargin and 4 on the retromargin. The term “distal” denotes a character on the tip of the structure whereas “distal” refers to the distal half of the structure; equally, “basal” is used to refer to the basal half.

*Eyes* (Figs 2, 3 a-h, 4a-h). The width or length of eye rows is measured in a transverse or longitudinal line, respectively. The relative width of the eye group is given both through

the PLE centres and through the mid-length of the eye group where that line intersects with a line joining the outer edges of the ALE and PLE (Fig. 2); equally, the position of the eye group in relation to the “shoulder”, the concave narrowing from the carapace to caput, is given through the centres of the PLE. The extent of the curvature of the AER and PER are given as a percentage of the overlap of the two lines given by the extent to which a line across the anterior edge of the posterior eye of the respective rows overlaps with the anterior eyes of the row (Fig. 2). Eye measurements are not given in millimetres but eyepiece graticule units. MOQ and OQ are viewed from above. The length of the male palpal tibia and cymbium are taken through the mid-line of each. Eye row measurements and interspaces are taken through the diameters of the *Eyes*. Terminology of eye rows in spiders with a strongly recurved PER are confusing because row may be so curved that the eye extents do not overlap and that form two rows. PER overlap refers to the extent, from above that the two rows overlap (Fig. 2). Thus, zero overlap indicates the PER are two lines; 50% means the anterior edge of the PLE cuts the the middle of the PME.

Overall shape of epigyne (Fig.12e) is measured from the anterior extent of the lateral lobes to the posterior extent of the epigyne and the width is taken from the widest extent of the lateral lobes. The relative extent of the median field is taken from the point at which the scape begins to the posterior extent of the epigyne.

Leg measurements are given in the description as (leg) 1: femur, patella, tibia, metatarsus (absent in palp), tarsus, total. All but *Megadolomedes* females were measured using an eyepiece graticule; large females were measured with dial callipers. Spine counts on lateral and ventral surfaces are dependant on the angle of viewing; hence, absolute differences in, for example, the ventral count on metatarsi III and IV should not be taken as significant as in some cases a ventrolateral spine may have been scored as lateral in one case and ventral in another.

Institutions: AMS, Australian Museum, Sydney; ANIC, Australian National Insect

Collection, CSIRO, Canberra; BMNH, Natural History Museum, London; MCSN, Museo Civico di Storia Naturale Giacomo Doria, Genoa, Italy; MNHN, Museum National d'Histoire Naturelle, Paris; MV, Museum of Victoria, Melbourne; QM, Queensland Museum, Brisbane; SAMA, South Australian Museum, Adelaide; TMAG, Tasmanian Museum and Art Gallery, Hobart; WAM, Western Australian Museum, Perth. Localities and collectors: Ck, Creek; Is., Island; NP, National Park; QM party, Queensland Museum Terrestrial Biodiversity staff; Rd, Road.

Digital photographs were taken with either a Leica DFC 500 and the image stacking software program Zerene or a Nikon Coolpix 880 or Nikon Coolpix 5400, hand-held on the eyepiece of a Zeiss Stemi SV11 stereomicroscope or Leica SZ, resolution being 3 and 5 megapixels respectively. Drawings were drawn with a camera lucida on a Zeiss Stemi SV6. Scanning electron micrographs were done on a Hitachi S530 or a Hitachi TM1000.

Material examined, both types and otherwise, refer to the first author's examinations. Coordinate of localities for which those were not recorded on collecting are taken from Google Earth and rounded to the near 10 minutes and given in square parentheses; their accuracy should thus be taken at best as  $\pm 10$  minutes.

Here, all evident morphological characters have been used to associate males with conspecific females. Although species are described based only upon males, it seemed unwise to describe females without associated males. Given that up to four *Dolomedes* species can occur in sympatry, all with similar abdominal and cephalic patterns, the potential for mismatching males and females is high.

## MORPHOLOGY

Characters in *Dolomedes*. Carico (1973) found a number of characters of diagnostic value in Nearctic *Dolomedes*; all were checked here. Of those, no males of the Australian *Dolomedes* treated here showed any modifications on ventral femur IV, the carapace (lateral) profile in all species was consistent, being higher

behind and sloping gradually to the front. The cephalic and dorsal abdominal patterns were consistent in most species, save for *Dolomedes facetus* and *Dolomedes flaminus*, in which the patterns on the carapace and abdomen are more distinctive. Abdominal pattern did preserve best in specimens with a distended abdomen unless preserved in 100% ethanol when shrinkage was strong (e.g. Fig. 33a, *Dolomedes lizturnerae* sp. nov., male). However, some females of some species (e.g. *Tasmomedes eberhardarum* (Strand 1913), *Dolomedes instabilis*, *Do. lizturnerae* sp. nov.) but usually not the males, except for *T. eberhardarum*, have a dark field on the ventral abdomen with two pairs of pallid lines (Fig. 38b, c, e). The vagaries of different preservations, different transporting after preservation, and in some cases damage either during capture or through capture (e.g. egret regurgitation) reduced the efficacy of the character.

The biggest challenge in this work was matching conspecific males and females of *Dolomedes*. This was made more complex by the sympatric occurrence of up to four similar species with similar epigynes (see below) and no discovered characters allowing the alignment of the male and conspecific females. Molecular methods should be the modern panacea. However, much of the material was collected into a mixture of ethanol, glycerol, water, and acetic acid, the latter two being most damaging to the successful extraction of DNA. A sound molecular approach will cast invaluable light on the relationships of the various genera and the vexatious question about, for example, whether *Megadolomedes* is merely an apomorphic clade within *Dolomedes*. To resolve such a question, a study of many species, not just those from Australia would be necessary. Hence, for new species, only holotypes (males) are designated as types, with females being listed simply as material examined.

**Females of *Dolomedes*.** The association of males with their putatively conspecific females was based upon a number of criteria. First, if a good collection was made in an area, e.g. Lake Broadwater (south-east Queensland), and only one species was taken they were assumed to be

matching. Often, *Do. facetus* is present at most localities; males and females are among the smallest *Dolomedes* with quite ornate abdominal patterns and the palp and genitalia quite distinctive. This species then can be readily eliminated as a potential conspecific of larger *Dolomedes*. In some cases, three species (apart from *Do. facetus*) with similar females are found in the same area or may be taken in sympatry. In this case, species with the most different male palp and different female epigyne (e.g. *Dolomedes venmani* sp. nov.) are associated.

*Penultimate females.* A lesser challenge was the recognition of penultimate females in which the spermathecal ducts had substantively developed. In one case, a very large penultimate female *Dolomedes* showed primordia (see also Sierwald 1997).

Australian male *Dolomedes* of the *Dolomedes albicomus* group show a character not reported in other *Dolomedes* species world-wide, save for *Dolomedes nigrimaculatus* Song & Chen, 1991: with the exception of the cymbium, the palp is very long with often the patella but always the tibia being clearly longer than the cymbium (e.g. Fig. 12b). In all other species or at least those presently known and included in the genus *Dolomedes*, the tibia is shorter than cymbium.

*Spines.* The leg spination, position and number of the spines treated here is remarkably consistent and hence only limited data are given. However, two spine characters were noted which seemed informative. The patella triad is one mid-point proteral spine, one basal and one distal spine dorsally. The second character is the number of dorsal spines on the dorsal palpal femora; the widespread spination pattern is fe p1d1.1.1.2.r1; i.e. three spines in a row dorsally followed by a distal pair (Fig. 21a, arrows). In some *Ornodolomedes*, gen. nov., species, only one or two spines occur dorsally basal to the distal pair.

*Male Palp.* The overall shape and position of sclerites of the male palp across *Dolomedes*, *Megadolomedes*, *Ornodolomedes*, gen. nov., *Mangromedes*, gen. nov., *Caledomedes*, gen. nov. are highly consistent with the L-shaped tegulum

with DTP; the fulcrum, conductor and median apophysis are all similar in overall shape and position. In the pisaurine genera reported here, the conformation is quite different, except possibly in *Hygropoda* in which the tegulum is U-shaped, i.e. retrolateral edge is extended anteriorly. However, the somatic morphology, as well as the carapace and abdominal pattern are consistent within each genus.

*Epigyne.* Carico (1973), following Carico & Holt (1964), used a number of epigynal characters to help identify species of Nearctic *Dolomedes*; some of those are used here, namely, maximum length to width (i.e. the ratio) of the epigyne and extent of the scape/median field. Many species of Australian *Dolomedes* have very similar epigynes with two curving lateral lobes and a narrow median septum joined to a broad median field. The relative shape of the epigyne remains relatively stable across species, as does the relative extent of the median septum. In some species, a pair of soft "hooks" (Figs 16g, 19a) arise from the median field; in others, a soft median cone is present. In one species at least, the median field extends for the length of the epigyne. However, internally, several different groups of the ducts are evident. Most widespread are a pair of similarly sized, short broad CD's directed diagonally outwards with the relative length, size, direction and position of the posterior duct varying between species. Less common are long slender sinuous ducts diagonally directed or spiralled ducts (Fig. 38i).

The relative length to width (overall shape) of the epigyne is easily quantifiable, as is the length of the septal area; the species "groups" formed by the combination have divergent shaped spermathecae, so they are not highly informative in isolation.

## FAMILY PISAURIDAE

**Description.** Pretarsal fracture present (*Megadolomedes*, *Ornodolomedes*, gen. nov., *Bradystichus*, *Inola*, *Perenethis*, *Dendrolycosa*) or absent (*Dolomedes*, *Tasmomedes*, gen. nov., *Caledomedes*, gen. nov., *Mangromedes*, gen. nov., e.g. Fig. 7d, inset); retrocoxal hymen not evident in any examined Pisauridae. Three claws; teeth

present or absent on third claw; claw tufts absent. Cribellum absent. Eyes in 2–3 rows, 4.4 or 4.2.2, with a strongly recurved PER with no overlap of the eyes. Male palp with retrolateral tibial apophysis, bulb with conductor, fulcrum and median apophysis. Spines: on ventral tibiae and metatarsi I, II slender, juxtaposed, not strong opposed pairs, as in e.g. Zoropsidae. Females carry eggs in chelicerae.

**Subfamilies.** At present, two subfamilies, Thalassiinae and Pisaurinae, are recognised (Zhang, Zhu & Song 2004); however, morphologically, the defense for the groups is weak.

Murphy & Roberts (2015: 144) newly divided the Pisauridae into the Dolomedinae, Pisaurinae and Eurychoerinae initially based on the absence or presence (latter two subfamilies) of the pretarsal fracture. However, in so doing, they set aside many strong similarities in the bulbs in the then separated groups, as shown in in the strongly *Dolomedes* like palp of *Bradystichus* which respectively lack and possess a pretarsal fracture. Also, of the 48 pisaurid genera listed, only 9 genera (those illustrated) were placed in the three subfamilies so proposed. Significant here is that *Dendrolycosa* was placed in the Eurychoerinae. Abdominal setae types also supported their groups and they hypothesised that the brachiate setae, present only in the Pisaurinae and Eurychoerinae (i.e. those with the pretarsal fracture), would be “a hindrance when diving into water for prey”. Of the Australian genera with a pretarsal fracture, only *Megadolomedes* hunts beside and dives into water and of those in which it is absent, *Caledomedes* gen. nov., alone does not hunt in water.

**Remarks.** One of the characters putatively differing between the Pisauridae and Lycosidae is the presence of teeth on the third claw. This was consistently checked and, in many cases, such teeth are recorded as absent but the tooth, if present, it often very slender and difficult to discern from bristles around the claws. Equally, teeth are present on the third claw of spiders of the lycosid genus *Venonia* (pers. obs.). Hence, in practice, the character is not useful at the family level.

Although some trechaleids have tarsi pseudo-segmented, the character is by no means universal in the family and is presumably apomorphic within the group. The male palpal configuration of the pisaurid genera with pseudo-segmented tarsi (*Hygropoda* and *Megadolomedes*) is very similar to that in *Dolomedes*, whereas the male palp of trechaleids are basically that of a lycosid but with a tibial apophysis (pers. obs.).

#### KEY TO GENERA OF THE WESTERN PACIFIC

1. MOQ on long gentle slope (Fig. 5a) ..... *Perenethis*
- MOQ on steep slope (Fig. 5b–h) ..... 2
2. (1). Tarsi pseudo-segmented, curved (Fig. 7e) ..... 3
- Tarsi not pseudo-segmented, straight (Fig. 7a–d) ..... 4
3. (2). Abdomen long and slender (Figs 77, 79a), green in life (Fig. 77), males and females small (carapace length ca. 3 mm) ..... *Hygropoda*
- Abdomen short, cordate, earth coloured (Fig. 1a), never green in life, males small and females very large (carapace length 6–10 mm) ..... *Megadolomedes*
4. (2). Ventral abdomen with dark median field with pale, red or orange spots centrally (Fig. 71b); dorsally abdomen often mud-encrusted; males with scopula on prodorsal cymbium (Fig. 71a, b; only New Caledonia) ..... *Bradystichus*
- Ventral abdomen pallid without strong ventral pattern; dorsal abdomen never mud-encrusted, no scopula on cymbium of males (Australia, New Caledonia) ..... 5
5. (4). Pretarsal fracture present (Fig. 6a) ... 6
- Pretarsal fracture absent (Fig. 7c, d) ..... 7
6. (5). AER straight (Fig. 4b) ..... *Inola*
- AER clearly recurved (Fig. 73g); abdominal pattern with anterior medial dark “tongue” with waist (Fig. 73g) ..... *Dendrolycosa*
7. (5). AER narrow, no wider than second row

- (MOQ back width; Fig. 68c)...*Caledomedes*
- AER wider than second row (MOQ back width; Fig. 3c) .....7
8. (7). Spines on ventral tibiae and metatarsi I, II long, extents overlapping (Fig. 7f); legs slender.....9
- Spines on ventral tibiae and metatarsi I, II short, extents not overlapping (Fig. 7a–c); legs stout.....10
9. (8). Males with deeply incised RTA (Figs 65b, 66d); females with extensive epigynal “wings” (Fig. 65c–e); found in intertidal zone, usually in mangroves.....*Mangromedes*
- Males with simple short RTA (e.g. Figs 46a, 53b–e, 57a, 63a, d, g, j); female epigyne ovoid, without wings (e.g. Figs 46c, 49c, 51c, 59e, 60b).....*Ornodolomedes*
10. (8). Male palp with elongate cymbium (Fig. 38f, g); female with spiralled spermathecae (Fig. 39i); Tasmania, Victoria...*Tasmomedes*
- Male palp with short cymbium (e.g. Fig. 10a); female with short spermathecae confined posteriorly (Figs 10g, 14b); Australia-wide .....*Dolomedes*

### Pisauridae Simon, 1890

#### *Thalassiinae* Simon, 1898

Included genera (following Zhang, Zhu & Song, 2004): *Dolomedes* Latreille, 1804, *Nilus* O.P. Cambridge, 1876 (senior synonym of *Thalassius*), *Hygropoda* Thorell, 1895, *Megadolomedes* Davies & Raven, 1980, *Mangromedes*, gen. nov., *Ornodolomedes*, gen. nov., *Caledomedes*, gen. nov., *Tasmomedes*, gen. nov., *Bradystichus* Simon, 1884, *Qianlingula* Zhang, Zhu & Song, 2004, *Sphedanus* Thorell, 1897.

### HISTORY OF DOLOMEDES

Two species, *Dolomedes albicomus* and *Dolomedes flaminus*, were described by L. Koch (1867) from south-east Queensland and figured in L. Koch (1876) in which were also described *Dolomedes facetus* from Queensland and *Dolomedes instabilis* from western New South Wales. A fifth species, *Dolomedes elegans* L. Koch, 1876 proved to be

misplaced and was transferred to *Nilus* by Simon (1898) but the original combination was preoccupied (by *Dolomedes elegans* Taczanowski, 1874) and replaced with *Nilus kochi* by Roewer (1951) (see *Caledomedes* gen. nov.) Chrysanthus (1967) figured a male and female ascribed to *Dolomedes facetus* from New Guinea. *Dolomedes stilatus* Karsch, 1878, described from Western Australia, is here transferred to *Perenethis*. Strand (1911) described a female as *Dolomedes chroesus* from Indonesia which was redescribed from a male by Chrysanthus (1967) and, based on material in the Queensland Museum. Davies (1985) considered the species to be also in Australia but no description or figures were given. The World Spider Catalog (2017) lists the species in New Guinea, as described. Soon after, Strand (1913) described a male as *Dolomedes eberhardarum* from Victoria. Until now, no further material of this species has ever been reported in Victoria but the species is here reported widespread in heath in Tasmania.

Significantly then, with the exception of the *Megadolomedes*, the genus *Dolomedes* has remained unrevised in Australia and perhaps this is best exemplified by the only two specimens taken in the past 110 years of *Dolomedes eberhardarum* from Victoria, Australia’s most densely populated state by a factor of 2.7.

Vink & Dupérré (2010) revised the genus *Dolomedes* in New Zealand, looking at over 350 adults and across highly comprehensive geographic extent. With the help of one mitochondrial (CO-1) and one nuclear gene (Actin5C), they examined the divergence and introgressions in that fauna. For all of New Zealand, they admitted only four species of *Dolomedes* and the results are used critically herein.

Given that some Australian species, e.g. *Dolomedes facetus* and *Dolomedes chroesus*, are currently listed at least notionally from elsewhere in the Pacific, the geographical scope of this work was expanded to also include New Caledonia, where extensive collections have been made. Thus, the New Caledonia *Dolomedes*, *Dolomedes lafoensis* Berland, 1924, *Dolomedes neocaledonicus* Berland, 1924, and *Dolomedes titan* Berland,

1924, were reviewed to ensure no Australian species considered new was among them.

Equally, *Anoteropsis flavovittata* Simon, 1880, which Vink (2002) found to be misplaced in the Lycosidae, raised questions about the validity of proposed new Australian species and genera and is thus included here. For completeness, the bizarre mud-wallowing New Caledonian pisaurid genus, *Bradystichus*, is also included.

This work makes no pretence of being a full revision. The scope has been to treat all of the Australian pisaurids in the QM collection and those in other museums that bore upon the issues that needed to resolve the Queensland species and the previously described species. Hence, it is a review. The work began with the offer of a new species of *Dolomedes* for the World Science Festival founder, Dr Brian Greene. It quickly became apparent that the scope had to be extended, as noted above, to ensure that senior synonyms of the new species were not described from outside of Australia.

The order of treatment of *Dolomedes* starts in Queensland with the most widespread species, followed by shorter range species from other states.

### *Dolomedes* Latreille, 1804

*Dolomedes* Latreille, 1804: 135. Type species. *Araneus fimbriatus* Clerck, 1758 by subsequent designation of Walckenaer (1805: 16); Rainbow, 1911: 263; Davies, 1985: 102; 1 ma., 1 fem., *Dolomedes fimbriatus*, B. Baehr European collection, det B. Baehr, examined.

**Diagnosis.** Males of *Dolomedes* are most similar to those of *Tasmomedes* gen. nov., from which they differ by the short cymbium, conductor, and fulcrum; females differ in the non-spiralled spermathecae.

**Description.** Carapace in lateral view highest posteriorly, sloping down to eye region (Fig. 5g). PTF absent. Eyes of PER larger than those of AER. Caput saddle posterior to PLE. AER width less than PLE-PLE. Males and females of similar size. Male palp with L-shaped DTP, distal conductor, and cymbium ventral, and retroventral processes basally. Males have tarsus I much longer than II or IV; in females,

tarsus I is only slightly longer than II. Spines on ventral tibia and metatarsi I, II short, not overlapping (Fig. 7a–c). Diurnal and nocturnal spiders hunting freely beside creeks usually with at least first pair of legs in water; also found under rocks in creek beds diurnally.

**Distribution.** World-wide, excluding Antarctica.

**Australian species.** *Do. albicomus*, *Do. facetus*, *Do. flaminus*, *Do. instabilis*, *Do. briangreenei* sp. nov., *Do. vicque* sp. nov., *Do. alexandri* sp. nov., *Do. lizturnerae* sp. nov., *Do. wollemi* sp. nov., *Do. mankorlod* sp. nov., *Do. karijini* sp. nov., *Do. venmani* sp. nov.

***Dolomedes* world-wide.** Comparisons between *Dolomedes* species in different biogeographic regions have not yet been documented. However, the clypeus height in the male of *Do. raptoroides* Zhang, Zhu & Song, 2004 (CL:CW=1.17) (Silva *et al.* 2015, fig. 5) is only that from the lower edge of the AME to that of the PME, whereas in *Do. kalanora* Silva & Griswold, 2012 (fig. 5), (CL:CW=1.07) the eyes are quite remote from the clypeus which is as wide as the length of the MOQ (from front). Equally, the carapace of the latter is relatively wider than that of the former. Likewise, Vink & Dupérré (2010) showed a long clypeus in *Do. schauinslandi* Simon, 1889 (Vink & Dupérré, 2010, fig. 38) and a short clypeus in *Do. dondalei* Vink & Dupérré, 2010 (Vink & Dupérré 2010, fig. 3) and *Do. minor* L. Koch, 1876 (Vink & Dupérré 2010, fig. 34). Thus, although the genus is very consistent in genital morphology, there are probably informative differences somatically.

Australian species of *Dolomedes* can be readily divided into 5 groups based on the male palp: the *Do. albicomus* group always has the tibia longer than the cymbium and most species have a flange on the retrolateral side of the median apophysis. All other species have the palpal tibia at most as long as the cymbium and, within them, the *facetus* “group” (only *Do. facetus*, *Do. neocaledonicus* and *Do. flaminus*) have a large DTP and deeply incised RTA. The *Do. briangreenei* group includes *Do. vicque* and *Do. briangreenei*, both have a small DTP and a widely flared RTA that is multidentate. The *Do. albicomus* group includes *Do. albicomus*, *Do.*

*instabilis*, *Do. mankorlod*, *Do. karijini*, *Do. wollemi*, *Do. lizturnerae*, *Do. venmani*, as well as *Do. titan* in New Caledonia. The *Do. facetus* group includes *Do. facetus* and *Do. flaminius* in Australia, as well as *Do. neocaledonicus* in New Caledonia. The *Do. alexandri* group is monotypic.

**KEY TO MALE DOLOMEDES AND  
TASMOMEDES  
IN AUSTRALIA AND NEW CALEDONIA**

1. Palpal tibia clearly shorter than cymbium or at least equal and median apophysis not apically chelate (Figs 10a, 18a) . . . . . 2
  - Palpal tibia clearly longer than cymbium and median apophysis apically chelate (Figs 12b, 12a) . . . . . 7
2. (1). Distal tegular process slender, digitiform, parallel-sided for mid-length (Fig. 22a) . . . 4
  - Distal tegular process large trianguloid (Figs 10a, 24a) . . . . . 3
3. (2). RTA viewed retrolaterally two similarly long prongs (Figs 10e, 37d) . . . . . 14
  - RTA viewed retrolaterally with 3–4 short prongs (Fig. 24c) . . . . . *Do. pedder*
4. (2). Conductor extends past tip of DTP for half length of bulb (Fig. 38f, g) . . . . . *Tasmomedes eberhardarum*
  - Conductor extends just past tip of DTP (Fig. 31a) . . . . . 5
5. (4). Palpal tibia barrel-shaped, RTA small simple (Fig. 31a) . . . . . *Do. alexandri*
  - Palpal tibia coniform, widening distally, RTA flared, multilobed (Figs 16a–f, 20a, b) . . . . . 6
6. (5). RTA retrolaterally, a long flared edge with single dorsal process (Figs 18a, b, 19e–h, 20a, b) . . . . . *Do. briangreenei*
  - RTA retrolaterally, a long scooped trianguloid process with one apical prong flared and smaller subapical prongs (Fig. 16a–f) . . . . . *Do. vicque*
7. (1). Palpal tibia long straight (Fig. 12b) . . 8
  - Palpal tibia bowed laterally (Figs 21b, 22a) . . . . . *Do. venmani*
8. (7). Palpal tibia very long, ca. 1.40–1.80 times length of cymbium (Fig. 12b); retrolateral process of median apophysis distal and thick spiniform (Fig. 12a) . . . . . *D. albicomus*
  - Palpal tibia shorter, ca. 1.00–1.38 times longer than cymbium (Fig. 13a), retrolateral process of median apophysis apical or absent (Figs 13a, 26a) . . . . . 9
9. (8). Retrolateral process of median apophysis absent (Fig. 26a) . . . . . *Do. wollemi*
  - Retrolateral process of median apophysis present . . . . . 10
10. (9). Retrolateral process of median apophysis above “neck” (Figs 27a, 32a) . 11
  - Retrolateral process of median apophysis below “neck” (Figs 28b, 36a) . . . . . 12
11. (10). Retrolateral process of median apophysis apical making MA apex chelate (Fig. 32a) . . . . . *Do. lizturnerae*
  - Retrolateral process of median apophysis hooked, just above neck (Fig. 27a) . . . . . *Do. mankorlod*
12. (10). Retrolateral process of median apophysis beak-like (Fig. 28b) . . *Do. karijini*
  - Retrolateral process of median apophysis small, triangular (Figs 13a, c, 36a) . . . . . 13
13. (12). Retrolateral process of median apophysis set well basal on neck; very large spiders (CL=ca. 12 mm); New Caledonia (Fig. 36a, b) . . . . . *Do. titan*
  - Retrolateral process of median apophysis set apical on neck; large spiders (CL=ca. 7 mm); Australia (Fig. 13a, c) . . *Do. instabilis*
14. (3). RTA deeply incised (Figs 10b, 37b) . . . . . 15(14)
  - RTA a long low ridge with upper lobe . . . . . *Do. flaminius*
15. (14). Abdomen dorsally with a pair of fine white stripes and spots, centrally with dark band (Fig. 8a) . . . . . *Do. facetus*
  - Abdomen dorsally with continuous white band along edge and central band pallid (Fig. 37a); New Caledonia . . . . . *Do. neocaledonicus*

***Dolomedes facetus* L. Koch, 1876**

(Figs 4c, d, 7a, 8a–d, 9a, b, 10a–j. Map 1a)

*Dolomedes facetus* L. Koch, 1876: 869, pl. 74, figs 5, 6; Chrysanthus, 1967: 423, figs 63, 64, (female); Rainbow, 1909: 274; Rainbow, 1911: 263; Davies, 1985: 103.

*Dolomedes chroesus*: Chrysanthus, 1967: 422, figs 62, 66, male, misidentified.

**Material examined.** Types. Queensland: lectotype (*Dolomedes facetus*, designated by Chrysanthus, 1967) fem., Rockhampton, ZMH MGH 6522. Paralectotypes: juveniles, same data as lectotype, ZMH; 1 ma., 2 fem., BMNH 19.9.18.5540–42; 3 females, 1 penult. male, juveniles, no further data, Museum Godeffroy, MV K13739–613743.

**Other Material examined.** Queensland: 1 ma., 1 fem., Carnarvon Station (CN3M1), 24.837°S, 147.623°E, 690 m, malaise trap in *Callitris* stand near damp edge with fords, 14 Dec 2010–15 Jun 2011, A. Zwick & Wilson, QMS107111; 1 fem., Ayr, 19°34'S, 147°27'E, 10 Jan 1974, V. Salanitri, QMS28788; 1 ma., 3 fem., Weatherstation Ck, 13°42'S, 143°17'E, 17 Mar 1979, K. McDonald, QM S67773; 1 ma., 4 fem., Hibbett Point, Weipa, 12°39'S, 141°53'E, 7 Feb 1975, R.J. Raven, QM S28846; 1 ma., Biloela, 24°24'S, 150°31'E, 21 Jan 1997, Department of Primary Industries, Biloela, QM S34561; 1 fem., Little Yabba Ck, Conondale Range, 26°36'S, 152°35'E, 14 Dec 1977, QM S67756; 1 ma., 1 fem., Fig Tree Pocket, Brisbane, 27°28'S, 153°03'E, 9 Nov 1972, V.E. Davies, QM S192; 1 ma., 1 fem., Blackdown Tableland, Stony Ck Falls, 23°48'S, 149°08'E, 1–6 Feb 1981, R.J. Raven, QM S67782; 1 ma., 1 fem., Proserpine, Deadman Creek, site XY17, 20°30'S, 148°33'E, open forest, night collection, 17 Mar 2008, R.J. Raven, QM S85987; 1 fem., Boondall Wetlands (BCC1), 27°20'S, 153°04'E, *Melaleuca* open forest, pitfall, 31 Mar–629 Apr 2004, QM party, QM S65571; 1 fem., Montville, 26°42'S, 152°54'E, Apr 1915, H.A. Longman, QM S67757; 1 ma., Taroom District, Boggomoss No 19, 25°25'S, 150°01'E, *Lophostemon*, night collection, 11 Nov 1996, P. Lawless, QM S37434; 1 fem., Boggomoss No 3, via Taroom, 25°26'S, 150°01'E, 12 Nov 1996, G. Thompson, QM S36878; 1 fem., Taroom District, Boggomoss No 21, 25°27'S, 150°03'E, hand collection, 11 Nov 1996, QM survey, QM S36939; 1 ma., 2 fem., Musgrave, (Merina Downs Rd), roadside, 19 May 1973, V.E. Davies, QM S52190; 1 fem., Marsupial Ck, E Croydon, bucket trap (elev.), 15 Mar–29 Jun 2002, J. Hasenpusch, QM S73819; 2 ma., Cedar Galleries, dam, Calliope, 23°59'S, 151°10'E, 27 Feb–1 Mar 2017, R. Raven, QM S108244; 1 fem., Moorehead R, 18 May 1973, V.E. Davies, QM S67723; 1 fem., Norman R xing, main rd S Normanton, 17°40'S, 141°05'E, Oct 1977, M. Archer, QM S67747; 1 ma., Toomba Homestead site, moist litter pockets, 19°58'S, 145°34'E, basalt ridge with *Brachychiton*, litter, 15 Feb 2007, R.J. Raven, QM S79252; 1 ma., 3 fem., Doboy, 17 Dec 1979, D. Seaton, QM S91004; 1 fem., 2 ma., Gatton, 21–23 Feb 1980, QM S91392; 1 ma., Coolibah camp, 28 Jul 2016, R. Raven, QM S104917; 1 fem.,

Berringtonia Lagoon, Cape York Peninsula, Jun 1982, QM S104923; 1 ma., Norman River, edge, Oct 1977 QM S104924; 1 ma., Kilcoy Creek, 27 Jul 1978, QM S104925; 1 fem., Almaden, Chillagoe district, 17°20'S 144°41'E, June–Sept. 1929, W.D. Campbell, AM KS117592; 1 fem., same data but, May 1929, W.D. Campbell, AM K59086; 1 fem., Nerina Downs, near Homestead, 20 May 1973 QM S104926; 1 fem., Springfield camp site near Mt Surprise, 31 Aug 1980 QM S104927; 1 fem., Cooloola, 13 Jul 1973, QM S104928; 2 fem., Mt Molloy, QM S1974, QM S104929; 1 fem., Cooktown, Feb 1975–Mar 1975, QM S104930; 1 fem., Lagoon 2 miles N of Moorehead River, 19 May 1973, QM S104931; 1 fem., Lake Broadwater near Dalby, 12 Feb 1984 QM S104932; 2 fem., Coen, 11 Mar 1979, QM S104933; 3 fem., 1 juv., Appel Channel, Mornington Island, 16°42'S, 139°11'E, 30 Apr 1960, N.B. Tindale, P. Aitken, SAMA NN13650–54. New South Wales: 1 fem., Carroll's Creek, above road bridge, 28°50'50"S 152°05'56"E, 4 May 2008, G. Theischinger, AM KS109227; 1 fem., Ryans Creek at Belle View, 33°37'58"S 150°07'11"E, 1 May 2007, S. Claus, AM KS119896; 1 fem., Careel Bay [33.6208°S, 151.3219°E], mangrove area, 4 Dec 1972, Australian Littoral Society, S. Ceggs, AMS KS; 1 ma., Gurley Creek at "Carrington", 29°39'25"S 149°36'59"E, 29 Mar 2010, D. Mawer, AM KS112416; 1 ma., Millie Creek at Ellematta, 29°48'45"S 149°32'31"E, 10 Feb 2001, D.K. McAlpine, AM KS109234; 1 ma., Darling River at Windmill, 30°01'46"S 146°02'22"E, 22 Mar 2007, G. Theischinger, AM KS119879; 1 ma., Namoi R at Namoi Farm, 30°21'16"S 149°47'17"E, 18 Mar 2009, G. Theischinger, AM KS110776; 1 ma., Wandalli Ck at Munda, 28°29'19"S 150°30'28"E, 4 May 2009, G. Theischinger, AM KS110778; 1 ma., Tulla Mullen Ck at Railway X-ing, 30°35'19"S 149°56'50"E, 17 Apr 2007, S. Jacobs, AM KS101391; 1 ma., 1 fem., juv., Lachlan River at Whealbah Rd, 33°39'32"S 145°14'54"E, 24 Jan 2011, C. Rush, AM KS115667; 1 ma., 1 juv., Bucklandbak Ck, Wexford, 18 March 2008, G. Theischinger, 30.9624°S, 148.69161°E, AM KS105156; 2 fem., St Marys [no further data], AM K3539. Northern Territory: 2 fem., Casuarina Coast Reserve, Darwin, 12°27'S, 130°50'E, 29 Mar 1982, per Darwin City Council, QM S67772; 1 fem., Kakadu NP, Magela floodplain, 1 May 1987, P. Dostine, QM S51192; 1 fem., Ellery Ck via Hermannsburg, 23°47'S, 133°05'E, 15 Mar 1995, R.J. Raven, QM S53461; 1 fem., Wildman Ra., Kakadu National Park, 4 May 1979, QM S104922; 1 ma., Melville Island, Pickertaramoor, 5 km W, Arnhem Land, 11°46'S, 130°52'E, 17 Jan 1990, M.J. Tyler, SAMA NN13649. Western Australia: 1 fem., Stewart R at "Kimbolton Station", Kimberley Ra., 16°44'S, 123°54'E, 15 Jul 1986, R. Leggett, G. Heidke, QM S67765. South Australia: 3 ma., 1 fem., Morris Creek Bore tail, Finnis Springs Station, Lake Eyre Basin, 29°25'40"S, 137°34'E, 29 Mar 1996, D. Nijjalke, SAMA NN13577–81. Victoria: pen. ma., Churchill, Gippsland, 38°18'S, 146°26'E, 12 Aug 1993, R. de Souza-Daw, from dam, SAMA NN8727.

**Diagnosis.** The male palp of *Do. facetus* is very similar to that of *Do. flaminius*: the palpal tibia being slightly shorter (*ca.* 0.83) than the cymbium (Fig. 9a, b), the DTP is large and trianguloid with a similar prolateral basal mound (Fig. 9a), the median apophysis lacks the retrolateral vane (Fig. 9a) and the very long male palps of the *Do. albicomus* group (Figs 12a, 13a), the ventral abdomen lacks pattern and the dorsal abdomen has pallid spots and a median pallid zone. The difference between males of the two species is shown in the retrolateral view of the RTA which is a low ridge set distal in *Do. flaminius* (Fig. 24c) but a ridge with two long prongs set clearly predistal (Fig. 10b) in *Do. facetus*, the tibia (most noticeable in retrolateral view) is of similar width for its length in *Do. flaminius* but distinctly wider distally in *Do. facetus*, and the tegulum in the latter is longer, slender and clearly diagonal. Females of *Do. facetus* are unusual (if not unique) in the Australian region in the relatively short wide epigyne with roughly trianguloid ridges and the lateral lobes being strongly diagonal, posteriorly convergent with a small quadrate median field (Fig. 10f, h); internally, the CD is basally forming a figure 8 anteriorly then recurring back through a double fold to a more anterior FD (Fig. 9d). The male palp of *Do. schauinslandi* Simon, 1889 (see Vink & Dupérré, 2010) shows strong similarities to that of both *Do. facetus* and *Do. flaminius* in the large DTP but differs in the smaller RTA

In life, compared to most other *Dolomedes* species, males and females of *Do. facetus* are much lighter coloured on the carapace and legs and have quite a colourful abdominal pattern dorsally (Fig. 8a–d); males lack the broad white bands that flank the carapace as in other species.

**Description.** Male QM S107111. Carapace 5.36 long, 4.80 wide. Abdomen 4.80 long, 3.04 wide. Total, 10.16.

I: 6.72; 2.48; 6.48; 5.68; 3.28; 24.64. II: 6.64; 2.80; 6.00; 5.36; 3.04; 23.84. III: 6.00; 2.48; 5.04; 4.64; 2.72; 20.88. IV: 7.04; 2.48; 6.32; 6.64; 4.00; 26.48. Palp: 2.88; 0.88; 1.36; 1.92; 7.04.

Carapace orange brown with white haired midline; wide bands of white hairs on margins.

Abdomen ostiate region orange with sinuous convergent lines forming four chevrons posteriorly and four pairs of white spots. Abdomen upper flanks with white band. Abdomen long tear-shaped. *Eyes.* Group width/headwidth=0.69 through PLE, 0.57 through mid-eye group. OQ front, back, long: 54, 85, 47. MOQ front, back, long: 32, 45, 26. AME: ALE: PME: PLE, 12: 10: 15: 16. PLE at mid-caput shoulder. AER with 30–40% overlap; PER in two lines well separated by ALE diameter. Chelicerae 2p, 4r. STC with *ca.* 7 teeth; ITC, 0. Scopula absent. Group of long hairs (not tufts) only below spines. Palp: fe p1d1.1.1.2r1; pa p1d1.1; ti p1r1. Pedal patellae with spine triad. Palp. Retroventral cymbium widely flared; VTA small rectanguloid; RTA low rectanguloid keel with small distal points; RTA small keel deeply invaginated forming two long similar lobes. DTP large trianguloid with retrolateral extension.

*Female* QM S107111. Carapace 7.20 long, 5.28 wide. Abdomen 6.00 long, 4.56 wide. Total, 13.20.

I: 5.84; 2.88; 5.52; 4.56; 2.16; 20.96. II: 5.84; 2.56; 5.04; 4.56; 2.24; 20.24. III: 6.00; 2.08; 4.72; 4.56; 2.24; 19.60. IV: 6.64; 2.48; 6.00; 6.32; 3.20; 24.64. Palp: 1.84; 1.20; 1.60; 2.24; 6.88.

Carapace with narrow brown margin, wide submarginal band; centrally darker with dark hair; white haired midline, submarginal white band extends across clypeus. Abdomen dorsally brown with pair of white lines anteriorly becoming paired white spots; venter pallid. Lateral of PLE entally and only partially overlapping a line of *ca.* 8 long bristles, similar line of 6–8 lateral of ALE and 5 in front of AME. *Eyes.* Group width/headwidth=0.60 through PLE, 0.46 through mid-eye group. OQ front, back, long: 33, 50, 30. MOQ front, back, long: 19, 25, 19. AME: ALE: PME: PLE, 7: 5: 10: 9. Caput shoulder weakly defined. AER with *ca.* 40% overlap; PER in two lines separated by half diameter of ALE. Chelicerae, 2p, 4r. STC with *ca.* 6–7 teeth; ITC, 0; palp 4. Scopula in lateral bands on metatarsi and tarsi I–IV. Palp: fe p1d1.1.1.2r1; pa p1d1r1; ti p2d1; ta p2r1. Pedal patellae with spine triad. Ventral spines on tibiae and metatarsi short, not overlapping. Epigyne. Broad triangular; with lateral lobes forming very obtuse

angle (i.e. almost transverse), septum absent. Internally, two slender ducts (Fig. 10g, i) loop widely spaced.

**Remarks.** L. Koch (1876) described and figured a male and female of *D. facetus* from Rockhampton, mid-eastern Queensland. However, Chrysanthus (1967), as well as Davies (1985), were unable to find the male (in ZMH, ZMB). Chrysanthus (1967) designated the adult female as lectotype and the juveniles are thus paralectotypes. However, RJR found a male and females, from the Godeffroy Collection in the Natural History Museum, London (BMNH), as is often the case with types from the Godeffroy Collection which were often sold (Baehr *et al.* 2017). He then illustrated a male (from New Guinea) which he considered was *D. facetus*. However, the male palp figured by Chrysanthus (figs 63, 67) showed a bilobed tibial apophysis (RTA) in retrolateral view with a short upper lobe and long lower, the reverse of the palp figured in Koch (1876, pl. 74, fig. 6b) and that of *Do. facetus* found widespread and figured here. As Chrysanthus noted, Koch's figure of the ventral face of the palp (1876) is unusually uninformative (cf. that of *D. flaminus*, pl. 75, fig. 4); however, it is clear that the distal tegular process is large (pl. 74, fig. 6a) and, in retrolateral view figured clearly (pl. 74, fig. 6b), two digitiform lobes are evident on the RTA, the upper clearly larger and slightly longer.

Davies (1985) followed Chrysanthus (1967), accepting his lectotype designation of the female in the face of the missing male which was part of the type series. However, RJR examined and drew a male, and two females in BMNH (1998) of *Do. facetus* labelled "types". Likewise, Catriona McPhee (pers. comm., Museum of Victoria, 2017) stated that a number of species with Museum Godeffroy numbers also occur in the collection of Museum of Victoria and are presumed types, in this case, paralectotypes.

Chrysanthus (1967) also figured and described a male of *D. chroesus* (figs 62, 66), previously known only from a female with an epigyne he thought very like that of *Do. facetus*. *Do. facetus* is a widespread species in Australia and the western Pacific and consistently shows

the slightly longer upper lobe of the RTA consistent with Koch's figure and resembling Chrysanthus' male of *D. chroesus*. Thus, Chrysanthus (1967) mismatched the male of *Do. chroesus* to the female of *Do. facetus* and vice versa.

The epigyne of females of *Do. facetus* is unlike that of any described species.

Throughout its range in Queensland, the palp of *Do. facetus* shows little variation; however, the dorsal pattern on the abdomen is quite varied (Fig. 8a–d), seemingly depending on how well fed the spiders were. As the abdomen distends, the pattern becomes more distinct. They are the most elegantly coloured of the Australian *Dolomedes* species treated here and show more similarity in pattern to that of *Nilus*, eg. *N. curtus* O.P.-Cambridge, 1876 (see Dippenaar-Schoeman 2014, p. 125).

*Dolomedes naja* Berland (1938: 179, not examined) has a very similar palp to that of *Do. facetus* and may be a synonym.

**Variation.** Females from south-east Queensland (Fig. 10f) have a relatively longer overall epigyne than those from Cape York (cf. Musselbrook, Fig. 10h) and have no evident septum; the overall size of the ducts is slightly longer relatively in southeastern Queensland than Cape York and the female of *Do. facetus* figured by Chrysanthus (1967) resembles those from southeastern Queensland. Internally, the shape of the ducts in the epigyne are quite similar.

**Distribution.** Queensland, Western Australia, Northern Territory, Victoria, New South Wales and probably New Hebrides.

***Dolomedes albicomus* L. Koch, 1867**  
(Figs 5g, 7c, 11a, 12a–f. Map 1b)

*Dolomedes albicomus* L. Koch, 1867: 199; L. Koch, 1876: 875, pl. 75, fig. 3, 3a; Rainbow, 1911: 263; Davies, 1985: 102.

**Material examined.** Type. Queensland: holotype male, Brisbane, A. Dietrich, ZMH MGH 3503, examined.

**Other material examined.** Queensland: ma., Ayr, V. Salanitri, QM S28795; 1 fem., same data but 10 Jan 1974, QM S67793; fem., Deeral [17°10'S 145°50'E], 26 Mar 1950, J.G. Brooks, MV K13690; 1 ma., 1 fem., Toomba Homestead site, 19°58'S, 145°34'E, basalt ridge with *Brachychiton*, night collection, 16 Dec 2006, R.J. Raven, QM S79214; ma., Brisbane River,

Sherwood [27°31'S, 152°59'E], 1900–1907, SAMA NN135722; 2 fem., Brisbane River, [27°31'S, 152°59'E], Turner, SAMA NN13570, 71; 1 ma., Deception Bay, 27°09'S, 153°05'E, 22 Feb 1988, G. Larsen, QM S4534; 1 fem., Rochedale, Brisbane, 27°37'S, 153°09'E, scrub, 28 Nov 1973, G. Ingram, QM S67777; 1 fem., Home View, 28 May 2007, J. O'Flaherty, QM S75828; 1 ma., Wynnum N, Brisbane, 27°28'S, 153°03'E, 24 Jul 1990, QM S16455; 1 fem., Currumbin Ck, 11 Jan 1980, D. Seeton, QM S67791; 1 ma., Southbank, Brisbane, 27°28'S, 153°01'E, spider bite, 20 Mar 1993, Q.A.T.B., QM S22003. New South Wales: 1 ma., Stotts Is., Tweed R., 28°14'S, 153°31'E, sweeping, 19 Nov 1978, R.J. Raven, QMS96303; 1 fem., 3 ma., Pigabeen, Turners Dip, Tweed R., 28°10'S 153°28'E, 21–22 Nov 1978, R. Raven, H. Heatwole, G. Czechura, QM S107093.

**Diagnosis.** Males differ from those of *Do. instabilis* and *Do. mankorlod* sp. nov. in the median apophysis having a wide scoop and large sail-like keel retrolaterally on the distal portion (Fig. 12a). Females differ from those of *Do. instabilis* in the vulva having the CD and median lobe strongly overlapping (Fig. 12e).

**Description.** Male QM S28795. Carapace 6.25 long, 5.46 wide. Abdomen 5.75 long, 5.44 wide. Total, 12.

I: 7.81; 3.31; 7.75; 6.94; 4.44; 30.25. II: 7.75; 3.00; 6.88; 6.44; 3.88; 27.94. III: 6.88; 2.50; 5.94; 5.44; 3.00; 23.75. IV: 7.69; 2.69; 6.69; 7.69; 3.81; 28.56. Palp: 6.38; 2.38; 4.00; 1.94; 14.69.

**Colour.** Carapace red brown with yellow brown marginal band. Abdomen with distinct white flanks visible dorsally; venter pallid, without pattern. **Eyes.** Group width/headwidth= 0.52 through PLE, 0.57 through mid-eye group. OQ front, back, long: 71, 116, 78. MOQ front, back, long: 40, 55, 48. AME–AME, 7; AME–ALE, 5; PME–PME, 12; PME–PLE, 28. AME: ALE: PME: PLE, 15, 19, 24, 23. PLE posterior to caput shoulder. Chelicerae with 4 teeth on promargin, 3 on retromargin. STC with 7 long teeth; ITC with 1 long thin tooth. **Spines.** Legs I, II: fe p5d3r5; pa p1r1; ti p2d2r2v.2.2.2.2; me p2r2v2.2 + distal whorl of 4. Leg III, IV: as above but, pa p1d1 (apical)r1; ti p2d2r2v.2.2.2; me p2r2 v1.1.1.1 + distal whorl of 4. Palp: fe p1d1.1.2r2; pa 0; ti 0 (both palps). Leg tarsi slender, straight. Palp (Fig. 12a–c) very long. Tibia of male palp 1.87 times longer than cymbium. RTA retrolateral, a low ridge with

cone on dorsal and ventral corners; VTA low, rounded, trianguloid. Cymbium elongate, apical cone short. Transverse part of tegulum slightly diagonal with deeply undulating distal edge; DTP slender, cucumiform, curved, not extending beyond MA. MA with long basal neck, deep flared apex with digitiform distal process on retrolateral edge.

**Female** QM S79214. Carapace 8.80 long, 7.44 wide. Abdomen 8.64 long, 5.44 wide. Total, 17.4.

I: 7.92; 4.08; 6.48; 5.36; 2.56; 26.40. II: 7.68; 3.84; 6.24; 5.36; 3.20; 26.32. III: 7.20; 3.44; 5.76; 5.20; 2.56; 24.16. IV: 8.56; 3.52; 7.60; 7.60; 3.44; 30.72. Palp: 3.60; 1.92; 2.16; 2.56; 10.24.

Carapace and chelicerae redbrown with irregular narrow undulating pallid submarginal band; dark centrally. Abdomen dorsally dark with lighter upper flanks anteriorly, pallid ostiate region; venter pallid. **Eyes.** Group width/headwidth=0.60 through PLE, 0.48 through mid-eye group. OQ front, back, long: 21, 34, 20. MOQ front, back, long: 10, 15, 12. PLE set just behind midpoint of caput shoulder curve; AER have ca. 40% overlap; PER in slightly separated lines. Chelicerae: 2p, 4r. STC and palpal claw with ca. 5 teeth; ITC bare. Scopula light for distal prolateral edge of tibia I, absent on tibia II; strong on metatarsi and tarsi I, II. **Spines.** Palp: fe p1d1.1.1.2r1; pa p1, d1.1w; ti p2d1; ta p1r1v2.1. Patellar spines form triad but as with palp distal dorsal spine weak. Epigyne (Fig. 12d, e): ca. 1.2 times longer than wide, septum extend for distal 0.43 of length; median field with upturned corners; internally, ony median duct fully evident, other concealed.

**Distribution.** Eastern coastal Queensland and north-eastern New South Wales.

**Variation.** Through its long range from Toomba, just west of Townsville through to northern New South Wales, the relative length of the palpal tibia compared to the cymbium varies (see below) but in all other aspects the palps are similar and thus the spiders are considered conspecific. The patella to cymbium ratio of the palps of three males taken with a female from the Tweed River (QM S107093) were measured to check the reliability of the measure of the

length of the palpal tibia to cymbium; both palps were measured on each male.

Significantly, the length of the cymbium varied at most 10% and that was on the same animal. In contrast, the ratio of length of cymbium to tibia length varied from 1.62–1.91, with a difference of 1.68 and 1.91 on one male, with a mean of 1.73. However, on the most divergent male, the ratio of tibia to patella length was 1.40 on both sides. Over the three males, the ratio was 1.49–1.58, mean 1.49 with maximum specimen difference of only 3%.

Palps of the holotype male (from Brisbane) have a small trianguloid RTA (Fig.10f) whereas all males recently collected (past 40 years) from Ayr to Sydney have a second upper trianguloid dorsal spine on the RTA.

**Remarks.** Davies (1985: 103) noted L. Koch (1865) in the synonymy of *Dolomedes albicomus* but the only *Dolomedes* mentioned was *Do. australianus* L. Koch, 1865.

### *Dolomedes instabilis* L. Koch, 1876

(Figs 11b, 13a–d, 14a–f. Map 1c)

*Dolomedes instabilis* L. Koch, 1876: 863, pl. 74, fig. 1; Rainbow, 1911: 263; Davies, 1985: 103. Type lost.

*Dolomedes habilis* Hogg, 1906: 589, fig. 89. New Synonymy. *Lycosa habilis*: Rainbow, 1911: 268, incorrectly listed as *Lycosa habilis* Hogg; McKay, 1985: 78.

*Dolomedes habilis*: Hirst, 1988: 77, correction of type locality and restoration to *Dolomedes*, contra Rainbow, 1911.

**Material examined.** Types: New South Wales: holotype female of *Dolomedes instabilis* L. Koch, 1876, presumed lost, not found in ZMH, ZMB, NHMW, BMNH, MNHMP, Caigan [-31.6984°S, 149.2346°E], near Mudgee. South Australia: syntypes *Dolomedes habilis* Hogg 1906, 3 fem., Gilbert River, Riverton, South Australia, 34°10'S 138°45'E, SAMA.

**Other Material Examined.** Queensland: 1 ma., Boggomoss No. 3, via Taroom, 25°26'S, 150°01'E, 12 Nov 1996, P. Lawless, QM S37350; male, Boggomoss No. 3, via Taroom, 25°26'S, 150°01'E, 12 Nov 1997–Jan 1997, D. Cook, G. Monteith, QM S87988; male, Taroom District, Boggomoss No 21, 25°27'S, 150°02'E, foliage, night collection, 10 Nov 1996, P. Lawless, QM S37365; 1 fem., Taroom District, Boggomoss No 19, 25°25'S, 150°01'E, boggomoss, Lophostemon, night collection, 11 Nov 1996, P. Lawless, QM S37433; 1 fem., Taroom District, Mt Rose Station, BM13 (Hewitt), 25°28'S, 150°02'E, pitfall, 13 Sep 1996–11 Nov 1996, P. Lawless, QM S37469; 1 ma., Boggomoss No 32, Prices Ck via

Taroom, 25°26'S, 150°01'E, 14 Nov 1996, P. Lawless, QM S37389; 1 fem., Taroom district, Boggomoss No 21, 25°27'S, 150°03'E, open forest, pitfall, 9 Sep–10 Nov 1996, P. Lawless, QM S75637; 1 fem., Southwood near Moonie R, 24 Aug 1973, R.J. Raven, QM S67771; 1 ma., Taroom District, Boggomoss No 21, 25°27'S, 150°02'E, foliage, night collection, 10 Nov 1996, P. Lawless, QM S37365; 1 ma., Boggomoss No. 3, via Taroom, 25°26'S, 150°01'E, 12 Nov 1996–Jan 1997, D. Cook, G. Monteith, QM S87988; 1 fem., Kulgán Rd, Kalbar, 27°57'S, 152°37'E, 9 Jan 1994, L. Evans, QM S21633; 1 fem., Dalveen, 28°29'S, 151°58'E, house, Sep 1992–Feb 1993, G. Dutton, QM S20960; 1 fem., Biloela, 24°24'S, 150°31'E, 17 Jul 1992, D. Lack, QM S19603; 2 ma., 1 fem., Oakey, 27°26'S, 151°43'E, 12 Jan 1979, T. Adams, QM S67759; 1 fem., 1 pen. ma., 1 juv., Lake Broadwater via Dalby, 27°21'9"S, 151°5'31.5"E, Hand -under bark, 28 Jul 1984, QM S107071; 2 fem., Lake Broadwater via Dalby, 27°21'9"S, 151°5'31.5"E, 12 Feb 1984, QM S107073; 1 fem., Goondiwindi, 28°33'S, 150°19'E, QM S107074; 1 fem., Lake Broadwater, SW lake edge, near cottage, 23 Feb 1985, QM S107085; 1 fem., Lake Broadwater, overflow, 24 Nov 1984, QM S107086; 1 ma., Lake Broadwater, (overflow) via Dalby, 24 Nov 1984, QM S91006. South Australia: 1 ma., Adelaide, Botany Dept Adelaide University, Adelaide Plains, 34°56'S, 138°36'E, 25 Aug 1995, found while unpacking large mail bag from USA, SAMA NN13612; fem., Beltana, Flinders Ra., 30°49'S, 138°24'E, Nov 1941, V.H.M., SAMA NN8672; ma, 4 fem., juv., Brown Hill Creek, Mt Lofty Ra., 34°59'S, 138°37'E, 1 Feb 1935, H. Womersley, SAMA NN8657–62; ma., Bunyeroo Creek, ABC Range, Flinders Ra., 31°25'S, 138°34'E, 14–15 May 1990, D. Hirst, SAMA NN13588; fem., Ceres near Furner, Lower South-East, 37°19'S, 140°16'E, Feb 2001, R. Andre, SAMA NN13622; 4 ma., 1 fem., Coward Springs, Railway Bore, Lake Eyre Basin, 29°24'S, 136°48'50"E, 15–19 Apr 1996, D. Niejalke, SAMA NN13630, 13631, 13640–2; 1 ma., same data but, 25 Jul 1998, I. Gee, P., Coulls, SAMA NN8716; fem., Cox's Creek, Mylor, Mt Lofty Ra., 35°02'S, 138°45'E, 25 Apr 1936, H. Womersley, SAMA NN8656; fem., Dalhousie Springs, Lake Eyre Basin, 26°27'S, 135°31'E, 6 Sep 1980, G. Richardson-NPWS, SAMA NN13583; fem., Dog Lake Rd, SE of Langhorne Creek, Murray Mallee, 35°01'7"S, 013°92'E, Jun–Jul 1990, J. Eckert, SAMA NN13600; fem., Fred Springs, 16 km E, Lake Eyre Basin, 29°31'S, 137°25'E, 02 Oct 1978, P. Greenslade, SAMA NN13582; fem., Kapunda, Mt Lofty Ra., 34°20'S, 138°54'E, 7 Jun 1975, J. Mcmara, SAMA NN8671; fem., Keilira Station, 13 km N, Upper South-East, 36°37'S, 140°10'E, 22 Mar 1992, D. Hirst, on flat under damp rocks, SAMA NN13620; fem., Langhorne Creek, Murray Mallee, 35°01'7"S, 013°92'E, Jan 1988, C.L. Wilton, SAMA NN13604; 2 fem., Leigh Creek, Flinders Ra., 30°35'S, 138°24'E, W.B. Greenwood, SAMA NN13585, 86; fem., Mambrey Creek, Mt Remarkable NP, Flinders Range, 32°49'S, 137°58'E, 01 May 1983, G. Coombe,

- NPWS, SAMA NN13584; fem., juv. Melrose, Flinders Ra., 32°49'S, 138°11'E, 17 Apr 1987, D. Hirst, camping ground, creek, SAMA NN13587; fem., Milang, Mt Lofty Ra., 35°24'S, 138°58'E, Jan 1999, T. Sim, SAMA NN13613; ma., Monteith, Murray Mallee, 35°10'S, 139°19'E, 25 Feb 1984, B. Guerin, beside dam, SAMA NN13602; 2 ma., Morris Creek Bore, Lake Eyre Basin, 29°25'40"S, 137°34'E, 29 Mar 1996, D. Niejalke, SAMA NN13634, 35; ma., pen fem., same data but 24 Jan 1996, D. Niejalke, ex *Cyperus*, SAMA NN13639; fem., Old Finniss Spring, Lake Eyre Basin, 29°45'S, 137°31'E, 17 Oct 1995, D. Niejalke, SAMA NN13629; ma., pen fem., Old Finniss Spring, Lake Eyre Basin, 29°45'S, 137°31'E, 1995, D. Niejalke, SAMA NN13638; 1 fem., 1 penult. fem., Onkaparinga River, Mt Lofty Ra., 35°08'S, 138°37'E, 1922, R.H. Pulleine, SAMA NN8667; 1 fem., Outside Spring, Lake Eyre Basin, 28°16'S, 136°13'E, 22 Aug 1996, D. Niejalke, SAMA NN13636; fem., Outside Spring, Lake Eyre Basin, 28°16'S, 136°13'E, 22 Aug 1996, D. Niejalke, SAMA NN13637; fem., Salt Creek, near Ungarra, near Tummy Bay, Eyre Peninsula, 34°01'S, 136°02'E, 23 Mar 1980, W. Zeidler, SAMA NN13593; fem., Sleaford Bay, Eyre Peninsula, 34°53'S, 135°43'E, 4 Jan 1964, J. Casanova, SAMA NN13596; fem., Sleaford Mere, Eyre Peninsula, 34°50'S, 135°44'E, 27 Jan 1971, J. Casanova, SAMA NN13597; fem., pen fem., Sleaford Mere, SW of Port Lincoln, Eyre Peninsula, 34°50'S, 135°44'E, 27 Mar 1987, D. Hirst, Lee, D C, SAMA NN13592; pen. fem., St Peters, Adelaide Plains, 34°54'S, 138°37'E, Dec 1957, SAMA NN8670; ma., 'The Fen' mound spring, near Hermit Hill, Lake Eyre Basin, 29°34'10"S, 137°25'30"E, 24-29 Jan 1996, D. Niejalke, pitfall, SAMA NN13643; fem., egg mass Tolderol Game Reserve, Lake Alexandrina District, 35°02'1"S, 513°99'3"E, 3 Jan 2002, Eckert, J, under water couch, SAMA NN29308; 1 ma., Windsor Gardens, Adelaide Plains, 34°52'S, 138°39'E, 24 Oct 1993, D. Hirst, SAMA NN13611; 1 ma., 1 juv., Waterfall Gully, 32°45'S 137°42'E, 3 Oct 1978, P. Walker, AM KS32117. New South Wales: 1 fem., Cooks Gap near Mudgee, 32°24'S 149°42'E, 2 Feb 1981, H. Neugebauer, AM KS6773; 1 fem., Gurley Ck at "Carrington", 29°39'25"S 149°36'59"E, 29 Mar 2010, D. Mawer, AM KS112416; 1 fem., Eglinton, 33°23'S 149°32'E, 19 Jan 1971, B. Eltham, AM KS56854; 1 fem., Mt Riverview near Blaxland, 33°44'S 150°37'E, 18 Jan 1981, Fisher, AM KS6607; 1 fem., Burrawye Ck at Burrawye Keotong Ck Rd, 36°04'02"S 147°33'45"E, 11 Nov 2009, J. Miller, AM KS110789; 1 fem., Chipping-Nelson area, 33°39'S 150°55'E, 22 Jan 1979, M. Julian, AM KS2737; 1 fem., (no locality name), 37°15'S 145°00'E, R. Helms, AM KS21616; 1 fem., Broken Hill, 31°57'32"S 141°27'49"E, 1 Dec 1973, R. Todd, AM KS105744; 1 fem., Belmore, 3 Feb 1930, Mrs Campbell, AM K61138; 1 fem., Moorbank, nr Liverpool, March 1950, J. Ashtbury, AM KS; 1 ma., Merrowrie Creek crossing, Lachlan Wetlands, 33°25'39"S 145°18'25"E, 6 Oct 2013, B. Haine, AM KS123220; 1 ma., Murray River at Cobram, 35°54'28"S 145°39'36"E, 30 Oct 2011, D. Mawer, AM KS117695; 1 ma., 6.5 km along access track to Narran Lake Reserve, 29°42'52"S 147°25'19"E, 24 Nov-14 Dec 1999, Pitfall, F. Christie, P. Flemons, M.G. Elliott, AM KS77053; 1 ma., Nebea Creek on Carrana, 30°45'05"S 148°20'37"E, 26 Mar 2010, G. Theischinger, AM KS113964; 1 ma., Upper Hunter River, Cliffords Quarry at Aberdeen, 32°08'09"S 150°55'36"E, 17 Jan-1 Feb 2006, Pitfall, J. Gollan, AM KS98316; 3 ma., ca. 100 m along access rd to Warrambungles NP, 31°25'09"S 148°31'19"E, 21 Nov-11 Dec 1999, pitfall, L. Wilkie, R. Harris, T.M. Moulds, AM KS71469-71; 1 ma., Gloucester, Sieve Cave (gloworm), 32°03'37"S 152°05'01"E, 7 Mar 1995, S. Eberhard, AM KS51020; 1 ma., Berida Station 22 km W of Gilgandra, 31°39'S 148°27'E, 27 Mar 1982, W. Bell, AM KS8857; 1 ma., 1 fem., 1 juv., Glen Osmond Quarry, A. Zietz, AM KS57501; 2 ma., Murray Valley National Park, 35°48'S 145°10'54"E, 10-14 Feb 2015, pitfall, I. Oliver et al., AM KS124768, 125157; 1 ma., Bonnie Doon Golf Club, "Armcliffe", Jan 3, 1933, J. Logan, AM. Northern Territory: 1 fem., Reedy Hole [23°40'S 132°40'E], Horn Expedition, 1894/95, juvenile fem., Saxon Ck, 10 km N Frankfort [41°16'S 146°42'E], 19 Nov 1972, A. Neboiss, MV K-13676; ma., fem., Finke River Gorge, S of Hermannsburg, Central Australia, 23°55'S, 132°43'E, 16 May 1976, R.C. Kowanko, SAMA NN13652, 53; 1 ma., Hermannsburg, Central Australia (23°56'S, 132°46'E), H.A. Heinrich, SAMA NN13648. Victoria: 1 ma., Hurstbridge, Melbourne, 2 Apr 1990, P. Vaughn, MV K; ma., Royal Botanic Gardens, in sink in building, 37°49'50.50"S, 144°58'38.09"E, 25 Jan 2017, V. Stajsic & B. Gunn, MV K-13619; fem., "Orchards", 27 Mar 1991, MV K-13677; ma., 1k N of Galah 517667 [35°00'S 142°10'E], 29 Oct 1974, MV K-13678; ma., Melbourne western region invertebrate survey, Point Cook [37°50'S 144°40'E], Red gum, 23-30 Jan 1992, pitfall, MV K-13680. Victoria Remnant Woodland Study: fem., site 101G, Booths Rd, 0.2 km S of Murray Valley Highway 36°08'S 145°11'E 17-22 Jan 1994, pitfall, G. Milledge, MV K-13679; ma., site 131, McInnes Rd, 35°55'S 144°22'E Jan 1993, pitfall, A. Bennett, MV K-13681; ma., (palp tibia, cymbium absent), site 4, Reef Hills Rd, 36°35'S 145°58'S, Jan 1993, pitfall, A. Bennett, MV K-13682; fem., site 158, Mt Hope Ck, Jungaburra Homestead, 1k SSE, 36°05'S 144°19'E, Jan 1993, pitfall, A. Bennett, MV K-13683; fem., site 164, Cant Rd, 36°16'S 144°23'E, Jan 1993, pitfall, A. Bennett, MV K-13684; ma., site 43, Winton-Lurg Rd, 36°33'S 146°06'E, Jan 1993, pitfall, A. Bennett, MV K-13685; ma., site 170, Longwood-Pranjiip Rd, 36°45'S 145°24'E, Jan 1993, pitfall, A. Bennett, MV K-13686; 1 ma., 1 fem., site 114, McInnes Rd, 35°54'S 144°22'E Jan 1993, pitfall, A. Bennett, MV K-13687; 1 fem., "Victoria", SAMA NN13659. Papua New Guinea: 1 ma., 1 juv., Kairiru Island, 3°20'S 143°33'E, 11 Feb 1976, O.W. Borrell, AM KS7961; 1 fem., Kairiru Island, 3°20'S 143°33'E, 10 Oct 1979, O.W. Borrell, AM KS8039; ma., Kairiru Island near lake, 3°20'S 143°33'E, 23 May 1976, O.W. Borrell, AM KS8016.

**Diagnosis.** Males belong to the long-palped *Do. albicomus* group but differ from those of *Do. albicomus* in the median apophysis with small trianguloid process retrolaterally on basal portion (Fig. 13a), and from that of *Do. mankorlod* sp. nov., in the sausage-shaped DTP, varying little in diameter across its length. Females and males are unusual in Australian *Dolomedes* in having a black field with four convergent longitudinal pallid stripes ventrally. Females of *Do. instabilis* differ from those of *Do. albicomus* in that the ectal (insemination) loop lies is almost entirely overlapping (i.e. hidden when viewed from below) by the median loop, and from those of *Do. vicque* sp. nov., in that the lateral ridges of the epigyne narrow quickly at the line of the median field (Fig. 14a, c, e) rather than curving smoothly (Fig. 16g).

**Description.** Male QM S37350. Carapace 6.38 long, 5.63 wide. Abdomen 4.50 long, 3.25 wide. Total, 11.2.

I: 7.31; 3.38; 6.88; 6.38; 4.38; 28.31. II: 7.50; 3.13; 6.50; 5.94; 3.69; 26.75. III: 6.69; 2.63; 5.69; 5.69; 3.13; 23.81. IV: 8.00; 2.88; 7.00; 7.81; 4.13; 29.81. Palp: 4.44; 1.69; 2.38; 2.19; 10.69.

**Colour.** Carapace: broad undulating band of white hair narrows beside eyes, widest at caput edge. Ventral abdomen with dark trapezoidal pattern with pairs of submarginal pallid lines and medial lines. **Eyes.** Group width/headwidth=0.56 through PLE, 0.46 through mid-eye group. OQ front, back, long: 70, 117, 65. MOQ front, back, long: 41, 57, 42. AME-AME, 12; AME-ALE, 5; PME-PME, 17; PME-PLE, 22. AME: ALE: PME: PLE, 18:12:20:20. PLE in line of caput shoulder curve; PER with 50% overlap. Chelicerae with 3 teeth on promargin, 4 on retromargin. STC on I with 4 long teeth; ITC 0. **Spines.** Legs I, II: fe p5d4r5; pa p1r1; ti p2d2r2v.2.2.2.2; me p2r2v2.2 + distal whorl of 4. Leg III, IV: as above but, pa p1d1 (apical)r1; ti p2d2r2v.2.2.2.2; me p2r2 v2.2.2 + distal whorl of 4. Palp: fe p1d1.1.1.2r1; pa p1 apical 1; ti 0. Tarsi straight. Palp (Fig. 13a-c): all palpal segments elongate; tibia of male palp 1.27 times longer than cymbium; RTA retrolateral with two small cones on edge of low keel; ventral tibial apophysis small, rounded with small apical invagination. Cymbium with

small retrobasal flange and wide margin to bulb. Transverse part of tegulum slightly diagonal with low distal undulation; DTP curving, similar width, almost cylindrical varying little over its length extending just past MA. MA anvil-shaped with short neck and trianguloid vane retrobasally.

**Female** QM S37433. Carapace 9.69 long, 8.75 wide. Abdomen 11.56 long, 9.06 wide. Total, 21.25.

I: 8.31; 4.69; 7.56; 6.50; 4.31; 31.38. II: 8.44; 4.56; 7.38; 6.38; 3.56; 30.31. III: 8.06; 3.94; 6.75; 6.63; 3.19; 28.56. IV: 9.81; 4.31; 6.63; 8.75; 4.13; 33.63. Palp: 3.94; 1.94; 3.19; 3.13; 12.19.

**Colour.** Carapace: median narrow band of white hairs widening just anterior to fovea, brown with irregular pallid "islands" submarginally; long hairs overhand PLE and in MOQ. Abdomen, dorsally medially with anterior ostiate mark, irregular mottling elsewhere; ventrally with median dark trapezoidal field bounded by pallid lines and with pair of median pallid lines. **Eyes.** Group width/headwidth=0.68 through PLE, 0.60 through mid-eye group. OQ front, back, long: 32, 40, 24. MOQ front, back, long: 16, 19, 14. AME-AME, 20; AME-ALE, 12; PME-PME, 24; PME-PLE, 33. AME: ALE: PME: PLE, 25, 21, 28, 28. Chelicerae with 3 teeth on promargin, 4 on retromargin. **Claws.** STC on I with 7 long teeth; ITC 0, none on palpal claw. Retroventral scopula fringes on pedal metatarsi and tarsi and strong ventral bristles on tarsi. **Spines.** Legs I, II: fe p5d3r5; pa p1r1; ti p2d2r2v.2.2.2.2; me p2r2v2.2 + distal whorl of 4. Leg III, IV: as above but, pa p1d1 (apical)r1; ti p2d2r2v.2.2.2.2; me p2r2 v1.1.1.1 + distal whorl of 4. Palp: fe p1d1.1.1.2r1; pa p1d1+apical; ti p2d2. Epigyne (Fig. 14a-f). Overall shape 1.11 times longer than wide. Lateral lobes uniformly curving, converging posteriorly. Median field occupies ca. 0.53 of overall length. Overall internal ducts broadly N-shaped; CD slightly shorter or longer than median fold (Fig. 14b, d, f) and not juxtaposed, inner fold slightly shorter than median fold.

**Distribution.** Southern Queensland, western New South Wales, Victoria, Australian Capital Territory, South Australia and Papua New Guinea. Hirst (1988) amended the type locality

of *Do. habilis* to Gilbert River, Riverton, South Australia, 34°10'S 138°45'E. None have yet been found in Tasmania.

**Sexual dimorphism.** Males and females taken together (QM S67759) show no correspondence of the scopula on metatarsi I, II which is absent in males and present in females; some females also show no ventral abdominal pattern. One syntype of *Do. habilis* has 4 stripes on ventral abdomen (Hogg, 1906). Equally, in a female (QM S37433), the venter has four pallid lines converging at spinnerets breaking up a dark field (as in Fig. 36c, d) and a scopula on metatarsus and tarsus I also present in the described male.

**Remarks.** The figure of the epigyne of the lost holotype (L. Koch, 1876, pl. 74, fig. 1) of *D. instabilis* presents little information. The epigyne is 1.33 times longer than wide and the septal area is 0.64 of the overall length. Several species, all with a similar epigyne, have consistently different spermathecae. Thus, specimens previously identified from females as *Do. instabilis* based upon the similarity of the epigyne need to be dissected.

The association of the male with the female of *Dolomedes instabilis* was made using the South Australian Museum collection of pisaurids from the Adelaide region, a well represented area in the collection. Apart from *Ornodolomedes southcotti* sp. nov., the pisaurid fauna is three species of *Dolomedes*. One is *Do. facetus* which are well known. The most common large species is *Dolomedes instabilis*; a third undescribed species also occurs there and is quite different.

No further material of *D. instabilis* has been described in the scientific literature (WSC, 2017). However, because many species of *Dolomedes* have little difference in abdominal pattern and otherwise somatically appear quite similar, many images in popular literature and the Atlas of Living Australia ([www.ala.org.au](http://www.ala.org.au)) are mis-identified as *D. instabilis*. In general, with the exception of *Do. facetus*, identification of *Dolomedes* species from photographs, especially of females but also of males is not generally possible.

The only possible reason for maintaining the New Caledonian *Do. lafoensis* Berland, 1924 is if the retrolateral flange on the median apophysis (not shown by Berland, 1924) is absent or different to that in *Do. instabilis*. The flange is very difficult to see unless the light angle is altered to different positions; it was not shown in L. Koch's illustration of the type but is clearly present.

***Dolomedes vicque* sp. nov.**

(Figs 1b, 15a-d, 16a-h, 17c. Map 1d)

**Etymology.** The species epithet is an arbitrary combination of letters of the two states at the edge of its known range, Victoria and Queensland.

**Material examined.** Queensland: holotype male, 1 fem., Teviot Brook, Boonah, 27°55'S, 152°33'E, rainforest, 3 Oct 1973, V.E. Davies, QM S188; 1 fem., same data but 21 Oct 1973, QM S91002. Victoria: Avon R near Valencia Ck, 37°48'S, 146°57'E, gravel bank in stream bed, V. Framenau: 1 ma., 6 Oct 1997, QM S53977; 1 fem., near Wombat Xing, 10 Apr 1997, QM S63911; 1 fem., 12 Feb 1997, QM S53976; 1 ma., 7 May 1997, QM S51050; fem., 12 Feb 1997, WAM T51482; 1 ma., 1 fem., 1 juv., 16 Oct 1996, WAM T51480; 1 fem., 22 Oct-8 Nov 1996, wet pitfall, WAM T51479; 1 fem., 12 Mar 1997, WAM T51481; 1 fem., Lerderderg River, 37°36'S, 144°24'E, 6 Jul 1996, V. Framenau, hand collection, riparian gravel bank, WAM T51478; 1 ma., Howqua River, 37°12'S, 146°28'E, 26 Jan 1999, V. Framenau, hand collection, riparian gravel bank, WAM T51483. New South Wales: 1 ma., Minnamurra Falls, 18 Oct 1964, R. Mascord, AM KS124037; 1 fem., Oxley Wild Rivers NP, Macleay River, East of Gara River junction, 30°39'50"N, 151°51'39"E, 367 m, 9 Nov 2015, H.M. Smith, AM KS124478; 1 fem., Fig-Tree Cave, Wombeyan Caves, 34°18'41"S 149°57'55"E, 15 Oct 1952, P.M. Pinnock, AM KS115614; 1 fem., Naringal 17 km E of, 38°25'S 142°48'E, 27 Aug 1978, H. Parnaby, AM KS44484.

**Diagnosis** (Fig. 16a-f). Males differ from those of other species with a short palpal tibia by the slender tapering RTA (Fig. 16e) with small lateral lobes along its length. Females are similar to those of *Do. briangreenei* sp. nov., in the small pair of cones on the median epigynal field but differ in the N-shaped (two parallel lobes joined dorsally by a diagonal duct) spermathecal line (Fig. 16h).

Tibia about as long as cymbium, distal incrassate most noticeable in ventral view (Fig. 16a); ventral tibial apophysis lobular, slightly

diagonal, directed retrolaterally, irregular tip; RTA bifid, upper lobe long, slender, lower lobe rounded, both on offset base, Cymbium with basodorsal mound (Fig. 16b); retrobasal process bipartite, basal part small, digitiform, retrobasal part with complex twisted groove (Fig. 16a, b); cymbial cone short, rounded, lacking spines; retrobasal cymbium with broad flange. Tegulum of dissimilar width for its length, distal tegular lobe broad, basal transverse portion narrow with anterior lobe on retrolateral corner, median apophysis basally narrow widening quickly to flared V-shape, in cross-section (as in Fig. 13c). Short portion of embolus evident distally with conductor lying retrolaterally.

**Description.** Holotype Male QM S188. Carapace 7.44 long, 6.40 wide. Abdomen 6.48 long, 3.60 wide. Total, 13.9.

I: 7.36; 3.44; 6.40; 6.56; 4.32; 28.08. II: 7.60; 3.60; 6.40; 6.64; 3.20; 27.44. III: 6.48; 2.64; 5.60; 5.20; 2.96; 22.88. IV: 7.60; 2.88; 6.80; 8.08; 3.92; 29.28. Palp: 4.80; 1.84; 2.00; 2.56; 11.20.

**Colour.** Carapace red-brown with dark marginal band and submarginal band of white hair. Abdomen faded, ostiate area pallid, ventrally dark. Carapace with fringe of strong bristles arising behind and overhanging PLE, strong lateral fringe in diagonal line over PME. **Eyes.** Group width/headwidth=0.69 through PLE, 0.55 through mid-eye group. PLE at mid-shoulder. OQ front, back, long: 35, 55, 32. MOQ front, back, long: 18, 25, 18. AME: ALE: PME: PLE, 7:6:10:11. Back eye row is two close lines separated by 0.2 of PME diameter; from above, AER 30–40% overlap. Chelicerae with 2 large teeth plus one small tooth on promargin, 4 on retromargin. STC with 7 teeth; ITC bare. **Spines.** Apical patellar spines weak on I, II. Strong but short, non-overlapping on tibiae and metatarsi I, II. Palp: fe p1d1.1.1.2r1; pa p1d1.1; ti p1. Pedal patellae spines form triad. Scopula absent. **Palp** (Fig. 16a, b). Tibia of male palp short, cymbium 1.3 times longer than tibia; retrobasal cymbium with wide flare with unequally divided retroventral plate. RTA long trianguloid with 2–3 processes. Tegulum transverse. DTP

narrowly triangular. Median apophysis long slender, apical scoop small.

**Female** QM S91002. Carapace 8.08 long, 6.40 wide. Abdomen 9.92 long, 7.20 wide. Total, 18.0.

I: 6.96; 3.12; 5.68; 5.44; 3.12; 24.32. II: 7.28; 3.28; 5.60; 6.32; 3.04; 25.52. III: 6.40; 2.96; 5.36; 5.20; 2.56; 22.48. IV: 7.52; 3.20; 6.96; 7.84; 3.20; 28.72. Palp: 3.20; 1.52; 2.08; 2.48; 9.28.

**Colour.** Carapace faded, yellowish with broad bark margins, lighter submarginal band widest at coxae I with broad white midline for anterior half of caput. Abdomen faded yellow brown, no ventral pattern but female from Avon River (Victoria, WAM T51481) has ventral pattern, less evident on second sympatric female. **Eyes.** Group width/headwidth=0.61 through PLE, 0.48 through mid-eye group. OQ front, back, long: 37, 58, 32. MOQ front, back, long: 17, 27, 22. AME: ALE: PME: PLE, 7:6:12:12. PER two lines separated only by 0.16 of PME; from above, AER with 50% overlap. Chelicerae with 2 large and one small tooth on promargin, 4 on retromargin. STC with 9 long teeth; ITC bare. Scopula in lateral fringes on metatarsi and tarsi I–III, none on tibia I. **Spines.** Pedal patellae with triad but apical spines on I–III weak. Paired ventral spines on tibiae and metatarsi I, II not overlapping. Palp: fe p1d1.1.1.2r1; pa p1d1.1; ti p2d1r1; ta p2r2. Epigyne (Fig. 16g, h). Overall, cordate with long median field with pair of low cones on lateral corners; internally short N-shaped ducts.

**Distribution.** Eastern Australia from eastern Victoria, through coastal New South Wales near Kiama and into south-eastern Queensland.

***Dolomedes briangreenei* sp. nov.**

(Figs 17a, b, 18a–d, 19a–h, 20a–d. Map 1e)

**Etymology.** The species epithet is in honour of Professor Brian Greene, world renowned physicist and co-founder of the World Science Festival to celebrate Professor Greene's contributions to science. Professor Greene is one of the world's leading experts in exploring and explaining the effects of gravitational waves in the universe and the connection was due to the way pisaurids hunt their prey on water using waves and associated vibrations. Australian pisaurids are known to eat fish, tadpoles and frogs

and thus highly likely to also feed on small Cane Toads, *Rhinella marina* (Linnaeus, 1758).

**Material Examined.** Queensland: holotype male, Kroombit Tops (Three Moon Ck), 45 km SSW Calliope, 24°25'S, 151°02'E, rainforest, 9–19 Dec 1983, V. Davies, J. Gallon, QM S63910; 2 ma., 1 fem., same data as holotype, QM S63910; 1 ma., 1 fem., Mudgeeraba, 28°05'S, 153°22'E, along creek, 22 Jan 1986, R. Raven, J. Gallon, QM S67767; 2 fem., Numinbah, 28°11'S, 153°15'E, in caves, 18 Dec 1973, G. May, QM S67783; 2 fem., McLeod Mountain near Windsor Tableland, camp site, 17–23 Dec 1980, ANZSES expedition, QM S67775; 1 ma., 1 fem., Mt Nebo, 27°23'S, 152°47'E, 3 Dec 1974, D. Smyth, G. Ingram, QM S193; 1 fem., Booloomba Ck, Conondale Ra., 26°39'S, 152°39'E, 1974, R.J. Raven, QM S67778; 1 fem., Upper East Funnel Ck, 21°34'S, 149°12'E, 15–16 Nov 1992, G. Monteith, G. Thompson, D. Cook, H. Janetzki, QM S49454; 1 fem., Boondall Wetlands (BCC1), 27°20'S, 153°04'E, *Melaleuca* wetland, pitfall, 2 Sep–2 Oct 2003, QM party, QM S62826; 1 fem., Proserpine, Deadman Creek, site XY17, 20°30'S, 148°33'E, open forest, night collection, 17 Mar 2008, R.J. Raven, QM S85988; 1 fem., Mt Elliot NP, North Ck, 19°29'S, 146°58'E, 25–27 Mar 1991, G. Monteith, D. Cook, QM S17934; 1 fem., Paluma NP at Paluma, 19°00'S, 146°12'E, hand collection, 25 Oct 1991, G. Monteith, H. Janetzki, QM S59048; 1 ma., 1 fem., Home Rule, Wallaby Ck, 15°44'S, 145°18'E, rainforest, 19 Nov 1974, J. Covacevich, D. Joffe, V.E. Davies, QM S191; 1 fem., Rathdowney nr, 28°13'S, 152°52'E, Dec 1975, C. Corben, QM S67764; 1 fem., Mt Spurgeon, Sandy Ck, 16°28'S, 145°12'E, 22 Nov 1997, G. Monteith, QM S43344; 2 fem., Kilcoy Ck, E branch, 26°42'S, 152°34'E, 14 Feb 1979, K.R. McDonald, QM S67788; 1 ma., Mt Abbot, 20°06'S, 147°45'E, C, 9–12 Apr 1997, G. Monteith, H. Janetzki, D. Cook, QM S50714; 2 fem., Cameron Ck, upper, 21°35'S, 149°11'E, rainforest, hand collection, 1–2 Oct 1999, G. Monteith, D. Cook, C. Burwell, S. Evans, QM S19811; 1 ma., 2 fem., Bunya Mtns NP, Dandabah, 26°54'S, 151°37'E, 1–7 Mar 1976, Queensland Museum Party, QM S67787. New South Wales: 1 fem., Bruxner Park, 30°14'S, 153°06'E, rainforest, 12 Nov 1980, R.J. Raven, QM S67790; 1 fem., Mt Warning, 28°25'S, 153°17'E, night collection, 3 Dec 1974, R.J. Raven, QM S677431 fem., Wallaby Ck, Tooloom, 28°37'S 152°25'E, 4 Dec 1962, Naval Exped., AM KS68012; 1 fem., Oxley Wild Rivers National Park, East Kunderang Track, 30°48'25"S 152°07'09"E, 12 Nov 2015, C. Nzama, AM KS124524; 1 fem., Sharpers Ck, Boundary Rd, N of Sharpers Rd, Nerong SF, 32°31'37"S 152°07'E, 30 m, 4 Feb–9 Apr 1993, pitfall, G.A. Cassis, M.R. Gray, AM KS42180; 2 ma., Washpool State Forest, Coombadjah Ck, 0.6 km from Moongem Rd, 29°16'S 152°22'E, 13 Feb 1982, C. Horseman, AM KS9236, 9348; 1 ma., 1 fem., Dome Mountain, Richmond Range, Yabba SF, 28°28'S 152°43'E, 900 m, 11 Dec 1989, Pitfall, Smith, Hines, Pugh & Webber, AM KS51281; 1 ma., 1 fem., 1 juv., Bellangary State Forest Wilson River Flora

Reserve, 31°18'S 152°29'E, 7 Dec 1981, M. Gray *et al.*, AM KS9688.

**Diagnosis.** Among species with males that have the palpal tibia clearly shorter than cymbium, they are unusual in the long flared RTA and differ from that of *D. flaminus* in that the DTP is slender and curved not short and triangular and straight, and from those of *Do. vicque* in the broad flared RTA. Females are unusual in the soft curved horn-shaped lobes on the lateral epigynal field (Figs 18c, 19a, 20c) and may also have a conical medial process (Figs 18c, 20c).

**Description.** Holotype male QM S63910. Carapace 6.48 long, 5.60 wide. Abdomen 6.00 long, 3.60 wide. Total, 12.48.

I: 7.83; 3.33; 7.17; 6.67; 3.83; 28.83. II: 8.00; 3.33; 7.00; 6.83; 3.50; 28.67. III: 7.50; 3.00; 6.00; 3.83; 2.67; 23.00. IV: 8.33; 3.00; 7.17; 8.83; 3.67; 31.00. Palp: 4.17; 1.67; 1.83; 2.83; 10.50.

Carapace with lateral band widest anterior to mid-fovea, narrow for caput; no medial pallid line. Abdomen faded, no shoulder band or upper pallid line, no ventral pattern. *Eyes.* Group width/headwidth=0.64 through PLE, 0.33 through mid-eye group. OQ front, back, long: 29, 48, 27. MOQ front, back, long: 15, 23, 16. PLE through mid-shoulder curve; AER almost in 2 rows; PER two just separated lines. STC with *ca.* 5 teeth; ITC bare. Scopula absent, strong bristles on ventral tarsi IV; no modifications of femur IV. *Spines.* Palp: fe p1d1.1.1.2r1; pa 0; ti p1d1; ta 0. Palp. palpal tibia clearly shorter than cymbium; DTP long slender digitiform, with basal bulge and mid-distal narrowing, directed almost parallel to median apophysis only lying dorsad and apically; tegulum also diagonally; retroventral cymbial corner narrowly and gradually flared; RTA distal, long, flared with various smaller lobes usually one dorsally, rarely two.

*Female* QM S63910. Carapace 10.08 long, 8.24 wide. Abdomen 10.32 long, 6.00 wide. Total, 20.40.

I: 9.67; 4.83; 9.00; 8.33; 4.17; 36.00. II: 10.17; 5.00; 9.00; 8.33; 4.00; 36.50. III: 9.17; 4.50; 7.00; 7.50; 3.50; 31.67. IV: 10.50; 4.67; 9.00; 10.67; 4.50; 39.33. Palp: 4.17; 2.17; 2.67; 3.50; 12.50.

Carapace red-brown with broad lateral bands, no pallid medial line, lateral band widest anterior to mid-fovea, narrow for caput; no medial pallid line. Abdomen faded, no shoulder band or upper pallid line, no ventral pattern. *Eyes*. Group width/headwidth=0.65 through PLE, 0.31 through mid-eye group. OQ front, back, long: 50, 75, 43. MOQ front, back, long: 25, 34, 25. PLE through mid-shoulder curve; AER rows contiguous; PER two separated lines. STC with *ca.* 5 teeth; ITC bare. Scopula absent. *Spines*. Palp: fe p1d1.1.1.2r1; pa p1; ti p2d1; ta p1r1v1.2. Epigyne (Fig. 18c, d) with roughly V-shaped median field with central cone and pair of ridges laterally; septum in distal third; broad CD folding twice with first lobe broad and second, if actually a lobe, much thinner.

**Distribution and Habitat.** Rainforest and open forest streams from northern New South Wales to north-east Queensland.

**Remarks.** Material from well north (1000 km) of the type locality (Kroombit Tops) shows slight differences in the RTA shape (Fig. 20b) and the broad spermathecal duct is longitudinal not diagonal as in the southern specimens. However, some females have little or no medial cone (Fig. 19c) and others have well developed lateral hooks (Fig. 19a), all of which are soft tissue, and internally they are little different. The difference in the RTA of northern specimens (Fig. 20b) also lies within the variability of those in the south (Fig. 19e-h). Thus, looking at the variability accepted by Vink & Dupérré (2010) in concordance with molecular data, this variation is considered intraspecific.

***Dolomedes venmani* sp. nov.**

(Figs 21a, b, 22a-d. Map 1f)

**Etymology.** The species epithet is in honour of Jack Venman (13 August 1911-29 December 1994), a farmer who, wanting to preserve the great biodiversity in the area, "sold his 255 acres to the Queensland Government in 1971 for \$1."

**Material examined.** Type. Queensland: holotype male, Mt Cotton, Venman's Reserve, 27°37'S, 153°13'E, 29 Sep 1973, P. Belfield, QM S67741.

**Other Material examined.** Queensland: 1 ma, same data as holotype, QM S108240; 1 ma., 2 fem., 2 juv., Eagers Swamp, Moreton Island, pitfall, Environmental Impact Study (W. Houston), 24 Sep 1982, QM S107110; 1 fem., Teewah Ck, Cooloola, 25°56'S, 153°02'E, 13 Jul 1973, R.J. Raven, QM S67786; 1 fem., Booloumba Ck, Conondale Ra., 26°39'S, 152°39'E, 1974, R.J. Raven, QM S67779; 1 ma., Erapah Ck, Redlands, Aug 1995, C. Moriarty, QM S33665; 2 fem., Cedar Galleries, dam, Calliope, 23°59'S, 151°10'E, 27 Feb-1 Mar 2017, R. Raven, QM S108245. New South Wales: 1 fem., Pigabeen, Turners Dip, Tweed R., 28°10'S 153°28'E, 22 Nov 1978, R. Raven, H. Heatwole, G. Czechura, QM S107091; 1 fem., Stotts Island, Tweed River, 28°14'S, 153°31'E, sweeping, 19 Nov 1978, R.J. Raven, QM S67769; 1 fem., Sharpers Ck, Boundary Rd, N of Sharpers Rd. Nerong SF, 32°31'37"S 152°07'E, 30 m, 4 Feb-9 Apr 1993, Pitfall, G.A. Cassis, M.R. Gray, AM KS42180; 1 fem., Frenchs Forest, 33°45'S 151°14'E, 20 Aug 1968, I. Edmunds, AM KS767; 1 ma., Lake Innes, 31°29'S 152°52'E, 23 Apr 1981, A.B. Rose, AM KS115258; 1 ma., Gerringong, Mayflower Retirement Village, 34°45'S 150°50'E, 21 Mar 1991, G. Wishart, AM KS91402; 1 ma., Myall R, site A1, 9 Feb 1974, AMS KS; 1 ma., Mororo State Forest, 29°19'06"S 153°14'28"E, 1 Feb 1997, pitfall, A. York, AM KS74425.

**Diagnosis.** Males are unique in having a long bowed palpal tibia (Figs 21b, 22a), and females in having a trianguloid epigyne (Fig. 22c).

**Description.** Holotype male QM S67741. Carapace 7.00 long, 6.12 wide. Abdomen 5.29 long, 3.65 wide. Total, 12.5.

I: 7.18; 3.59; 6.94; 8.24; 4.35; 30.29. II: 7.18; 3.53; 7.12; 3.18; 3.94; 24.94. III: 7.24; 3.00; 6.12; 7.71; 3.59; 27.65. IV: 8.24; 3.18; 6.18; 8.53; 4.00; 30.12. Palp: 5.06; 2.47; 3.59; 2.41; 13.53.

**Colour.** Carapace red brown with broad white marginal band of hair widest anterior to fovea. Abdomen dorsally brown with narrow fringe around dorsal edge, ostiate region pallid, otherwise with darker reticulations. Abdomen without ventral pattern. *Eyes*. Group width/headwidth=0.58 through PLE, 0.53 through mid-eye group. OQ front, back, long: 47, 75, 45. MOQ front, back, long: 25, 31, 28. AME-AME, 3; AME-ALE, 5; PME-PME, 7; PM-PL, 14. AME: ALE: PME: PLE, 10: 9: 12: 15. PER in two lines without overlap. STC on I with 7 long teeth; ITC bare. *Spines*. Legs I, II: fe p5d3r5; pa p1 apical 1 triangular, r1; ti p2d2r2v.2.2.2.2; me p2r2v.2.2 + distal whorl of 4. Leg III, IV: as

above but, pa p1d1 (apical)r1; ti p2d2r2v.2.2.2; me p2r2 v1.1.1.1 + distal whorl of 4. Palp: fe p1d1.1.1.2r2; pa p1; ti p1. Patellae with triad but apical spine weak, ventral spines on tibiae and metatarsi I, II non-overlapping. Palp (Figs 21b, 22a, b). Tibia of male palp long, 1.06 times longer than cymbium, bowed prolaterally for length, with large VTA with serrate retrolateral edge; simple thumb-like RTA set retrolaterally. Cymbium broad with short apical cone and small retrobasal process. Transverse component of tegulum directed diagonally to base, DTP bent, thumb-like with distal "limb" concave prolaterally; MA large flared, anvil-shaped, extends distal of DTP with long curving hook basally overlying it; fulcrum and conductor small, distal.

*Female* QMS67769. Carapace 9.17 long, 7.67 wide. Abdomen 8.83 long, 5.83 wide. Total, 18.00.

I: 7.44; 3.84; 6.32; 5.44; 2.80; 25.84. II: 7.84; 4.00; 6.48; 5.52; 2.48; 26.32. III: 7.36; 2.40; 5.76; 5.44; 2.56; 23.52. IV: 8.56; 3.92; 7.20; 8.16; 3.60; 31.44. Palp: 3.44; 1.92; 1.76; 2.56; 9.68.

Carapace dark with narrow dark edge and wide pale submarginal band. Abdomen dark with indistinct pattern; venter faded but with central dark field with 2 lines of small sigilla. *Eyes*. Group width/headwidth=0.60 through PLE, 0.40 through mid-eye group. OQ front, back, long: 34, 68, 37. MOQ front, back, long: 22, 29, 22. AME: ALE: PME: PLE, 9: 5: 12: 11. PLE at posterior end of caput shoulder. AER with 40–50% overlap; PER in two lines separated by half of PME diameter. Chelicerae, 2p, 4r. STC with *ca.* 6–8 teeth; ITC, 0. Scopula for distal 0.6 of tibia I, and length of metatarsi and tarsi I, II. Group of long hairs (not tufts) only below *Claws*. Palp: fe p1d1.1.1.2r1; pa p1d1 (all weak bristles); ti p2d2; ta pv2 rv2. Pedal patellae with p1r1 all weak. All spines short, weak. Epigyne (Fig. 22c, d). Overall shape trianguloid, slightly longer than wide. Lateral lobes with long anteriorly convergent ridge; spermathecae occupy 0.33 of length, simple lobes in short gamma-shape.

**Distribution.** Known only from several coastal areas in north-eastern New South Wales (Tweed River) north to heath swamps on Moreton

Island and Cooloola, as well as the rainforest in the Conondale Range, in Queensland.

***Dolomedes flaminius* L. Koch, 1867**  
(Figs 23a, b, 24 a–c. Map 2a)

*Dolomedes flaminius* L. Koch, 1867: 197; L. Koch, 1876: 877, pl. 75, figs 4, 4a, 4b; Rainbow, 1911: 263; Davies, 1985: 103.

**Material Examined.** Queensland: holotype, male, "Brisbane", ZMH, examined.

**Diagnosis.** The male of *Do. flaminius* shares with males of *Do. facetus* and the New Caledonian *Do. neocaledonicus* the palpal tibia being slightly shorter (*ca.* 0.83) than the cymbium (Fig. 24a–c), the DTP is large and trianguloid with a similar prolateral basal mound (Fig. 24a); the median apophysis lacks the retrolateral vane (Fig. 24a) and the palp is short unlike those of the *Do. albicomus* group, the ventral abdomen lacks pattern and the dorsal abdomen has pallid spots and a median pallid zone (Fig. 23a). The only clear differences between males of *Do. flaminius* and *Do. facetus* and *Do. neocaledonicus* is in the retrolateral view of the RTA which is a low ridge in *Do. flaminius* (Fig. 24c) but a ridge with two long prongs (Fig. 10e) in *Do. facetus* and *Do. neocaledonicus*, the tegulum is shorter, broader and more transverse (*cf.* longer, slender, diagonal tegulum of *Do. facetus*). However, a further difference is in the dorsal abdominal pattern (but see Remarks) of *Do. flaminius*, with the full length pallid sinuous band, a pattern unlike any in Australia, New Zealand or USA. Males differ from those of *Do. briangreenei* in the large straight trianguloid DTP. Males of *D. flaminius* differ from those of *D. neocaledonicus* in the wider shallower RTA and from *Do. titan* in the short palpal tibia and absence of a retrolateral process on the median apophysis. Females are unknown.

**Description.** Holotype male ZMH. Carapace 5.09 long, 4.56 wide. Abdomen 4.56 long, 2.63 wide. Total, 9.7.

**Colour.** Carapace reddish brown with faint paler margins; no indication of medial pallid line as in *Do. facetus*. Abdomen dorsally with darker flanks and undulating brown pallid zone medially; venter pallid without pattern. Palp (Fig. 24a–c). Cymbium *ca.* 1.2 times longer

than tibia. RTA a low long undulating ridge with longer lobe on dorsal edge, viewed ventrally, appears long conical; 4 long bristles on retroventral tibia; VTA small rounded trianguloid; retroventral cymbial flange almost triangular; massive distal tegular process irregularly triangular with unsclerotised basal zone; median apophysis smoothly sigmoidal without retrolateral process basally.

**Remarks.** The stated type locality of *Dolomedes flaminius* is Brisbane. However, no further material resembling the type has been found. As is sometimes the case with 19<sup>th</sup> century Australian localities (e.g. see Raven 1982), the stated locality represents only the port of departure rather than the collecting locality. This may explain why no further material has been taken.

To date, no males assignable to *Do. flaminius* have been found in the Brisbane area where at least five other *Dolomedes* species (*Do. vicque* sp. nov., *Do. venmani* sp. nov., *Do. facetus*, *Do. albicomus* and *Do. briangreenei* sp. nov.) occur in the area. Of those, males of *Do. flaminius* are most similar to those of *Do. facetus* with which they share the relatively short palpal tibia and the shallow broad bifid RTA (Fig. 24c), the former also shared with *Do. vicque* and *Do. briangreenei*.

Substantial differences in Koch's localities and the actual distribution of species have been documented, e.g. in *Arbanitis longipes* (L. Koch 1873), the stated type locality was Bowen whereas it is actually Brisbane (Raven & Wishart 2006); in *Uliodon frenatus* (L. Koch 1873) the stated type locality was Australia but the genus is endemic to New Zealand (Raven & Stumkat, 2002). Thus, the actual locality for *Do. flaminius* may not be Brisbane or even Australia. A male and female from Kairiru Island, Papua New Guinea (AM KS8039, KS8016, here listed in *Do. facetus*) have the most similar palpal bulb and RTA to those of the holotype of *Do. flaminius* but the abdominal pattern is quite different.

As noted in the diagnosis, the dorsal abdominal pattern of *Do. flaminius*, with the full length pallid sinuous band (Fig. 23a), is unlike any known pisaurid in Australia, New Zealand

(Vink & Dupérré 2010) or USA (Carico 1973). In most species, the central medial pallid zone is a dagger-shaped area overlying the heart and thus confined anteriorly (e.g. Fig. 21a). The exception is in *Do. facetus*, the nearest species to *Do. flaminius*, in which the pattern is also quite different with two lines of white spots running the length of the abdomen (Fig. 8a).

The specimen in the vial labelled holotype (Figs 23a, b, 24a, b) of *Dolomedes flaminius* in Hamburg differs from that figured by Koch in several ways.

Koch's figure of the male shows:

- broad white lateral carapace sashes (as in *Do. briangreenei*, Fig. 17a) whereas Fig 23a shows narrow carapace sashes.
- narrow white medial band on carapace (as in *Do. facetus*) whereas Fig. 23a shows such a band only centrally.
- the dorsal abdominal pattern is dark with white flanks and dorsally paired lines then dots posteriorly (as in *Do. facetus*) whereas Fig. 23a shows the paired lines and spots flanking a pallid undulating central band, as in *Do. neocaledonicus*.
- strong similarities in the palpal bulb and sclerites, especially the large DTP, with *Do. facetus* and *Do. neocaledonicus* however,
- the median apophysis extends beyond DTP whereas in other similar species it is never long. However, the artist may have conflated the fulcrum and median apophysis making the latter seem more extensive.
- the RTA is long and pointed with sinuous distal edge whereas Fig 24a shows a low ridge with a small lower lobe and longer dorsal lobe which together, from some angles, can appear pointed but not with distal processes.
- the VTA is large and square in distal shape (as in *Do. neocaledonicus*) whereas Fig. 24a shows the VTA a small rounded cone.

**Distribution.** The holotype was putatively from Brisbane and no further material matching

it has been found since in the Brisbane area, one of the best sampled areas for *Dolomedes*, or elsewhere. Although the bulb and RTA are similar to that of the New Caledonia *Do. titan*, they differ substantially in the relative length of the palpal tibia to the cymbium. The most likely possibility is that *Do. flaminius* may not be Australian.

***Dolomedes wollemi* sp. nov.**

(Figs 3a, b, 25 a, b, 26a–g. Map 2b)

**Etymology.** The species epithet is a noun in apposition from the infamous Wollemi pine (*Wollemia nobilis* Jones, Hill & Allen, 1974, Araucariaceae) and the National Park which houses it.

**Material examined.** New South Wales: Newnes, Wolgan Valley, 33°10'19.1"S 150°14'22.5"E, 21 Dec 2016, J. Wolff: holotype male, AM KS126569; 2 fem., same data, AM KS126570, KS126572; 1 ma., Gordon Western Traps, 33°44'S 151°09'E, 23 Oct 1982, Pitfall, C. Horseman, AM KS10448; 1 ma., Lindfield, 33°47'S 151°10'E, 22 Dec 1968, N. Allan, AM KS2696; 1 ma., Roseville, 33°47'S 151°12'E, 24 Apr 1998, S. Manners, AM KS57124; 1 ma., Nahrwongah, AM K11959; 1 ma., 1 fem., Parsons Creek, upstream of Terrys creek, 32°44'24"S 150°56'08"E, 16 Oct 2012, G. Theischinger, AM KS120611.

**Diagnosis.** The male palp is very similar to that of *Do. albicomus* in that tibia is very long but males differ from those of all species in the group in lacking the flange on the retrobasal edge of the median apophysis (Fig. 26a). Females are similar to those of *Do. vicque* sp. nov. and *Do. briangreenei* sp. nov. in the presence of cones or hooks on the epigyne (Fig. 26e, f) but differ in that the epigyne is relatively wider and all of the spermathecal ducts are similarly wide.

**Description.** Holotype male AM KS126569. Carapace 5.84 long, 4.80 wide. Abdomen 6.00 long, 4.40 wide. Total, 11.84.

I: 7.68; 2.96; 7.60; 7.44; 3.92; 29.60. II: 7.28; 2.96; 7.04; 6.00; 3.60; 26.88. III: 6.88; 2.40; 6.00; 6.24; 2.80; 24.32. IV: 7.92; 2.64; 7.36; 8.32; 4.00; 30.24. Palp: 2.96; 2.16; 2.16; 2.24; 9.52.

Carapace dark brown with broad brown margins, sublateral band of white hair widest at caput-thorax junctions extends narrowly to clypeus. Abdomen dark, ostiate "dagger" darker edge with white flanks form "crown",

venter centrally pallid. *Eyes.* Gentle caput shoulder; PLE at mid-curve. AME on common tubercle. Group width/headwidth=0.75 through PLE, 0.62 through mid-eye group. OQ front, back, long: 28, 47, 26. MOQ front, back, long: 21, 23, 14. AME: ALE: PME: PLE, 6:5:10:10. PER cuts through back of caput shoulder. AER with 20–30% overlap; PER in two well separated lines. STC with 8 teeth; ITC 0. *Spines.* Palp: fe p1d1.1.1.2r1; pa p1d1; ti 0. Palp (Fig. 26a–d). RTA with retrodorsal rhomboidal keel, and cluster of strong bristles ventrally; DTP digitiform to thumb-like; tegulum transverse; median apophysis strongly flared over DTP and lacks any retrobasal keel.

*Female* AM KS126570. Carapace long 10.67, 8.33 wide. Abdomen 10.33 long, 6.67 wide. Total, 21.0.

I: 8.24; 4.08; 7.20; 6.56; 3.60; 29.68. II: 8.88; 4.48; 7.12; 6.64; 3.60; 30.72. III: 8.00; 4.24; 6.56; 6.48; 3.28; 28.56. IV: 9.20; 3.60; 7.28; 8.48; 4.56; 33.12. Palp: 4.16; 2.08; 2.48; 2.56; 11.28.

**Colour.** Carapace dark brown with dark brown edges, jagged submarginal edge with pallid midline. Abdomen dorsally dark, ostiate area dagger-like; ventral abdomen mottled to well defined anterior field with faint sign of 2 pallid lines. *Eyes.* Group width/headwidth=0.50 through PLE, 0.45 through mid-eye group. OQ front, back, long: 45, 67, 41. MOQ front, back, long: 22, 33, 28. AME: ALE: PME: PLE, 9: 7: 13: 12. PER in two lines well separated by 0.3 of PME diameter; AER with 50% overlap. STC with 7 long teeth; ITC bare. Scopula lateral on metatarsi and tarsi I, II, narrow lateral bands on tarsi III. *Spines.* Pedal patellae with triad. Palp: fe p1d1.1.1.2r1; p1d1r1w; ti p1r1; ta p2. Epigyne (Fig. 26e–g) broadly rounded with median field for 5/6 of length with low distal septum; two low cones or hooks, viewed axially from behind, on median field; CD strongly overlaps with second coil and that of similar width to third.

**Distribution.** Western edge of the Great Divide at Blackheath and nearby Wollemi National Park and presumably between them.

***Dolomedes mankorlod* sp. nov.**

(Figs 7b, 27a–d; Map 2c)

**Etymology.** The species epithet is a noun in apposition from aboriginal name of the area.

**Material examined.** Type. Northern Territory: holotype male, female paratype, Mankorlod, south of Maningrida, Arnhem Land, August 2013, R. Raven, MAGNT A004617.

**Diagnosis.** Males differ from those of *Do. albicomus* in the median apophysis with small trianguloid process retrolaterally on basal portion (Fig. 27a), and from that of *Do. instabilis* in the DTP narrowing strongly from base to tip (Fig. 27a), and from both in the palpal tibia is only slightly than cymbium. In the female, the epigyne is very similar to that of *Do. instabilis* but females differ in having a distinct scopula on tibia I (Fig. 7b) and the lateral epigynal ridges curve smoothly rather than unevenly as in *Do. instabilis*.

**Description.** Holotype male MAGNT A004617. Carapace 6.80 long, 5.92 wide. Abdomen 6.00 long, 3.44 wide. Total, 12.80.

I: 8.00; 3.52; 7.36; 7.20; 4.16; 30.24. II: 8.00; 2.96; 6.56; 6.80; 4.00; 28.32. III: 7.60; 3.20; 6.08; 6.24; 2.96; 26.08. IV: 8.56; 3.20; 7.60; 6.32; 5.12; 30.80. Palp: 5.12; 1.92; 2.72; 2.40; 12.16.

**Colour.** Carapace red brown centrally with cover of fine black hairs, narrow black edges with broad band of white hair widest beside caput. Abdomen dark brown with fringe of white hairs laterally; venter darkly mottled, medially mottled. **Eyes.** Group width/headwidth=0.63 through PLE, 0.56 through mid-eye group. OQ front, back, long: 33, 55, 32. MOQ front, back, long: 16, 25, 19. AME: ALE: PME: PLE, 7: 5: 11: 10. PER cuts through mid-curve of caput shoulder. AER with 15–20% overlap; PER in two well separated lines. Chelicerae 2p, 4r. Tarsi I–IV ventrally with black thorns. **Spines.** Palp: fe p1d1.1.1.2r1; pa 0; ti 0. Palp. Tibia longer than cymbium; VTA low curved keel; tegulum transverse; DTP thumb-like, narrowing strongly from base to tip; median apophysis with small trianguloid process retrolaterally on basal portion; RTA a small low ridge (Fig. 27b).

Allotype female MAGNT. Carapace 8.16 long, 7.04 wide. Abdomen 8.80 long, 5.44 wide. Total, 17.0.

I: 7.60; 3.44; 6.64; 5.84; 2.96; 26.48. II: 8.08; 3.84; 6.64; 5.92; 2.72; 27.20. III: 7.60; 3.52; 6.24; 5.76; 2.88; 26.00. IV: 8.32; 3.76; 7.76; 8.24; 3.52; 31.60. Palp: 3.52; 1.76; 2.40; 2.80; 10.48.

**Colour.** Carapace dark red brown with broad dark edges, yellow submarginal band, jagged and discontinuous at caput. Abdomen dorsally dark brown with dark foliate dagger-like area with irregular pallid spots anterolaterally and posterior laterally. Venter laterally mottled with dense central field and 4 lines of pallid areas converging. Femora laterally with large mottling (Fig. 7b, inset). **Eyes.** Group width/headwidth= 0.65 through PLE, 0.44 through mid-eye group. OQ front, back, long: 40, 65, 40. MOQ front, back, long: 21, 30, 25. AME: ALE: PME: PLE, 8: 8: 13:13. PER just form two lines; AER with 50% overlap. STC with 7 long teeth; ITC bare. Scopula on lateral tibia I (Fig. 7b) and on metatarsi and tarsi I–III. **Spines.** Palp: fe p1d1.1.1.2r1; pa p1d1.1; ti p2d1; ta pv2rv2. Epigyne (Fig. 27c, d). Overall shape 1.17 times longer than wide. Edges of lateral lobes curve smoothly. Median field (excluding septum) occupies 0.59 of overall length. Internally, two closely adpressed lobes with inner lobe longer and wide.

**Distribution and habitat.** Known only from Mankorlod, an area of open forest just south of Maningrida, Arnhem Land, Northern Territory.

***Dolomedes karijini* sp. nov.**

(Figs 28a–d, 29a–d. Map 2d)

**Etymology.** The species epithet is a noun in apposition from the National Park which houses it.

**Material examined.** Types. Western Australia: holotype male, Karijini National Park, Dales Gorge (Circular Pool), 22°28'33"S, 118°34'43"E, 15 Mar 2015, C. Stevenson, R. Bray, WAM T135513. Paratype female, same data but, surface of shallow pool, 18 Mar 2015, J. Huey, M. Harvey, WAM T135645.

**Diagnosis.** The male differs from that of *Do. mankorlod* in that the retrobasal flange on the median apophysis is rounded (Fig. 28b) rather

than trianguloid. Females differ from those of *Do. instabilis* in the shorter ridged median field (Fig. 29c) and the non-overlapping spermathecal ducts (Fig. 29d).

**Description.** Holotype Male WAM T135513. Carapace 7.44 long, 6.80 wide. Abdomen 6.72 long, 5.52 wide. Total, 14.2.

I: 10.00; 4.17; 9.00; 8.83; 5.67; 37.67. II: 10.00; 4.00; 8.33; 7.83; 4.83; 35.00. III: 8.83; 3.50; 7.50; 7.17; 3.83; 30.83. IV: 10.17; 3.00; 8.50; 8.67; 4.83; 35.17. Palp: 5.50; 2.00; 3.17; 3.00; 13.67.

**Colour.** Carapace red-brown with white median line, wide black margins with wide band of white hair extending to but not around clypeus. Abdomen redbrown with broad pallid flanks, mottled dorsally; venter with defined field with at least two wide pale lines. **Eyes.** Group width/headwidth=0.64 through PLE, 0.52 through mid-eye group. OQ front, back, long: 38, 58, 33. MOQ front, back, long: 21, 30, 20. AME: ALE: PME: PLE, 10:6:11:11. PER just forms two lines; AER with 20% overlap. Chelicerae with one small and 2 large teeth on promargin, 4 on retromargin. STC on I with 5–6 long teeth; ITC bare. Scopula absent. **Spines.** Palp: fe p1d1.1.1.2r1; pa p1 weak; ti 0. Palp (Fig. 28a–d). Tibia ca. 1.2 times longer than cymbium (Fig. 28a). Median apophysis with triangular retrobasal flange; retrodistal flange flared widely over DTP (Fig. 28b). DTP curved banana-like; tegulum transverse. Conductor and fulcrum short. VTP rectanguloid. RTA a low ridge with small terminal lobes (Fig. 28c).

**Female** WAM T135645. Carapace 12.17 long, 10.17 wide. Abdomen 10.33 long, 7.33 wide. Total, 22.50.

I: 11.17; 5.83; 9.50; 8.00; 4.00; 38.50. II: 11.33; 6.17; 9.67; 8.33; 4.17; 39.67. III: 11.17; 4.50; 8.67; 7.50; 3.83; 35.67. IV: 11.67; 5.17; 10.33; 13.17; 4.67; 45.00. Palp: 4.33; 2.50; 3.00; 3.67; 13.50.

**Colour.** Carapace dark red-brown, dark narrow margin with mottling near caput edge, deeply sinuous orange brown submarginal band, median line full length broad in parts. Abdomen dorsally, fawn with ostiate region darker, dagger-like and medially pallid, broad irregular pallid zones lateral of that and darkly mottled

flanks; ventral pattern of two wide faint lines centrally in paler median V-shape formed by dark lateral faces. **Eyes.** AME on common tubercle. Group width/headwidth=0.62 through PLE, 0.44 through mid-eye group. OQ front, back, long: 54, 85, 43. MOQ front, back, long: 25, 36, 23. AME: ALE: PME: PLE, 10:8:14:15. PER in two lines separated by 0.29 of PME diameter; AER with 50% overlap. Chelicerae with 2 large teeth, one bicuspid on promargin, 4 on retromargin. Most claws broken, 4–5 teeth evident on STC and palp; ITC bare. Scopula laterally for length of tibia I, weak and distal only on tibia II, lateral on metatarsi and tarsi I–IV but only for distal half on IV; dense hair clusters around claws. **Spines.** Palp: fe p1d1.1.1.2r1; pa p1d1; ti p2d1r1; ta p2r2. Epigyne (Fig. 29 c, d) wider than long with short procurved ridged median field (Fig. 29c) and long septum; spermathecal ducts similar in size and non-overlapping.

**Distribution.** Known only from Karijini National Park, north western WA.

***Dolomedes alexandri* sp. nov.**  
(Figs 30a–c, 31a, b. Map 2e)

**Etymology.** The species epithet is in honour of the late Alexander (Sandy) Roy whose steadfast and thorough contributions in sorting and managing the Australian National Insect Collection of arachnids was most appreciated by Australian arachnologists.

**Material examined.** Types. Australian Capital Territory: holotype male, Lees Ck, Brindabella Ranges, pitfall, 29 May 1981, C. Dickman, ANIC 42: 001795. Paratype, Victoria, 1 ma., penult fem., East Gippsland, Wrong Ck Trail, Rodger River Forest Block, 37°18'S 148°31'E, 1 Feb 1983, pitfall, D. Allen, AM KS87150.

**Diagnosis.** Males differ from those of all other species of Australian *Dolomedes* by the short barrel-shaped palpal tibia (Figs 30a, 31a). Female unknown.

**Description.** Holotype male ANIC 42: 001795. Carapace 8.24 long, 6.64 wide. Abdomen 6.40 long, 4.00 wide. Total, 14.64.

I: 7.36; 3.60; 6.88; 7.36; 4.64; 29.84. II: 7.20; 3.28; 6.64; 7.20; 4.24; 28.56. III: 7.36; 2.64; 6.08; 6.24;

3.44; 25.76. IV: 7.36; 2.64; 6.08; 6.24; 3.44; 25.76. Palp: 3.76; 1.44; 1.36; 3.36; 9.92.

Condition poor. Carapace redbrown with longitudinal pallid midline, darker striae, narrow dark margins with broad submarginal band of white hairs, band widest at caput shoulder. Abdomen collapsed, dark with white "shoulders"; venter pattern indiscernible. *Eyes*. Group width/headwidth=0.63 through PLE, 0.54 through mid-eye group. OQ front, back, long: 40, 56, 34. MOQ front, back, long: 23, 30, 27. AME: ALE: PME: PLE, 9, 8, 13, 12. PLE mid-caput shoulder curve; AER in 2 separated lines; PER in two slightly separated lines. STC with ca. 8 teeth; ITC bare. Scopula only on metatarsi and tarsi I. *Spines*. Palp: fe p1d1.1.1.2r1; pa p1(d1r1); ti p2d1. Patellar spines p1, bristles d1r1. Palp (Figs 30a–c, 31a, b). Male palpal cymbium clearly longer, barrel-shaped; DTP long, narrows strongly in distal third, directed diagonally across distal relatively smaller median apophysis, basal portion of tegulum long, only slightly diagonally upward; retroventral cymbial corner narrowly and gradually flared; tibia with short basal "neck" enlarging quickly to barrel-shape (Fig. 30a); RTA subdistal, long, flared with long narrow groove apically with slender lobe and smaller subapical "teeth".

**Distribution.** Known from the Brindabella Ranges, Australian Capital Territory and East Gippsland, Victoria.

***Dolomedes lizturnerae* sp. nov.**

(Figs 32a–c, 33a–e. Map 2f)

**Etymology.** The species epithet is in honour of Elizabeth (Liz) Turner who long served as collection manager/curator of Arachnology at the Tasmanian Museum and Art Gallery.

**Material examined.** Tasmania: Murphys Flat, 42.75275°S 147.15667°E, 25 Mar 2010, Bush Blitz, R. Raven: holotype male, TMAG J4124; female, same data, TMAG J4125; 1 ma., East Risdon, 42°50'S 147°21'E, 31 Jan 1961, J.L. Hickman, AM KS29155; 1 ma., Risdon Creek, 42°50'S 147°19'E, 20 Oct 1967, J.L. Hickman, AM KS29160.

**Diagnosis.** The male differs from those of the *D. albicomus* species group by a large distal hook on the retrolateral median apophysis (Fig. 32a).

Females of *Do. lizturnerae* differ from those of *Do. instabilis* in the relatively wider overall shape of the epigyne (Fig. 33d), the relatively shorter septal area (ca. one third overall length) and the middle loop of the spermathecal ducts (Fig. 33e) is clearly longest and longitudinal rather than diagonal as in *Do. instabilis*.

**Description.** Holotype Male TMAG J4124. Carapace 5.76 long, 4.88 wide. Abdomen (shrivelled) 4.32 long, 3.40 wide.

Palp: 4.82, 2.08, 2.78, 1.80, 11.18. *Colour*. White band on lateral cephalon narrow to base of caput then quickly widens in undulating band to about mid fovea where it narrows again. Abdomen dorsally brown, no pattern; ventrally pallid. *Eyes*. Eye group width/headwidth=0.65 through PLE, 0.53 through PME. *Spines*. Legs I, II: fe p5d3r5; pa p1r1; ti p2d2r2v.2.2.2.2; me p2r2v2.2 + distal whorl of 4. Leg III, IV: as above but, pa p1d1 (apical)r1; ti p2d2r2v.2.2.2; me p2r2 v1.1.1.1 + distal whorl of 4. Palp: fe p1d1.1.2r2; pa 0; ti p1r1. Palp (Fig. 32a–c). Very long tibia widens gradually to retrolateral face with RTA. RTA a low sinuous ridge with subcentral blunt tooth. Large distal hook on retrolateral median apophysis (Fig. 32a).

*Female* TMAG J4125. Carapace 7.17 long, 5.83 wide. Abdomen 6.67, 3.17 wide.

I: 5.92, 3.33, 5.00, 4.00, 2.50, 20.75. II: 6.17, 3.17, 4.83, 4.17, 2.33, 20.67. III: 5.58, 2.83, 4.17, 4.00, 2.25, 18.83. IV: 6.75, 3.00, 5.83, 6.17, 2.92, 24.67. Palp: 2.92, 1.42, 1.83, –, 2.33, 8.50.

**Carapace.** With dark edge. Abdomen shrivelled, dorsally dark with digitiform pallid mark anteriorly. *Eyes*. PER about equal in size. AME–AME > AME–ALE. *Legs*. Scopula on metatarsi I, II in bands; entire on tarsi I, II, widely divided on III. 6 teeth on STC, smallest basally. ITC bare. *Spines*. I & II: fe pv1p4d3r5; pa p1r1; ti p1.1r1.1v2.2.2.2; me p2r2v2.2.3. III & IV: fe p5d3r5; pa pd1 apical r1; ti p2d.1.1r2v2.2.2; me p1.1.2r1.1.2v2.2.3. *Palp*. fe p1d1.1.1.2r1; pa p1d1; ti p2r1; ta p2.1r1.1. *Epigyne* (Fig. 33d, e). CO transverse ridge forms median scape in anterior third; spermathecae one large longitudinal duct with smaller spheroidal ducts on entry and exit.

**Distribution.** Known from Murphys Flat and East Risdon, southern Tasmania.

*Dolomedes pedder* sp. nov.  
(Fig. 34a, b. Map 2e)

**Etymology.** The species epithet is a noun in apposition from the type locality, Lake Pedder, which was “drowned” in 1972 for a hydroelectric dam on the Serpentine River, southwestern Tasmania.

**Material examined.** Type. Tasmania: holotype male, Lake Pedder, 43°00'S 146°08'E, 1 Mar 1972, C. Horseman, AM KS107495.

**Diagnosis.** The male is most similar to those of *Do. vicque* sp. nov. but differs in the four-pointed retrolateral tibial apophysis (Fig. 34b). Females are unknown.

**Description.** Holotype Male AM KS107495. Carapace 5.84 long, 4.88 wide. Abdomen 5.60 long, 2.96 wide. Total, 11.4.

I: 6.00, 2.64, 5.44, 5.44, 3.92, 23.44. II: 5.84, 2.56, 5.20, 5.04, 2.88, 21.52. III: 5.44, 2.48, 4.48, 4.64, 2.08, 19.12. IV: 6.80, 2.80, 6.16, 6.24, 3.76, 25.76. Palp: 3.84, 1.36, 1.52, –, 2.08, 8.80.

**Colour.** Carapace brown with narrow submarginal white bands, widest at half length. Abdomen dorsally dark with pale ostiate region and white flanks; venter entirely dark without pallid lines. **Eyes.** Group width/headwidth=0.65 through PLE, 0.52 through mid-eye group; caput shoulder very gradual. MOQ front, back, long: 27, 47, 28. MOQ front, back, long: 16, 25, 15. PER in two lines well separated by 0.7 of PME diameter; AER with 60% overlap. Chelicerae with one small and 2 large teeth on promargin, 4 on retromargin. STC with *ca.* 10 long teeth; ITC with 1 tooth. Scopula absent on tibiae-tarsi. **Spines.** Pedal patellae with triad. Palp: fe p1d1.1.1.2r1; pa p1d1.1; ti p1d1. Palp (Fig. 34a, b). Tibia of male palp shorter than cymbium. Retrobasal cymbium widely flared. DTP very broad, trianguloid. MA slender without retrobasal process. RTA retrolateral with three separate prongs, the most dorsal deeply bifid.

**Distribution.** Known only from Lake Pedder and presumably surrounding areas, southwestern Tasmania.

NEW CALEDONIAN *DOLOMEDES*

*Dolomedes titan* Berland, 1924  
(Figs 35, 36a–e. Map 3a)

*Dolomedes titan* Berland, 1924: 240.

**Material examined.** New Caledonia: holotype female, Mt Canala, 700 m, 3 Nov 1911, coll. Sarasin and Roux, MNHN, examined; 1 fem., Oubatche, under overhang, 1 Nov 1988, R. Raven, QM S13542; 2 fem., Col d'Amoss, 20°18'S, 164°25'E, 13 Feb 1993, R.J. Raven, QM S37690, S38060, 30678; 1 ma, 1 fem. (photograph), Mt Mou, 380–400 m, rainforest, 24 Feb 1993, R. Raven, MNHN; fem., juvs, Grottes d'Adio, near Poya, 21°15'S, 165°14'E, Dec–Jan 1965, G.F. Gross, SAMA NN13655.

**Diagnosis.** Males differ from those of *Do. instabilis* in the slightly smaller retrobasal process on the median apophysis (Fig. 36a) and the more elevated RTA (Fig. 36c). Females differ from those of *Do. instabilis* in the epigyne having a slightly broader median field (Fig. 36d); internally, the ducts are more slender and more widely spaced (Fig. 36e).

**Description.** Male QM S30678. Carapace 9.50 long, 7.83 wide. Abdomen 7.50 long, 3.83 wide. Total, 17.0.

I: 12.83; 5.33; 12.33; 12.50; 7.17; 50.17. II: 13.17; 5.33; 12.00; 11.50; 6.17; 48.17. III: 11.83; 5.00; 10.17; 10.17; 5.17; 42.33. IV: 12.33; 5.00; 12.50; 13.83; 6.83; 50.50. Palp: 7.17; 2.50; 3.50; 3.17; 16.33.

**Colour.** Carapace red-brown with wide lateral band, widest anterior to mid-fovea. Abdomen faded brown, venter pallid. **Eyes.** Group width/headwidth=0.65 through PLE, 0.54 through mid-eye group. OQ front, back, long: 43, 67, 40. MOQ front, back, long: 21, 34, 22. AME: ALE: PME: PLE, 9: 7: 12: 15. PER well behind, small, caput shoulder. AER with 60% overlap; PER two well separated lines. Chelicerae: p2, r4. Legs very long but tarsi not pseudosegmented. Femur IV unmodified. Tarsi long, slender, slightly bowed, not curved, no scopula. STC with *ca.* 8 teeth; ITC bare. Scopula absent. **Spines.** Pedal patellae: d1 basal, pr1r1. Palp: fe p1d1.1.1.2r1.1; pa p1, d1; ti p1d1; ta 0. Palp (Fig. 34a, b). Dense group of 40–50 strong bristles on retroventral tibia; tibia much longer than cymbium. RTA set retrodorsally, with long low collar with small bifid ventral lobe and long

pointed distal lobe; tegulum transverse, DTP thumb-like; median apophysis with triangular retrobasal process on narrow "neck".

*Female* QM S13542. Carapace 12.00 long, 9.50 wide. Abdomen 9.67 long, 5.83 wide. Total, 21.67. I: 12.00; 5.83; 12.33; 10.67; 5.50; 46.33. II: 13.17; 5.83; 11.83; 11.17; 5.83; 47.83. III: 12.50; 5.00; 11.00; 10.33; 5.17; 44.00. IV: 14.33; 5.83; 13.33; 14.00; 12.00; 59.50. Palp: 4.83; 2.67; 3.67; 4.00; 15.17.

*Colour.* Carapace yellow brown with light brown margins posterior to caput; broad pallid band extends to clypeus; medial area darkest on edges not centrally; 2 dark ovoid areas in prefoveal area. Abdomen dark with pallid ostiate area, light shoulders; venter pallid contrasts to flanks. *Eyes.* Group width/headwidth=0.63 through PLE, 0.51 through mid-eye group. OQ front, back, long: 22, 38, 21. MOQ front, back, long: 12, 19, 12. AME: ALE: PME: PLE, 11: 8: 15: 16. PER cuts through mid-curve of caput shoulder. AER with 15–20% overlap; PER two well separated lines. Chelicerae 2p, 4r; no PTF. STC with 6 teeth; ITC bare. *Spines.* Palp: fe p1d1.1.1.2r1; pa p1r1d1; ti p2d1.1; ta pv2rv2. Epigyne cordate with median field confined to basal third; internally, ducts slender and well separated.

**Distribution.** Known only from New Caledonia.

**Remarks.** Despite their large size, females and males of *Do. titan* lack the pseudosegmented tarsi of *Megadolomedes*. The long palpal tibia and retrobasal process on the median apophysis places *Do. titan* firmly in the *Do. albicomus* species group.

#### *Dolomedes neocaledonicus* Berland, 1924

(Fig. 37a–c. Map 3b)

*Dolomedes neocaledonicus* Berland, 1924: 241, figs 189–191, syntypes male and female, MNHN 3.851, examined. Species actually attributed to Simon as "*Dolomedes neocaledonicus* É. Simon n. sp." as it was so named in Simon's collection (Berland, 1924: 241).

**Material Examined.** Types. New Caledonia: holotype male, 2 paratypes females, Noumea, MNHN 3.851.

**Other Material Examined.** New Caledonia: male and several juveniles, Canala, Oct 1911, coll. Sarasin and Roux, MNHN; 1 fem., base of Mandjelia, 17 Feb 1993, R. Raven, QM S108408; 1 ma., Baie Nure, Dumbea, 23 Mar 1980, L. Bigot, QM S13826.

**Diagnosis.** Males differ from those of *Do. facetus* in the widely spaced and slightly dissimilar RTA which has a second lobe on the ventral process. The epigynes of females look very like those of *Do. facetus* but differ in being less angular and more rounded and all spermathecal ducts are broader.

**Description.** *Male* QM S13826. Carapace 4.78 long, 4.41 wide. Abdomen 5.65 wide, 3.35 long. Total 10.5.

I: 6.88, 2.75, 6.63, 6.63, 3.25, 26.13. II: 6.38, 2.75, 5.88, 5.63, 3.13, 23.75. III: 6.25, 2.50, 5.13, 5.38, 2.88, 22.13. IV: 7.50, 2.75, 6.25, 7.25, –, 23.75. Palp: 3.83, 1.58, 1.58, –, 2.75, 9.75.

*Colour.* Carapace with narrow white band on margin, darker centrally. Dorsal abdomen pattern like *Do. facetus*. *Eyes.* Group width/headwidth=0.55 through PLE, set well behind caput shoulder, 0.54 through mid-eye group. OQ front, back, long: 30, 51, 27. MOQ front, back, long: 16, 24, 17. AER with 15% overlap; PER two separated lines ca. 0.3 PME diameter apart. *Spines.* Palp: fe p1d1.1.2r1; pa p1d1.1; ti p2d1. Palp (Fig. 37b, c). Tibia enlarged distally with rectanguloid ventral apophysis; RTA lateral, not dorsally, placed, two low lobes set well apart but short, ventral lobe with lower ledge. DTP broad triangular, median apophysis with narrow base and flares broadly; retrobasal cymbium enlarged with thumb-like process.

*Female* (Fig. 37d, e) Mandjelia QM S108408. Carapace 8.38 long, 7.25 wide. Abdomen 8.50 long, 5.00 wide. Total, 16.9.

I: 8.75, 3.75, 7.88, 6.63, 2.50, 29.50. II: 8.75, 3.63, 8.13, 6.38, 3.13, 30.00. III: 8.50, 3.50, 7.25, 6.88, 3.50, 29.63. IV: 10.38, 4.25, 8.88, 9.13, 4.75, 37.38. Palp: 3.75, 1.63, 2.25, –, 3.13, 10.75.

*Colour* faded. Carapace orange brown with broad pallid lateral bands each occupying one fifth of carapace width at that point; narrow white medial from PME to fovea. Abdomen yellow brown with white flanks; weak pattern of *Do. facetus* type discernible anteriorly with pair slender white lines breaking up into three to four paired white spots posteriorly (as in Fig. 8a); venter pallid without pattern. 10–15 long forward directed bristles overhang

PLE, fewer over PME. *Eyes*. Group width/headwidth=0.61 through PLE, 0.54 through mid-eye group. Clypeus 0.81 long = twice PME diameter. OQ front, back, long: 50, 80, 46. MOQ front, back, long: 27, 30, 24. AME: ALE: PME: PLE, 10: 8: 15: 17. Back eye row is two well separated lines, AER with 50% overlap. Caput "shoulder" posterior to PLE. Chelicerae with two large teeth on promargin, four on retromargin. *Claws*. STC on I with 5 long teeth; ITC bare. Scopula lateral on metatarsi and tarsi I–IV. *Spines*. Pedal patella with triad. Palp: fe p1d1.1.1.2r2; pa p1d1r1; ti p2r1; ta v2. Female paratype MNHN 3.851: very similar to *Do. facetus* but abdominal pattern like *Do. flaminius* with dark flanks and pallid median band. Epigyne roughly downward arrow-shaped, with median septum only between lateral lobes in posterior quarter; internally, two concave ducts.

**Distribution.** Known only from New Caledonia.

#### *Dolomedes lafoensis* Berland, 1924

*Dolomedes lafoensis* Berland, 1924: 243, figs 192–194; male holotype. La Foa, New Caledonia, MNHP, not examined.

**Diagnosis.** Male with palpal tibia much longer than cymbium, RTA a low collariform ridge. Female with epigyne like that of *Do. instabilis*.

**Distribution.** Known only from La Foa on the western side of New Caledonia.

**Remarks.** The types were not found in MNHN but several aspects of the illustrated palp, viz., the long tibia and subtle RTA are very similar to that of *Dolomedes instabilis*; similarly for the epigyne. However, the median apophysis is not sufficiently well shown to confirm the absence or presence of the retrolateral process on the median apophysis. No further material from New Caledonia has been found.

### NEW HEBRIDES

#### *Dolomedes naja* Berland, 1938

*Dolomedes naja* Berland, 1938: 179, figs 141–142; holotype male, River Jordan, Santo Island, New Hebrides, 20 Apr 1927, J.R. Baker, MNHP, not examined.

**Remarks.** In all of the figured characters on the male palp—the large triangular DTP, the tibia of similar length to the cymbium and the widely bifid RTA, the male of this species is indifferently from those of *Do. facetus*. The type was not found in MNHP and, without its examination, final confirmation of the synonymy of *Do. naja* with *Do. facetus* is not possible.

### INDONESIA

#### *Dolomedes chroesus* Strand, 1911

*Dolomedes chroesus* Strand, 1911: 166, pl. 5, fig. 58; Davies, 1985: 102. Holotype female from forest in Wokomar, Wokam, Merauke, Indonesia, not examined.

*Dolomedes chroesus*: Chrysanthus, 1967: 422, figs 60, 61, female; Davies, 1985: 102.

*Dolomedes facetus*: Chrysanthus, 1967: 423, figs 65, 67, male misidentified.

**Material.** Indonesia: Aru Island: syntypes SMF 4779, 1 fem., juv. fem., not examined.

**Diagnosis.** Males of *Do. chroesus* differ from those of *Do. facetus* in the more slender DTP and the RTA has a shallow invagination with a longer lower lobe; the epigyne of females of *Do. chroesus* are similar to those of *Do. instabilis* but differ in the single longitudinal coil. They differ from those of *Do. facetus* in having steeply and smoothly curving lateral lobes and a large median field.

**Remarks.** This species is here explicitly removed from the Australian fauna. See Remarks in *Do. facetus* for explanation of crossed identifications by Chrysanthus (1967).

**Distribution.** Known only from Indonesia.

#### *Tasmomedes* Raven gen. nov.

**Etymology.** The genus name is formed from Tasmania and *Dolomedes*; the gender is masculine.

**Diagnosis.** Differs from *Megadolomedes* in the absence of pseudosegmented tarsi in the males and females, the absence of a PTF, the smaller RTA (Fig. 38f, g) and the less significant sexual dimorphism in size as well as the sloping profile of the carapace (Fig. 38d), as in *Dolomedes*. Most closely related to *Dolomedes*, from which it differs in the long cymbium and

conductor and small subdistal RTA. Males also differ from those of *Thaumasia* Perty, 1833 (see Silva & Carico, 2012) in that the DTP is not elongated and the embolus and fulcrum lie on the retrodistal corner of the bulb, as in *Dolomedes*.

**Type species and species included:** *Dolomedes eberhardarum* Strand, 1913.

**Distribution.** Victoria, Tasmania.

**Remarks.** The elevation of a genus for this species may seem equivocal but the inclusion of this species in *Dolomedes* is considered to excessively broaden the concept of the genus to make the concept unworkable.

***Tasmomedes eberhardarum* (Strand, 1913),  
new combination**

(Figs 4a, 38a–I. Map 4a)

*Dolomedes eberhardarum* Strand, 1913: 207.

**Material examined.** Victoria: holotype male, "Victoria", not examined except images of palp by Weisbaden curator; 1 fem., Grampians, Mt Rosa Picnic ground, 17 Dec 1987, P. Hudson, SAMA: 1 fem., with eggs, Wilsons Promontory [39°10'S 146°20'E], northern swampland, 19 Jan 1987, A. Neboiss, MV K-13692. Tasmania: 1 fem., 1 ma., Edgar, 43°01'S, 146°21'E, button grass plain, pitfall, 18 Feb 2004, M. Driessen, QM S66980, S75790. 2 ma., Mt Anne, 42°57'S, 146°21'E, button grass plain, pitfall, 5 Mar 2004, M. Driessen, QM S75458; 1 fem., same data but 18 Feb 2004, QM S75531. 2 ma., McPartlan Pass West, 42°51'S, 146°12'E, button grass plain, pitfall, 5 Mar 2004, M. Driessen, QM S75505, S75528. McPartlan Research A, 42°51'S, 146°12'E, button grass plain, M. Driessen: 3 ma., 5 Mar 2004, QM S75512, S67892, S75516; 1 fem., 1 ma., pitfall, 18 Feb 2004, QM S67893, S67877. 1 ma., McPartlan Research B, 42°51'S, 146°12'E, button grass plain, pitfall, 5 Mar 2004, M. Driessen, QM S67872. 1 fem., Condo Nth, 42°57'S, 146°21'E, button grass plain, pitfall, 5 Mar 2004, M. Driessen, QM S75522; 1 fem., same data but 25 Feb 2004, QM S80795; 1 ma., same data but Condo NW, 5 Mar 2004, QM S77777; 2 ma., Condo 42°58'S, 146°21'E, button grass plain, pitfall, 5 Mar 2004, M. Driessen, QM S75529, S77796; 1 fem., same data but 25 Feb 2004, QM S68038; 1 ma., Harbacks Rd Sth, button grass plain, pitfall, 16 Feb 2004, M. Driessen, QM S80790. Airstrip East, 43°02'S, 146°20'E, button grass plain, pitfall, M. Driessen: 1 ma., 5 Mar 2004, QM S75507. Airstrip Rd, button grass plain, pitfall, M. Driessen: 1 fem., (site 6E), 12 Mar 2002, QM S72193; 1 ma., (site 3B), pitfall, 15 Mar 2000, QM S70390; 1 ma., 15 Mar 2000, QM S65879; 1 ma., (site

5D) 15 Mar 2000, QM S48771; 2 ma., (site 6E), 1 Apr 1999, QM S48784; 1 ma., (site 6K), 14 Mar 2001, QM S70359; 1 fem., (site 6M), 14 Mar 2001, QM S70362; 1 ma., (site 5B), 14 Mar 2001, QM S70371; fem., (site e2J), 22 Mar 2000, QM S48795; 1 ma., (site 6F), Mar 1999, QM S48786. 2 ma., Sandfly Ck, 42°53'S, 146°22'E, button grass plain, pitfall, 5 Mar 2004, M. Driessen, QM S70022, S77784. McPartlan Pass, 42°51'S, 146°11'E, button grass plain, pitfall, M. Driessen; 1 ma., 5 Mar 2004, QM S75553; 1 ma., (site 5F), 19 Mar 2002, QM S70445; 1 ma., same data but (site 2D), QM S70446; 1 ma., same data but (site 1M), QM S70447; 1 ma., same data but (site 10M), QM S70448; 1 fem., same data but (site 8F), QM S70449; 1 ma., same data but (site 9B), QM S70450; 1 ma., QM S51333; 1 ma., same data but 12 Mar 1998, QM S48772; 2 ma., (site 5G), QM S70376; 1 ma., same data but (site 9O), QM S70273; 1 ma., same data but (site 12D), QM S70279; 2 ma., same data but (site 1M), QM S70377; 2 ma., same data but (grid 11 H), 15 Mar 2000, QM S70464; 1 ma., same data but QM S22403; 1 ma., same data but (site 1H), QM S70280; 1 ma., same data but (site 1G), QM S70281; 1 ma., same data but (site 12C), 22 Mar 2000, QM S70443. 1 ma., McPartlan Pass West, 42°51'S, 146°12'E, button grass plain, pitfall, 5 Mar 2004, M. Driessen, QM S70535; 1 ma., Wedge Inlet, 42°50'S, 146°12'E, button grass plain, pitfall, 5 Mar 2004, M. Driessen, QM S77776; 1 fem., same data but 18 Feb 2004, QM S67998; ma., Lake Pedder [42°00'S 146°10'E], 10 Mar 1972, A. Neboiss, MV K-13691; 1 ma., same data but A. Dartnall, TMAG J.

**Diagnosis.** Males and females differ from those of *Me. johndouglasi* in the smaller size and absence of pseudosegmented tarsi. Males differ from those of *Dolomedes* in the elongate fulcrum extending up the cymbium and the reduced form of the RTA (Fig. 38f, g). Females are unusual in the circular course of ducts in the vulva (Fig. 38i).

**Description.** Male QM S22403. Carapace 7.12 long, 6.24 wide. Abdomen 7.20 long, 4.16 wide. Total, 14.32.

I: 6.56; 2.80; 5.68; 5.60; 3.36; 24.00. II: 6.96; 3.20; 5.60; 5.60; 3.20; 24.56. III: 6.56; 2.56; 4.08; 4.32; 2.24; 19.76. IV: 7.76; 3.20; 0.56; 7.20; 2.64; 21.36. Palp: 3.20; 1.28; 1.20; 3.76; 9.44.

**Colour.** Carapace dark red brown with wide brown edges and narrow submarginal pallid band, no medial line. Abdomen dark with light flanks for one-third irregular pallid ostiate region; venter well defined with irregular pallid lines (as in Fig. 38c, d). **Eyes.** Group width/headwidth=0.70 through PLE, 0.53 through

mid-eye group. OQ front, back, long: 34, 56, 44. MOQ front, back, long: 19, 29, 17. AME: ALE: PME: PLE, 8: 7: 11: 10. PER just anterior to caput shoulder. AER with 40% overlap; PER two well separated lines *ca.* 0.5 of PME diameter. Pedal patella d1 (basal) p1r1. Chelicerae: 3p, 4r. Femur IV unmodified. STC with *ca.* 8 teeth; ITC bare. *Palp* (Fig. 38f, g). Tibia very short, similar in size to patella, RTA a low ridge or cone mid-laterally on retroventral edge, proventral edge with broad “shelf”. Cymbium concavity extends for length; retroventrally, VTA with large lobe paddle-shaped; fulcrum and conductor very long, cymbium groove very long; DTP banana-shaped, widest at mid-length, with ends irregular; MA anvil-like, apically with flared groove.

*Female* QM S68038. Carapace 7.28 long, 6.16 wide. Abdomen 10.00 long, 5.60 wide. Total, 17.28.

I: 6.16; 3.12; 5.04; 4.40; 2.40; 21.12. II: 6.00; 3.20; 4.80; 4.32; 2.24; 20.56. III: 5.28; 2.80; 2.88; 4.72; 2.32; 18.00. IV: 6.96; 3.04; 5.84; 6.40; 2.56; 24.80. *Palp*: 3.04; 1.52; 1.60; 2.48; 8.64.

Carapace dark red, broad brown edges, narrow pale submarginal band, lighter medial band around fovea and on caput. Abdomen with large dark ostiate area with pallid area around it, dark upper edge with mottling laterally; dark venter with two pairs of pallid parentheses-shaped areas centrally. *Eyes*. Group width/headwidth=0.67 through PLE, 0.50 through mid-eye group. OQ front, back, long: 39, 60, 41. MOQ front, back, long: 20, 29, 25. AME: ALE: PME: PLE, 8: 9: 12: 12. PER cut curve of caput shoulder. AER with 20–30% overlap; PER two well separated lines *ca.* 1 PME diameter apart. *Spines*. *Palp*: fe p1d1.1.1.2r1; pa p1d1.1.1; ti p2d1.1.1; ta pv1rv1.1. STC with 7 teeth; ITC bare. Scopula on tarsi I–IV. Epigyne (Fig. 38h, i). Lateral ridges smoothly curving with septum in distal quarter; internally, ducts follow circular path.

**Distribution and Habitat.** Tasmania, Victoria. In Tasmania, the spiders were found in button grass moorland which does not have flowing water.

**Remarks.** Males of *T. eberhardarum* have a similar palp to those of *Megadolomedes* in the elongate fulcrum (Fig. 38f, g) extending up the length of the cymbium. However, unlike both species of *Megadolomedes*, they lack the pseudosegmented tarsi and, apart from the palp, are similar to other very “standard” *Dolomedes* species treated here.

### *Megadolomedes* Davies & Raven, 1980

*Megadolomedes* Davies & Raven, 1980: 135.

**Type species.** *Dolomedes australianus* L. Koch, 1865, by original designation.

**Included species.** *Megadolomedes australianus* (L. Koch, 1865); *Megadolomedes johndouglasi* sp. nov.; *Megadolomedes trux* (Lamb, 1911); *Megadolomedes nord* sp. nov.

**Diagnosis.** Males and females differ from those of all other Australian pisaurids, except *Hygropoda*, in the long slender, pseudosegmented tarsi (e.g. Fig. 7e). Males and females differ from those of *Hygropoda* in the small ALE (Fig. 42a) in a distinctly recurved line (vs large and straight, Fig. 79a) and the small simple conical RTA (Figs 40b, 41b, 43a); females differ in the very large size and the epigyne being very wide rather than narrow.

**Description.** Males and females with pseudosegmented tarsi; sexual dimorphism notable (*Me. australianus*, *Me. trux*) or minor (*Me. johndouglasi*). PITF present. Carapace in lateral view flat, sloping down very little to eye region (as in Fig. 5f). Eyes of PER larger than those of AER; AER about 0.6–0.70 of width of PER. Creekside diurnal and nocturnal spiders hunting freely beside creeks usually with at least first pair of legs in water.

**Distribution.** Eastern Australia from Queensland to Tasmania.

**Remarks.** Davies and Raven (1980) diagnosed the genus based on the males of the sole species known, *Megadolomedes australianus*, and noted the strong sexual dimorphism. Those males were taken from Queensland, well north of the type locality near Sydney, New South Wales. A male from the Sydney region is not conspecific with that from Queensland figured and listed by Davies and Raven (1980) which

are here considered to be the newly restored *Megadolomedes trux*. However, in the genus, although all species have similar palps (where known) and epigynes, the sexual dimorphism in size is not so strong in *Me. johndouglasi* as in two of the northern species.

**History.** Davies and Raven (1980) revised the *Dolomedes australianus* group and concluded that both *Dolomedes cervinus* L. Koch, 1876 and *Dolomedes trux* Lamb, 1911 were conspecific with it, synonymised the species and diagnosed a new genus.

#### KEY TO SPECIES

Males (Males of *Me. nord* sp. nov. unknown)

1. Cymbium very long, embolus extends as to tip of cymbium (Figs 40a, 41a; New South Wales, Queensland) ..... 2
  - Cymbium slightly elongate, embolus not reaching cymbial top (Fig. 43a; Tasmania, Victoria)..... *Me. johndouglasi* sp. nov.
2. Large spine at base of embolus (Fig. 41b) ..... *Me. trux*
  - No spine at base of embolus (Fig. 40a, b) ..... *Me. australianus*

Females

1. Epigyne clearly longer than wide (Figs 42d, 43c)..... 2
  - Epigyne as wide as long or wider (Figs 40d, 42b) ..... 3
2. (1). Epigyne with spermathecal coils fused (Fig. 43d; Tasmania, Victoria) ..... *Me. johndouglasi* sp. nov.
  - Epigyne with three separate spermathecal coils (Fig. 42e; Cape York, Queensland) ..... *Me. nord* sp. nov.
3. (1). Spermathecae confined to posterior third of epigyne (Fig. 40d; central coastal New South Wales) ..... *Me. australianus*
  - Spermathecae extend for at least half of epigyne (Fig. 42c; Queensland to northern coastal New South Wales) ..... *Me. trux*

#### *Megadolomedes australianus* (L. Koch, 1865) (Fig. 40a–d. Map 4b)

*Dolomedes australianus* L. Koch, 1865: 863; L. Koch, 1876: 873, pl. 75, fig. 2.

*Dolomedes cervinus* L. Koch, 1876: 872, pl. 75, fig. 1. Holotype whereabouts unknown, juvenile, Nepean River, New South Wales; considered lost from ZMH, see Davies (1985).

**Material examined.** Type. New South Wales: holotype (*Dolomedes australianus*) juvenile male, ZMH 302, examined.

**Other Material examined.** New South Wales: 1 fem., Budderoo National Park, Minnamurra Rainforest Centre, 34°38'S 150°44'E, on boulder in narrow gorge at foot of waterfall, R. Oberprieler, A. Zwick, ANIC 42-002260; 1 ma., Double Dumps Fire Trail, 700 m off Daisy Patch Rd, Enfield State Forest, 163AS., 31°20'50"S 151°54'E, 1080 m, 4 Feb–9 Apr 1993, pitfall, G.A. Cassis, M.R. Gray, AM KS39496; 1 fem., Colo River, 8 km north of Upper Colo, 33°24'S 150°40'E, 14 Mar 1997, L. Voigt, AM KS53192; 1 fem., Bulliac, AM K34553.

**Diagnosis.** Males differ from those of *Me. trux* and *Me. johndouglasi* sp. nov. in the short barrel-shaped palpal tibia and the DTP is broad and thumb-like. Females differ from those of *Me. johndouglasi* sp. nov. in the different abdominal pattern (see Davies & Raven 1980, figs 8–12), the relatively broader epigyne and the thread-like overlying spermathecal coils. Females differ from those of *Me. trux* in that the spermathecae are aligned transversely and thus occupy relatively less of the epigyne (Fig. 40d).

**Description.** Male AM KS39496. Carapace 6.00 long, 4.96 wide. Abdomen mashed.

I: 6.48, 2.64, 6.24, 6.48, 3.60, 25.44. II: 6.48, 2.72, 6.24, 6.16, 3.44, 25.04. III: , 6.16, 2.56, 5.04, 5.52, 2.80, 22.08. IV: 6.64, 2.80, 6.32, 6.80, 4.80, 27.36. Palp: 3.20, 1.20, 1.20, 4.72, 10.32.

**Eyes.** Eye group width/headwidth= 0.64 through PLE, 0.53 through PME. Eye group front: back: long, 30: 44: 29. MOQ front: back: long, 15: 24: 20. AME: ALE: PME:PLE, 6: 5: 10: 10. PER cuts posterior of shoulder. Back eye row in just two lines. From above, AER overlap 30%. Chelicerae with 2 teeth on promargin, 4 separated on retromargin. **Claws.** STC I with 8–10 teeth. **Spines.** Palp: fe p1d1.1.1.2r1; pa 0; ti p1d1. Palp. Conductor large, racket-shaped,

distally sinuous beside embolus. Embolus base roughly conical with no processes or spines; cymbium highly twisted; median apophysis flared; DTP roughly right-angled; embolus extends to end of cymbium. RTA pointed, apically bent. VTA tripartite with broad distal lobe.

Female ANIC, Budderoo National Park. Carapace 13.68 long, 12.87 wide. Abdomen 18.22 long, 12.15 wide.

I: 20.60, 7.03, 19.68, 17.22, 14.17, 78.70. II: 21.39, 7.59, 18.70, 17.57, 14.17, 79.42. III: 19.28, 7.58, 16.45, 16.03, 11.83, 71.17. IV: 22.01, 7.31, 19.36, 23.13, 12.83, 84.64. Palp: 4.67, 2.83, 4.17, 5.33, 17.00.

*Eyes.* Eye group width/headwidth= 0.54 through PLE, 0.43 through PME. Eye Group front: back: long, 59: 97: 52. MOQ front: back: long, 20: 43: 32. AME: ALE: PME:PLE, 12:7:14:15. PER cuts through middle of shoulder. Back eye row in two lines separated by half of ALE. From above, AER overlap 12%. Chelicerae with two teeth on promargin, 4 separated on retromargin. White hair on distal patella and basal tibia of palp. *Claws.* Palp with 5 teeth; 5–7 on STC I. *Spines.* Patellae: p1d1r1. Palp: fe p1d1.1.1.2r1; pa p1d2; ti p2d2; ta p1r1v2. I: fe p5d3r5; pa p1d1r1; ti p1d3r1v2.2.2; me p2r2v2.2.2. Epigyne with broad, smoothly curving lateral lobes and median field in distal third; vulva with large posterior lobe and successively smaller anterior lobes overlain with three loops of filamentous ducts.

**Distribution.** From just north of Sydney at the Nepean River south through at least to Wooloongong, New South Wales.

***Megadolomedes trux* (Lamb, 1911) new comb.**  
(Figs 1c, h, 3b, c, 39a–c, 40a–c, 52a–c. Map 4b)

*Dolomedes trux* Lamb, 1911: 173, fig. 4; Rainbow, 1912: 210, figs 1–3; Davies & Gallon, 1986: 235. First synonymised with *Me. australianus* by Davies & Raven (1980), here rejected.

*Megadolomedes australianus*: Davies & Raven, 1980: 136, figs 1–12, plate 1A–D, male and female misidentified.

**Material examined.** Type: Queensland: holotype, penult. female, Brisbane, QM G55, examined.

**Other Material Examined.** Queensland: 1 fem., Unanderra, 12 May 2005, per AQIS, QM S69850; 4 fem., 1 penult. ma., Conondale Ra., 26°45'S, 152°37'E,

rainforest, 1974, R.J. Raven, QM S13487; fem., near Cairns [17°00'S 145°50'E], May 1957, MV K-13688; 1 fem., The Gap, Brisbane, 27°27'S, 152°57'E, 29 Nov 1972, R. McKay, QM S13495; 1 fem., Warro SF, 24°33'S, 151°44'E, 3 Jun 1974, P. Filewood, QM S13488; 1 fem., Mt Windsor Tableland, base camp, 16°12'S, 145°05'E, camp site, 26 Dec 1980, Australian New Zealand Schools Expedition Society expedition, QM S13483; 2 fem., Proserpine, Lethe Brook crossing, site XY20, 20°24'S, 148°31'E, rainforest, beating, 15 Mar 2008, R.J. Raven, QM S86873; 1 ma., Toomba Homestead site, 19°58'S, 145°34'E, basalt ridge with *Brachychiton*, night collection, 16 Dec 2006, R.J. Raven, QM S79215; 1 fem., Davies Ck, 16°55'S, 145°32'E, 30 Mar 1975, N. Clyde Coleman, QM S235; 1 fem., Mt Molloy, 16°41'S, 145°20'E, Sept 1969, F. Little, QM S236; 2 fem., Booloumba Ck, Conondale Ra., 26°39'S, 152°39'E, rainforest, Mar 1973, R.J. Raven, QM S237; 1 fem., Kroombit Tops, Lower Kroombit Ck, 24°25'S, 151°03'E, 15 Dec 1983, V. Davies, J. Gallon, G. Thompson, P. Lawless, QM S13489; 1 fem., Home Rule, Wallaby Ck, 15°44'S, 145°15'E, rainforest, 18 Nov 1974, D. Joffe, V. Davies, QM S233; 2 fem., Home Rule, Wallaby Ck, 15°44'S, 145°18'E, rainforest, 19 Nov 1974, J. Covacevich, D. Joffe, V.E. Davies, QM S234; 1 fem., Kroombit crossing, Kroombit Tops, Site 15, 24°22'S, 151°01'E, 15 Dec 1983, V. Davies, J. Gallon, G. Thompson, P. Lawless, QM S13479; 1 fem., Shiptons Flat, 15°48'S, 145°15'E, rainforest, 1975, L. Roberts, QM S13481; 1 fem., Mt Coot-tha, Brisbane, 27°29'S, 152°57'E, 12 Jul 1988, R.J. Raven, QM S13515; 1 ma., 1 fem., Gayundah Ck, Hinchinbrook Is., 16.09 km N of track, 18°22'S, 146°13'E, rainforest, 7–14 Nov 1984, V. Davies, J. Gallon, QM S13484; 1 ma. 3, Cedar Ck, near Samford, 27°22'S, 152°53'E, rainforest, 21 Dec 1978, R. Raven, V. Davies, QM S13486; 1 ma., Cedar Ck Falls, via Samford, 27°22'S, 152°53'E, rainforest, 5 Feb 1986, R.J. Raven, J. Gallon, QM S13519; 1 fem., Mt Moffatt NP, Top Moffatt Camp, 25°01'S, 147°57'E, SC, 13–15 Dec 1987, J. Gallon, QM S14504; 2 fem., Blackdown Tableland, 23°48'S, 149°08'E, open forest, 1 Feb 1981, R.J. Raven, QM S13490; 1 ma., 1 fem., Home Rule, Wallaby Ck, 15°44'S, 145°18'E, rainforest, 19 Nov 1974, J. Covacevich, D. Joffe, V.E. Davies, QM S194; 1 ma., Cedar Ck, Mt Glorious, 27°21'S, 152°46'E, rainforest, 16 Nov 1973, R.J. Raven, QM S230; 2 ma., Home Rule, Wallaby Ck, 15°44'S, 145°18'E, rainforest, 19 Nov 1974, J. Covacevich, D. Joffe, V.E. Davies, QM S231; 1 fem., Kondalilla NP, 26°40'S, 152°52'E, rainforest, 10 Dec 1973, R.J. Raven, QM S238; 1 fem., Goodna reach, Brisbane R, 27°35'S, 152°54'E, 13 May 1975, R. Monroe, QM S239; 1 fem., Beerburum, 26°58'S, 152°58'E, 29 Nov 1951, G.J. Male, QM S240; 1 fem., Little Yabba Ck, 26°37'S, 152°41'E, rainforest, 25–26 Jan 1975, G. May, QM S241; 1 fem., Kilcoy Ck, E branch, 26°42'S, 152°34'E, 15 Nov 1978, K. McDonald, QM S242; 3 fem., Mt Tamborine, 27°56'S, 153°12'E, rainforest, 12 Nov 1979, QM S13478; 1 fem., Booloumba Ck, Conondale Ra., 26°39'S,

152°39'E, rainforest, 8 Aug 1986, R. Raven, J. Gallon, QM S13511; 1 fem., Blackall Ra., 26°34'S, 152°52'E, C.J. Wild, QM S13480; 1 fem., Cooloola, 26°12'S, 153°03'E, 13 Jul 1973, R.J. Raven, QM S13513; 1 fem., Mt Glorious, 27°20'S, 152°46'E, rainforest, 19 Jul 1974, R.J. Raven, QM S13514; 1 fem., Cape Tribulation, 16°05'S, 145°26'E, Apr 1990, R.J. Raven, QM S20428; 1 fem., Mt Coot-tha, J.C. Slaughter Falls, 27°30'S, 152°55'E, 12 Dec 1989, R. Raven, J. Gallon, QM S12538; 1 fem., Mt Spurgeon, 3 km S, 16°27'S, 145°11'E, sclerophyll, 19–23 Nov 1997, G. Monteith, D. Cook, C. Burwell, QM S41847; 1 fem., 1 penult. ma., Crows Nest, 27°16'S, 152°03'E, G. May, QM S13517; 1 fem., 1 penult. ma., Kilcoy Ck, E branch, 26°45'S, 152°34'E, 15 Nov 1978, K. McDonald, QM S13512; 1 fem., Conondale Ra., 26°45'S, 152°37'E, rainforest, 23 Feb 1975, G. Maywold, G. Czechura, QM S13508; 1 ma., Mt Coot-tha, J.C. Slaughter Falls, 27°30'S, 152°55'E, 12 Dec 1989, R. Raven, J. Gallon, QM S15536; 1 ma., Stone Ck. (Hasenpusch), 17°28'S, 146°01'E, 7 Dec 1995, G. Monteith, G. Thompson, D. Cook, QM S37961; 1 ma., Mt Coot-tha, J.C. Slaughter Falls, 27°30'S, 152°55'E, 12 Dec 1989, R. Raven, J. Gallon, QM S15537; 1 fem., Henrietta Ck, 18 km SW Millaa Millaa, 17°36'S, 145°45'E, 16 Apr 1997, C. Burwell, G. Monteith, J. Wright, QM S40143; 1 ma., Mt Coot-tha, J.C. Slaughter Falls, 27°30'S, 152°55'E, 12 Dec 1989, R. Raven, J. Gallon, QM S15535. New South Wales: 1 fem., Gordon, 8 Dec 1982, AM KS10601; 1 fem., Richmond Ra., 28°20'S, 152°55'E, rainforest, 14 Sep 1974, R.J. Raven, QM S232; 2 fem., Cudgen, 28°16'S, 153°33'E, 20–21 Nov 1978, R. Raven, H. Heatwole, G. Czechura, QM S13503; 1 fem., Richmond Ra., 28°20'S, 152°55'E, open forest, 16 Apr 1976, R.J. Raven, QM S13491; 1 fem., Whian Whian SF, 28°41'S, 153°19'E, rainforest, 9–12 Sep 1976, R.J. Raven, QM S13492.

Juveniles with only locality, coordinates, and registration number. Queensland: Burnett Ck, 25°08'S, 152°04'E, QM S13516; Booloumba Ck, Conondale Ra., 26°39'S, 152°39'E, QM S67780; North Stradbroke Is., 1.6 km N Dunwich, 27°30'S, 153°24'E, QM S13494; Kilcoy Ck, E branch, 26°45'S, 152°34'E, QM S13496; Teviot Brook, Boonah, 27°57'S, 152°33'E, QM S13499; Forest Glen, 26°42'S, 152°59'E, QM S13500; Mudgeeraba, 28°05'S, 153°22'E, QM S13501; Kilcoy Ck, 26°45'S, 152°34'E, QM S13493; Blackall Ra., 26°34'S, 152°52'E, QM W2146; Home Rule, 15°44'S, 145°18'E, QM S13482; Majors Mt, 17°38'S, 145°32'E, QM S13485; Spear Ck, 16°42'S, 145°24'E, QM S13520; Eungella NP, 21°10'S, 148°30'E, QM S13504; Enoggera, Brisbane, 27°26'S, 152°57'E, QM S13518; Bloomfield, 16°04'S, 145°09'E, QM S13507; Finch Hatton NP, Finch Hatton Gorge, 21°04'S, 148°38'E, QM S13505; Laidley Ck, 27°31'S, 152°25'E, QM S13497; Conondale Ra., 26°45'S, 152°37'E, QM S13510; Kilcoy Ck, 26°47'S, 152°43'E, QM S13509; Kroombit Tops, Callide Ck, Site 16, 24°25'S, 151°03'E, QM S13498; Gayundah Ck, Hinchinbrook

Is., 18°22'S, 146°13'E, QM S13506; Cape Tribulation, 16°05'S, 145°26'E, QM S20476.

**Diagnosis.** Males differ from those of *Me. johndouglassi* sp. nov. in the short barrel-shaped palpal tibia and the broad and thumb-like DTP. Females differ from those of *Me. johndouglassi* sp. nov. in the different abdominal pattern (see Davies & Raven 1980, figs 8–12), the relatively broader epigyne and the thread-like overlying spermathecal coils.

**Description.** *Male* QM S79215. Carapace 3.76 long, 3.36 wide. Abdomen 3.84 long, 1.84 wide. Total, 7.60.

I: 5.60, 0.96, 5.44, 5.44, 3.20, 20.64. II: 5.36, 1.68, 5.20, 4.88, 3.52, 20.64. III: 4.40, 1.36, 3.92, 4.08, 2.80, 16.56. IV: 5.92, 1.68, 4.64, 5.52, 4.24, 22.00. Palp: 1.20, 0.40, 0.32, 1.60, 3.52.

*Eyes.* Eye group width/headwidth= 0.73 through PLE, 0.55 through PME. Eye Group front: back: long, 47: 75: 40. MOQ front: back: long, 25: 38: 20. AME: ALE: PME: PLE, 10: 9: 13: 15. Back eye row in two lines well separated by half of ALE. From above, AER overlap 12%. PLE on large tubercles, higher posteriorly. Clypeus = 1.80 mm. Chelicerae with two teeth on promargin, 4 separated on retromargin. *Claws.* 8 teeth on STC I. *Spines.* Patellae: p1d1r1. Palp: fe p1d1.1.1.2r1; pa d1; ti 0.

*Female* QM S13478. Carapace 13.78 long, 11.65 wide. Abdomen 16.27 long, 9.46 wide. Total, 30.0.

I: 19.84, 7.51, 18.73, 17.01, 15.63, 78.72. II: 19.63, 7.8, 18.32, 17.81, 15.03, 78.59. III: 18.57, 6.65, 15.60, 15.93, 12.54, 69.29. IV: 21.95, 7.03, 18.76, 20.98, 16.04, 84.76. Palp: 7.00, 3.00, 4.17, 7.50, 21.67.

*Eyes.* Eye group width/headwidth= 0.55 through PLE, 0.38 through PME. Eye Group front: back: long, 55: 91: 50. MOQ front: back: long, 28: 41: 32. AME: ALE: PME: PLE, 12:8:16:15. PER cuts through middle of shoulder. Back eye row in two lines separated by half of ALE. From above, AER overlap 15%. PLE on large tubercles, higher posteriorly. Clypeus= 1.80 mm. Chelicerae with two teeth on promargin, 4 separated on retromargin. *Claws.* Palp with 6 teeth; 8 on STC I. Scopula absent. *Spines.* Patellae: p1d1r1. Palp: fe p1d1.1.1.2r1; pa

p1d2r1; ti p2d2; ta p1r1v2. I: fe p5d3r5; pa p1d1r1; ti p1.2d1r2v2.2.2; me p2r2v2.2.3. Epigyne with broad, smoothly curving lateral lobes and median field in distal third; vulva with large posterior lobe and successively smaller anterior lobes overlain with three loops of filamentous ducts.

**Distribution.** East of the Great Dividing Range, at least from northern New South Wales, possibly further south, to Cooktown, north Queensland. Females from Gordon, central New South Wales, are unequivocally those of *Me. trux* and thus a very narrow zone south of which *Me. australianus* occurs.

***Megadolomedes johndouglasi* sp. nov.**  
(Figs 39d, 43a–d. Map 4c)

*Dolomedes australianus*: Hickman, 1967: 82, figs 144–146. Misidentification.

**Etymology.** Named in honour of Mr John Douglas, Citizen scientist and Honorary at the Queen Victoria Museum and Art Gallery, Launceston, who persistently refused to allow RJR to ignore the significance of the larger male of which he had only photos.

**Material examined.** Tasmania: holotype, male, Forth, Forth River, P. Zwick, April 1972, QM S28796; paratype (allotype), TMAG J2851, 1 fem. with egg sac, Tunnack, 28 Dec 1988, Mrs S. Irvine; fem. Gowen Brae, beside stream, R. Raven, 24 Feb 2014; juv. fem., Saxon Ck, 10 km N Frankfort [41°16'S 146°42'E], 19 Nov 1972, A. Neboiss, MV K-13674; 1 fem., Trowutta Natural Arch, Cave twilight zone, 41°02'S 145°05'E, 21 Jan 1981, N. Poulter, AM KS8609. Victoria: 1 fem. with egg sac, Gibbo R., [36°50'S 147°40'E], 325 km N of Benambra, 25 Feb 1993, G. Milledge, MV K-13669; fem., Thompson River Gorge, Gippsland [38°00'S 146°40'E], 15 Dec 1964, MV K-13670; fem., Porepunkah [36°40'S 146°50'E], 27 Jan 1957, A. Neboiss, MV K-13671; fem., Dartmouth Survey, Mitta Mitta R./Toke Ck [36°30'S 147°20'E], 30 Mar 1974, MV K-13672; fem., no data, MV K13673; 1 fem., Bemm R, 37°46'S, 148°58'E, creek margin, 16–28 Nov ?1993, V. Salanitri, QM S28789; 1 juv. probable, Upper Tumut Gorge, Snowy Mtns, 35°20'S, 148°14'E, 28 Feb 1957, I.G. Filmer, QM S13502.

**Diagnosis.** Males differ from those of *Me. australianus* in the long cylindrical palpal tibia, the longer, curved DTP, the fulcrum extends only to the subapical cymbium, and the relatively larger size of the spider. Females differ from those of *Me. australianus* in the different abdominal pattern

(Fig. 39d), the relatively narrower epigyne (Fig. 43c) and fewer spermathecal coils (Fig. 43d).

**Description** Holotype male QM S28796. Carapace 6.80 long, 5.84 wide. Abdomen 4.80 long, 4.00 wide. Total, 11.6.

I: 8.16; 2.80; 7.36; 8.80; 4.40; 31.52. II: 8.64; 3.12; 7.76; 8.32; 6.40; 34.24. III: 7.36; 2.96; 6.88; 6.80; 4.48; 28.48. IV: 9.44; 3.92; 7.68; 9.20; 6.16; 36.40. Palp: 3.92; 1.28; 1.60; 3.04; 9.84.

**Colour.** Carapace and abdomen faded entirely yellow, without pattern. **Eyes.** Group width/headwidth=0.71 through PLE, 0.50 through mid-eye group. OQ front, back, long: 33, 55, 29. MOQ front, back, long: 11, 25, 16. AME: ALE: PME: PLE, 6: 6: 9: 10. PER cuts through mid-curve of caput shoulder. AER with 30% overlap; PER in two well lines separated by ca. 0.6 of PME diameter. Chelicerae 3p, 4r; fang broad for most of its length. Tarsi pseudosegmented, strongly curved; tarsal measurements about 6% shorter than actual. **Spines.** Palp: fe p1d1.1.1.2; pa p1; ti p1. Palp: RTA a simple conical subdistal spine set retrodorsally.

Allotype Female TMAG J2851. Carapace 9.67 long, 8.67 wide. Abdomen 10.50 long, 7.17 wide. Total, 20.2.

I: 11.50; 4.83; 10.83; 11.50; 8.17; 46.83. II: 11.83; 5.00; 11.33; 10.33; 8.00; 46.50. III: 10.83; 4.17; 9.17; 10.17; 7.17; 41.50. IV: 13.50; 5.00; 11.67; 13.00; 9.00; 52.17. Palp: 4.33; 2.00; 2.33; 4.33; 13.00.

Carapace dark brown, edge to posterior caput light brown with broad pallid submarginal band to clypeus; two slender ovoid pallid spots anterior to fovea; pile of short black hairs darken effect. Abdomen dorsally dark brown with two full length bands of white hairs along edge partially forming 3 chevrons posteriorly; narrower band around edge of ostiate area; legs annulate; laterally abdomen dark, paler venter with pair of lines of sclerotised spots. Carapace profile flat. **Eyes.** Clypeus 1.00 mm to AME. Group width/headwidth=0.53 through PLE, 0.28 through mid-eye group. OQ front, back, long: 45, 74, 44. MOQ front, back, long: 21, 33, 25. AME: ALE: PME: PLE, 8: 8: 14: 13. PER cuts through mid-curve of caput shoulder. AER almost without overlap; PER in two well

separated lines by 0.6 of PME. Chelicerae 4r, 2p. STC 7–8; ITC, 0. Epigyne with lateral lobes forming heart-shape, edges anteriorly and posteriorly, convergent with slight discontinuity at distal limit of the median field; median field with subtle trianguloid corners anteriorly. Vulva with CD curving to dorsum quickly widening and coiling once (Fig. 43d).

**Distribution.** Tasmania, Victoria.

**Remarks.** *Me. johndouglasi* is by far the largest pisaurid in Tasmania and Victoria.

***Megadolomedes nord* sp. nov.**  
(Fig. 42d, e. Map 4c)

**Etymology.** The species epithet is a noun in apposition for the French word for north, nord.

**Material examined.** Queensland: holotype female, Iron Range, 12°45'S 143°19'E, 24–30 June 1976, R. Raven, V. Davies, QM S67749; paratypes, females, same data as holotype, QM S108410.

**Diagnosis.** Females differ from those of *Me. trux* in the relatively long epigyne (Fig. 42d) and the similar or anteriorly enlarging lobes of spermathecae are directly more distally (Fig. 42e).

**Description.** Holotype female QM S67749. Carapace 8.83 long, 8.00 wide. Abdomen 10.33 long, 6.17 wide. Total, 19.2.

I: 13.00, 4.67, 11.33, 12.00, 9.33, 50.33. II: 13.17, 5.00, 13.67, 13.67, 8.83, 54.33. III: 12.00, 4.17, 10.17, 10.17, 7.67, 44.17. IV: 14.17, 4.67, 12.33, 14.33, 10.33, 55.83. Palp: 4.00, 1.83, 2.50, 3.83, 12.17.

**Eyes.** Eye group width/headwidth= 0.48 through PLE, 0.38 through PME. Eye Group front: back: long, 42: 66: 40. MOQ front: back: long, 23: 35: 25. AME: ALE: PME: PLE, 10: 6: 15: 13. From above, AER overlap 30%. Clypeus=0.63 mm. Chelicerae with two teeth on promargin, 4 separated on retromargin. **Claws.** 6 teeth on STC I. Scopula on metatarsi I, II and in two narrow lateral bands on III, IV. **Spines.** Patellae: p1d1r1. Palp: fe p1d1.1.1.2r1; pa p1d2r1; ti p2d2; ta p1r1v2. I: fe p5d3r5; pa p1d1r1; ti p2d1.1r2v2.2.2; me p3r5v2.2.3. II, III: fe p5d3r5; pa p1d1r1; ti p2d2r2v2.2.2; me p3r5v2.2.3. IV: fe p5d3r3, rest as I. Epigyne with broad, smoothly curving lateral lobes, narrowing slightly at median field

in distal third; vulva with small posterior lobe and successively larger anterior lobes without filamentous ducts.

**Distribution.** Cape York, Iron Range, Queensland.

***Ornodolomedes*, gen. nov.**

**Etymology.** The genus name is formed from ornate and *Dolomedes*; the gender is masculine.

**Type species.** *Ornodolomedes benrevelli* sp. nov.

**Genus Common name.** Rainforest Sprites

**Diagnosis.** Males and females differ from those of most other Australian pisaurids by the long overlapping spines on the ventral tibiae and metatarsi (Fig. 7f), from *Hygropoda* in the absence of pseudosegmented (curved) tarsi and from *Mangromedes*, gen. nov., in males having a small distal RTA and females having the epigyne of normal width, not with “wings”. Males and females are readily distinguished from those of *Dolomedes* by the ornate pattern on the carapace and abdomen.

**Diagnostic description.** Males and females of similar size. Carapace flat in lateral view or with medial saddle rising to eye region (Figs 5e, f, 50c). With median dark inverted V on inner diagonals of cheliceral face (e.g. Fig. 50d). Eyes of PER larger than those of AER; AER about 0.7 of width of PER (Figs 54e, 56c, d). MOQ subvertical; thus MOQ length from above small. Abdomen laterally dark with well defined pallid venter. PTF present. Tarsi not pseudosegmented. Scopula absent. Palpal femur dorsal spines, either 1.2 or 1.1.2 (most species), rarely 1.1.1.2. Three (tibiae) and two (metatarsi) very long pairs of ventral spines (each plus 1 short distal pair) on I, II overlap and alone span length of article. *ca.* 6 teeth on STC. Male cymbium shorter (*Ornodolomedes gorenpul* sp. nov.) than or longer than palpal tibia (all other species). Arboreal nocturnal spiders hunting freely on leaves and bark in closed forests.

**Included species.** *O. benrevelli* sp. nov., *O. gorenpul* sp. nov., *O. mickfanningi* sp. nov., *O. marshi* sp. nov., *O. nebulosus* sp. nov., *O. nicholsoni* sp. nov., *O. southcotti* sp. nov., *O. xypee* sp. nov., *O. yalangi* sp. nov.

**Distribution and Habitat.** Found in rainforest, vine thickets and in riverine areas of closed eucalypt forest in Queensland, New South Wales, Victoria, South Australia and Western Australia.

**Remarks.** The genus common name, Rainforest Sprites, was conferred by Jude McAuley as part of the launch of the World Science Festival Brisbane at the Queensland Museum in March 2017.

KEY TO *ORNODOLOMEDES* SPECIES

Males (males of *O. xypee* sp. nov., unknown)

1. Palpal tibia long, only slightly shorter than cymbium (cymbium =1.10–1.40x tibia, e.g. Fig. 63j) ..... 2
  - Palpal tibia short, much shorter than cymbium (cymbium =1.80–2.2x tibia, e.g. Fig. 63a)..... 6
2. DTP apically blunt (Fig. 46a)..... 3
  - DTP apical conical or truncated (Fig. 57a) .. 5
3. RTA in lateral view a broad ridge with 2–3 small points (Fig. 63e, i) ..... 4
  - RTA in lateral view narrow rectanguloid (Fig. 46b)..... *O. benrevelli*
4. RTA trianguloid, apically bifid (Fig. 63e) ..... *O. yalangi*
  - RTA rectanguloid (Fig. 63i) .... *O. staricki*
5. RTA in lateral view small, thumblike (Figs 51b, 52c) ..... *O. mickfanningi*
  - RTA in lateral view a broad keel (Fig. 57a, b) ..... *O. southcotti*
6. RTA in lateral view subtle (Fig. 49b) ... *O. gorenpul*
  - RTA in lateral view distinct (Figs 53c, 59d, 61d) ..... 7
7. RTA in ventral view a strongly procurved hook (Fig. 53b)..... *O. nebulosus*
  - RTA in ventral view a conical spine (Figs 59b, 61b) ..... 8
8. Palpal tibia longer than cymbium (Fig. 59b) ..... *O. nicholsoni*
  - Palpal tibia clearly shorter than cymbium

(Fig. 61d).....*O. marshi*

Females (females of *O. southcotti*, *O. staricki*, and *O. marshi* and *O. nebulosus* unknown)

1. Epigyne with long median field occupying >60% of length (Figs 46c, 51c, 59e) ..... 2
  - Epigyne not as above ..... 4
2. Overall shape of epigyne clearly wider than long (Fig. 46c) ..... *O. benrevelli*
  - Overall shape of epigyne as wide as long or longer (Figs 51c, 59e)..... 3
3. Epigyne trianguloid (Fig. 59e) *O. nicholsoni*
  - Epigyne broadly pear-shaped (Fig. 51c) ..... *O. mickfanningi*
4. Epigyne with narrow anterior median scape, median field arrow head shaped (pointed posteriorly, e.g. Fig. 60b) ..... 5
  - Epigyne with broad anterior median scape and median field indistinct but with posterior median scape (Fig. 49c). *O. gorenpul*
5. Epigyne externally with dark slender sigmoidal duct (Fig. 60b) ..... *O. xypee*
  - Epigyne externally with large folded ducts appearing tear-shaped (Fig. 61d) *O. nebulosus*

***Ornodolomedes benrevelli* sp. nov.**  
(Figs 44a–c, 45, 46a–d, 47a–c. Map 4d)

**Etymology.** The species epithet is honour of the collector and photographer, Mr Ben Revell, in testament to his efforts as a “Citizen Scientist” for collecting a species that had remained so long undiscovered so close to Brisbane, despite day and night arachnological expeditions to the area.

**Common Name.** Masked Wood sprite.

**Material examined.** Queensland: holotype male, Mt Glorious, rainforest, 27.32579°S, 152.76199°E, B. Revell, May 2016, QM S104920; 2 female paratypes, same data, QM S104916.

**Diagnosis.** The male palp is very similar to that of *O. mickfanningi* sp. nov., in that the RTA is quite long (Figs 46a, 47a) but differs in that the RTA is more basal, the cymbium is only slightly longer than the tibia and the DTP is broader. Compared to that of *O. mickfanningi* sp. nov., the epigyne is clearly longer than wide and the spermathecal ducts more slender, widely spaced

and diagonal. Males and females are easily recognised from other pisaurids by the distinctive bold brown, black and pallid markings on the carapace and abdomen (Figs 44a–c, 45).

**Description.** Holotype male QM S104920. Carapace 3.72 long, 3.28 wide. Abdomen 3.48, 2.32 wide. Total, 7.20.

I: 4.88; 1.60; 4.40; 4.56; 2.64; 18.08. II: 4.72; 1.52; 4.16; 4.48; 2.40; 17.28. III: 3.28; 1.44; 2.80; 3.20; 1.60; 12.32. IV: 4.64; 1.52; 4.08; 5.28; 1.20; 16.72. Palp: 1.84; 1.12, 1.12; 1.28; 6.08.

*Colour* (in alcohol *cf.* colour in life, Fig. 44a–c). Carapace yellow brown with light pile of fine black hairs, central area to eyes burgundy, two black patches on posterior corners. Abdomen with strong constriction at two-thirds with fawn brown flanks. Chelicerae with dark inverted V. *Eyes.* Group width/headwidth=0.67 through PLE, 0.68 through mid-eye group. OQ front, back, long: 19, 30, 17. MOQ front, back, long: 12, 17, 8. AME: ALE: PME: PLE, 10: 6: 13: 13. PER in two lines separated by third of PME diameter; AER in 2 lines. Chelicerae with 2 large teeth on promargin, 4 on retromargin. STC with 6 long teeth; ITC bare. Scopula entirely absent. *Spines.* Pedal patellae with triad. Palp: fe p1d1.2r1; pa p1d1.1; ti p2d1. Palp (Figs 46a, b, 47a). Cymbium of male palp long, 1.14 times longer than tibia; retrobasal lobe thumb-like with ledge narrowing anteriorly. RTA retrolateral, clearly subdistal; VTA a low chelate lobe. Transverse part of tegulum slightly diagonal, DTP broad thumb-like.

Allotype female QM S104916. Carapace 3.80 long, 3.60 wide. Abdomen 4.04 long, 2.40 wide. Total, 7.84.

I: 3.68; 1.60; 3.96; 3.28; 2.04; 14.56. II: 3.84; 1.00; 3.48; 3.24; 1.88; 13.44. III: 3.04; 1.00; 2.36; 2.28; 1.12; 9.80. IV: 4.32; 1.12; 3.28; 4.12; 2.28; 15.12. Palp: 1.24; 0.68; 0.80; 1.28; 4.00.

Carapace and abdomen pattern similar to male with more strongly defined bands on posterior corners of carapace. Median dark inverted V on inner diagonals of cheliceral face. Abdomen laterally dark with well defined pallid venter. *Eyes.* Group width/headwidth=0.61 through PLE, 0.63 through mid-eye group. OQ front,

back, long: 22, 31, 21. MOQ front, back, long: 10, 18, 10. AME: ALE: PME: PLE, 10: 6: 13: 12. PER cuts through mid-curve of caput shoulder. AER with 20% overlap; PER in two lines well separated by 1 diameter of PME. Chelicerae, 2p, 4r. STC with 8 teeth, ITC, 0. Scopula in lateral bands only on metatarsi and tarsi I–III. Group of long hairs (not tufts) only below *Claws.* Palp spines: fe p1d1.2r1; pa p1d1r1; ti p2d1; ta p2r1. Pedal patellae with triad. Epigyne. Overall, 1.25 times longer than wide; anteriorly narrow median scape delimiting spindle-shaped opercula with pear-shaped smooth lateral ridges narrowing in distal third with wide posterior median septum extending to epigastric ridge; internally, a short sinuous duct forming three loops in basal two-fifths (Fig. 46d).

**Distribution, habitat and biology.** Known only from rainforest at Mt Glorious in south-eastern Queensland; the spiders were found hunting on green leaves on low plants at night.

**Variation.** *Colour Pattern* (Figs 44a–c, 45). The diversity in colour patterns in one population at Mt Glorious is remarkable. However, the photographer, Ben Revell, also took photographs but did not capture *Ornodolomedes* from Nightcap Range, north-eastern New South Wales, as well as Mt Tamborine in south-east Queensland. The pattern types of *O. mickfanningi* (Fig. 50a, b) are similar to those of *O. benrevelli* (Figs 44a–c, 45). Hence, it is hypothesised that the diversity of patterns seems then to cover a number of species.

***Ornodolomedes gorenpul* sp. nov.**  
(Figs 5e, 48a, b, 49a–d. Map 4)

**Etymology.** The species is named for Gorenpul, the name of one of the aboriginal groups on North Stradbroke Island.

**Common name.** Gorenpul sprite.

**Material examined.** Queensland: holotype male, Enterprise Mine, Blackbutt site 1, 27°33'S, 153°27'E, Blackbutt, hand collection, 9 Jan 2002, Queensland Museum Party, QM S55979. Paratypes. Queensland: 1 ma., 2 fem., same data as holotype, QM S108401; 1 fem., Enterprise Mine, Scribbly Gum site 3, 27°35'S, 153°27'E, scrubby gully, hand collection, 10 Jan 2002, Queensland Museum Party, QM S55969; 1 ma., Enterprise Mine, Blackbutt site 3, 27°34'S, 153°28'E, Blackbutt, malaise trap, 8–22 Jan 2002, C. Burwell,

S. Wright, QM S55975; 1 fem., Enterprise Mine, Mallee (heath) site 1, 27°34'S, 153°26'E, Mallee, hand collection, 7 Jan 2002, Queensland Museum Party, QM S55965; 1 fem., North Stradbroke Is., Central, night collection, 6 Jan 2002, R. Raven, B. Baehr, QM S80519; 5 fem., Enterprise Mine, Scribbly Gum site 3, 27°35'S, 153°27'E, scrubby gully, hand collection, 10 Jan 2002, Queensland Museum Party, QM S55492; 1 ma., Bribie Island, 27°03'30"S 153°11'32"E, 19 Dec 1997, malaise Trap, N. Power, AM KS69519.

**Diagnosis.** The male palp bulb is very similar to that of *O. benrevelli* sp. nov. in that the RTA is subdistal, males differ in the relatively shorter palpal tibia and the RTA is quite short and indistinct (Fig. 49a, b). Females differ from those of all other species in having a wide distal septum (Fig. 49d).

**Description.** Holotype male QM S55979. Carapace 3.88 long, 3.32 wide. Abdomen 4.32 long, 2.44 wide. Total, 8.20.

I: 4.72; 1.84; 4.80; 4.24; 1.84; 17.44. II: 4.32; 1.60; 4.40; 3.52; 1.28; 15.12. III: 4.00; 1.60; 3.28; 3.44; 1.44; 13.76. IV: 5.12; 1.60; 3.84; 4.64; 1.76; 16.96. Palp: 1.92; 0.72; 0.64; 1.20; 4.48.

Carapace brown with moderately short brown hairs, margins dark. Abdomen dorsally with dark ostiate region, darker mottling laterally. *Spines.* I, II: fe p3d3r4; pa p1d1r1; ti p1d1-2r1v2.2.2+2 distal; me p3r3v2.2.2+ 2 short. III: fe p5d3r4; pa as I; ti p2d1-2r2v2.2.2; me p3r3v2.2.2. IV: as III but fe p4-5d3r4-5. Palp: fe p1-2d1.2r1; pa p1r1d1; ti p2d1. *Eyes.* Group width/headwidth=0.85 through PLE, 0.60 through mid-eye group. OQ front, back, long: 40, 68, 40. MOQ front, back, long: 23, 35, 21. AME: ALE: PME: PLE, 8: 11: 12: 11. PER well anterior to mid-curve of caput shoulder. AER with 30% overlap; PER two well separated lines. Chelicerae 2p, 4r; fang broad for most of its length. Tarsi straight; PTF distinct; no plumose hairs. Sternum cordate, narrows from II/III. Serrula long, sinuous. Labium slightly longer than wide. Two irregular rows of trichobothria on tarsi; distal line of 6 on metatarsi. Palp (Fig. 49a, b). Cymbium retrobasally with rounded process and long retroventral ridge; tibia clearly shorter than cymbium; RTA subdistal, simple, low curved ridge set mid-retrolaterally; VTA formed of two juxtaposed trianguloid lobes. Bulb with long transverse, slightly diagonal

tegulum and digitiform DTP beside by large flared MA arising from broad base.

*Female* QM S108401. Carapace 3.00 long, 2.56 wide. Abdomen 3.60 long, 2.28 wide. Total, 6.6.

I: 3.50; 1.44; 3.06; 2.69; 1.00; 11.69. II: 3.50; 1.00; 2.88; 2.25; 0.75; 10.38. III (?regenerated): 2.50; 0.94; 2.06; 2.06; 0.94; 8.50. IV: 3.19; 1.25; 2.69; 2.56; 1.25; 10.94. Palp: 1.13; 0.50; 0.63; 1.00; 3.25.

*Colour.* Carapace yellow brown with narrow dark edge and thin dark striae scallops. Legs yellow brown, III dark ventrally, less so on IV. Abdomen anteriorly with median invagination making two "shoulders", unpigmented arrow like ostiate region flanked by large white areas with two long dark bars posteriorly, laterally with dark diagonal bars, ventrally pallid; cluster of long bristles preject forward between PME, cluster of long procurved bristles over PLE. *Eyes.* Group width/headwidth= 0.66 through PLE, 0.55 through mid-eye group. OQ front, back, long: 34, 59, 38. MOQ front, back, long: 18, 30, 22. AME: ALE: PME: PLE, 7: 6: 9: 11. PER in two lines separated by 0.4 of PME diameter; AER with 50% overlap. PLE well behind clypeal shoulder. Chelicerae with one small and 2 large teeth on promargin, 4 on retromargin. STC with ca. 7 long teeth; ITC bare. Scopula absent. *Spines.* Tibiae I, II ventrally with three pairs of long (50% overlap) strong spines, none on distal edge; metatarsi I, II ventrally with two proximal pairs very long, each half length of metatarsus, and distal shorter (0.4 of basals) pair. Legs I, II: femora p4d3r3. Pedal patellae p1d1r1. Palp: fe p1d1.1r1; pa p1d1; ti p2d1; ta p2v2. STC with 6-7 long teeth; ITC bare.

*Epigyne* (Fig. 49c, d). Overall, ca. 1.47 times longer than wide; wide median scape delimiting irregular opercula with sinuous lateral ridges in distal 0.4 with posterior median lobe to epigastric ridge; internally, a long sinuous duct forming two loops for length with ental loop clearly shorter (Fig. 49d).

**Distribution and habitat.** Known only from closed Blackbutt forest on North Stradbroke Island and just north on Bribie Island, south-east Queensland.

*Ornodolomedes mickfanningi* sp. nov.

(Figs 3f, h, 5f, 7f, 50a–d, 51a–d, 52a–d. Map 4)

**Etymology.** The species epithet is conferred by Hector Manuel Osorio Gonzalez Filho as part of the launch of the World Science Festival, Brisbane, at the Queensland Museum in March 2017. It is in honour of Australian surfer, Mick Fanning, whose path to surfing greatness has incorporated all the attributes of a champion, including overcoming personal tragedy, career-threatening injury and one of sport's greatest competitive dynasties to reach surfing's highest echelon three times. He has a love for water and has a strong Queensland connection with his favourite "break" being at Queensland's iconic Snapper Rocks at Coolangatta.

**Common Name.** The species common name, Masked wood sprite, was conferred by Ricardo Leite as part of the launch of the World Science Festival Brisbane at the Queensland Museum in March 2017.

**Material examined.** Queensland: Lamington NP, IBISCA survey: holotype male, 28.155°S 153.139°E, 282 m, site 300B, hand collecting, 6 Oct 2006, B. Baehr, QM S104681. Paratypes: fem., 28.192°S 153.124°E, 775 m, site 700B, 16–21 Oct 2006, R. Menendez, G. Monteith, QM S76373; 2 ma., 28.148°S 153.137°E, 267 m, site 300A, 16–21 Oct 2006, flight intercept trap, G. Monteith, QM S76251; fem., 28.148°S 153.137°E, 267 m, site 300A, 6–9 Oct 2006, rainforest, pitfall traps, K. Staunton, QM S81158; ma., 28.148°S 153.137°E, 267 m, site 300A, 16–21 Oct 2006, dung pitfalls, R. Menendez, G. Monteith, QM S76341; ma., 28.207°S 153.137°E, 471 m, site 500D, 18–28 Oct 2006, flight intercept trap, G. Monteith, QM S76268; 1 ma., 28.142°S 153.133°E, 248 m, site 300D, 16–21 Oct 2006, dung pitfalls, R. Menendez, G. Monteith, QM S76418.

**Diagnosis.** The male palp is very similar to that of *O. benrevelli* sp. nov. in that the RTA is subdistal and quite long (Fig. 51a) but differs in that the RTA is more distal, the cymbium is distinctly longer than the tibia and the DTA is more slender. Females differ from those of *O. benrevelli* sp. nov. in that the spermathecal ducts are broader.

**Description.** Holotype male QM S104681. Carapace 4.00 long, 3.44 wide. Abdomen 4.64 long, 2.72 wide. Total, 8.6.

I: 4.40; 1.28; 5.04; 4.88; 3.20; 18.80. II: 4.40; 1.12; 4.88; 4.56; 2.72; 17.68. III: 3.60; 1.36; 3.04; 3.28; 1.92; 13.20. IV: 4.88; 1.52; 4.40; 5.68; 2.40; 18.88. Palp: 1.92; 0.80; 1.20; 1.36; 5.28.

**Colour.** Carapace yellow brown with slightly darker submarginal band most distinct

posteriorly; red batwing-shaped area behind PER; paler central ovoid region. Abdomen pentagonal, posteriorly strongly tapered, partially accenuated by dark brown flanks; dorsally yellow brown with red-brown mottling, central paler regions; laterally with dark shoulders anterior. Median dark inverted V on inner diagonals of cheliceral "face". Legs fawn brown. *Eyes.* Group width/headwidth=0.62 through PLE, 0.50 through mid-eye group. OQ front, back, long: 27: 65: 40. MOQ front, back, long: 27: 33: 18. AME–AME, 7; AME–ALE, 3; PME–PME, 10; PME–PLE, 15. AME: ALE: PME: PLE, 10: 8: 12: 13. From front, AER with 50% overlap; PER in two lines separated by 0.16; from above, AER recurved. Chelicerae with 3 widely spaced teeth on promargin and retromargin. *Spines.* Legs I, II: fe p4d3r3; pa p1 apical r1; ti p2d2r2v.2.2.2.2; me p2r2v2.2 + distal whorl of 4. Leg III, IV: as above but, pa p1 d1(apical, not on II) r1; ti p2d2r2v.2.2.2; me p2r2 v1.1.1.1 + distal whorl of 4. Palp: fe p1d1.2r1; pa p1d1.1; ti p1d1 or 2. Palp (Fig. 51a, b): tibia long slender but shorter than cymbium; RTA subdistal, simple, rectanguloid lobe set mid-retrolaterally; VTA a low chelate lobe. Cymbium with small retroventral lobe and more distal ridge. Bulb with transverse tegulum and digitiform DTP overlaid by large unevenly flared MA.

Allotype female QM S81158. Carapace 4.08 long, 3.52 wide. Abdomen 5.24 long, 3.60 wide. Total, 9.32.

I: 3.96; 1.68; 3.76; 3.60; 1.76; 14.76. II: 3.92; 1.72; 4.12; 3.36; 1.88; 15.00. III: 3.20; 1.40; 2.60; 2.68; 1.28; 11.16. IV: 4.32; 1.48; 3.24; 4.48; 1.88; 15.40. Palp: 1.40; 0.76; 0.88; 1.16; 4.20.

Carapace orange brown with two dark ovoid areas submarginally in posterior corners and rhomboidal outline prefoveal zone; tufts of white hair between PME and over PLE. Abdomen pentagonal with dark anterior lateral corners and posterior lateral edges; tufts of white hair on legs and abdomen. Palpal tarsus, distal pedal tibiae, and band on metatarsi brown. *Eyes.* Group width/headwidth=0.60 through PLE, 0.46 through mid-eye group. OQ front, back, long: 35, 66, 40. MOQ front, back, long: 25, 37, 20. AME: ALE: PME: PLE, 10: 7: 15: 11. Caput

shoulder weakly defined. AER with *ca.* 15% overlap; PER in two lines well separated by half diameter of PME. Chelicerae, 2p, 4r. STC with *ca.* 10 teeth; ITC, 0; palp 7–8. Scopula absent. Group of long hairs (not tufts) only below *Claws*. Palp: fe p1d1.2r1; pa triad; ti p2d1.1; ta p2r2. Pedal patellae with spine triad. Epigyne. Overall about as wide as long; short, narrow median scape delimiting two trianguloid opercula in *ca.* distal quarter, lateral ridges continue to epigastric ridge forming wide barrel-shaped septum; internally, sclerotised narrow ducts, overall confined to posterior two thirds, tightly folded (Fig. 51d).

**Distribution, habitat and biology.** Known only from the lower slopes up to 700 metres of the Lamington National Park, close to Canungra, in south-eastern Queensland; the spiders were found under logs and rocks in riverine gallery thickets in the day.

***Ornodolomedes nebulosus* sp. nov.**

(Figs 2, 53a–e, 63a–c. Map 5a)

**Etymology.** The species epithet alludes to the clouds that almost permanently crown Mt Bellenden Ker, the type locality.

**Material examined.** Queensland: holotype, male, Bellenden Ker Ra., cable tower 3, 1054 m, 17°16'S, 145°51'E, rainforest, 17–24 Oct 1981, EARTHWATCH/Qld Museum, QM S27998; 1 fem. (non-type), Emerald Creek Falls picnic area, 17°03'11"S, 145°32'29"E, 3 Mar 2008, G. Milledge, H.M. Smith, AM KS103149.

**Diagnosis.** Males differ from those of *Ornodolomedes yalangi* sp. nov., in the presence of a long thorn-like process adjacent to base of DTP (Fig. 53b) and the more elaborate RTA (Fig. 53c–e). The female epigyne is most similar to that of *O. xypee* but differs in the longer double-folded ducts and externally in the folds appearing tear-shaped.

**Description.** Holotype male QM S27998. Carapace 2.90 long, 2.62 wide. Abdomen 3.57 long, 3.10 wide. Total, 6.5.

I: 3.81; 1.43; 3.81; 4.00; 1.71; 14.76. II: 3.76; 1.05; 3.24; 3.86; 1.76; 13.67. III: 3.43; 1.05; 3.24; 3.86; 1.76; 13.33. IV: 4.05; 1.05; 3.24; 4.52; 1.86; 14.71. Palp: 1.67; 0.48; 0.67; 1.43; 4.24.

Carapace with pile of short fine hairs; yellow brown with black bristles in striae and marginally beside PLE. Abdomen dorsally with two large ovoid guanine patches evident, laterally brown edges also with guanine; legs paler than carapace with black patches proximally on femora I–IV and mottling on tibiae I–IV. *Eyes*. Group width/headwidth=0.68 through PLE, 0.57 through mid-eye group. OQ front, back, long: 36, 54, 37. MOQ front, back, long: 19, 29, 20. AME: ALE: PME: PLE, 8: 7: 10: 10. PLE at mid-shoulder. AER with *ca.* 40–50 overlap; PER two well separated lines. Chelicerae: 2p, 3r. STC with *ca.* 6–7 teeth; ITC, 0. Scopula absent. Group of long hairs (not tufts) only below claws. *Spines*. Three basal paired spines on ventral metatarsi and tarsi I–II just overlapping. Palp: fe p1d1.2r1; pa p1d1.1r1; ti p1d1. Pedal patellae with spine triad. Palp (Fig. 53a–e). Cymbium much longer than tibia; RTA just proximal of midlength, large deeply concave, laterally set retrodorsal but just above retrolateral; VTA rectanguloid, deeply bipartite. Cymbium with broad retroventral flange and elongate lobe. Tegulum short, concave on proximal edge; DTP broad, straight, bullet-shaped with thorn-like process adjacent (Fig. 53b); MA with narrow base and well flared apically.

*Female* AM KS103149. Carapace 5.25 long, 4.25 wide. Abdomen 5.75 long, 4.25 wide. Total, 11.

I: 5.63, 2.00, 4.88, 4.38, 1.75, 18.63. II: 5.63, 2.13, 4.63, 4.25, 1.88, 18.50. III: 4.38, 1.75, 3.88, 4.13, 1.75, 15.88. IV: 5.38, 1.75, 4.38, 5.63, 1.50, 18.63. Palp: 2.00, 0.75, 1.00, –, 1.50, 5.25.

Carapace orange brown with darker hair medially, edges of posterior corners dark; legs banded black and fawn; femora mottled. Abdomen pentagonal, anteriorly invaginated, dorsally with white anterior corners, dark ostiate dagger-shape. Overall pattern like that of *O. mickfanningi*. *Eyes*. Group width/headwidth=0.69 through PLE, 0.57 through mid-eye group.

OQ front, back, long: 71, 85, 65. MOQ front, back, long: 24, 40, 22. AME:ALE:PME:PLE, 10: 8: 18: 20. Back eye row is two contiguous lines, AER with 50% overlap. Caput “shoulder” in front of PER. Chelicerae with three teeth on promargin, 3–4 on retromargin. *Claws*. STC on

I with 5-7 long teeth; ITC bare; palp with 3-4 teeth. Scopula absent. *Spines*. Slight overlap of ventral spines on tibia I, II. Pedal patellae with triad. Palp: fe p1d1.1.2r2; pa p1d1; ti p2d1.1; ta v2.

**Remarks.** The male and female were taken at highly disparate altitudes (over 1000 metres vs 200 metres) and thus the female is not considered a paratype.

**Distribution and habitat.** Known only from high altitude (1054 m) rainforest at Mt Bellenden Ker, and at Emerald Creek Falls, just to the east, north-east Queensland.

***Ornodolomedes yalangi* sp. nov.**

(Figs 54a-g, 63d-f. Map 5b)

**Etymology.** The species epithet is from the aboriginal name of the tribe in the Mossman area.

**Material examined.** Queensland: holotype male, Mossman Bluff Track, 5-10 km W Mossman, 16°28'S, 145°22'E, flight trap, 20 Dec 1989-15 Jan 1990, G. Monteith, G. Thompson, ANZSES Expedition, QM S16718; 1 ma., 1 fem., same data but 20-24 Dec 1989, QM S108120; 1 ma., same data but 16-30 Dec 1989, QM S108121; 1 ma., same data but 17-31 Dec 1989, QM S108122; 1 fem., same data but 21 Dec 1989, QM S108124; 2 ma., same data but 1-16 Jan 1990, QM S108126; 1 ma., Stewart Ck, Mt Spurgeon, 16°28'S, 145°12'E, 15-21 Oct 1989, G. Monteith, QM S108125; 1 ma., 1 juv. fem., Tully River crossing, 10 km S Koombaloo Dam, 17°55'S 145°37'E, flight intercept trap and pitfall, 8 Dec 1989-4 Jan 1990, G. Monteith, G. Thompson, H. Janetzki, QMS34799; 1 ma., same data as holotype, QM S108407; 1 ma., Thornton Peak, 16°10'S 145°23'E, 20-27 Sep 1989, G. Monteith, QM S108127.

**Diagnosis.** Males are most similar to those of *Ornodolomedes nebulosus* sp. nov. but differ in the shorter, less elaborate RTA, less elaborate abdominal pattern and the absence of the thorn-like process beside the DTP. Female unknown.

**Description.** Holotype Male QM S59162. Carapace 2.79 long, 2.25 wide. Abdomen 3.17 long, 1.54 wide. Total, 6.0.

I: 3.63; 1.29; 4.08; 4.25; 2.50; 15.75. II: 3.42; 1.13; 3.67; 3.75; 2.42; 14.38. III: 2.71; 0.96; 2.29; 2.58; 1.38; 9.92. IV: 3.88; 0.96; 3.08; 4.13; 1.54; 13.58. Palp: 1.29; 0.42; 0.71; 0.92; 3.33.

**Colour.** Carapace yellowish with brownish tinge centrally and pale median band. Abdomen colour faded, paler ostiate zone with darker regions around it. Legs yellowish. *Eyes*. Group width/headwidth= 0.74 through PLE, 0.59 through mid-eye group. OQ front, back, long: 38, 54, 37. MOQ front, back, long: 22, 30, 19. PER in just two lines slightly separated; AER with ca. 30% overlap. Chelicerae with 2 large teeth on promargin, 4 on retromargin. STC with 6-7 long teeth; ITC bare. Scopula absent. *Spines*. Pedal patellae with triad. Palp: fe p1d1.2r1; pa p1d1r1; ti d1. Palp (Figs 54a-g, 63d-f). Cymbium long, 1.3 times longer than tibia. RTA small, apically unequally bifid, retrolateral; VTA simple, rounded; tegulum slightly diagonal; short, cucumiform DTP.

**Distribution and habitat.** Known only from rainforest in the Wet Tropics Heritage area in north-eastern Queensland.

***Ornodolomedes staricki* sp. nov.**

(Figs 55a-d, 63g-i. Map 5d)

**Etymology.** The species epithet is in honour of Noel Starick, valued volunteer at both the Australian National Insect Collection, C.S.I.R.O., Canberra, and at the Queensland Museum.

**Material examined.** Victoria: holotype male, Copracambra NP, WB line, malaise over Beehive Ck, 27 km NNE Cann R., 37°20'01"S 149°14'12"E, 347 m, ANIC Bulk Sample 2608, 5 Dec 2004-11 Jan 2005, C. Lambkin, N. Starick, ANIC 42-002259.

**Diagnosis.** The male most closely resembles those of *O. yalangi* but differs in the RTA being broader and dorsally wider. Females unknown.

**Description.** Holotype male ANIC. Carapace 4.48 long, 3.76 wide. Abdomen 5.36 long, 3.04 wide. Total, 9.8.

I: 6.00; 2.00; 5.68; 6.00; 3.28; 22.96. II: 5.28; 2.08; 4.88; 4.88; 2.64; 19.76. III: 4.16; 1.60; 3.36; 3.36; 1.36; 13.84. IV: 5.60; 1.76; 4.48; 4.96; 1.84; 18.64. Palp: 2.64; 1.28; 0.96; 1.68; 6.56.

**Colour.** Carapace brown with light pile of black hairs. Abdomen dark brown, mottled dorsally, with pale foliate pattern; pale flanks and venter. *Eyes*. Group width/headwidth=0.77 through PLE, 0.58 through mid-eye group. OQ front,

back, long: 25, 41, 24. MOQ front, back, long: 13, 21, 15. AME: ALE: PME: PLE, 10: 9: 15: 17. PER in two lines just separated; AER with 30% overlap. Chelicerae with one small and 2 large teeth on promargin, 4 on retromargin. STC with 6 long teeth; ITC with 1 tooth. Scopula absent. *Spines*. Fe I-IV, p5d3r5. Pedal patellae with triad, p1d1r1. Palp: fe p1d1.1.1.2r1; pa p1d1.1; ti p2d1. Palp (Fig. 55a-c). Tibia shorter than cymbium. RTA a wide raised retrodorsal flange; VTA conical; DTP apically bluntly rounded.

**Distribution and habitat.** Known only from wet forest in eastern Victoria.

*Ornodolomedes southcotti* sp. nov.  
(Figs 56a-d, 57a, b. Map 5d)

**Etymology.** The species epithet is honour of Ronald Vernon Southcott (15 May 1918 in Adelaide - 9 April 1998), medical acarologist of South Australia, "the first native-born Australian to have a major impact on acarology in this country." (Halliday & Pearn, 1998)

**Material examined.** Type. South Australia: holotype male, Happy Valley Reservoir [35.083°S, 138.567°E], under bark of eucalypt, 30 Aug 1992, "Caren & Julie", SAM NN1997939; juv. fem. (non-type), same data as holotype.

**Diagnosis.** Males are unusual in having 3 spines (not 2 as for other congeners) on the dorsal palpal femur before the distal pair and differ from those of *O. staricki* by the VTA being apically rectanguloid (not bifid) and the RTA (viewed from RTAmax) having one point (vs 3 points) and the dorsal edge is quite short and rounded (Fig. 57a). Females unknown.

**Description.** Holotype Male SAM NN1997939. Carapace 5.28 long, 4.64 wide. Abdomen 6.72 long, 2.80 wide. Total, 12.0.

I: 6.32; 2.40; 6.48; 6.80; 4.24; 26.24. II: 5.76; 2.40; 6.40; 4.96; 2.80; 22.32. III: 5.12; 2.80; 4.56; 4.08; 1.76; 18.32. IV: 6.24; 2.24; 5.12; 5.60; 2.40; 21.60. Palp: 3.36; 1.20; 1.44; 1.84; 7.84.

**Colour.** Carapace cream-coloured, narrow dark edge with dark radial striae. Abdomen long, sub-pentagonal, ostiate region pale, darker mottling elsewhere; venter fawn with black flecking. Femora fawn with black flecking,

like coxae and sternum. *Eyes*. Group width/headwidth=0.66 through PLE, 0.45 through mid-eye group. OQ front, back, long: 25, 45, 29. MOQ front, back, long: 13, 24, 18. AME: ALE: PME: PLE, 5: 4: 9: 7. PER in two lines separated by 0.5 of PME diameter; AER with 30% overlap. Chelicerae with 2 large teeth on promargin, 4 on retromargin. STC with 8 teeth; ITC bare. Scopula absent. *Spines*. Pedal patellae with triad. Palp: fe p1d1.1.1.2r1; pa p1d1.1; ti p2d1. Palp (Fig. 57a, b). Cymbium long, 1.44 times longer than tibia, retroventrally with long wide flange with small trianguloid basal lobe. RTA retrodorsal, subdistal, with long invaginated scoop; VTA a long low ridge. Tegulum short, DTP long subcylindrical curved; MA with broad base and apically flared.

**Distribution and habitat.** Known only from Happy Valley, near Adelaide, South Australia.

*Ornodolomedes nicholsoni* sp. nov.  
(Figs 58a-d, 59a-f, 63j-l. Map 5e)

**Etymology.** The species epithet is in honour of Jack Nicholson, an actor who so brilliantly portrays diverse personalities.

**Material Examined.** Western Australia: Two Peoples Bay Nature Reserve, S. Comer, wet pitfall: holotype male, Lake Gardner, site MG14, 34°58'19"S, 118°10'30"E, 26 Jul-2 Aug 1994, WAM T65675. Paratypes: Western Australia: 1 ma., site MG01, Firebreak Valley bottom, 34°58'58"S, 118°11'18"E, 23 Oct 1995, 30 Oct 1995, WAM T27644; 1 fem., site MG07, bottom of R7 gully, 34°59'53"S, 118°11'52"E, 12-19 Apr 1994, WAM T67649; 1 fem., site MG10, below A-frame, Tick Flat, 34°59'26"S, 118°10'57"E, 14-21 Nov 1996, WAM T67660; 1 ma., site MG06, lower Robinsons Valley, 34°59'42"S, 118°11'58"E, 26 Jul-2 Aug 1994, WAM T65932. 'Glenbourne Farm', S. of Gracetown, dry pitfall, L.M. Marsh *et al.*: 1 ma., site 5, 33°54'40"S, 115°00'34"E, 27-28 Oct 2007, WAM T110912; 1 ma., site 5, 33°54'40"S, 115°00'34"E, 28-30 Oct 2006, WAM T111205; 1 ma., site 2, 33°54'50"S, 115°00'57"E, 25-2003, 27 Oct 2003, WAM T111262; 1 ma., site 3, 33°54'28"S, 115°00'49"E, 25-27 Oct 2003, WAM T111326; 1 ma., 1 allotype fem., site 5, 33°54'40"S, 115°00'34"E, 25-27 Oct 2003, WAM T111341; 2 ma., site 5, 33°54'40"S, 115°00'34"E, 26-28 Oct 2002, WAM T111346, T111358; 1 ma., site 1, 33°54'32"S, 115°00'24"E, 12-14 Oct 2012, WAM T133556; 1 ma., Two Peoples Bay, W. McKenzie, QM S61023; 1 ma., Boranup, 34°09'S 115°02'E, Karri forest, pitfall, 11-13 Dec 1990, A. Austin, WAM 98/1176; 1 ma., 2 fem., Pemberton, 34°30'S 115°05'E, 24 May 1905, J. Springett, AM KS115468.

**Diagnosis.** Males differ from those of the geographically closest *O. southcotti* sp. nov., in the longer palpal tibia (ca. 1.2 times longer than cymbium), the long simple conical RTA and the straight, almost triangular DTP. Males are most similar to those of *O. mickfanningi* but differ in the relatively much smaller median apophysis. Females are unique in the genus in having a trianguloid form of the median field (Fig. 59e) and the rectanguloid shape of the internal ducts (Fig. 59f).

**Description.** Holotype male WAM T65675. Carapace 5.04 long, 4.40 wide. Abdomen 4.96 long, 3.20 wide. Total, 10.0.

I: 6.48; 2.56; 6.24; 6.24; 3.60; 25.12. II: 6.16; 2.24; 5.84; 5.84; 2.96; 23.04. III: 5.12; 1.68; 4.40; 4.64; 2.08; 17.92. IV: 6.72; 1.92; 5.36; 6.64; 2.00; 22.64. Palp: 2.80; 0.80; 0.80; 1.76; 6.16.

**Colour.** Carapace yellow brown with light pile of darker hairs; no evident pattern. Abdomen laterally mottled, dark with medial foliate pallid zone, anteriorly pallid, convergent pallid edges; generally coffin-shape; venter pallid. **Eyes.** Set well back on shoulder. Group width/headwidth=0.69 through PLE, 0.49 through mid-eye group. OQ front, back, long: 27, 43, 29. MOQ front, back, long: 9, 14, 16. AME: ALE: PME: PLE, 6:5:9:8. Two lines of PER separated by one PME diameter; AER with 30–40% overlap. Chelicerae with 2 large teeth on promargin, 4 on retromargin. STC with ca. 6 teeth; ITC bare. Scopula absent. **Spines.** Pedal patellae with triad. Palp: fe p1d1.1.2r2; pa p2d1.1r1; ti p1r1. Palp (Fig. 59a–d). Cymbium long, 1.06 times longer than tibia. RTA distal, mid-retrolateral trianguloid; VTA a broad trianguloid mound; tegulum slightly diagonal, DTP almost straight short, digitiform.

**Allotype Female** WAM T111341. Carapace 5.20 long, 4.32 wide. Abdomen 6.80 long, 3.76 wide. Total, 12.00.

I: 4.40; 2.48; 4.64; 4.24; 2.24; 18.00. II: 4.56; 2.32; 4.56; 4.32; 1.92; 17.68. III: 4.00; 1.84; 3.60; 3.84; 1.60; 14.88. IV: 4.88; 2.00; 4.32; 5.20; 2.08; 18.48. Palp: 2.00; 1.20; 1.20; 1.92; 6.32.

**Colour.** Carapace yellowish with white hairs on caput, black hairs beside it and broadly around fovea. Abdomen pentagonal with two dark

anterior shoulders; tufts of white hair posteriorly and laterally; venter flecked. **Eyes.** Group width/headwidth=0.67 through PLE, 0.61 through mid-eye group. OQ front, back, long: 55, 82, 53. MOQ front, back, long: 27, 48, 25. AME: ALE: PME: PLE, 12:8:20:20. PER is two well separated lines; AER with 15% overlap. AME on common mound. Chelicerae with one small and 2 large teeth on promargin, 4 on retromargin. STC with 8 long teeth; ITC with 2 teeth. Scopula lateral on tarsi I–II. **Spines:** Pedal patellae with triad: p1 d.1. Palp: fe p1d1.1.2r1; pa p1d1.1; ti p2r1; ta p2r2. Epigyne (Fig. 59e, f). Overall shape about as long as wide. Lateral lobes discontinuous, small posterior lobes. Median field occupies 0.80 of overall length. Slender inner spermathecal duct with single broad outer duct; internal ducts in rectanguloid shape.

**Distribution and habitat.** Known only from Two Peoples Bay and Glenbourne, south of Gracetown, south western Western Australia.

#### *Ornodolomedes xypee* sp. nov.

(Fig. 60a–c. Map 5c)

**Etymology.** The species epithet is an arbitrary combination of letters.

**Material examined.** Queensland: holotype female, Proserpine, Deadman Creek (site XY17), 20°30'S, 148°33'E, open forest, 13 Mar 2008, R.J. Raven, QM S86872. Paratypes: 1 fem. with eggs, Proserpine, Deadman Ck (site XY17), 20°30'S, 148°33'E, open forest, litter, 17 Mar 2008, R.J. Raven, QM S86503; 1 fem., Proserpine, Airport Drive, WSC track, site XY13, 20°29'S, 148°34'E, closed woodland, malaise trap, 13 Feb –7 Mar 2008, Queensland Museum Party, QM S85261.

**Diagnosis.** Females are unusual in the genus in the form of the epigyne which is very like that in females of *Dolomedes instabilis*, i.e. lateral lobes with a large median field. The female epigyne is most similar to that of *O. nebulosus* in that less extensive median field but differs in the almost globose ducts and externally in the pipe-like sigmoidal ducts. Males unknown.

**Description.** Holotype female QM S86872. Carapace 4.88 long, 4.24 wide. Abdomen 5.60 long, 2.96 wide. Total, 10.5.

I: 5.52; 2.24; 5.28; 4.64; 2.24; 19.92. II: 5.36; 2.32; 5.04; 4.32; 1.92; 18.96. III: 4.64; 1.92; 3.60; 4.16; 1.52; 15.84. IV: 5.68; 1.84; 4.56; 5.52; 1.84; 19.44. Palp: 1.76; 0.96; 1.04; 1.84; 5.60.

Carapace yellow brown with fine black hair; eye region burgundy. Abdomen dorsally with dark ostia region, laterally pallid. *Eyes*. Group width/headwidth = 0.69 through PLE, 0.55 through mid-eye group. OQ front, back, long: 28, 45, 26. MOQ front, back, long: 15, 20, 15. PER in two lines just separated; AER with 60% overlap. Chelicerae p3, r3. PTF extends diagonally from venter almost to dorsum. STC with 6 long teeth; ITC bare; palpal claw with 4–5 teeth. Scopula absent. *Spines*. Normal spination but ventral tibiae I, II with three pairs of strong overlapping spines and one distal pair; metatarsi I, II, similar with two pairs plus smaller distal pair. Pedal patellae with p1d1r1 all weak or p1d1.1.r1. Palp: fe p1d1.2r1; pa p1d1.1r1; ti p2d1.1; ta p2d1r2. Epigyne (Fig. 60b, c). External, narrow median scape delimiting two slightly irregular sub-circular opercula in anterior 0.40–0.45 of epigyne, lateral ridges continue to epigastric ridge forming wide trianguloid septum; internally, highly sclerotised broad ducts, overall confined to posterior third, tightly folded.

**Distribution and habitat.** Known only from riverine rainforest just south of Proserpine in north-eastern Queensland.

***Ornodolomedes marshi* sp. nov.**  
(Figs 61a–c, 62a–d. Map 5d)

**Etymology.** The species epithet is in honour of Mr John Marsh, a legend in the Ingham area.

**Material examined.** Queensland: holotype male, Mt Spec NP, 19°00'S, 146° 12'E, rainforest, 15 Sep 1979, K. McDonald, QM S28805. Paratypes: 2 ma., same data as holotype, QM S108402.

**Diagnosis** (Figs 61a–c, 62a–d). The male most closely resembles those of *O. nicholsoni* but differs in the palpal tibia being shorter than the cymbium. Female unknown.

**Description.** Holotype Male QM S28805. Carapace 2.72 long, 2.50 wide. Abdomen 3.48 long, 1.60 wide. Total, 6.4.

I: 4.16; 1.44; 4.64; 4.96; 2.80; 18.00. II: 4.24; 1.36; 4.16; 4.32; 2.40; 16.48. III: 2.64; 1.04; 2.48; 2.80; 1.20; 10.16. IV: 4.24; 1.20; 3.60; 5.12; 2.08; 16.24. Palp: 1.68; 0.56; 0.80; 0.88; 3.92.

**Colour.** Entirely yellow brown. *Eyes*. Group width/headwidth = 0.74 through PLE, 0.80 through mid-eye group. OQ front, back, long: 46, 48, 32. MOQ front, back, long: 21, 30, 25. PER in two lines touching; AER with 15% overlap. STC with 7 long teeth; ITC bare. Scopula absent. *Spines*. Pedal patellae with d1w.1r1. Palp: fe p1d1.1.1r1; pa r1; ti p2d1. Palp (Figs 61a, b, 62a, b, d). Tibia shorter than cymbium. RTA retrodorsal, short, bifid; VTA rectanguloid; DTP strongly curved at mid-length, apically blunt.

**Distribution and habitat.** Known only from rainforest at Mt Spec, near Townsville in north-eastern Queensland.

***Mangromedes* Raven, gen. nov.**

**Etymology.** The genus name is formed from Mangroves, in which the spiders occur, and *Dolomedes*; the gender is masculine.

**Diagnosis.** Males differ from those of *Dolomedes* and *Ornodolomedes*, gen. nov., in the deep basally divided RTA (Figs 65b, 67b), the embolus rests on the prolateral edge, and as the DTP is rectanguloid, set on a short tegulum (Figs 65a, 67a); females are unique in the Australian Pisauridae in the very wide long epigynal “wings” (Fig. 65c–e). Like *Ornodolomedes*, gen. nov., the ventral spines on tibiae and metatarsi I, II are very long and overlapping (Fig. 7d) unlike the shorter spines in *Dolomedes* (Fig. 7a–c).

**Type species.** *Mangromedes kochi* (Roewer, 1951).

**Description.** Carapace saddle-shaped in profile, lowest at fovea (Fig. 66g). Carapace (male) about as wide as long; eye group ca. 0.7 of head width; from above, AER strongly recurved so ALE overlaps with AME, rows as 2.4.2, PER recurved, just forming 2 lines. AME clearly larger than ALE but clearly smaller than eyes of PER, all of similar size. Eyes of AER similar interspaces and PME clearly closer than to PLE. Front in front, AER recurved with ALE overlapping extent of AME to 0–50%, top edge of ALE = bottom edge of PLE. AER

wider than second row (PME) (Fig. 66b), AER width less than PLE–PLE, AME as big as or bigger than PME much smaller than PME and not on tubercle (Fig. 66b); AER about 0.7 of width of PER. Clypeus with steep face, caput clearly lower than thoracic region. Serrula long, trochanters notched, insignificant fang shield. Tarsi slender, not pseudosegmented; PTF absent. Basal article of posterior lateral spinnerets longer than wide cylindrical, apical long, conical. Large white cheliceral boss with sclerotised edge. Chelicerae with 3 prolateral and 4 retrolateral teeth. Male palpal bulb of *Dolomedes* type with deeply divided RTA (Figs 65b, 66d), apical cymbium slender coniform, tegulum small with large rectanguloid DTP; embolus rests on prolateral edge; median apophysis short, widens quickly. Epigyne with wide sclerotised lateral extensions along epigastric groove (Fig. 65c–e); internally simple. Males and females of similar size. Strictly nocturnal spiders hunting freely in mangroves (Fig. 64a–d) on the mud and on trees, roots and rotting wood.

**Included species.** *Mangromedes kochi* (Roewer, 1951), *Mangromedes porosus* sp. nov.

**Remarks.** Given that the spiders are mangrove inhabitants, searches on the western side of Cape York and west of Kakadu seemed prudent. However, searches by RJR for *Mangromedes* in the harbour mangroves of Darwin and Weipa were unsuccessful; in Weipa, an unnamed lycosid occupies the mangroves in the intertidal zone.

***Mangromedes kochi* (Roewer, 1951),  
new combination**

(Figs 3e, g, h, 5d, 7d, 64a–d, 65a–e. Map 5f)

*Dolomedes elegans* L. Koch, 1876: 861, pl. 73, fig. 6; Junior primary homonym of *Dolomedes elegans* Taczanowski, 1873.

*Nilus elegans*: Simon 1898: 290.

*Nilus kochi* Roewer, 1951: 438 (replacement name); Jäger, 2011: 5 (noted as misplaced, per RJR).

**Material examined.** Queensland: holotype male, Port Mackay, Museum Godeffroy No. 14629, ZMH, examined.

**Other Material examined.** Queensland: 1 ma., Jacobs Well Scientific Reserve, 27°34'S 153°30'E G. Leiper, 10 June 1997, QM S34613; 1 ma., Kangaroo Is., Moreton Bay, 27°34'S 153°30'E, 18 Nov 1990, R.

Raven, A. Luck, QM S17687; 1 fem., Shute Harbour, 20°18'S 148°47'E, 4 Sep 1988, R. Raven, QM S14041; 5 ma., 5 fem., Tingalpa Creek, 27°29'13"S 153°11'10"E, 7 May 2016, R. Raven, MAGNT A004619, QMS, AM KS, WAM, SMF, ZHM; 2 ma., 4 fem., Victoria Creek, Forrest Beach, near Ingham, 18°43'S 146°19'E, mangroves at night, R. Raven, August, 2016, QM S108066, S108067; 2 fem., same data but July 2016, QM S108406; 1 ma., Wynnum, 23 Aug 2016, R. Raven, QM S108403; 1 ma., same data but, 21 May 2016, QM S108405; 2 fem., Chelsea Rd, Tingalpa, Ransome, with egg sac, 27°29.6"S, 153°11.1"E, 9 Dec 2004, R. Raven, QM S108404.

**Diagnosis.** Males differ from those of *Ma. porosus* in the more proximal position of the RTA (Fig. 65a, b); females have much wider epigynal “wings” (Fig. 65c–e).

**Description.** (Holotype colour faded; legs on left side and leg I on right side missing.) Male QM S34613. Carapace 3.13 long, 2.94 wide. Abdomen 2.56 long, 1.63 wide. Total length, 5.7.

I: 5.75, 1.75, 7.25, 7.63, 3.25, 25.63. II: 5.38, 1.88, 7.13, 7.88, 3.13, 25.38. III: 4.75, 1.50, 4.00, 5.00, 1.63, 16.88. IV: 5.50, 1.50, 4.88, 6.75, 2.63, 21.25. Palp: 2.13, 0.75, 0.88, –, 1.75, 5.50.

**Colour.** Carapace orange brown with black edges and darker large central zone; legs orange brown, no bands; abdomen shrunken, dark brown. Carapace. Broad, widest at fovea, with uniform cover of fine brown hairs, longest between eyes. from above, 2 strongly recurved rows or 4 rows with almost no overlap of lines; PME with grate-shaped tapetum. Relative sizes: AME 11, ALE, 8, PME 15, PLE 11. ALE and PLE on common tubercle, at least on one side. Interspaces: AME–AME, 11; PME–PME, 15; PME–PLE, 26. AME, 15; ALE, 8; PME, 21; PLE, 18. Eye group, 52 wide in front, 78 wide behind, 40 long. MOQ 31 wide in front, 40 wide behind, 25 long. *Spines*. I, II: fe pv2p3d3r4; pa p1 distal,r1; ti p3d3r3v2.2.2; me p3r3v2.2.2. III: fe p5d3r5; pa d1 distal; ti p2d2r2v2.2.2; me p3r3v2.2.2, strong. IV: fe p4d3r3; pa p1d1 distal; ti p2d2r2v2.2.2; me p3r3v2.2.2, strong. Palp: fe p1d1.1.1.2r1; pa d1r1; ti p2d1r1 + RTA. Trichobothria: 6–8 short in straight line for distal 1/8 on dorsal tarsi; 8–10 very short, in more or less straight row on metatarsi; 5–6 short in each of two rows on tibia for basal third. Claws: paired claws with one row of teeth, distal 5 long, strong and 2–3 times length of two proximal; no

teeth evident on ITC. Palp (Fig. 65a, b): Tibia of male palp short cylindrical, 0.5 of cymbium; 2.0 times longer than mid-width. RTA deeply divided, set in basal third. DTP irregularly rectanguloid with medial constriction; median apophysis basally wide, short and quickly widens strongly; VTA triangular; cymbium long, digitiform, cymbium process transverse, digitiform; distal embolus lies on prolateral edge.

*Female* QM S14041. Like male except: Carapace 3.60 long, 3.25 wide. Abdomen 4.00 long, 2.85 wide. Total, 7.60.

I: 4.60, 1.60, 4.40, 4.70, 1.80, 17.10. II: 4.55, 1.50, 4.40, 4.60, 1.70, 16.75. III: 4.00, 1.25, 3.30, 3.85, 1.45, 13.85. IV: 5.15, 1.35, 4.45, 6.05, 2.05, 19.05. Palp: 1.75, 0.75, 1.05, -, 1.65, 5.20.

Carapace mottled brown, centrally dark with paler lateral band. Abdomen dorsally dark, mottled, anterior lateral shoulders darker, ostiate region dark with pallid edges. *Eyes*. Group width/headwidth=0.65 through PLE, 0.53 through mid-eye group. OQ front, back, long: 47, 67, 44. MOQ front, back, long: 28, 37, 31. AME:ALE:PME:PLE, 11: 8: 13: 12. Back eye row is two well separated lines, AER lines contiguous with no overlap. Caput "shoulder" in front of PER. Chelicerae with one small and two large teeth on promargin, 4 on retromargin. *Claws*. STC on I with 4 long teeth basally; ITC bare; palp with two very long distal teeth and at least one smaller basally. Scopula absent but ventral tarsi I-IV pallid (not pseudosegmented) with enlarged setae. *Spines*. Pedal patellae with d1r1, no prolateral on any. Palp: fe p1d1.1.2r2; pa p1d1r1; ti p2dv1; ta v2. Epigyne. Two slender lateral "wings" extending for width of main epigyne on each side, median scape absent, darkly sclerotised sinuous lateral ridges continue to epigastric ridge forming narrow cavity; internally, narrow duct leads from CO to pyriform transverse duct (Fig. 65c).

**Variation.** The described male (QM S34613) on the pedal patellae has a prolateral spine only on I on left side and II on the right side, otherwise a prolateral spine on the pedal patellae is absent in the described female and all other males.

**Distribution and habitat** (Fig. 64c, d; Map 5f). Known from mangroves and saltwater couch (grass) (*Sporobolus virginicus* (Linnaeus, 1753): Poaceae) from Ingham, coastal north-eastern Queensland, to Moreton Bay in southern Queensland.

**Biology.** A male from Moreton Bay was taken on grasses in a saltmarsh but the spiders are most common in mangroves adjacent to the sea (e.g. in Tingalpa Creek, Lota, Wynnum). They were seen running up the mangroves as the tide rose over the mudflats at night. Subsequently, they were taken low on mangrove trunks at low tide at night. Surveys of mangroves around Ingham (north-east Queensland) and Wynnum-Lota (south-east Queensland) found the spiders very common, up to 50 per square metre on logs and trunks but probably averaging 6–10 per m<sup>2</sup> through the aerial roots of the mangroves. The spiders are very fast moving and were found near the mud. When disturbed the spiders run into the cavities in the tree roots. Spiders placed in an aquarium of freshwater (household) were unable to walk on the surface whereas those on water in the mangroves were hunting over the surface. Males and females were taken in the mangroves from May until September with females carrying a small egg sac in the chelicerae in August and September. The egg sac is small with relatively few eggs.

*Mangromedes porosus* sp. nov.  
(Figs 66a–g, 67a–e. Map 5f)

**Etymology.** The species epithet is from the species name of the Saltwater Crocodile, *Crocodylus porosus* Schneider, 1801, which are very common in the mangroves in which this species occurs in the Northern Territory.

**Material examined.** Northern Territory: holotype male, Point Farewell, Kakadu NP, 17 June 1982, W. Houston, (Australian Littoral Society no. K2099, site code KISQ3), MAGNT A004618; paratype (allotype), female, Australian Littoral Society K2450 site code KT6/03, Kakadu, East Alligator River, W. Houston, QM S107589.

**Diagnosis.** Males differ from those of *Ma. kochi* in the more distal position of the RTA (Fig. 66d); females differ in the epigynal "wings" being not so extensive (Fig. 66e).

**Description.** Holotype male MAGNT A004618. Carapace 3.00 long, 2.79 wide. Abdomen 2.91 long, 1.82 wide.

I: 4.53; 1.65; 2.06; 5.29; 1.82; 15.35. II: 4.35; 1.41; 5.00; 5.71; 2.12; 18.59. III: 4.24; 1.35; 4.06; 4.71; 1.53; 15.88. IV: 4.88; 1.29; 4.88; 6.29; 1.76; 19.12. Palp: 1.41; 0.59; 0.65; 1.41; 4.06.

**Colour.** Carapace: light brown with darker margins, three darker edges of posterior striae; eye group and clypeus in front of AME black, frontal chelicerae distomedially darker. Legs slightly paler than carapace, femora with darker mottling. Abdomen roughly pentagonal; ostiate region pallid, flanked by dark mottling with paired curving bands lateral of mid lobe, pallid area just past widest point with pallid flanks. Clypeus slope steep. **Eyes.** Group width/head width = 0.59 through PLE, 0.58 through mid-eye group. OQ front, back, long: 28:40:25. MOQ front, back, long: 17:24:17. AME to clypeus slightly more than AME diameter. AME-AME, 3; AME-ALE, 3; PME-PME, 3; PME-PLE, 8. AME: ALE: PME: PLE, 9: 9: 10: 10. PER in two juxtaposed lines; from above, AER recurved, almost 2 lines, overlap = 30%. Chelicerae with 4 teeth on promargin and retromargin. **Spines.** Legs I, II: fe p5d3r5; pa weak distal r1; ti p2d2r2v.2.2.2 + distal 2; me p2r2v2.2.2 + distal 2. Leg III: fe p5d3r4; pa d1 (distal weak); ti p2d2r2v.2.2.2; me p3r3 v2.2.2. IV: fe p5d3r3; otherwise as for III. Palp: fe p1d1.1.1.2r1; pa d1 distal, 1 weak basal; ti p2d1r1. Tarsi straight. Palp (Figs 66c, d, 67a-c, e). Tibia short, 0.5 of cymbium; 2.0 times longer than mid-width, widens gradually to retrolateral face with deeply divided RTA, set in distal third. DTP block-like; median apophysis short, quickly widens strongly; VTA indistinct; cymbium tip long, digitiform, basal cymbial process transverse; apical embolus on prolateral edge, terminating near median apophysis.

Allotype Female QM S107589. Carapace 3.68 long, 3.28 wide. Abdomen 4.08 long, 2.40 wide. Total, 7.8.

I: 4.80; 1.60; 4.56; 4.24; 1.20; 16.40. II: 4.64; 1.68; 4.64; 4.32; 1.60; 16.88. III: 4.00; 1.04; 3.60; 4.16; 1.44; 14.24. IV: 4.96; 1.36; 4.56; 5.52; 1.60; 18.00. Palp: 1.60; 0.72; 0.96; 1.44; 4.72.

Carapace orange brown with dark edges; abdomen ruptured. **Eyes.** Group width/head width = 0.7 through PLE, 0.55 through PME. PLE set behind caput shoulder. OQ front, back, long: 25, 35, 21. MOQ front, back, long: 15, 19, 12. PER in two well separated lines; AER in two contiguous lines, no overlap. Chelicerae p3, r4. STC with 5 teeth; ITC with one tooth; palpal claw with 4 teeth. Scopula absent. **Spines.** Normal spination but ventral tibiae I, II with four pairs of strong overlapping spines; metatarsi I, II, similar with two pairs plus smaller distal pair. Pedal patellae with p1d1.1. Palp: fe p1d1.1.1.2r1; pa p1d1.1; ti p2d1.1; ta p2d1r1. Epigyne (Fig. 66e, f). With sinuous lateral lobes and apical "beak"; internally, simple ducts.

**Distribution and habitat.** Known only from mangroves at Point Farewell, Kakadu National Park and nearby Alligator River, Northern Territory.

#### *Caledomedes* gen. nov.

**Etymology.** The genus name is formed from New Caledonia, to which the spiders are endemic, and *Dolomedes*; the gender is masculine.

**Diagnosis.** Males differ from those of all other genera treated here in that the anterior eye row is not as wide as the back of the median ocular quadrangle (Fig. 68c), and the males have a deeply divided and proximal retrolateral tibial apophysis in combination with a long slender cymbium and embolus and fulcrum extending up the length of the cymbium (Figs 69a, b, 70a, b).

**Description.** AER only as wide as or narrower than width of second row (PME), AME much smaller than PME and on tubercle that overhands clypeus (Fig. 68b-d); AER ca. 0.7 of width of PER. Carapace in lateral view, low posteriorly with medial saddle rising to eye region (Fig. 68b). PTF absent; STC very long. Ventral spines on tibiae and metatarsi I, II long, but not overlapping. Male palp of *Dolomedes* grundplan. Nocturnal spiders hunting freely on the ground and vegetation in rainforest. Males and females of similar size.

**Type species and species included.** *Anoteropsis flavovittatus* Simon, 1880.

**Relationships.** The very long basal RTA of the male palp (Fig. 69) shows affinities with that *Mangromedes* (e.g. Fig. 67e). The elongate cymbium, embolus and fulcrum also occur in *Megadolomedes* (Figs 40b, 41b) and *Tasmomedes* (Fig. 38g).

**Distribution and Habitat** (Map 3b). Widespread in rainforests on New Caledonia.

**History.** Simon (1880) originally placed *Anoteropsis flavovittata* in the Pisauridae along with the type species, *Anoteropsis flavescens* L. Koch, 1878 (then known only from a female), and both species remained in the Pisauridae until Forster (1979) recognised that the type species was a lycosid. In revising *Anoteropsis*, Vink (2002) recognised that Simon had described a number of congeners in the genus *Lycosa* and that *A. flavovittata* was misplaced in the Lycosidae.

***Caledomedes flavovittatus* (Simon, 1880)**  
(Figs 4e, g, 5c, 68a–d, 69a–c, 70a–d. Map 3c)

*Anoteropsis (lapsus) flavovittata* Simon, 1880: 166; Simon, 1898: 314, fig. 314; Berland, 1924a: 244, figs 195, 196 (not a lycosid, per Vink, 2002: 19).

**Diagnosis.** As for genus.

**Material examined.** New Caledonia: holotype male, MNHN, examined; ma., 2 fem., Mandjélia above Puebo, 11–13 May 1987, 600–750 m, G. Monteith, D. Cook, QM S73715; fem., Mt Panié, refuge, 1300 m, 20°34'S 164°46'E, 8–9 Nov 2001, C. Burwell, QM S108409; 1 ma., Mt Koghis, 500 m, 21°00'S, 165°00'E, pyrethrum knockdown, 27 Jan 2002, G. Monteith, QM S57196; 1 ma., Mt Mou, summit, 22°04'S, 166°21'E, rainforest, 24 May 1984, G. Monteith, D. Cook, QM S44625; 2 ma., Aoupinié, 20 km NE Poya, Niaouli, 21°10'S, 165°18'E, 18–19 May 1984, G. Monteith, D. Cook, QM S73713; 1 fem., Mt Dzumac, 22°03'S, 166°28'E, 23 May 1984, G. Monteith, D. Cook, QM S44622; 1 fem., Aoupinié, 21°10'S 165°17'E, pitfall, Oct 1992–12 Feb 1993, R. Raven, E. Guilbert, N. Platnick, M. Harvey, QM S37707; 1 fem., Aoupinié, top camp, 21°00'S 165°00'E, pyrethrum knockdown, 2–3 Nov 2001, C. Burwell, G. Monteith, QM S67859; 2 fem., Mt Panié, 20°35'S, 164°45'E, *Agathis montana* forest, 4–14 Dec 1990, R.J. Raven, QM S25461; 1 ma., Riviere Bleue, Kaori Geant (SC8948), 8 Feb 2002, C. Darling, QM S108411.

**Description** Male QM S73715. Carapace 3.68 long, 3.32 wide. Abdomen 4.08 long, 2.32 wide. Total, 7.8.

I: 6.75; 2.00; 7.25; 8.63; 3.25; 27.88. II: 7.38; 1.88; 7.13; 8.75; 3.50; 28.63. III: 6.38; 1.88; 5.88; 7.50; 2.50; 24.13. IV: 7.25; 1.88; 6.63; 9.88; 3.13; 28.75. Palp: 2.25; 1.00; 0.75; 2.25; 6.25.

**Colour.** Carapace yellowish brown with slightly darker strial scalloping. Abdomen yellow brown with 2 large white spots posteriorly, no ventral pattern. Eyes: group width/headwidth=0.69 through PLE, 0.55 through mid-eye group. OQ front, back, long: 27, 50, 34. MOQ front, back, long: 14, 29, 17. AME: ALE: PME: PLE, 5: 4: 13: 11. PER in two lines separated by 0.5 of PME diameter; AER with 25% overlap. Chelicerae with one small and 2 large teeth on promargin, 4–5 on retromargin. PTF absent. STC with ca. 7 long teeth; ITC long, bare. Scopula absent. Tarsi bent at about half length. *Spines.* Legs I, II: fe p3–5d3r4–5; pa p1d1r1. Pedal patellae with p1d1r1. Palp: fe p1d1.1.2r1; pa p1d1.1; ti p1.1r1. Palp (Figs 69, 70a, b). Tibia of male palp shorter than patella (Fig. 70b), RTA proximal with short ventral process and very long dorsal process; VTA digitiform; transverse part of tegulum straight, DTP curved cucumiform; embolus and conductor extend almost to tip of very long curved cymbium (Fig. 69c).

**Female** Mt Panié SC 8765. Carapace 5.20 long, 4.24 wide. Abdomen 5.60 long, 3.20 wide. Total, 10.8.

I: 6.08; 2.00; 6.00; 5.76; 2.56; 22.40. II: 6.40; 2.24; 5.84; 6.40; 2.40; 23.28. III: 6.00; 2.08; 5.20; 6.08; 2.08; 21.44. IV: 6.80; 2.16; 5.68; 7.68; 2.64; 24.96. Palp: 2.56; 1.20; 1.60; 2.56; 7.92.

**Eyes.** group width/headwidth=0.72 through PLE, 0.59 through mid-eye group. OQ front, back, long: 31, 52, 37. MOQ front, back, long: 20, 33, 15. AME: ALE: PME: PLE, 5: 5: 14: 13. PER in two lines separated by 0.5 of PME diameter; AER with 50% overlap. PTF absent. STC with ca. 6 long teeth; ITC long, bare. Scopula absent. Tarsi bent at about half length. *Spines.* Pedal patellae with p1d1r1. Palp: fe p1d1.1.2r1; pa p1d1.1; ti p1.1r1. Epigyne. Overall shape ovoid, clearly wider than long; lateral lobes curved,

widen distally, median field occupies full length; septum a short distal dome inset into margin. Internally, ducts occupy *ca.* 0.6 of length, three folds.

**Distribution and habitat.** As for genus.

### *Bradystichus* Simon, 1884

*Bradystichus* Simon, 1884: CCXCIX. Type species *Bradystichus calligaster* Simon, 1884 by subsequent designation of Simon, 1898: 365; Platnick & Forster, 1993: 6.

**Common name.** New Caledonian mud wallower.

**Diagnosis.** Differs from all other genera by scopula on the prodorsal edge of the cymbium (Fig. 71a, b) as well as the combination of the minute third claw and the encrusted dorsal surfaces (Platnick & Forster, 1993) on the carapace, abdomen and legs (Fig. 1c).

**Description.** Male palp of *Dolomedes* type. Cuticle encrusted with soil. Carapace in lateral view similar to *Dolomedes* higher behind sloping down to eye region (as in Fig. 5g). Eyes of PER larger than those of AER and in two widely separated lines; AER about 0.7 of width of PER (Fig. 3c); ALE clearly smaller than AME. AER wide, edges cut through PLE. PTF present. Males slightly smaller than females. Rainforest spiders found under rocks and logs and in muddy mounds of leaves.

**Included species.** *Bradystichus calligaster* Simon, 1884, *Bradystichus crispatus* Simon, 1884, *Bradystichus panie* Platnick & Forster, 1993, *Bradystichus aoupinie* Platnick & Forster, 1993, *Bradystichus tanji* Platnick & Forster, 1993.

**Distribution and Habitat.** Rainforest areas in New Caledonia. The spiders occur under rocks and logs and when heavy rain causes surface water to sweep leaves in muddy mounds, the spiders are found in these muddy zones. In dry times, the spiders were found under logs and rocks.

**Remarks.** Since Platnick & Forster (1993) was a comprehensive revision of the genus with detailed morphology, only a minimal treatment is given here.

### *Bradystichus calligaster* Simon, 1884 (Figs 1c, 3c, 6a, 71a–c. Map 3d)

*Bradystichus calligaster* Simon, 1884: CCXCIX; Platnick & Forster, 1993: 10. Holotype, female, Canala, New Caledonia, in MNHN, examined.

**Remarks.** The scopula on the prodorsal cymbium (Fig. 71a, b) is most pronounced in this species, it is well developed in *Bradystichus crispatus*, *Bradystichus aoupinie*, but only nominal in *Bradystichus panie* (types of all species examined).

### Pisaurinae

**History.** Davies (1982) noted that *Dendrolycosa icadia* was known from mid-eastern and north eastern Queensland. Davies (1985) listed only *Dendrolycosa icadia* from Australia. Jäger (2011) revised *Dendrolycosa*, described the types (females) of *Dendrolycosa icadia* (L. Koch, 1876), and described the holotype female of a new species *De. yuka* from “Cap” which he considered was Cape York; no male of *Dendrolycosa* from Australia has been described; *Nilus kochi* Roewer, 1951 was left in abeyance for his work. Silva & Griswold (2013) provided an updated diagnosis for the genus worldwide; thus, the genus diagnosis provided here focusses on differences of the genus from other Australian pisaurids.

*Inola* Davies 1982 included *I. amicabilis* Davies, 1982, *I. cracentis* Davies, 1982 and *I. subtilis* Davies, 1982 from north Queensland; since then Tio & Humphrey (2010) added *I. daviesae*.

### *Dendrolycosa* Doleschall, 1859

*Dendrolycosa* Doleschall, 1859: 51; Davies, 1985: 102; Jäger, 2011: 10; Silva, 2013a: 397.

*Dianpisaura* Zhang, Zhu & Song, 2004: 366, type *Pisaura lizhii* Zhang, 2000. First synonymised by Jäger, 2011: 10.

**Type species.** *Dendrolycosa fusca* Doleschall, 1859 by monotypy.

**Diagnosis.** Differs from *Inola*, the other sheet web building pisaurid in Australia, by the ALE being clearly the smallest eyes rather than being as large if not larger than the PME and the anterior row being clearly recurved.

**Description.** Carapace low, long and almost flat in lateral view with slight medial saddle (Fig. 5b). Colour pattern A as in Jäger (2011).

All eyes similar in size; AER and PER recurved; rows 4.2.2; AER only slightly narrower (0.90) than PER (Fig. 73g). Chelicerae with 3 prolateral and 4 retrolateral. Tarsi straight. PTF for entire width. STC with *ca.* 8 teeth; ITC with 1 tooth. Spines: patellae I-IV, p1 distal 1 r1, all weak; palp p1, d1.1.weak; palpal femora with three spines proximally on dorsal edge followed by distal pair. Epigyne with curved lateral ridge, Y-shaped overall. Aboreal spiders building long sheet webs with retreat curling around stem of plant (Fig. 72b); found in open forest, heath and mangroves. Males and females of similar size.

**Distribution** (Map 6a). Australian Region-Queensland, Northern Territory, New Guinea, China, New Caledonia, Myanmar, India, Indonesia (Java, Sumatra), Malaysia, Nicobar Islands, Tanzania, Madagascar.

***Dendrolycosa icadia* (L. Koch, 1876)**

(Figs 72a-c, 73a-g, Map 6a)

*Dolomedes icadius* L. Koch, 1876: 859, plate 73, fig. 5.

*Dendrolycosa icadius*: Davies, 1985: 102.

*Dendrolycosa icadia*: Jäger, 2011: 32, figs 147-149, 153-158, 167.

**Material examined.** Syntypes. Queensland: 1 juv. male and female, Rockhampton, ZMH MGH 14628, examined; 1 female, 1 penult. male, 1 juv. fem., Port Mackay, L. Koch Collection, BMNH 19.9.18.5558-60; 3 juv. females, Bowen, Keyserling collection, BMNH 1890.7.1.2842-4.

**Other material examined.** Queensland: 2 fem., Lords Table, east face, 22°40'S, 148°01'E, vine forest, 9 Jan 2006, R.J. Raven, QM S80175; 1 fem., Eurimbula, 24°07'S, 151°43'E, 13 Sep 1989-15 Sep 1989, QM S25943; 1 fem., Binjour Plateau, (Darlington Rd) Picnic ground, Swains Rd, 21 Dec 1997, QM S75695; 1 ma., 2 fem., Deepwater NP, 65 km NW Bundaberg, 24°32'S, 151°58'E, 20-26 Sep 1992, G. & S. Monteith, QM S25396; 1 ma., 1 juv., Rochedale SF, 27°37'S, 153°09'E, open forest, 20 Sep 1979, V. Davies, R. Raven, QM S4778; 3 fem., Red Falls NP, Lochwall Station, 19°55'S, 145°44'E, open forest, 16 Dec 2006, R.J. Raven, QM S76503; 1 ma., 2 fem., Atherton Tableland, near Mareeba, 17°00'S, 145°26'E, rainforest, Dec 1982, R.R. Jackson, QM S4791, 2; 2 fem., Dalrymple NP, site 2, 19°49'S, 146°05'E, semi-evergreen vine thicket, night collection, 13 Dec 2006, R.J. Raven, QM S79128; 1 fem., 1 penult. male, Wrattens Camp, via Widgee, 26°15'S, 152°22'E, rainforest, pitfall, 29 Dec 1974-28 Mar 1975, G. & S. Monteith, QM S30395; 1 fem., Yeppoon, 10 km SSE, 23°08'S, 150°45'E, 28 Nov 1986, I.K.B. Common, QM S7003; 1 fem., Eurimbula, 24°07'S, 151°43'E,

13-15 Sep 1989, QM S25944; 5 fem., Orchid Beach, Fraser Is., 24°58'S, 153°19'E, heathland, 1 Oct 1996, R.J. Raven, QM S31306; 1 ma., Rochford Scrub, site 7, 20°07'S, 146°37'E, bendee scrub, malaise trap, 12 Dec 2006-11 Feb 2007, G. Monteith, D. Cook, QM S76582; 2 fem., Broken R, Jack's Hill Gorge, 19°28'S, 144°46'E, foliage, 16 Jul 1995, P. Lawless & QM, QM S33285; 2 fem., Turtle Is., rainforest plantation, 17 Nov 1992, Schoena, Keen, QM S51188; 1 fem., Horn Is., Torres Strait, 10°37'S, 142°17'E, open forest, 2-8 Dec 1986, J. Gallon, QM S12344; 1 fem., Prince of Wales Is., Terry Beach, 10°41'S, 142°11'E, on tree trunks, 30 Jun 1976, E. Cameron, QM S28868; 1 fem., Saibai Is., Torres Strait, 9°23'S, 142°40'E, mangrove, 13 Jul 1975, H. Heatwole, E. Cameron, QM S28864; 3 fem., 1 penult. male, Horn Is., Torres Strait, 10°37'S, 142°17'E, woodland, 23-27 Dec 1975, H. Heatwole, E. Cameron, QM S28869; 1 ma., Hann Tableland, base, 16°56'40"S, 145°19'14"E, 23 May 2010, QM S104602; 2 fem., Goodnight Scrub, Burnett River, Sep 1987, QM S107094; 2 fem., 2 ma., Davies Creek, Nov 1971-Jan 1972, QM S107095; 3 fem., Mt Garnet, 24 Feb 1972, QM S107096; 1 fem., 4 juv., Chillago, 24 Apr 1978-26 Apr 1978, QM S107097; 3 fem., 1 juv. fem., Atherton Tableland near Mareeba, Dec 1982, QM S107099; 1 fem., 4 juv., 40 Mile Scrub, SW Mt Garnet, 9-14 Apr 1978, QM S107100. Solomon Islands: Uipi Island, 1 ma., 1 fem., 1 juv., 8°25'S, 157°56'E, beach, 4 Jul 1990, T. B. Churchill, QM S33845; 1 fem., Prince of Wales Is., Torres Strait, Terry Beach, 10°41'S, 142°09'E, 1 Jul 1976, E. Cameron, AM KS44294; 1 fem., "Queensland", 16°55'20"S 145°46'33"E, 1 Jul 1967, J. Child, AM KS115235; 1 fem., Morehead R., 15°07'S 143°40'E, 1 Jan 1994, M.S. Moulds, AM KS44294; 2 fem., Walkers Ck ca. 20 km N Normanton, 17°28'S 141°10'E, 17 Jul 1995, J. Thompson, M. Tio, S. Cowan, AM KS53193-4; 1 juv., Eurimbula SE of Gladstone, 24°11'S 151°50'E, 1 Mar 1975, Pitfall, C. Horseman, AM KS257. Northern Territory: 1 ma., 1 fem., Mindil Beach, 12°27'S 130°50'E, 2 Oct 1997, M. Humphrey, AM KS65153, 4.

**Other localities.** Juveniles given as locality, registration number. Queensland: Broken R, Southside Jack's Hill Gorge, 19°28'S, 144°46'E, QM S33279; Casey Ck, via Imbil, 26°28'S, 152°41'E, QM S30422; Fraser Is.: Orchid Beach, 24°57'S, 153°18'E, QM S38846, QM S42584; Dauan Is., Torres Strait, 9°25'S, 142°32'E, QM S28867; Mt Tamborine, Palm Grove, 27°56'S, 153°12'E, QM S30396; Tungi Ck, 26°40'S, 152°28'E, QM S30471. Horn Is., Torres Strait, 10°37'S, 142°17'E, TS, 24-29 Jan 1975, R.J. Raven, QM S28865; Saibai Is., Torres Strait, 9°23'S, 142°40'E, QM S28866; Wonga Beach, 16°19'25"S 145°25'39"E, AM KS86148. New South Wales: Whian Whian SF, 28°41'S, 153°19'E, QM S30439; Brindlee Ck, Wiangaree SF, 28°28'S, 153°04'E, QM S30420; Victoria Pk, via Alstonville, 28°53'S, 153°23'E, QM S30352.

**Type localities.** Rockhampton, Bowen, Mackay, and Peak Downs, Queensland. However,

Davies (1985) reported only that of the syntypes in ZMH, i.e. Rockhampton.

**Diagnosis.** Males differ from those of *De. kakadu* sp. nov. in the ledged RTA, the less extensive tegulum, and extended cymbial prolateral mound (Fig. 73a, b). Females of *De. icadia* differ from those of *De. yuka* in the distinct anterior saddle anteriorly on the epigyne (Fig. 73c) and the reniform spermathecae (Fig. 73e).

**Description.** Male QM S104602. Carapace 4.35 long, 3.53 wide. Abdomen 5.12 long, 2.82 wide. Total, 9.5.

I: 5.69; 2.00; 5.56; 4.69; 1.88; 19.81. II: 5.69; 1.69; 5.50; 5.13; 2.13; 20.13. III: 4.81; 1.63; 3.75; 4.06; 1.69; 15.94. IV: 5.06; 1.69; 4.81; 5.63; 2.38; 19.56. Palp: 1.94; 1.13; 1.25; 1.88; 6.19.

**Eyes.** Group width/headwidth=0.62 through PLE, 0.50 through mid-eye group. OQ front, back, long: 33; 41; 30. MOQ front, back, long: 16; 20; 19. AME-AME, 6; AME-ALE, 4; PME-PME, 6; PME-PLE, 8. AME: ALE: PME: PLE, 6: 5: 7: 7. PER in two lines, AER recurved. Claws: STC on I with 6 long teeth; ITC, bare. Spines: patellae I, II, 1 p1 distal 1, weak b1. Tibiae I, II d0; III, IV, d1.1. Legs I, II: fe p5d3r5; pa p1r1; ti p2d2r2v.2.2.2.2; me p2r2v2.2 + distal whorl of 4. Leg III, IV: as above but, pa p1d1 (distal) r1; ti p2d2r2v.2.2.2.2; me p2r2 v1.1.1.1 + distal whorl of 4. Palp: fe p1d1.1.1.2r2; pa 0; ti p1r1.

**Female** QM S80175. As for male except: Carapace 5.19 long, 4.38 wide. Abdomen 9.50 long, 5.63 wide. Total, 14.7.

I: 6.06; 2.50; 4.81; 5.00; 1.94; 20.31. II: 6.13; 2.19; 4.81; 4.94; 2.06; 20.13. III: 5.31; 1.88; 4; 4.19; 1.69; 17.06. IV: 6.13; 2.06; 5.19; 5.94; 1.94; 21.25. Palp: 1.94; 1.13; 1.38; 1.88; 6.31.

**Eyes.** Group width/headwidth=0.65 through PLE, 0.69 through mid-eye group. OQ front, back, long: 67; 80; 62. MOQ front, back, long: 34; 40; 37. AME-AME, 10; AME-ALE, 4; PME-PME, 12; PME-PLE, 15. AME: ALE: PME: PLE, 13: 15: 14: 13. PER of two widely separated lines, AER recurved. Chelicerae with 3 teeth on promargin and retromargin. PTF distinct, diagonally for width of tarsus distally. **Spines.** Tibial spines weak; metatarsal spines long and strong but

not overlapping. Palp: fe p1d1.1.1.2r1; pa p1d1r1w; ti p1d1; ta p1d1r2. Epigyne. Lateral lobes forming Y-shaped with median “bridge” with narrow neck; internally, apostrophe-shaped ducts directed diagonally.

**Distribution.** Davies (1986) listed the distribution as NE coastal in Queensland; Jäger (2011) saw only the types. The species seems to be extending its range in south-east Queensland. In 1976, during a week long QM survey at Lake Poona, no webs of *De. icadia* were noted. In 1998, in a similar habitat just north at Fraser Island, RJR noted the presence of large numbers of webs of *De. icadia* in the Waddy Point Camp Ground. The webs are built near mangroves and creeks but also have been found many kilometres from the coast in open bushland and on the edge of rainforest.

**Remarks.** Very small juveniles were found in webs that presumably they built.

***Dendrolycosa kakadu* sp. nov.**  
(Figs 5b, 74a–e. Map 6a)

**Etymology.** The species epithet is a noun in apposition taken from Kakadu National Park, Northern Territory, near which the species was taken.

**Material Examined.** Northern Territory: Holotype male, South Alligator Inn, 12°40'S, 132°30'E, rainforest, 7–9 Nov 1979, R.J. Raven, QM S104600. Paratypes: 3 ma., 4 fem., same data as holotype, QM S53981; 1 fem., same data as holotype, QM S104601; 1 fem., Radon Creek (dry), 14 Nov 1979, R. Raven, QM S107098.

**Diagnosis.** Males differ from those of *De. icadia* in the more extensive tegulum and different shapes of the median apophysis and RTA (Fig. 74b); females differ from those of *De. icadia* by the vertical, rather than inclined slope, of the spermathecae (Fig. 74e).

**Description.** Holotype male QM S104600. Carapace 4.67 long, 4.28 wide. Abdomen 6.39 long, wide 3.22. Total, 11.1.

I: 6.38; 2.81; 6.13; 6.56; 2.56; 24.44. II: 6.50; 2.75; 5.94; 6.31; 2.44; 23.94. III: 6.06; 2.25; 4.75; 5.13; 1.75; 19.94. IV: 7.00; 2.19; 5.69; 6.56; 2.13; 23.56. Palp: 2.13; 0.88; 1.00; 2.13; 6.13.

**Carapace.** Pile of silver hairs through **Eyes.** Abdomen with Jäger (2011) pattern type A.

*Eyes.* AME and half of ALE overhang clypeus. Group width/headwidth=0.59 through PLE, 0.75 through mid-eye group. OQ front, back, long, 63: 75: 52. MOQ front, back, long: 31: 51: 32. AME-AME, 7; AME-ALE, 6; PME-PME, 12; PME-PLE, 5. AME: ALE: PME: PLE, 12: 13: 12: 15. PER in two lines; from above, AER recurved. Chelicerae with 2 teeth on promargin, 3 on retromargin. Tarsi straight. Claws: STC on I with 7 long teeth; ITC bare. *Spines.* Patellae I-IV with p1r1 and one proximal and one distal dorsal. Legs I, II: fe p5d3r5; pa p1r1; ti p2d2r2v.2.2.2.2; me p2r2v1.1.1.1.1+ distal whorl of 4. Leg III, IV: as above but, pa p1d1 (distal) r1; ti p2d2r2v.2.2.2; me p2r2 v1.175.1.1 + distal whorl of 4. Palp: fe p1d1.1.2r2; pa 0; ti p1r1. Palp (Fig. 74a-c). Tibia of male palp short. RTA a long process, subapically lobed in ventral view, with short tooth-like apical process rounded lobe; cymbium retrobasally with broad flange beside rectanguloid plate; median apophysis and embolus contrasting shape.

*Female* QM S53981. Similar to male but: Epigyne. Lateral lobes set very wide (Fig. 74d) with median "bridge" with broad neck; internally, small reniform-shaped ducts directed subvertically.

**Distribution and Habitat.** Known from South Alligator River and mangroves along the Darwin Harbour, Northern Territory. A male and female taken west of this point, near Darwin, are *Dendrolycosa icadia* which are presumably introduced.

#### *Dendrolycosa yuka* Jäger, 2011

*Dendrolycosa kochi* Simon, 1898a: 285, 289; Blandin, 1979: 365, fig. 34 (*nomen nudum*).

*Dendrolycosa yuka* Jäger, 2011: 31, figs 138-140, 144-146, 167.

**Material examined.** Type. Holotype, female (MNHN), "Cap" (Jäger 2011 deduced this meant Cape York, following Blandin (1979)), E.S. 3.190, examined RJR.

**Diagnosis.** Females of *De. yuka* differ from those of *De. icadia* in the absence of a deep saddle (procurved ridge, arrow) anteriorly on the epigyne (Jäger, 2011, fig. 144) and the spermathecae are not reniform but rounded rectanguloid (Jäger, 2011, fig. 145).

**Remarks.** The epigyne of a female from Torres Strait (Fig. 73e, f; the tip of Cape York) shows

no resemblance to that of *De. yuka* but could be conspecific with *De. sierwaldi* Jäger, 2011 (figs 141-143). However, the label on Simon's specimen (the holotype) is "Cap!" which is usually taken to be Cape Horn, South Africa. In the absence of females with a similar epigyne from Australia, even Cape York, the type locality is corrected to Cape Horn, South Africa. The nearest record to Cape Horn is that of *De. rossi* Silva & Griswold, 2013 from Madagascar.

#### *Perenethis* L. Koch, 1878

*Perenethis* L. Koch, 1878: 980; Blandin, 1975: 378; Sierwald, 1997: 387. Type species. *Perenethis venusta* L. Koch, 1878 by monotypy

*Pisarellus* Roewer, 1961b: 40, type *P. badius* Roewer, 1961. Synonymised by Sierwald, 1997: 395.

**Diagnosis.** *Perenethis* is unusual among the Australian pisaurids in the low profile of the carapace with a long low curving clypeus (Fig. 5a).

**Description.** Carapace very low, long and almost flat in lateral view with slight medial saddle, eye region curves down to chelicerae (Fig. 5a). Anterior edge of carapace is symmetrical procurved indents (Fig. 5a). Clypeus-AME vertical. Eyes all of similar size. AER clearly narrower (*ca.* 0.7) than PER (Fig. 75b) and from in front, procurved. ALE lower than AME and slightly smaller. AME on mound. Cheliceral boss with darkly sclerotised edge. Long bristles anterior to AME. Labium wider than long, 24: 18. Maxillae thumb-like; long black serrula. No feathery hairs. Male fang shield with only bristles. No scopula or preening combs. Trochanters deeply notched. PTF present. Male tarsi longer, straight, slender. STC I-IV with 9 long teeth; ITC distinct, curved, bare. posterior lateral spinnerets with digitiform apical segment. Cymbium long, lachrymoidal, no scopula. Males and females of similar size. Found on grass and low herbage, the spiders hunt freely with no web.

**History.** Zhang *et al.* (2004: fig. 1) found that *Perenethis* (with *Polyboea*) are the sister group of *Pisaura* and *Dendrolycosa* (as *Dianpisaura* Zhang, Zhu & Song, 2004), and they are the sister group of all other pisaurids (in their data set) with *Sphedanus* (as *Eurychoera*) plus *Qianlingula* as the basal sister group followed by *Hygropoda*, and they the sister group of *Dolomedes* plus *Nilus* (as

*Thalassius*). That work remains the last cladistic attempt (21 terminal taxa, 51 characters) to resolve the subfamilies of the Pisauridae.

***Perenethis venusta* L. Koch, 1878**  
(Figs 4f, 5a, 75a–c, 76a–d. Map 6b)

*Perenethis venusta* L. Koch, 1878: 980, plate 85, fig. 7; Davies, 1985: 104; Sierwald, 1997: 396, figs 42–47, 53, 57, 75, 76; Thorell, 1881: 372; Chrysanthus, 1967: 421, fig. 58; Sierwald, 1997: 396, figs 42–47, 53, 57, 75, 76; Chen & Chen, 2002: 32, figs 1A–F, 2A–D; Tanikawa & Ono, 2009: 220, figs 31–32.

*Dolomedes stilatus* Karsch, 1878: 814. New Synonymy.

*Perenethis parkinsoni* Dahl 1908: 228. Holotype female, Bismarck Archipelago, Ralum, Papua New Guinea; ZMHB 29 224, not examined. First synonymised by Sierwald (1997: 396).

*Perenethis unifasciata*: Chrysanthus, 1967a: 422, figs 53–57 (male and female misidentified, per Sierwald, 1997: 396); Barrion & Litsinger, 1995: 348, female; Jose, Sudhikumar & Sebastian, 2007: 127, fig. 1a–f.

*Perenethis kawangisa* Barrion & Litsinger, 1995: 345, holotype male, not examined. New Synonymy.

**Material examined.** Types. Queensland: Lectotype female (*Perenethis venusta*) and paralectotype female (Rockhampton and Peak Downs) in ZMH, designated by Sierwald (1997: 396); females, same data, BMNH, ZMB 3501. Western Australia: holotype male, (*Dolomedes stilatus*) ZMB, (as “Austr. occid.”), examined.

**Other material examined.** Queensland: 2 fem., Normanby Station, 80 km NW Cooktown, 15°23'S, 144°52'E, Aug 1985, D. Bell, QM S16620; 1 ma., 1 fem., Ferny Hills, Brisbane, 27°28'S, 153°03'E, 13 Dec 1979, R.J. Raven, QM S14661; 3 ma., 5 fem., Ayr, 19°34'S, 147°27'E, 10 Jan 1974, V. Salanitri, QM S28787; 2 fem., Ayr, 19°34'S, 147°27'E, 10 Jan 1973, V. Salanitri, QM S28786; 1 ma., Mount Tregaskis, 3 km NNE, 19°15'S, 145°29'E, open forest, flight intercept trap, 17 Dec 2006–15 Feb 2007, G. Monteith, D. Cook, QM S76595; 1 fem., Bundaberg Forest, 24°52'S, 152°21'E, 1986, E. Zillman, QM S14629; 1 ma., Currumbin, 28°12'S, 153°24'E, 11 Jan 1980, D. Seeton, QM S14633; 1 fem., Eureka Ck, 17°09'S, 144°59'E, 2 Feb 1972, N. Clyde Coleman, QM S14634; 1 ma., Lords Table plateau, site 2, 22°39'S, 148°01'E, eucalypt woodland, flight intercept trap, 10 Jan–7 Mar 2006, C.J. Burwell, QM S80271; 1 fem., Brisbane, 27°28'S, 153°01'E, 16 Mar 1986, W. McKenzie, QM S14630; 2 fem., Peak Downs, 22°15'S, 148°11'E, 30 Nov 1973, V.E. Davies, QM S14631; 1 ma., 1 fem., Doboy Ck, Brisbane, 27°28'S, 153°01'E, 9 Jan 1979, D. Seeton, QM S14632; 1 ma., Lords Table, SE base, site 2, 22°40'S, 148°01'E, eucalypt woodland, malaise trap, 13 Jan–4 Mar 2006, C.J. Burwell, QM S79513; 1 ma., 1 fem., Lords Table, SE base, site 2, 22°40'S, 148°01'E, eucalypt woodland, flight intercept trap, 13 Jan–4 Mar 2006, C.J. Burwell, QM S80251; 1 ma., Bald Hills, Brisbane, 27°19'S, 153°01'E, 10 Jan 1980,

D. Seeton, QM S14639; 1 fem., 1 juv., Coomburagee, Jan 2006, R.J. Raven, QM S22591; 1 ma., Proserpine, Thompson Ck, site XY18a, 20°31'S, 148°33'E, closed forest, pitfall, 14 Feb–12 Mar 2008, R.J. Raven, QM S85431; 1 fem., Bald Hills, Brisbane, 27°19'S, 153°01'E, 18–20 Dec 1979, D. Seeton, QM S14636; 1 ma., Newry Is. NP, 20°51'S, 148°55'E, 14 Feb 1975, K. McDonald, QM S14638; 1 fem., Cape Hillsborough NP, 20°55'S, 149°03'E, rainforest, 5 Jan 1975, K. McDonald, QM S14643; 1 ma., Weipa, 12°39'S, 141°53'E, 7 Feb 1975, R. Raven, V. Davies, QM S14641; 4 ma., Lords Table plateau, site 1, 22°39'S, 148°01'E, eucalypt woodland, flight intercept trap, 10 Jan–10 Mar 2006, C.J. Burwell, QM S80228; 1 fem., Homevale, 21°24'S, 148°33'E, semi-evergreen vine thicket, 1–7 Apr 1975, R. Monroe, QM S14644; 1 ma., Mazeppa NP, N end, 22°14'S, 147°15'E, brigalow, flight intercept trap, 18 Dec 2000–26 Mar 2001, D. Cook, G. Monteith, QM S55916; 1 ma., Kalbar, 3 km W, 27°57'S, 152°38'E, flight intercept trap, 2 Dec 2000–7 May 2001, C.J. Burwell, QM S55922.

**Description.** Male, QM S85431. Carapace 2.81 long, 2.19 wide. Abdomen 5.63 long, 1.44 wide. Total, 8.4.

I: 2.21, 0.64, 2.00, 2.00, 0.78, 7.63. II: 1.82, 0.64, 1.25, 1.68, 0.61, 6.00. III: 1.32, 0.53, 1.00, 1.21, 0.53, 4.59. IV: 2.11, 0.68, 1.75, 1.93, 0.61, 7.08. Palp: 0.89, 0.28, 0.28, 1.00, –, 2.45.

**Colour.** Uniform pile of short dark hairs on caput with narrow mid-line and wider bands from eye region of white hair (see Fig. 75a). Dark medial band of black hair and narrow glabrous zones with light coloured sides. **Eyes.** Group width/headwidth=0.59 through PLE, 0.48 through mid-eye group. OQ front, back, long: 40: 56: 45. MOQ front, back, long: 20: 26: 26. AME: ALE: PME: PLE, 9: 6: 9: 9. Back eye row in two lines widely separated from above, AER recurved. **Spines.** Tibia I with 3 longer ventral pairs (ca. 25% of tibia long), slightly overlapping and one shorter distal pair. Metarsus I, II ventrally with proximal pair longer, paired middle pair staggered, and short distal pair. I: fe p4d3r4; pa p1w, d1 distal, r1; ti p2d2r2v.2.2.2+2; me p3r3v2.2.2. II: fe p4d2r4; pa p0d1 distal r1; rest as I. III, IV: p5d2r5; pa d1r1; ti as I but spines shorter. Palp: fe p1d1.2; pa p1w, 1 distal d very long; ti, p2d1 very long. Palp. Cymbial edge with two spine-like bristles prolaterally and 1 retrolateral; 2 long ventrally on cymbial cone. Tibia slightly longer than patella, tibia with small retrolateral notch distally and wide

rectangular ventral plate; long irregular conical RTA; cymbial cone long, distally flattens with concavity extending as far forward again as bulb insertion; subtegulum large with internal scalloping; embolus long (Fig. 76a).

*Female* QM S22591. As for male but: Carapace 3.46 long, 2.59 wide. Abdomen 5.95 long, 2.05 wide. Total, 9.4.

I: 4.98, 1.46, 4.93, 4.68, 2.34, 18.39. II: 5.12, 1.46, 4.98, 5.12, 2.34, 19.02. III: 3.85, 1.07, 3.12, 3.56, 1.37, 12.98. IV: 5.17, 0.24, 4.29, 5.27, 1.76, 16.73. Palp: 1.46, 0.54, 0.93, -, 1.22, 4.15.

Group width/headwidth=0.62 through PLE, 0.50 through mid-eye group. AME to clypeus 0.24. From above, AER straight; AME slightly larger than ALE but equidistant. PER in two lines. Eye region quite flat. Caput flat. *Spines*. I, II: fe p5d3r5; pa d1 distal; ti p2r2v.2.2.2; me p2r2v.2.2.2. III: p5d3r5; pa d1; ti p2s1r2v.2.2.2; me p3r3v1.1.1.1. IV: fe p5d3r0.0.3; pa d1; ti p3d1r3v2.2.2.2; me p2r2v1.1.1.1.1. Palp: fe p1d1.1; pa 1 distal d; ti, d2r21; ta p1r1. Epigyne (Fig. 76c, d). Anterior ridge forms cordate cavity; internally, large flared translucent duct doubles back to spermatheca. Posterior coils evident ventrally, but not dorsally.

**Distribution.** Australian Region– Australia (eastern Queensland, Western Australia, New Guinea (Papua New Guinea)); Oriental Region– Myanmar, India, Philippines, Thailand, Singapore; Palaearctic Region–Japan. Davies (1985) listed only *Perenethis venusta* from Australia. Volker Framenau (pers. comm.) reported a specimen from the Kimberley Ranges, Western Australia.

**Remarks.** The type of *Perenethis unifasciatus* Doleschall, 1859 should be in RMNH, Leiden, but Chrysanthus (1967) was unable to find it because, as Sierwald (1997) reports, it was never received. Doleschall's figures are only of the habitus not of the critical palp. Further, although the cataloguers, Bonnet and Roewer, considered *P. venusta* and *P. unifasciatus* as synonyms, Chrysanthus (1967) found further material of both and concluded the species were distinct. But Sierwald (1997) rejected Chrysanthus and that is followed here.

The palp of the holotype male (examined) of *Dolomedes stilatus* Karsch, 1878 is the same as the eastern Australian material and the holotype of *P. venusta*. The male palp of the holotype of *Perenethis kawangisa* Barrion & Litsinger, 1995 is well illustrated and concurs completely with that of *P. venusta*.

### *Hygropoda* Thorell, 1895

*Hygropoda* Thorell, 1895: 221; Silva, 2013b: 290. Type species, *Tegenaria dolomedes* Doleschall, 1859 by subsequent designation of Simon (1903: 316).

**Diagnosis.** Males and females are very distinctive in the pseudosegmented (curved) tarsi in combination with the small size and, in Australia at least, green colour in life.

**Description.** Carapace profile flat. Clypeus steep to vertical; eyes subequal but clearly ALE are smallest. Carapace with subtle short "shoulder". Legs very long (Fig. 7e); tarsi of males and females curving, pseudosegmented (Fig. 7e). Carapace in lateral view with slight medial saddle rising to eye region (Fig. 5h). PTF present (Fig. 6b). Eyes of PER clearly larger than those of AER; AER *ca.* 0.7 of width of PER (Fig. 4h). Males and females of similar size. Aboreal diurnal and nocturnal spiders hunting on small sheet web over leaves in rainforest (*H. lineata*). Female tarsi distally incrassate for distal 0.25 and bent at midpoint. Trochanters with shallow notches. Palpal femur (male) subequal to carapace length. Male palp in the Pisaurinae form.

**Distribution.** Central African Republic, Madagascar, South-east Asia, Australia, Venezuela, Oriental Region; SE Asia.

**History.** The original, apparently stylized, figure of the type species, *Tegenaria dolomedes* Doleschall, 1859, lacks the diagnostic elongate flexible tarsi considered a key diagnostic character of the genus and the type species has never been revised.

Dankittipakul *et al.* (2008) reviewed the genus *Hygropoda* in Thailand. Davies (1985) listed only *Hygropoda lineata* from Australia and, based upon her examination of the types, included *Hygropoda spuripes* Strand, 1911 in its

synonymy. Dankittipakul *et al.* (2008) admit all *Hygropoda* have long flexible tarsi with the AER recurved and much narrower than PER.

Of the 28 species of *Hygropoda* listed in the WSC (2017), 16 (including the type species) have not been revised morphologically in the past 100 years; the figures of those, if they were provided, are inadequate to recognise the species. Dankittipakul, Singtripop & Zhang (2008) reviewed the genus in Thailand and found the fauna were all species described from China by Zhang, Zhu & Song (2004). The *Hygropoda* figured here is historically taken to be *H. lineata* with which it is clearly conspecific. However, given that these are widespread species, the Malaysian *H. longimana* (Stoliczka, 1869), the Sulawesi *H. longitarsis* (Thorell, 1877) and *H. longitarsis fasciata* (Thorell, 1877), *H. albolimbata* (Thorell, 1878) are geographically possible conspecifics and all compete with *H. lineata* for seniority.

### *Hygropoda lineata* (Thorell, 1881)

(Figs 4h, 5h, 6b, 7e, 77, 78a, b, 79a–c. Map 6c)

*Dendrolycosa lineata* Thorell, 1881: 366.

*Hygropoda spuripes* Strand, 1911: 69. First synonymised by Davies, 1985: 103.

*Hygropoda exilis* Thorell, 1881: 369, penult. male, "Dorei Hum (N. Guinea)", coll. O. Beccari, 1875, MCSN, examined. New synonymy.

**Material examined.** Queensland: holotype (*Dendrolycosa lineata*), female, Somerset, Cape York, coll. L. M. D'Albertis, 1875, MCSN, examined. Indonesia: holotype (*Hygropoda spuripes*), female, Wokam, Aru Is., fem. (missing from SMF, not examined), paratype(s) SMF ma. adult (missing, not examined, 16197); holotype (*Hygropoda exilis*) penult. male, "Dorei Hum (N. Guinea)", coll. O. Beccari, 1875, MCSN, examined.

**Other material examined.** Queensland: 1 fem., Lake Placid, 16°55'S, 145°46'E, rainforest, night collection, 12 Jun 1987, R.R. Jackson, QM S7115; 1 ma., Windsor Tableland, 1.2 km past barracks, 16°15'S, 145°02'E, rainforest, 8 Feb 1998, G. Monteith, D. Cook, QM S54006; 1 fem., Lake Boronto (=Wincheura), Newcastle Bay, rainforest, 30 Jan–4 Feb 1975, G. Monteith, QM S28851; 2 fem., Lake Placid, 16°55'S, 145°46'E, rainforest, night collection, May 1987, R.R. Jackson, QM S7116; 1 ma., Topaz, PEI Road, Frith house, 17°24'S, 145°41'E, rainforest, flight intercept trap, 6 Dec 1993–25 Feb 1994, G. Monteith, H. Janetzki, D. Cook, QM S58026; 1 ma., 1 juv., Massey Ra., 2nd camp, 17°14'S, 145°48'E, hand collection, 11–12 Oct 1991, G. Monteith, H. Janetzki, D. Cook, QM

S58621; 2 fem., Lockerbie Scrub, Cape York, 10°48'S, 142°28'E, rainforest, 19–22 Apr 1973, G. Monteith, QM S14659; 1 ma., Paluma Dam Road site 1, 18°56'S, 146°10'E, flight intercept trap, 8 Dec 1990–5 Feb 1991, G.B. Monteith, Seymour, QM S58002; 1 fem., Lockerbie, Cape York, 10°48'S, 142°27'E, 30 Jan 1975, R.J. Raven, QM S28853; 3 fem., Prince of Wales Is., 10°41'S, 142°09'E, closed forest, 13 Feb 1975, E. Cameron, QM S28852; 4 fem., Amphitheatre–Crystal Falls, Nitmiluk NP, rainforest, 16 Mar 1995–17 Mar 1995, G. Monteith H. Janetzki, QM S37894; 1 fem., West Claudie R, Iron Ra., 12°45'S, 143°14'E, rainforest, 3–10 Dec 1985, G. Monteith, D. Cook, QM S39458; 1 ma., Mission Beach (S3), 17°56'S, 146°04'E, rainforest, malaise trap, 29 Jan–4 Mar 1996, M. Cermak, QM S39128; 3 fem., Shiptons Flat, 15°48'S, 145°15'E, road verge, 17 Nov 1975, V. Davies, R. Monroe, QM S51189. Northern Territory: 1 fem., Fish River, 14.1025°S, 130.7847°E, 24 Apr 2012, R. Raven, QMS. Solomon Islands: 1 fem., New Georgia; Javae, near Seghe below campsite, rainforest, 24 Jun 1990, T. B. Churchill, QM S42972.

Juveniles given only with locality, coordinates and registration number: Queensland: Cape Tribulation, 16°05'S, 145°26'E, QM S14017; Prince of Wales Is., Torres Strait, 10°41'S, 142°09'E, QM S28850; Richardson's Property, Bellenden Ker, 17°16'S, 145°57'E, QM S26260; Cape Tribulation, N of Pilgrim Sands, 16°05'S, 145°26'E, QM S14062; Bamaga, 10°53'S, 142°24'E, QM S12492; Bellenden Ker Ra., Cableway Base Station, 17°16'S, 145°54'E, QM S27828.

**Diagnosis.** Small spiders, green in life (Fig. 77), with almost glabrous carapace. The male palp (Fig. 78a, b) is very similar to those of *Dolomedes* but lacks the retroproximal cymbial flange and the distal prolateral and ventral processes on the male palpal tibia. The spination is always erect, as in the Oxyopidae.

**Description.** Male Gordonvale 1 Mar 1972, NC Coleman, QM S. Carapace 3.53 long, 2.94 wide. Abdomen 5.06 long, 1.76 wide. Total, 8.6.

I: 8.24; 1.76; 8.12; 8.00; 5.53; 31.65. II: 8.12; 1.65; 7.53; 7.41; 4.71; 29.41. III: 6.71; 0.12; 5.41; 5.76; 4.12; 22.12. IV: 7.88; 1.65; 6.94; 7.65; 4.71; 28.82. Palp: 3.29; 0.94; 1.18; 1.53; 6.94.

**Eyes.** Group width/headwidth=0.68 through PLE, 0.64 through mid-eye group. OQ front, back, long, 31: 38: 25. MOQ front, back, long, 16:20:16. AME–AME, 3; AME–ALE, 2; PME–PME, 4; PME–PLE, 8. AME: ALE: PME: PLE, 7: 6: 7: 8. Back eye row in one recurved line, back edge of PME on line of front edge of PLE; from above, AER recurved. **Spines.** Only distal spines on femora strong.

Legs I, II: fe p2-3d2-4r3-4; pa p1 distal 1, r1w; ti p2d2r2v.2.2.2.2; me p2r2v2.2. Leg III: fe p5d3r3, pa p1d1 (distal) ; ti p2d2r2v.2.2.2; me p2r2v2.2.2.2 + distal whorl of 4. Leg IV, as II but fe p3de3r0-2. Palp: fe p1d1.1r1; pa d1; ti p2d1r1. Tarsi strongly curved, pseudosegmented, slender, similar width for length. Palp (Figs 7e, 78a, b). Tibia only slightly longer (1.10) times longer than patella. RTA stalked and deeply incised with ventral process distally bifid; median apophysis small; DTP rectangular; cymbial cone long, slender.

**Female QMS.** Carapace 2.94 long, 2.59 wide. Abdomen 5.88 long, 2.47 wide. Total, 8.8.

I: 5.76; 1.65; 7.65; 5.76; 3.53; 24.35. II: 5.29; 1.41; 5.06; 4.71; 3.41; 19.88. III: 4.82; 0.94; 3.76; 3.41; 2.47; 15.41. IV: 5.53; 1.06; 4.12; 4.71; 3.18; 18.59. Palp: 2.00; 0.82; 1.18; 1.18; 5.18.

**Colour.** Pallid, faded. Fine bands of white hair on carapace from PLE to fovea, medial short and long submargin. Tibiae I, II bent at distal half to third. Spines like male but longer on patellae-tibiae longer and stronger than on femora. Palp: fe p1d1.1r0; pa p1 distal 1; tibia p1r1. Epigyne. Very subtle: two long bracket like ridges; internally appear simple (Fig. 79b, c).

**Distribution and habitat.** Rainforest and riverine closed forest in the Northern Territory and northern Queensland to just north of Townsville.

**Biology.** Bright green in life (Fig. 77), these spiders build small "sheet" hunting webs entirely on leaves and are both diurnal and nocturnal. The webs are not sheets but the sparse strands line in one plane.

**Remarks.** As a penultimate male, the holotype of *H. exilis* cannot be recognised with certainty as distinct from *H. lineata* and it is thus placed in synonymy.

### *Inola Davies, 1982*

*Inola Davies, 1982: 479.* Type species, *Inola amicabilis* Davies, 1982 by original designation.

**Diagnosis.** Differs from *Dendrolycosa*, the other extensive sheet-web building pisaurid

in Australia, by the ALE being as large if not larger than the PME (Figs 80c, 82c), rather than the usual condition of being the smallest eyes. Differs from *Hygropoda* in lacking pseudosegmented tarsi.

**Description.** Carapace in lateral view with slight medial saddle rising to eye region (as in *Dendrolycosa*). Pretarsal fracture present (Davies, 1982, plate 1, fig. 17). ALE as big as PLE; AER almost as wide (0.9) as PER (Figs 80c, 82c). Males and females of similar size.

**Included species.** *Inola amicabilis* Davies, 1982, *Inola cracentis* Davies, 1982, *Inola subtilis* Davies, 1982, *Inola daviesae* Tio & Humphrey, 2010.

**Distribution, habitat and web.** *Inola* is known only from rainforests in north-eastern Queensland. The spiders build a sheet web in trees and scrubs; the web becomes funnel-shaped and wraps around a stem near the retreat which is 2-3 cm long. The web is similar to that of *Dendrolycosa* (Fig. 72b).

**Remarks.** Davies (1982) was a complete revision and only a minimal treatment is given.

### *Inola amicabilis* Davies, 1982

(Figs 4b, 80a-e, 81a, b, 82a-c. Map 6d)

*Inola amicabilis* Davies, 1982: 479.

**Material examined.** Types. Queensland: holotype, QM S860; female paratypes QM S861; 1 m 3 males, QM S864-8, fem., QM S870-1 ma.; QM S872, 4 ma., 5 fem.; QM S873, ma.

**Distribution & habitat.** Wet Tropics World Heritage area, Queensland, at Cooktown and just south at Home Rule.

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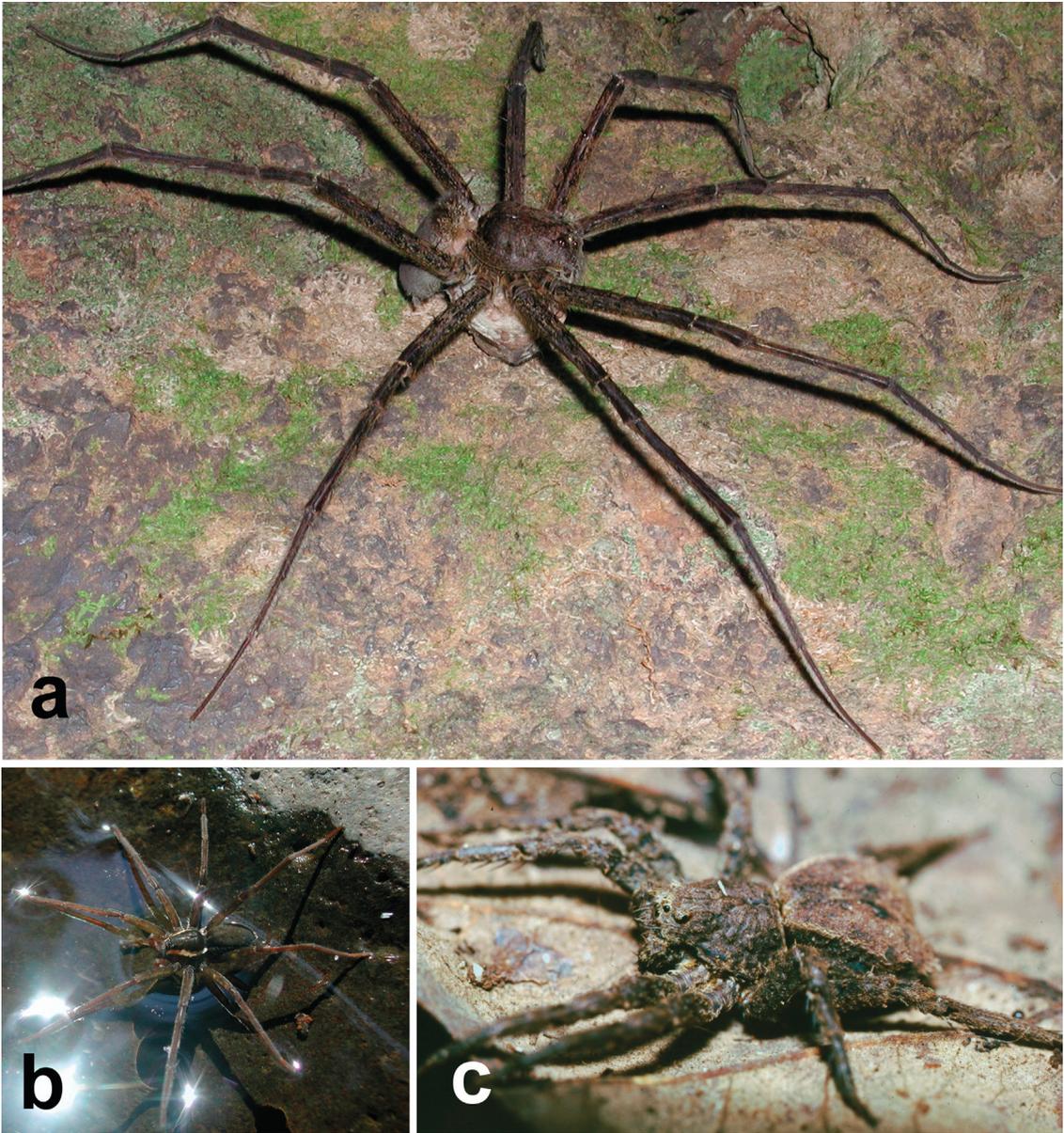


FIG. 1. Habitus, dorsal views. **a**, *Megadolomedes trux* (Lamb, 1911), female; **b**, *Dolomedes vicque* sp. nov., female; **c**, *Bradystichus calligaster* Simon, 1880, female.

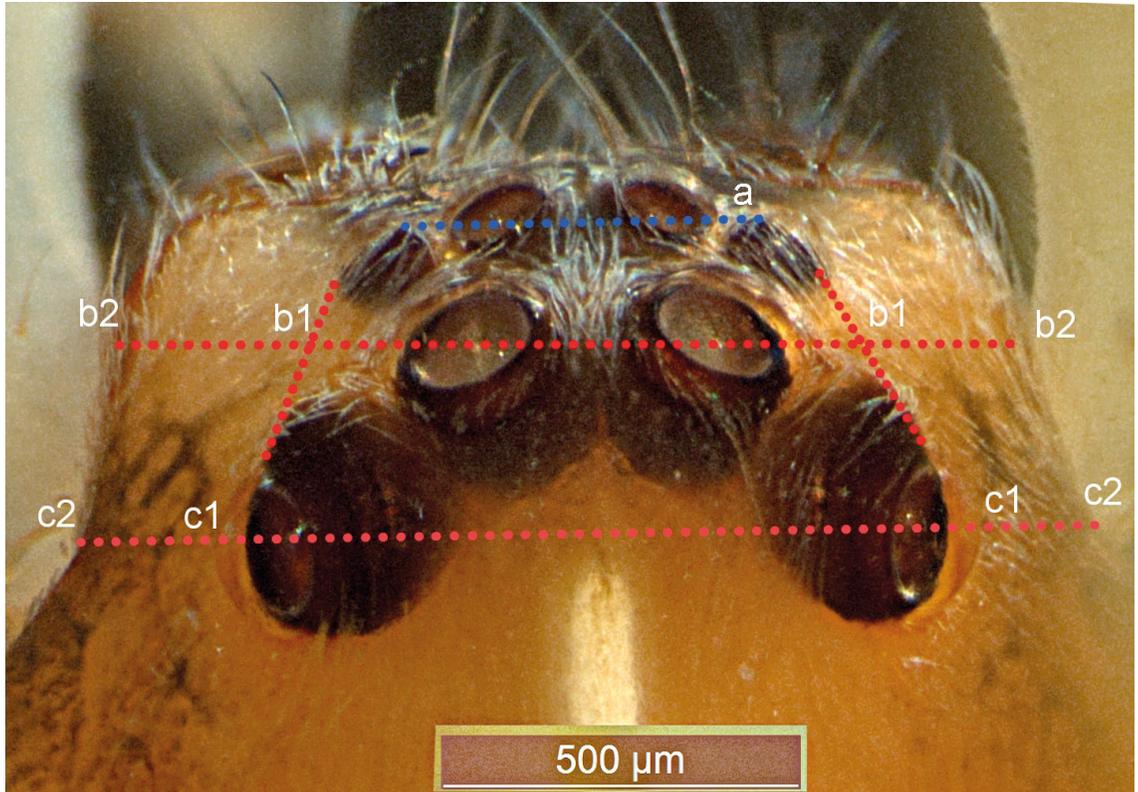


FIG. 2. Eyes of *Ornodolomedes nebulosus* sp. nov., showing measurements. **a**, percentage overlap of eyes of anterior row; **b**, width of head (b2–b2) through PME and of eye group on same line (b1–b1); width of head (c2–c2) through PLE and of back of eye group on same line (c1–c1). c2 also marks the position of “caput shoulder”.

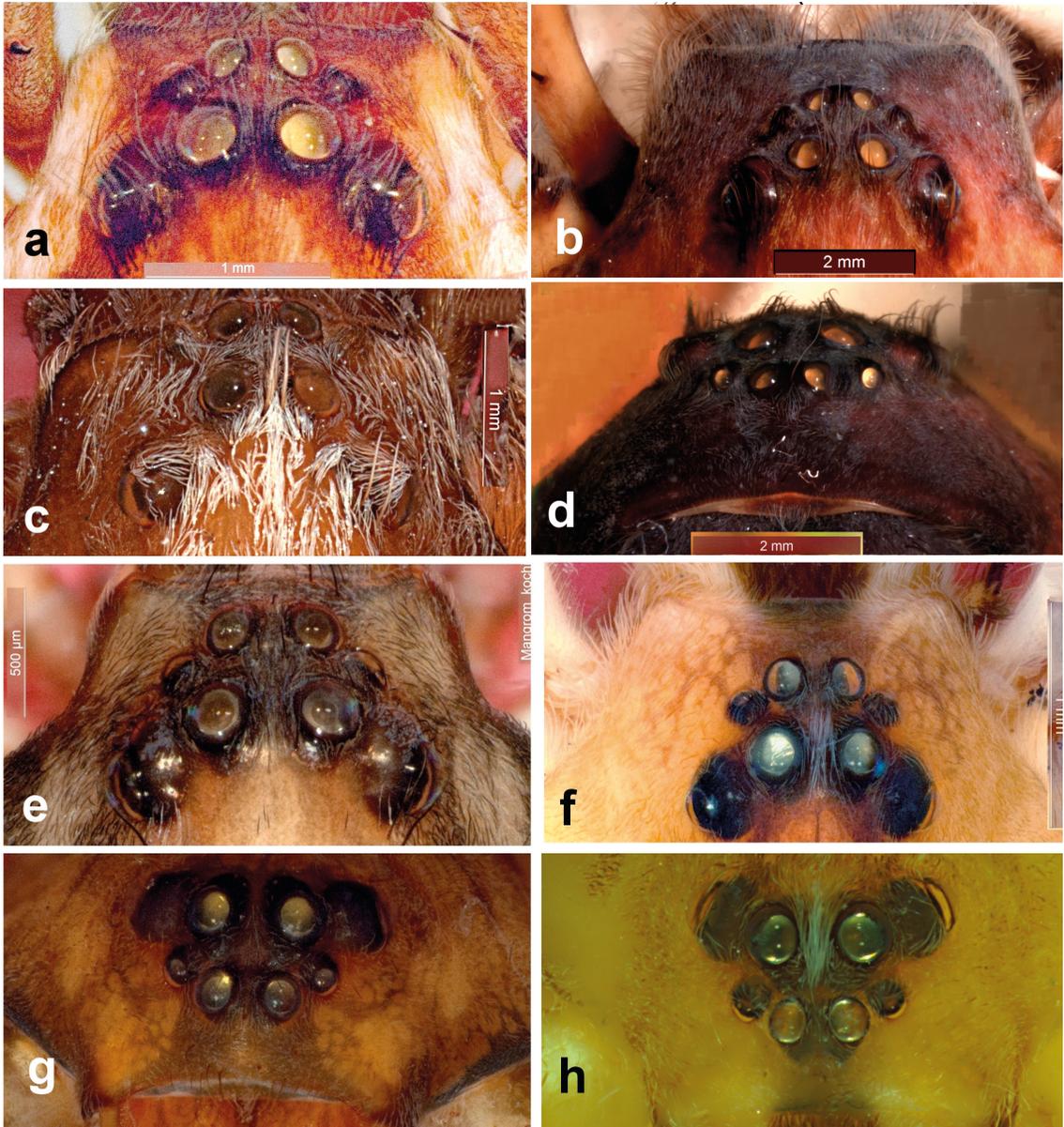


FIG. 3. Eye groups of different genera viewed from above and in front (the “face”). **a**, *Dolomedes wollemi* sp. nov., dorsal view; **b**, **d**, *Megadolomedes trux* (Lamb, 1911), female, **b**, dorsal view, **d**, “face”; **c**, *Bradystichus calligaster* Simon, 1880, dorsal view; **e**, **g**, *Mangromedes kochi* (Roewer, 1951). **e**, dorsal view; **g**, “face”; **f**, **h**, *Ornodolomedes mickfanningi* sp. nov., female, QM S104681; **f**, dorsal view; **h**, “face”.

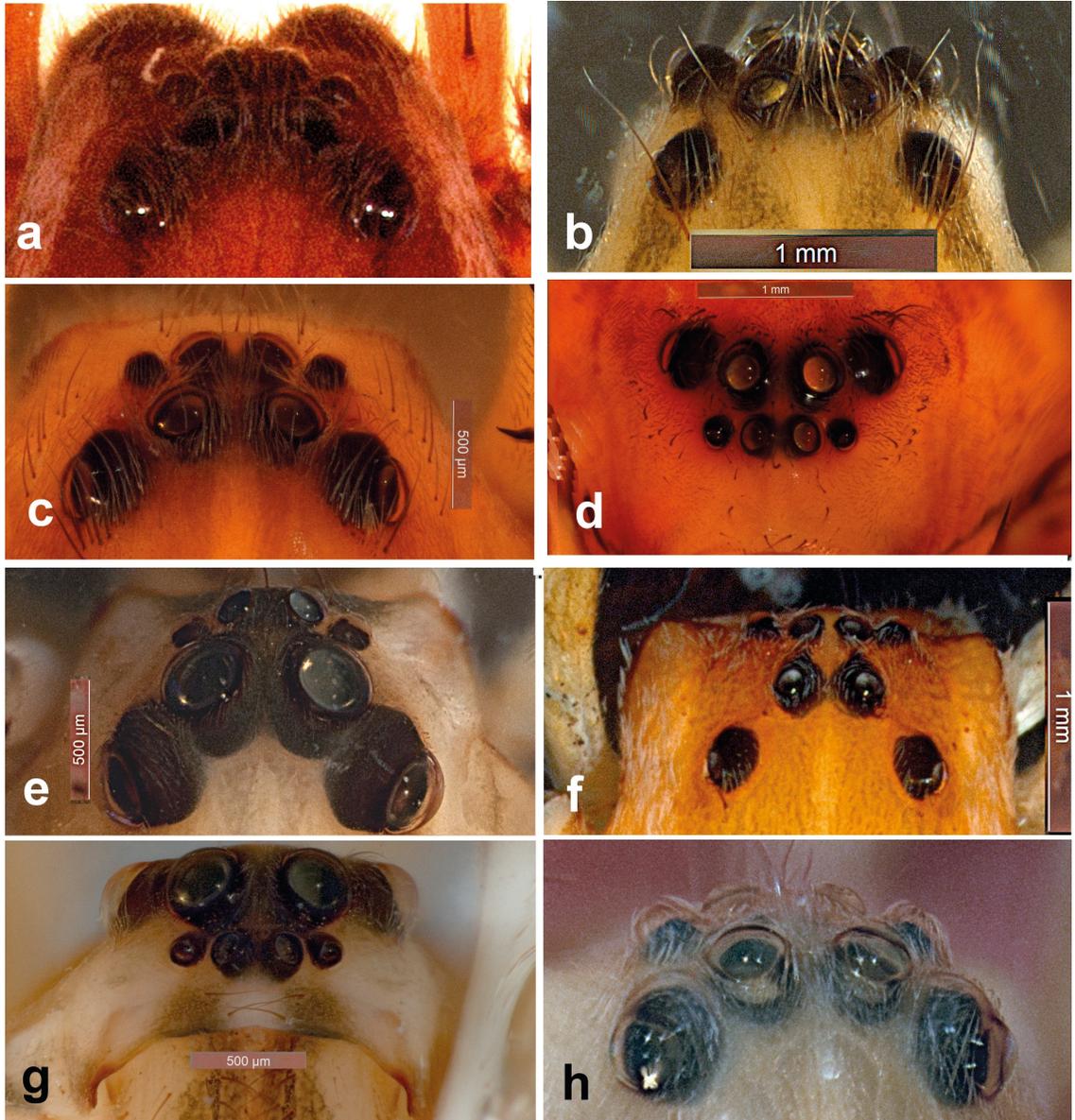


FIG. 4. Eye groups of genera viewed from above and in front (the “face”). **a**, *Tasmomedes eberhardarum* (Strand, 1913), dorsal view; **b**, *Inola amicabile* Davies, 1982, QM S881, ma., dorsal view; **c**, **d**, *Dolomedes facetus* L. Koch, 1873, QM S107111, male, dorsal (c) and “face” (d). **e**, **g**, *Caledomedes flavovittatus* (Simon, 1880), **e**, dorsal view; **g**, “face”; **f**, *Perenethis venusta* L. Koch, 1878, female, QM S22591, dorsal view; **h**, *Hygropoda lineata* (Thorell, 1881), dorsal view.

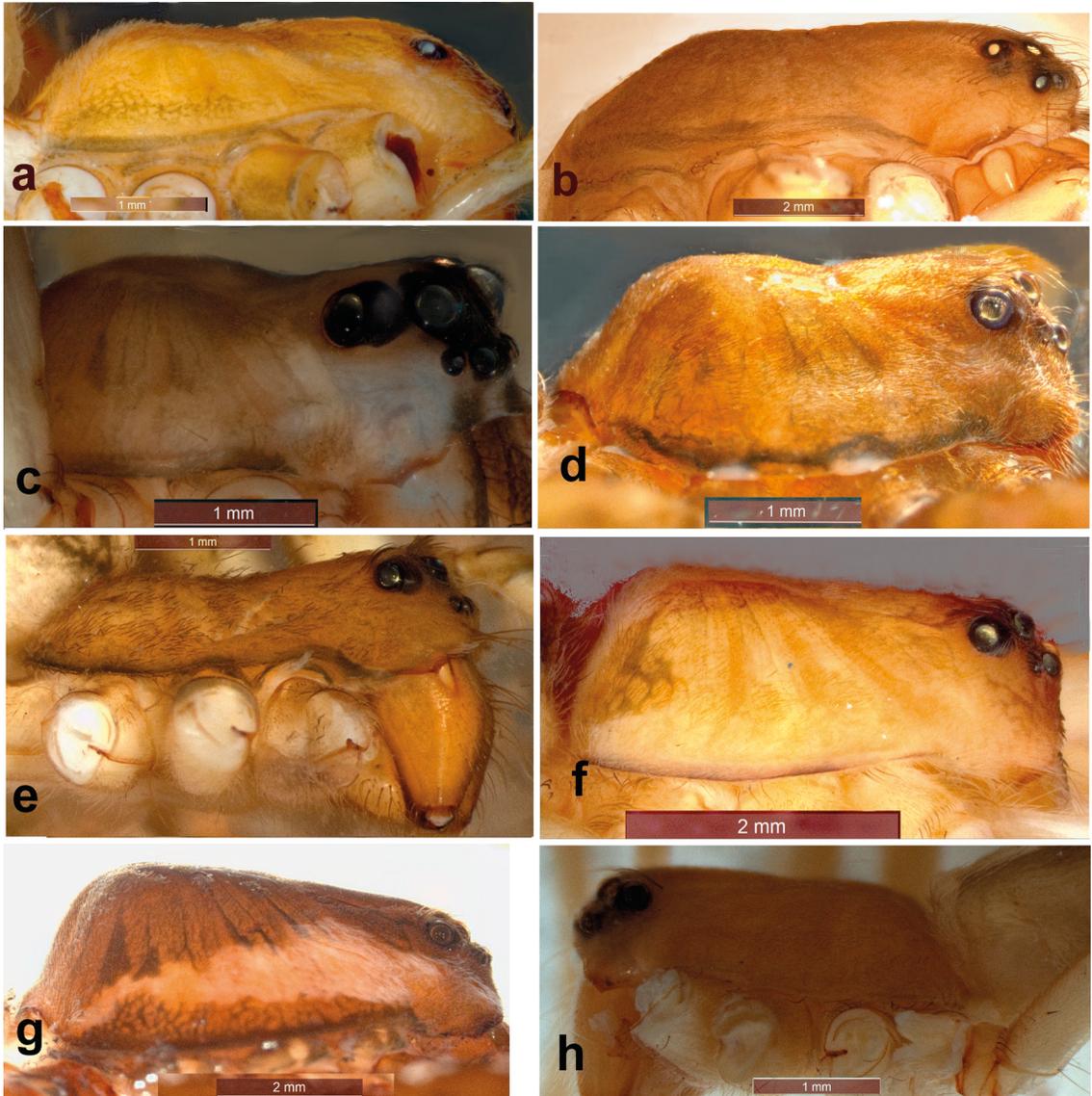


FIG. 5. Carapace, lateral view. **a**, *Perenethis venusta* L. Koch, 1878, female, QM S22591; **b**, *Dendrolycosa kakadu* sp. nov., female, QM S53981; **c**, *Caledomedes flavovittatus* (Simon, 1880); **d**, *Mangromedes kochii* (Roewer, 1951), female, QM S34613; **e**, *Ornodolomedes gorenpul* sp. nov., female, QM S55979; **f**, *Ornodolomedes mickfanningi* sp. nov., female, QM S104681; **g**, *Dolomedes albicomus*, male, QM S107110; **h**, *Hygropoda lineata* (Thorell, 1881), male, QM.

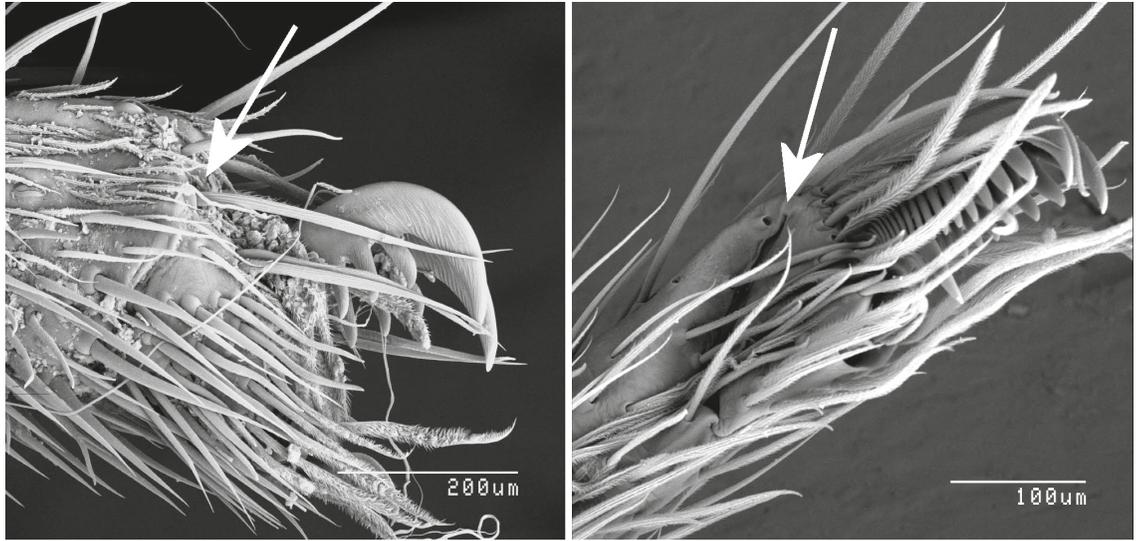


FIG. 6. Pretarsal fracture (arrows), scanning electron micrographs, lateral view. **a**, *Bradystichus*; **b**, *Hygropoda*, ventral view.

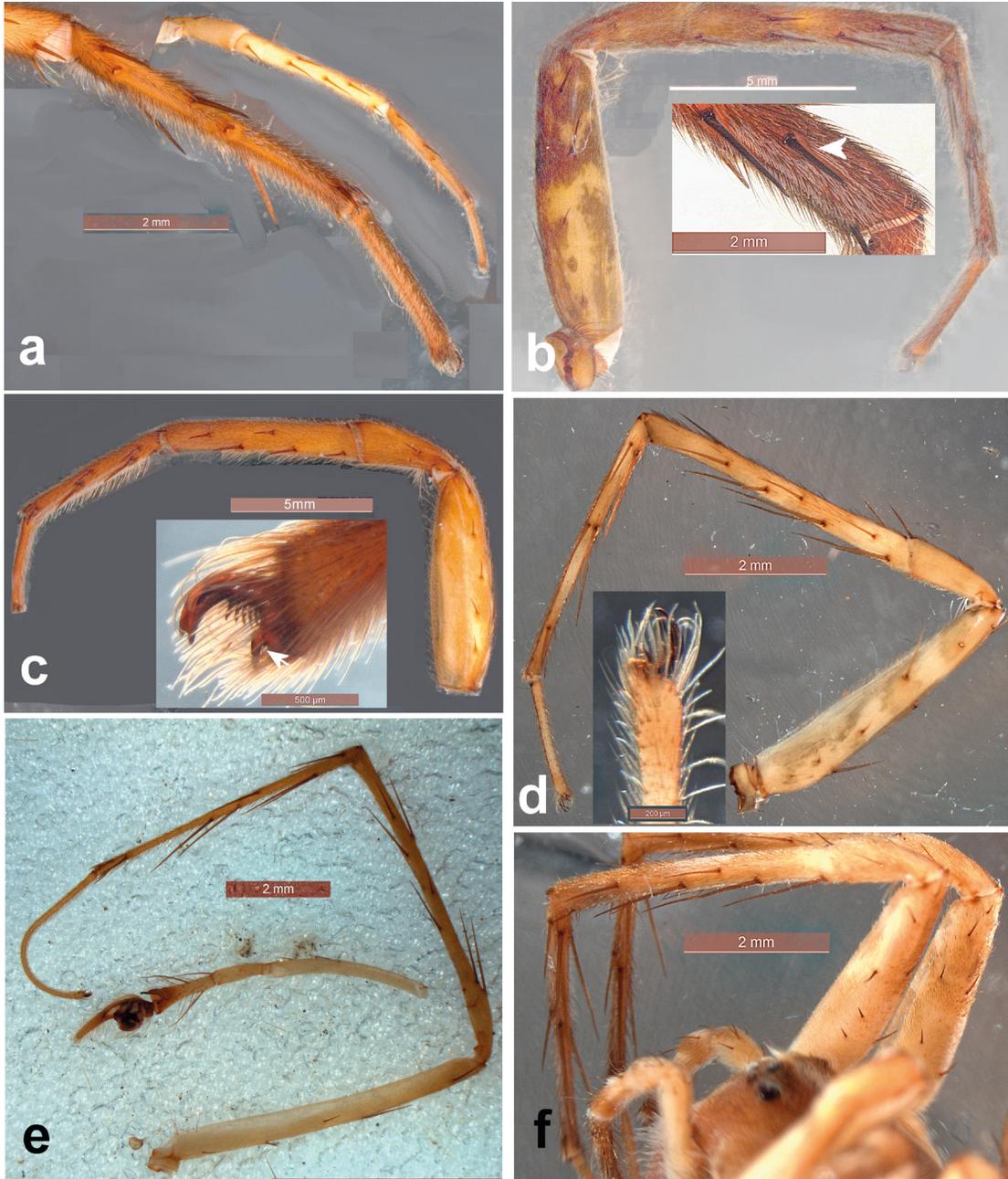


FIG. 7. Leg I, female (a–d, f), prolateral view. **a**, *Dolomedes facetus*, QM S107111; **b**, *Dolomedes mankorlod* sp. nov., inset shows tibial scopula; **c**, *Dolomedes albicomus*, QM S79214, inset shows claws with slender tooth on third claw; **d**, *Mangromedes kochi*, QM S108404, showing long tibial and metatarsal spines, inset shows claws with slender tooth on third claw; **e**, *Hygropoda lineata*, male QM S39128, shows long tibial and metatarsal spines and curved tarsi; **f**, *Ornodolomedes mickfanningi* sp. nov., QM S76373, showing long tibial and metatarsal spines.

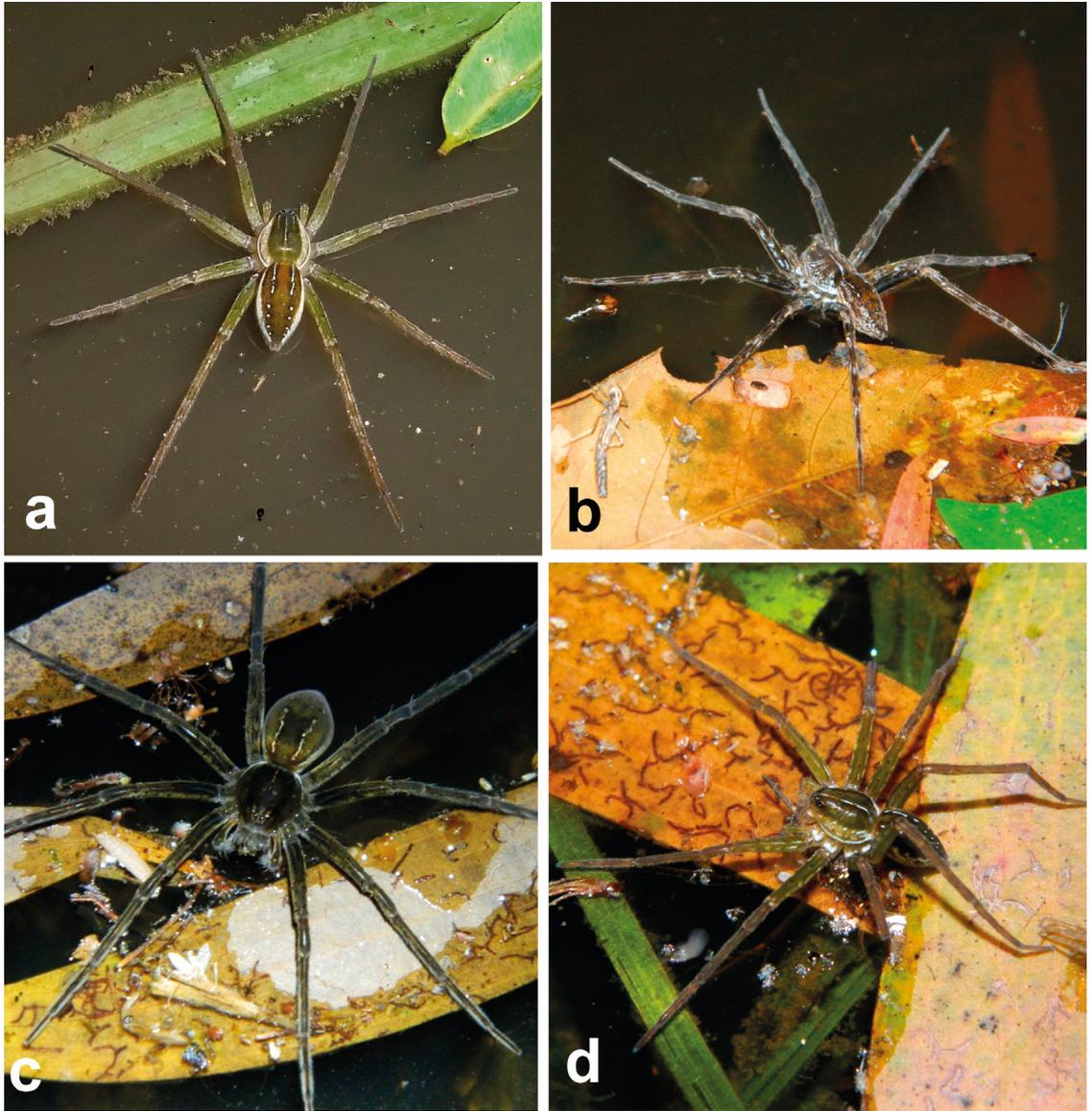


FIG. 8. *Dolomedes facetus*, habitus, dorsal view, showing pattern. **a**, female. **b-d**, Coolibah camp, Steve Irwin Wildlife Reserve, Pascoe River, north-east Queensland. **b, c**, female; **d**, male.

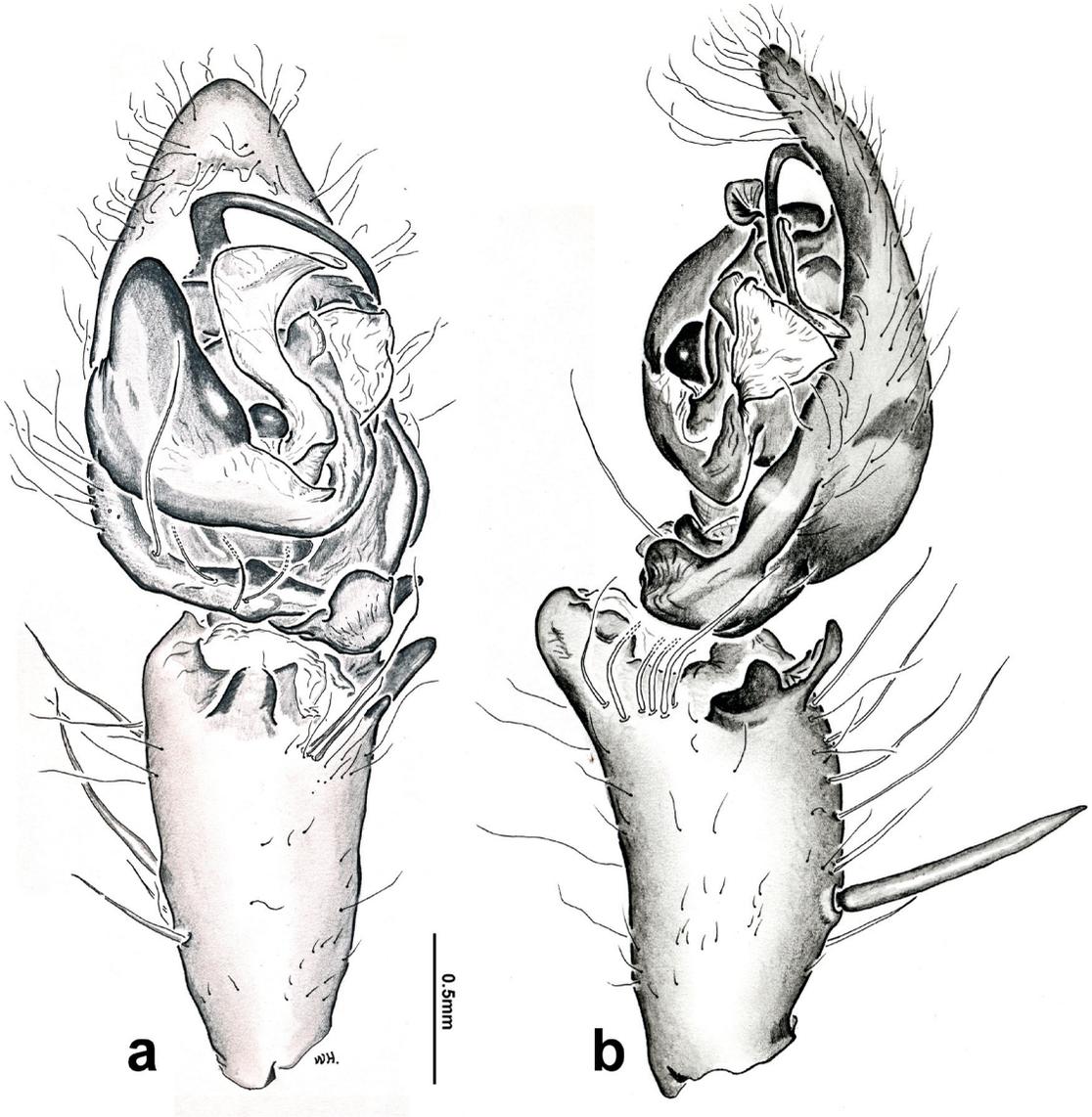


FIG. 9. *Dolomedes facetus* L. Koch, 1876, male palpal tibia and cymbium, Carnarvon, QM S107111. **a**, ventral view; **b**, retrolateral view.

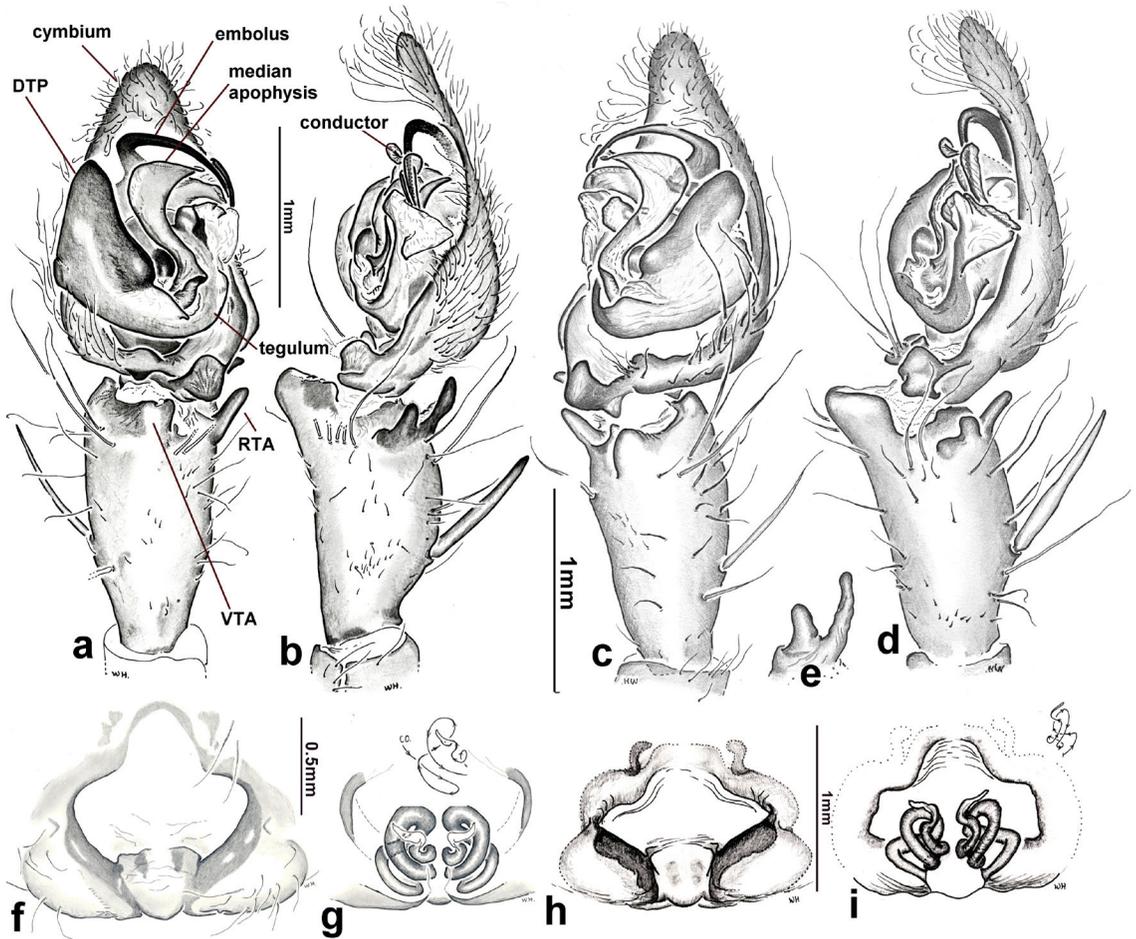


FIG. 10. *Dolomedes facetus* L. Koch, 1876, male palpal tibia and cymbium. **a, b**, Coolibah, QMS 104917; **a**, ventral view; **b**, retrolateral view. **c–e**, Musselbrook QM S96305, mirrored. **c**, ventral view; **d**, retrolateral view, **e**, RTAmax view. **f–i**, female epigyne. **f, g**, Carnarvon, QM S107111 ; **f**, external, **g**, internal; **h, i**, QM S67723; **h**, external, **i**, internal. Abbreviations: DTP, distal tegular process; VTA, ventral tibial apophysis.

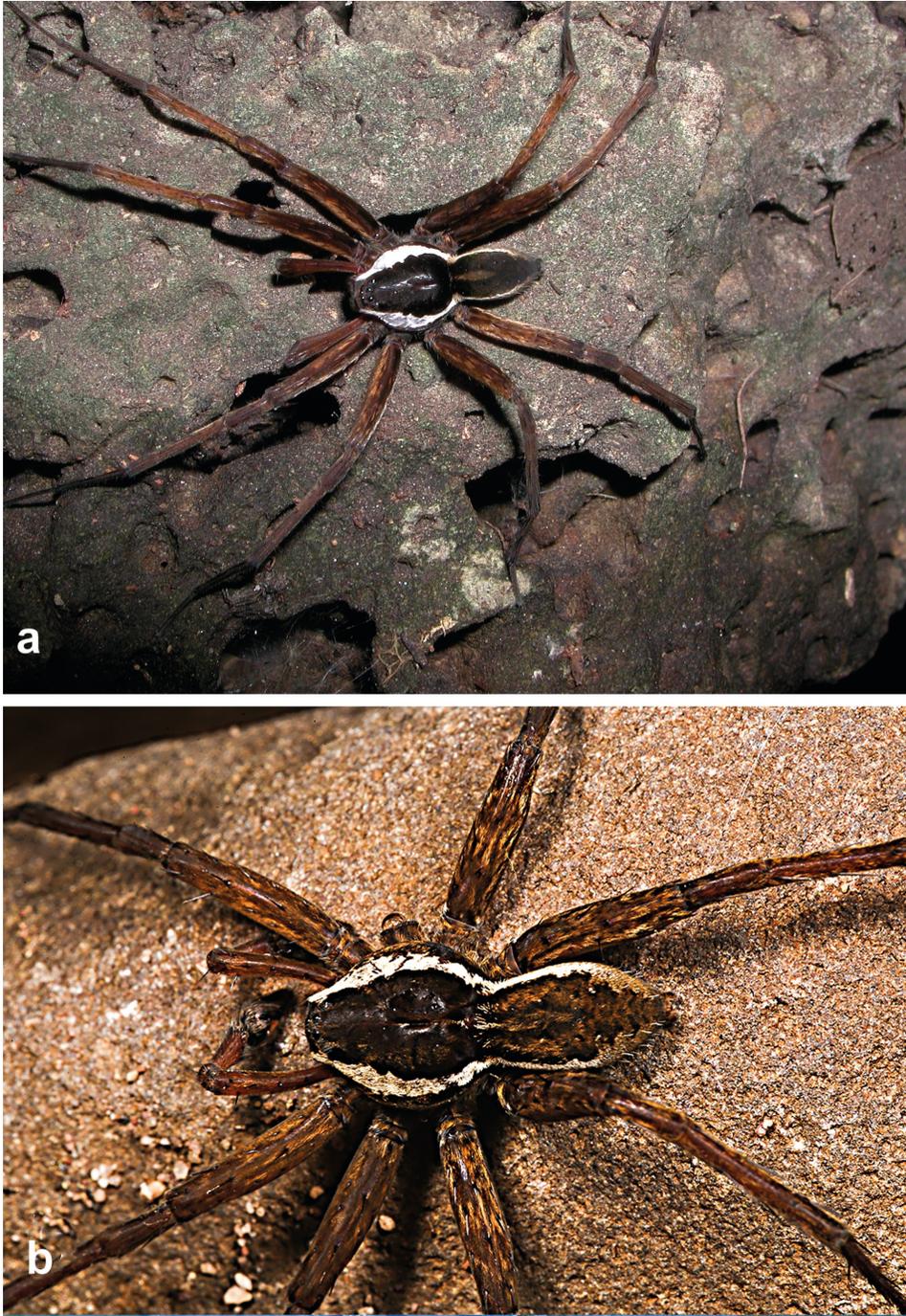


FIG. 11. *Dolomedes*, male habitus. **a**, *Dolomedes albicomus* L. Koch, 1867, Toomba; **b**, *Dolomedes instabilis* L. Koch, 1876, Avon River, Victoria, image, V. Framenau.

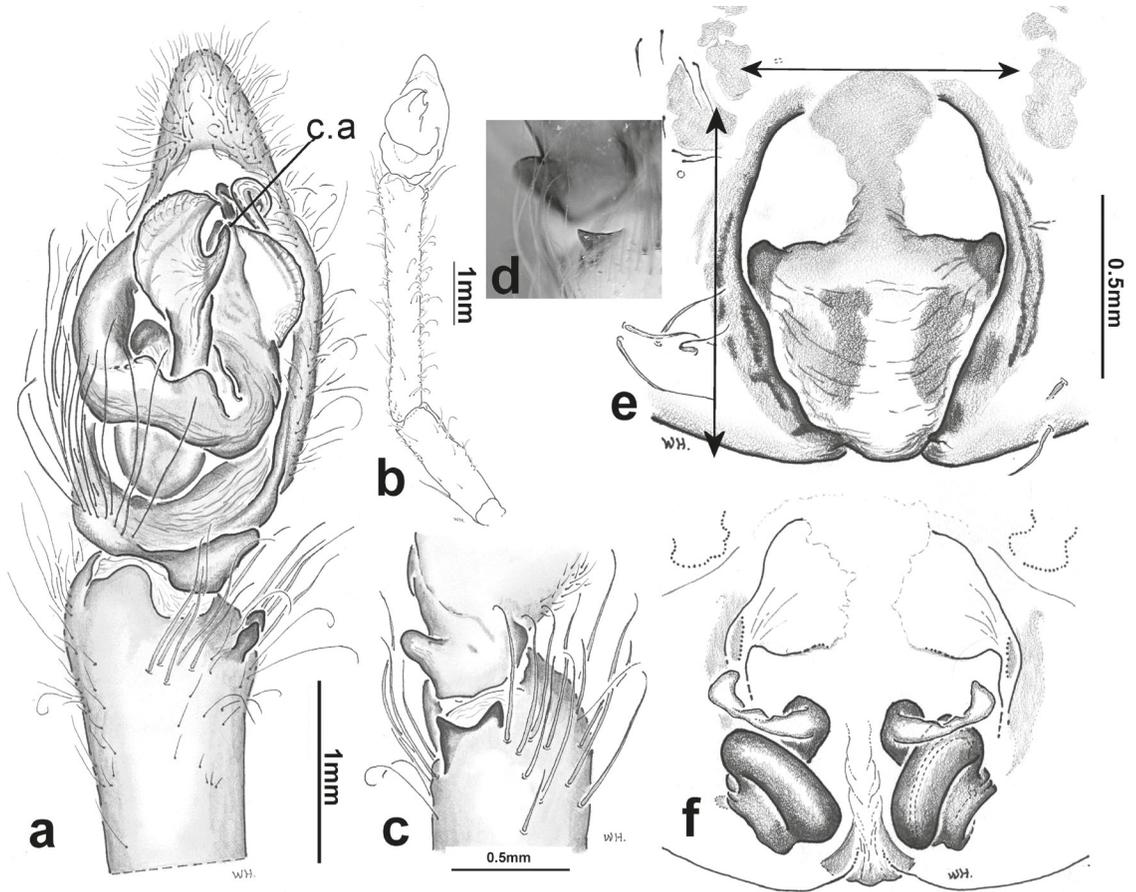


FIG. 12. *Dolomedes albicomus* L. Koch, 1867. **a-c**, male palpal patella, tibia and cymbium, QM S28795, Ayr. **a**, ventral view showing chelate apophysis (c.a); **b**, male palpal patella to cymbium. **c**, retrolateral view; **d**, holotype (ZMH), RTA and cymbium, retrolateral view. **e, f**, female epigyne, QM S79214. **e**, external showing length and width of epigyne as used herein, **f**, internal view.

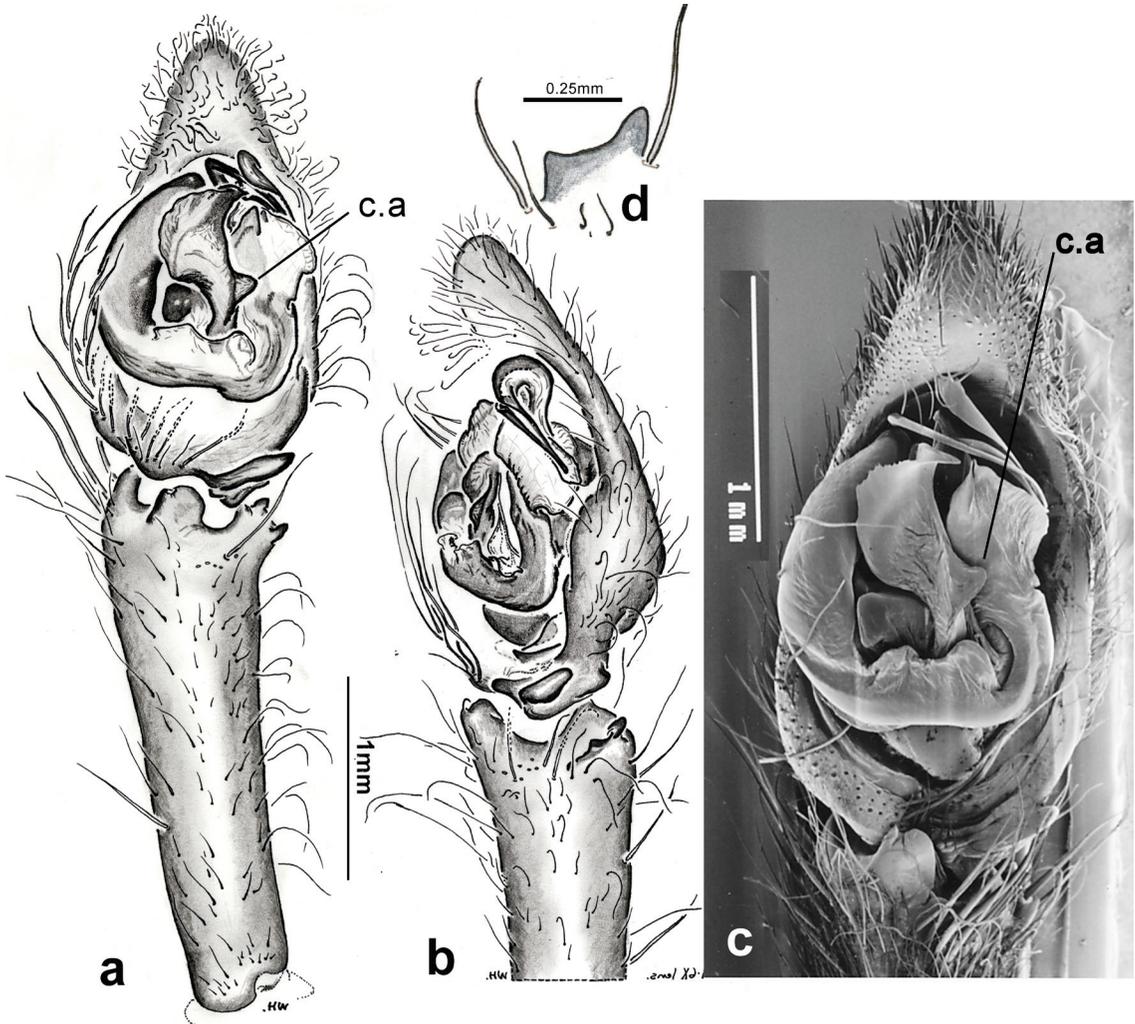


FIG. 13. *Dolomedes instabilis* L. Koch, 1876, male palpal tibia and cymbium, Boggomoss, QM S37350. **a**, **c**, ventral view showing chelate apophysis (**c.a**); **b**, retrolateral view; **d**, RTA max view.

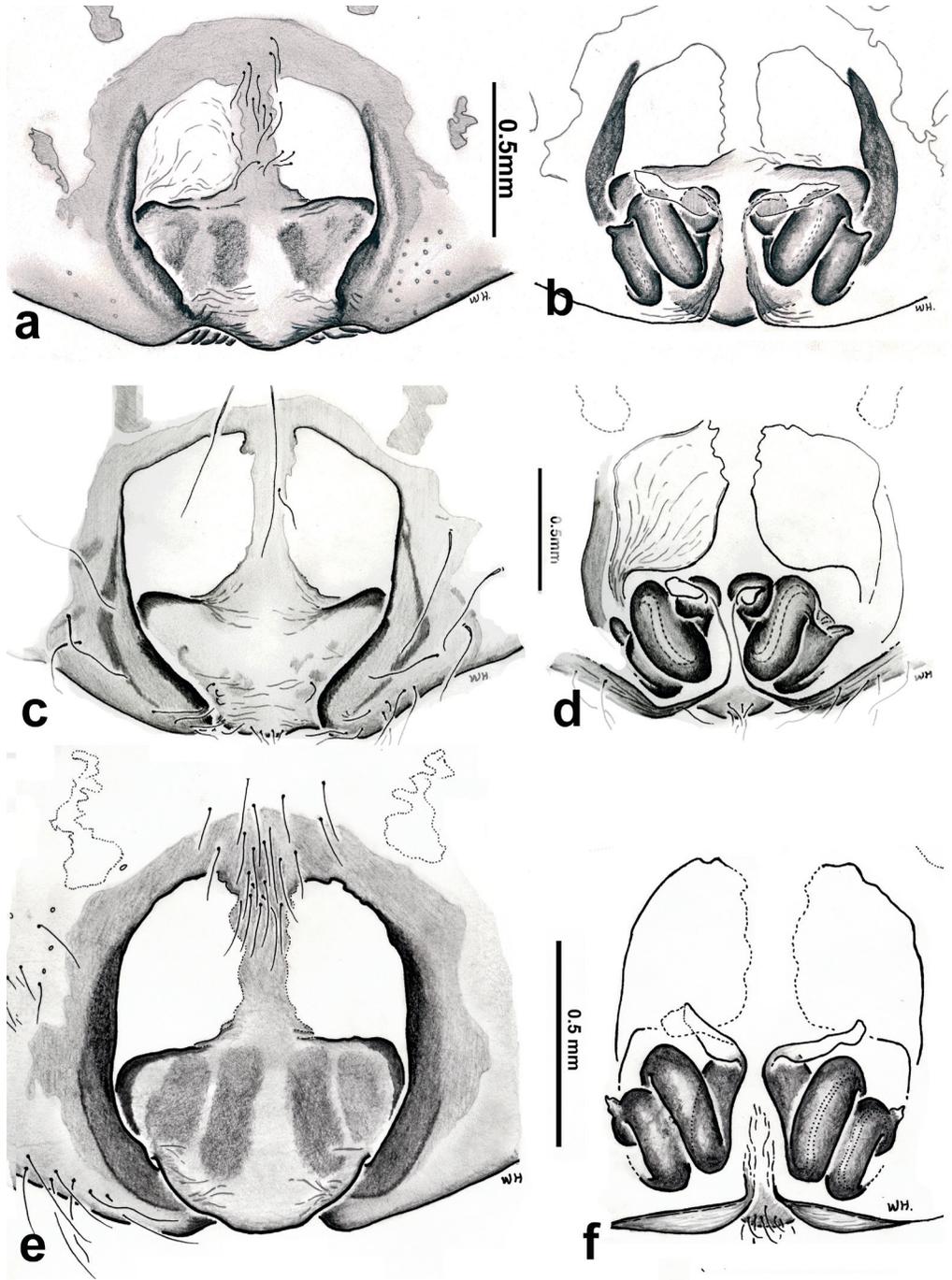


FIG. 14. *Dolomedes instabilis* L. Koch, 1876, female, epigyne. a, b, QM S37433. a, external; b, internal; c, d, *Dolomedes habilis* Hogg, 1906, syntype, Gilbert River, SAM NN319. c, external; d, internal. e, f, Lake George, ANIC. e, external; f, internal.

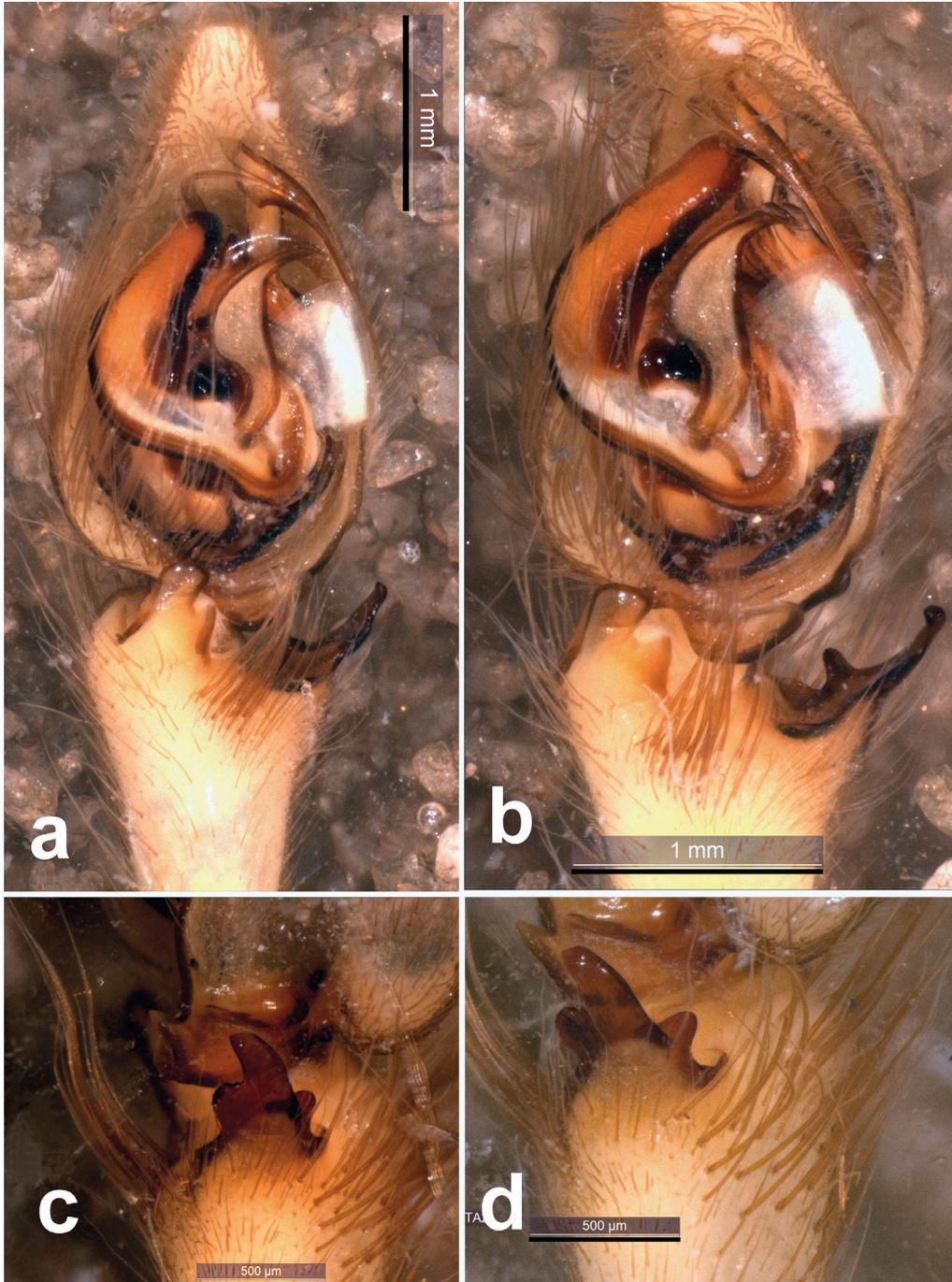


FIG. 15. *Dolomedes vicque* sp. nov., male, palpal tibia and cymbium, QM S91002, Boonah. **a, b**, ventral views; **c, d**, retrolateral tibial apophysis, **c**, RTAmax, **d**, retrolateral views.

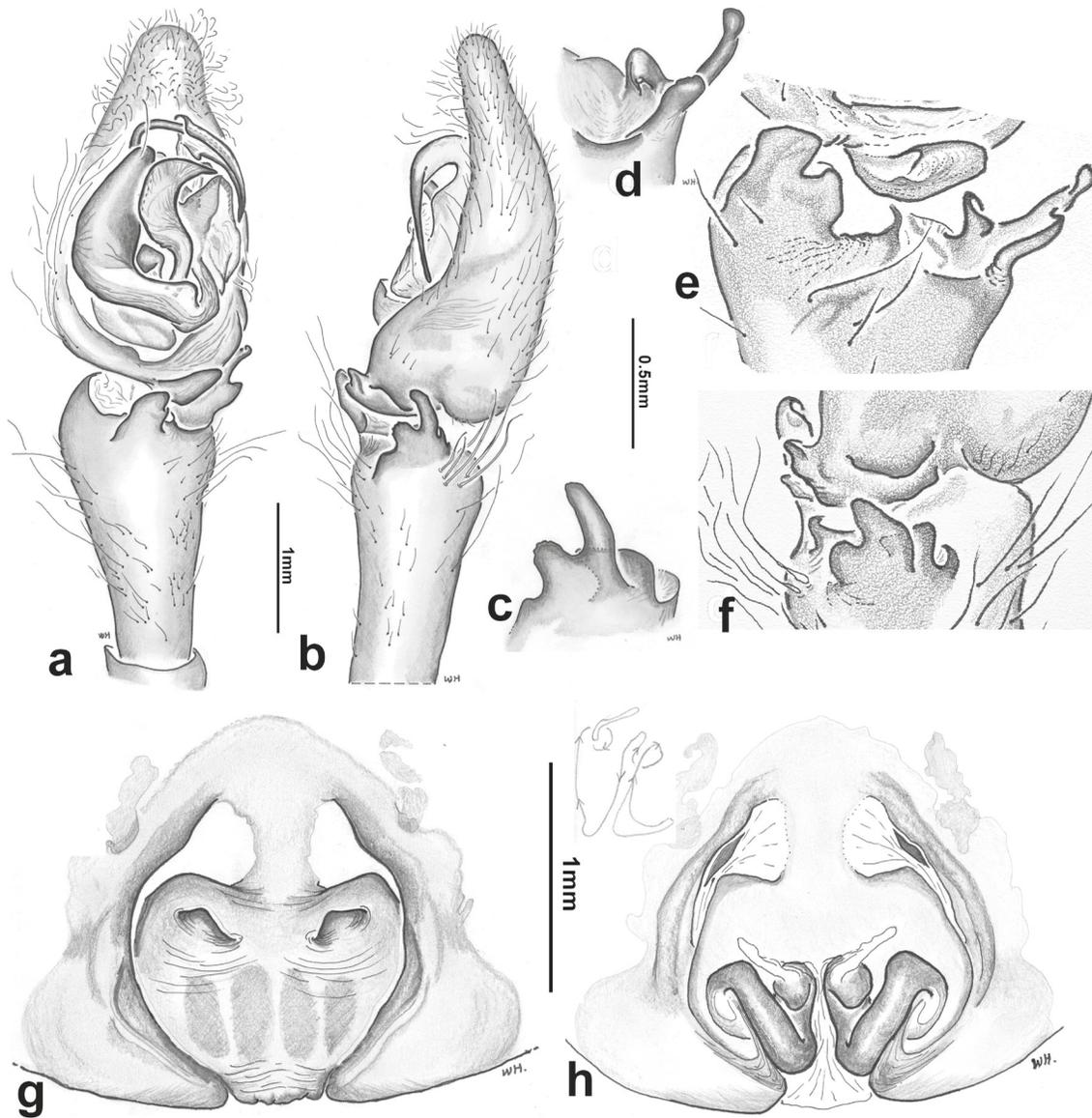


FIG. 16. *Dolomedes vicque* sp. nov., **a-f**, male, palpal tibia and cymbium. **a-d**, QM S28794, Otway Ranges, Victoria. **a, d**, ventral views; **b, c**, retrolateral views. **e, f**, Minnamurra Falls, New South Wales, AM KS124037. **e**, ventral view; **f**, retrolateral view. **g, h**, epigyne, Avon River, Victoria, QM S63911: **g**, external; **h**, internal views.

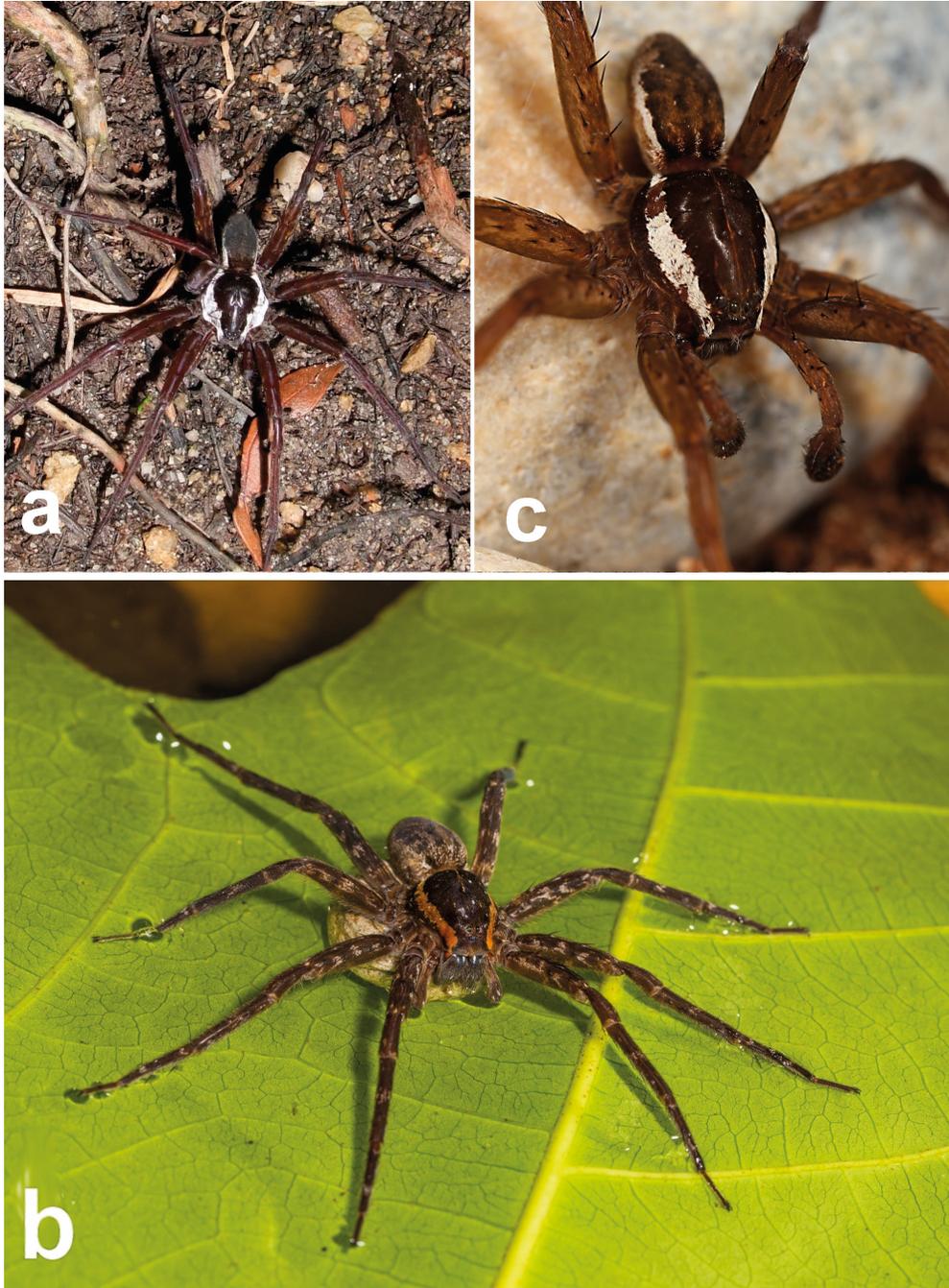


FIG. 17. *Dolomedes* species, habitus, dorsal view. **a**, **b**, *Dolomedes briangreeni* sp. nov., habitus: **a**, male QM S84867; **b**, female, Mt Coot-tha. Images, QM; **c**, *Dolomedes vicque* sp. nov., male, Avon R, Victoria, image, V. Framenau.

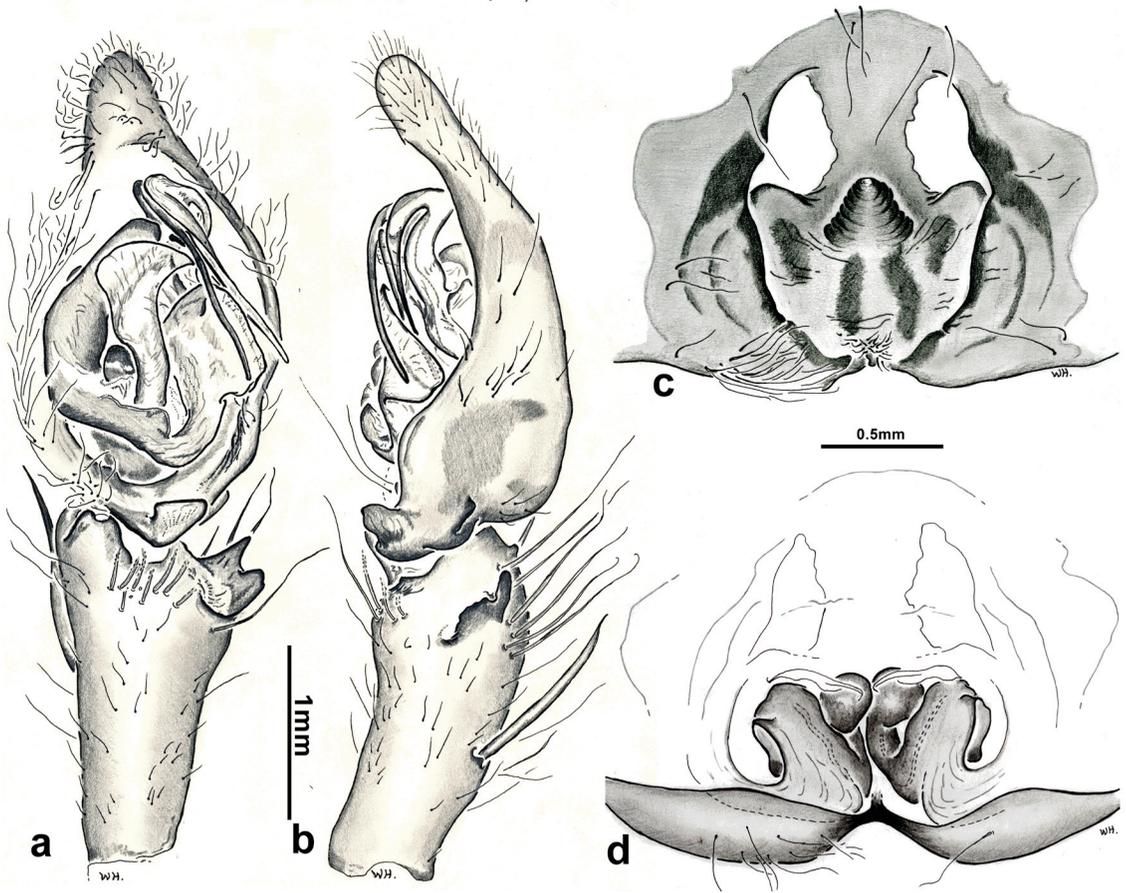


FIG. 18. *Dolomedes briangreenei* sp. nov. **a, b**, holotype male palpal tibia and cymbium, Kroombit Tops, QM S63910. **a**, ventral view; **b**, retrolateral view. **c, d**, female epigyne, same data, QM S63910: **c**, external; **d**, internal views.

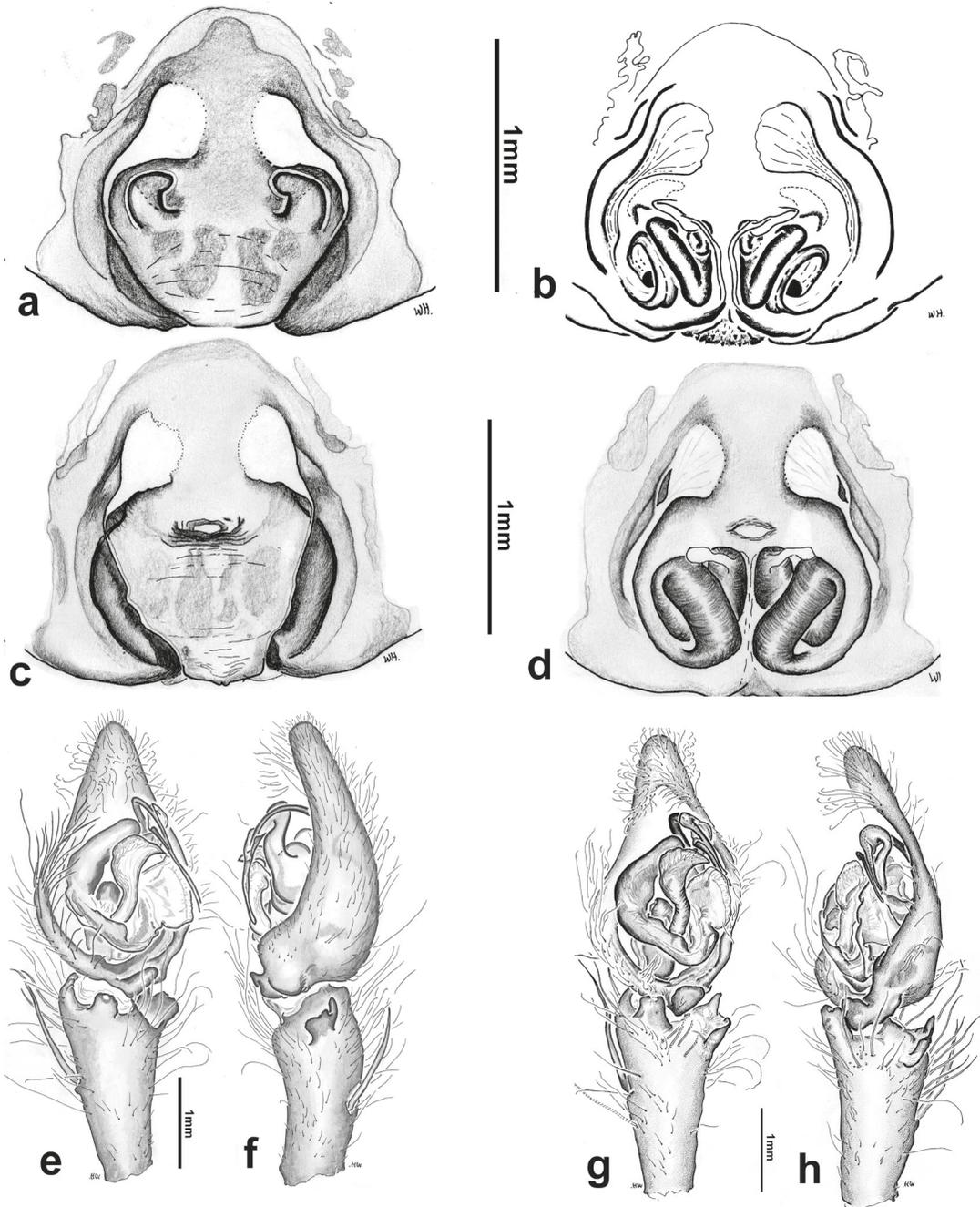


FIG. 19. *Dolomedes briangreenei* sp. nov. a–d, epigynes. a, b, Conondale Range, QM S67744. a, external; b, internal. c, d, Mt Warning, New South Wales, QM S67743. c, external; d, internal. e–h, male, palpal tibia and cymbium: QM S67787, Dandabah; e, ventral view; f, retrolateral view. QM S84867, Redlands: g, ventral view; h, retrolateral view.

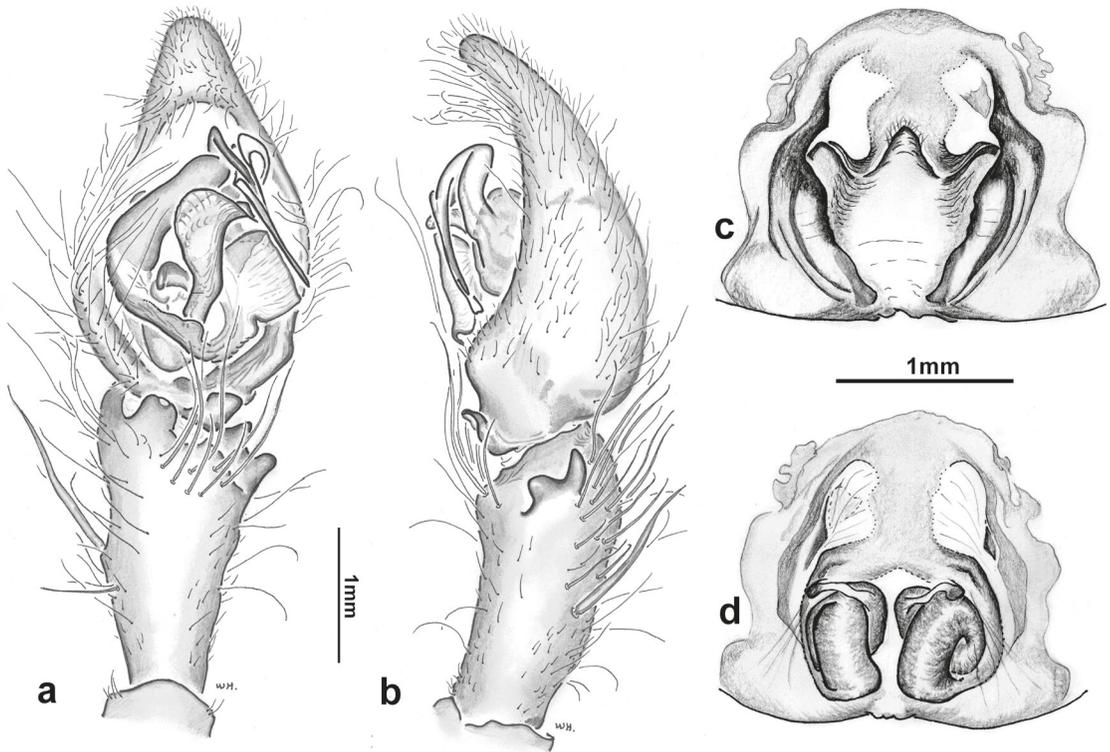


FIG. 20. *Dolomedes briangreenei* sp. nov. **a**, **b**, male, palpal tibia and cymbium. QM S67774, Majors Mt, north-east Queensland: **a**, ventral view; **b**, retrolateral view. Female epigyne, QM S40725, Bakers Blue Mt, north-east Queensland: **c**, external; **d**, internal view.

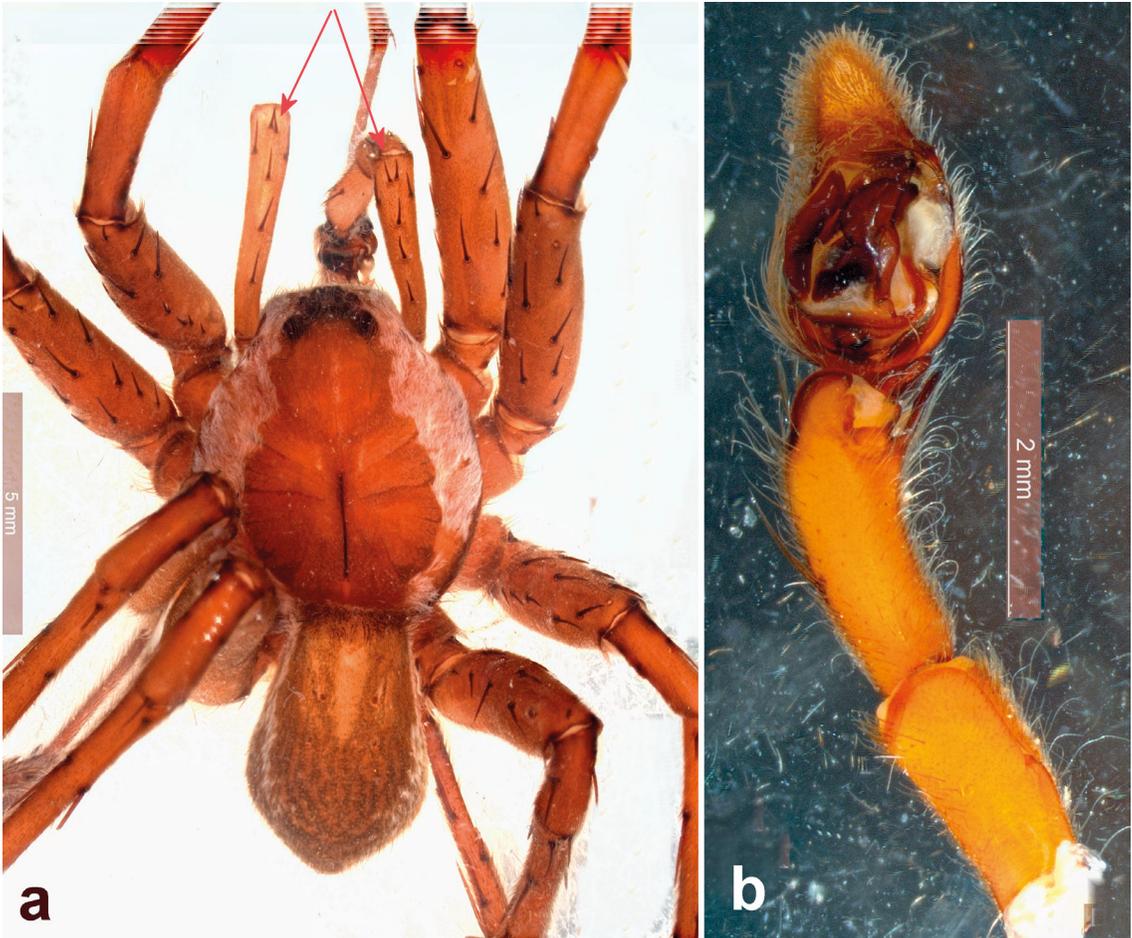


FIG. 21. *Dolomedes venmani* sp. nov., holotype, male QM S67741. **a**, habitus, dorsal view, arrows show paired spines distally on palpal femora; **b**, palpal patella, tibia and cymbium showing curved tibia and normal patella, ventral view.

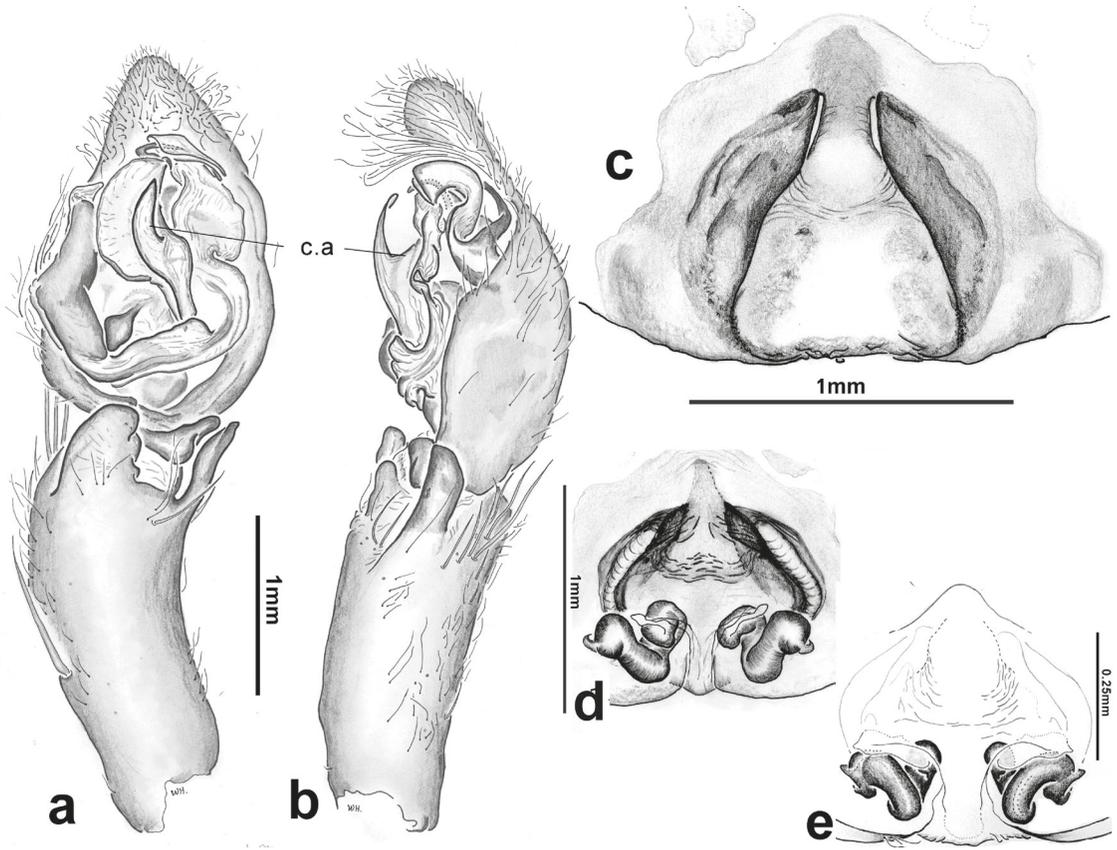


FIG. 22. *Dolomedes venmani* sp. nov. **a, b**, male, QM 91207, palpal tibia and cymbium, **a**, ventral view showing chelate apophysis (c.a); **b**, retrolateral view; **c, d**, female QM S67769, epigyne, **c**, external view; **d**, internal view; **e**, epigyne QM S107091, internal view.



FIG. 23. *Dolomedes flaminus* L. Koch, 1867, holotype male ZMH, habitus. **a**, dorsal view; **b**, ventral view. Images, B. Baehr.

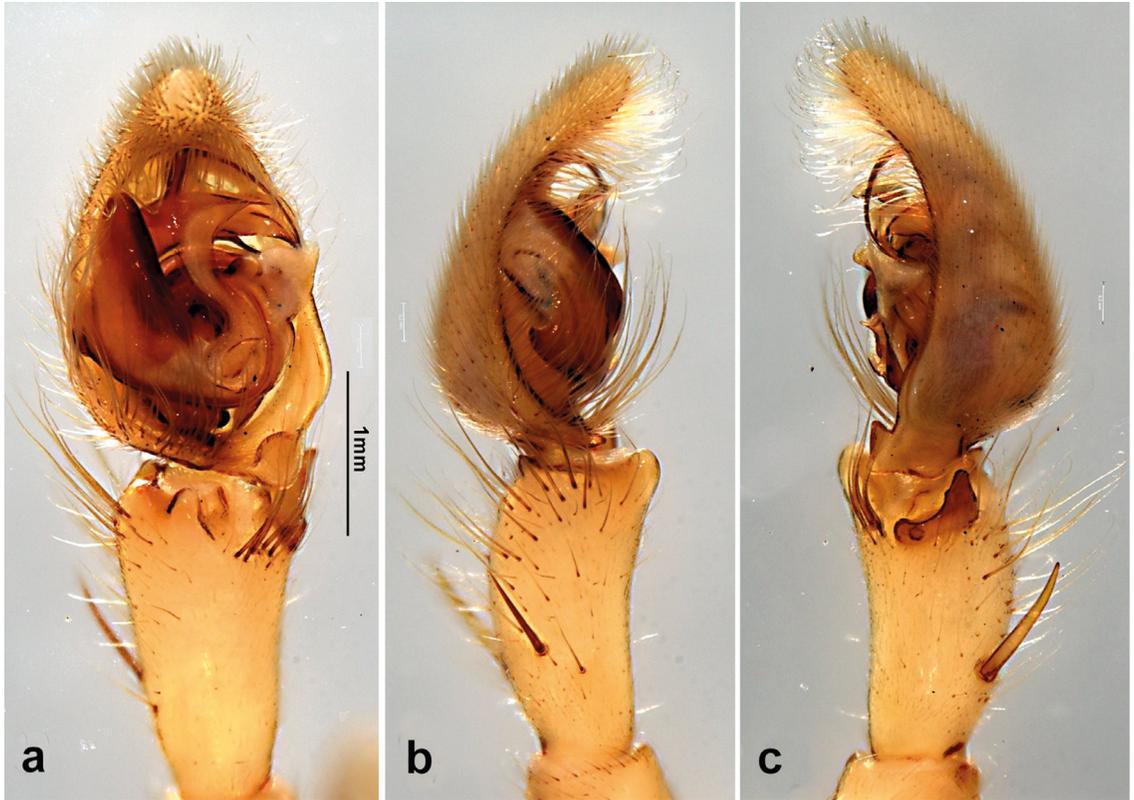


FIG. 24. *Dolomedes flaminius* L. Koch, 1867, holotype male ZMH, palp: a, ventral view ; b, prolateral view; c, retrolateral view. Images, B. Baehr.

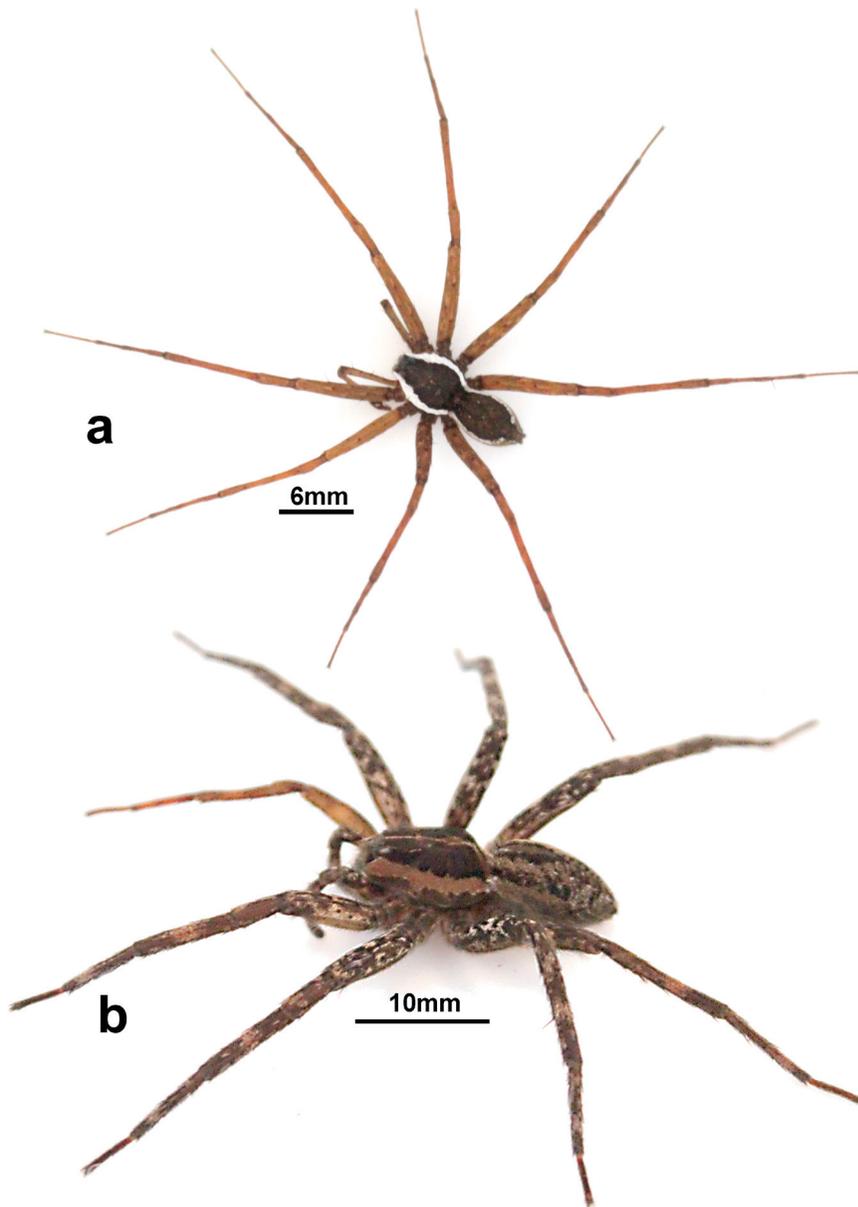


FIG. 25. *Dolomedes wollemi* sp. nov., habitus, dorsal view. **a**, male; **b**, female. Images, J. Wolff.

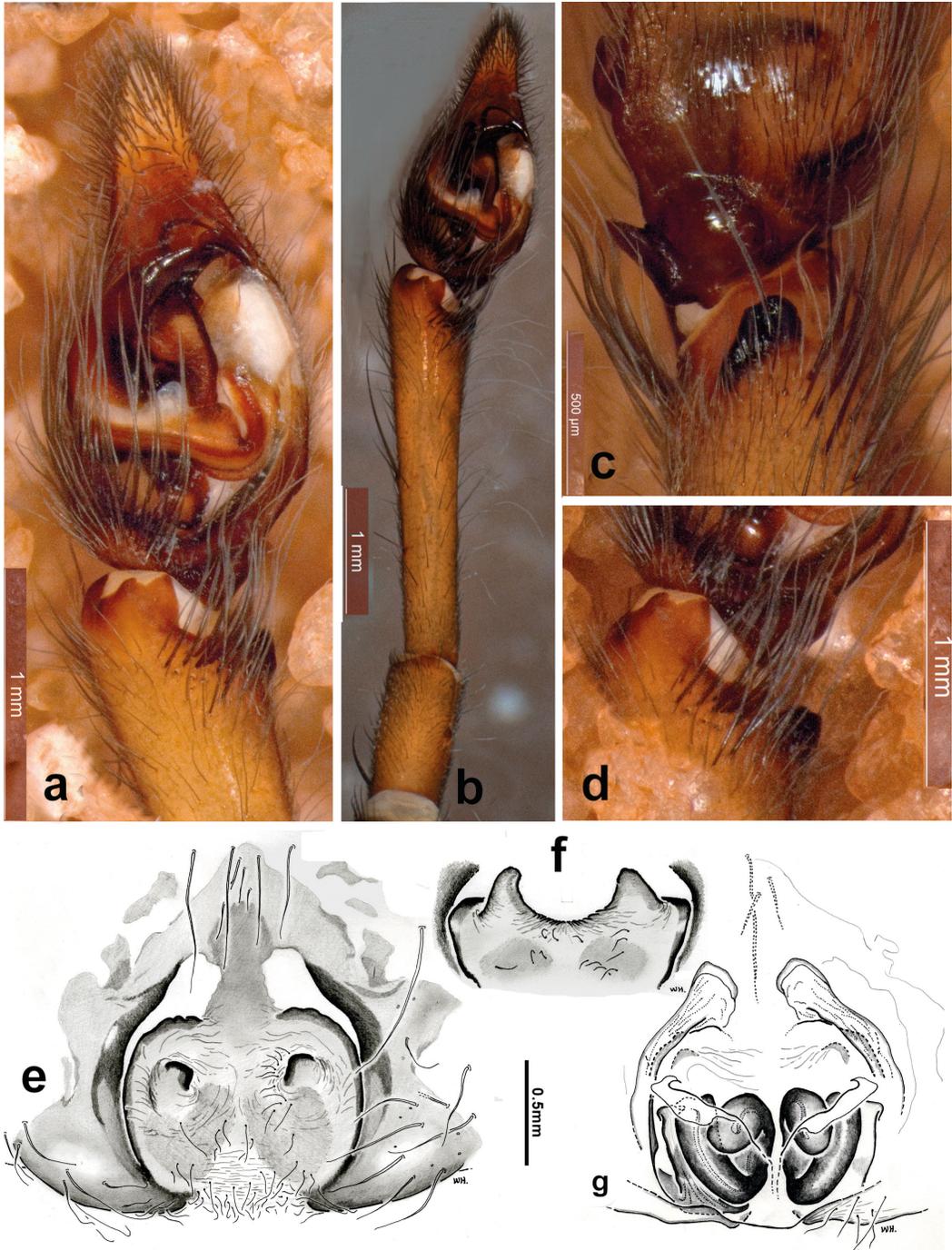


FIG. 26. *Dolomedes wollemi* sp. nov., holotype male AM KS126569, palpal tibia and cymbium. **a, d**, ventral view; **b**, also showing patella, ventral view; **c**, retrolateral view. **e-g**, female epigyne AM KS126570: **e**, external; **f**, posterior axial view of external; **g**, internal view.

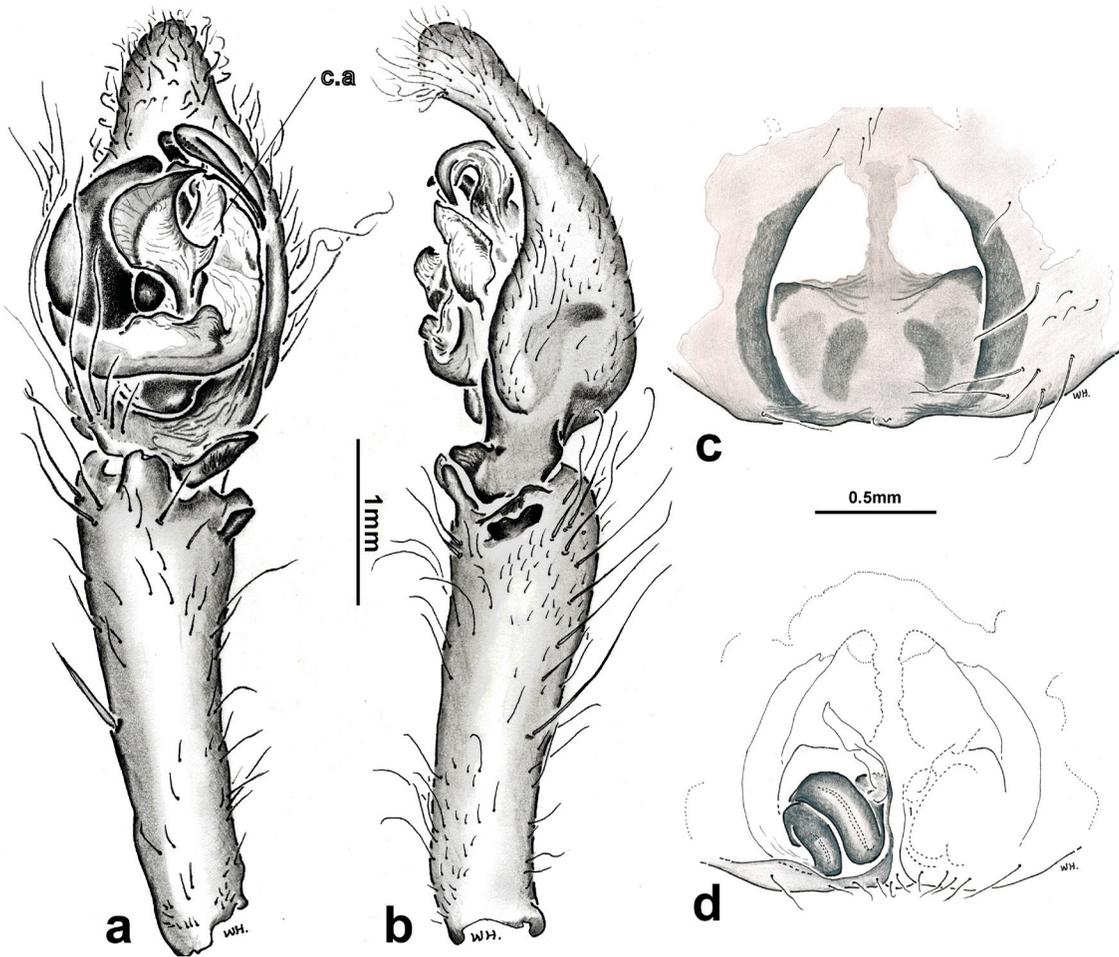


FIG. 27. *Dolomedes mankorlod* sp. nov. a, b, holotype male, MAGNT A004617. a, b, palpal tibia and cymbium: a, ventral view showing chelate apophysis (c. a); b, retrolateral view; c, d, female epigyne, MAGNT: c, external view; d, internal view.

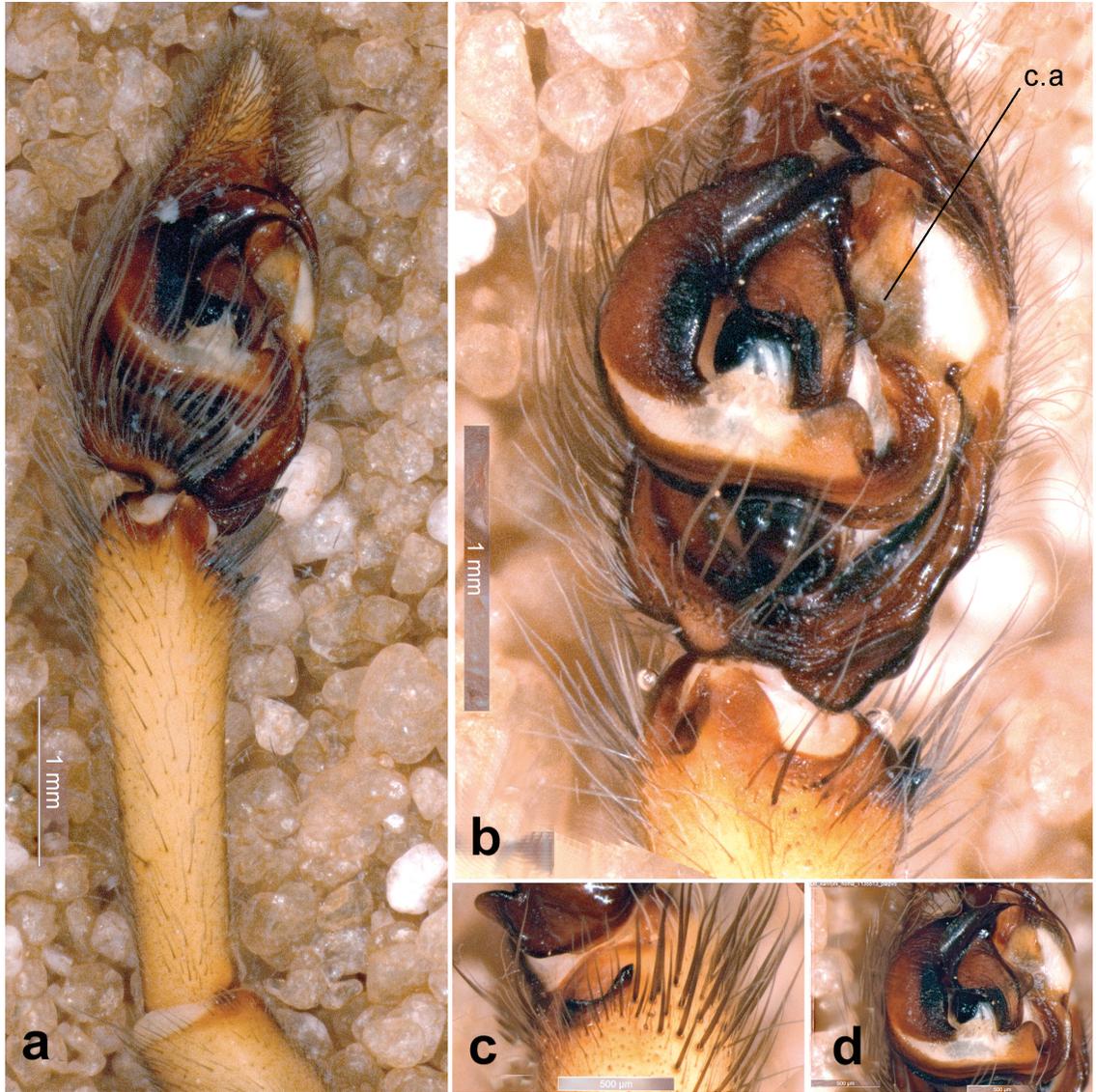


FIG. 28. *Dolomedes karijini* sp. nov. a-d, holotype male, WAM T135513, palpal tibia and cymbium. a, b, d, ventral view; c, retrolateral view.

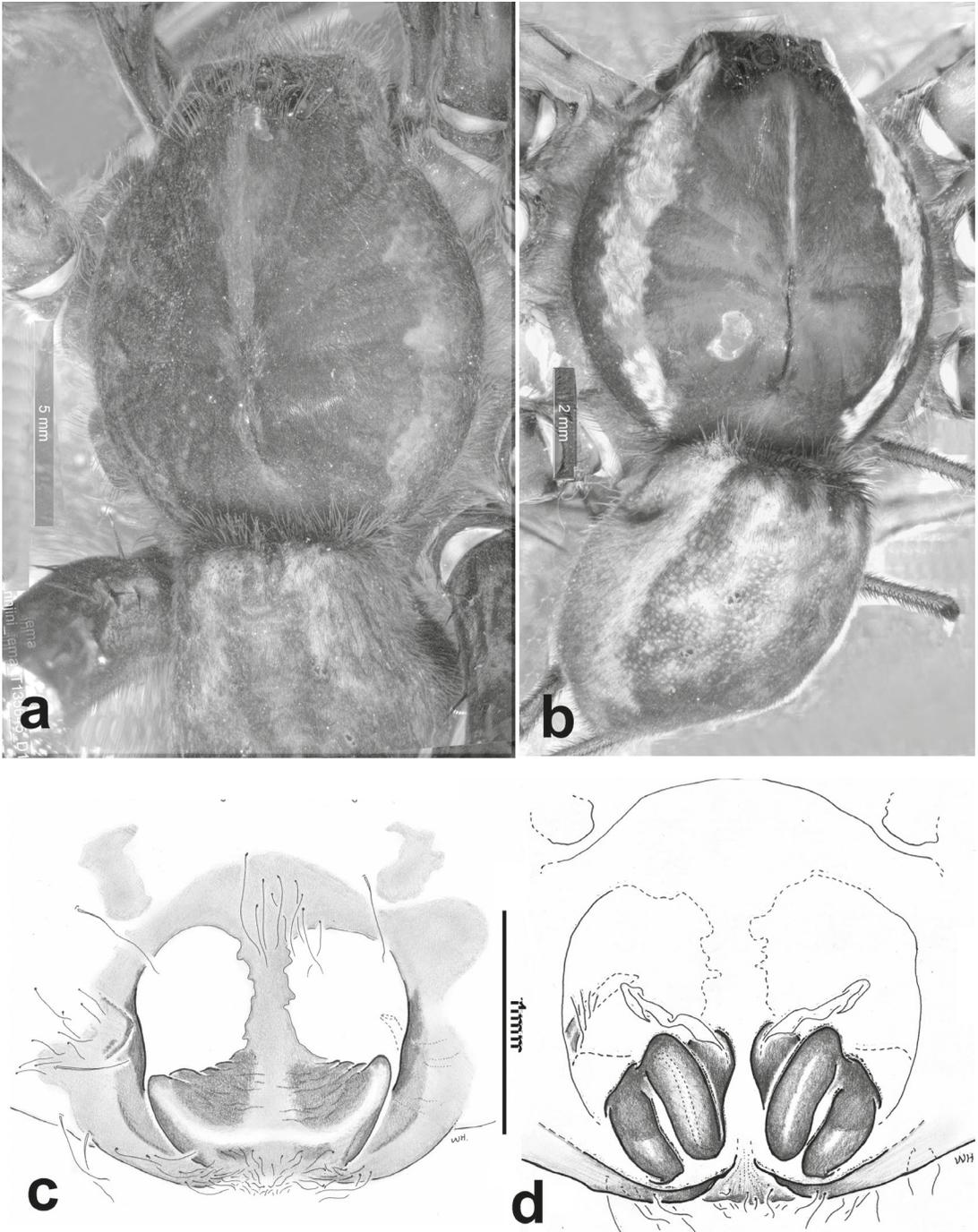


FIG. 29. *Dolomedes karijini* sp. nov. **a, c, d**, female WAM T135645. **a**, habitus, dorsal view; **c, d**, epigyne, external (c), internal (d); **b**, holotype male, WAM T135130, habitus, dorsal view.



FIG. 30. *Dolomedes alexandri* sp. nov., holotype male (ANIC 42:001795). Palpal tibia and cymbium, ventral (a), retrolateral (b) and RTAmax (c) view.

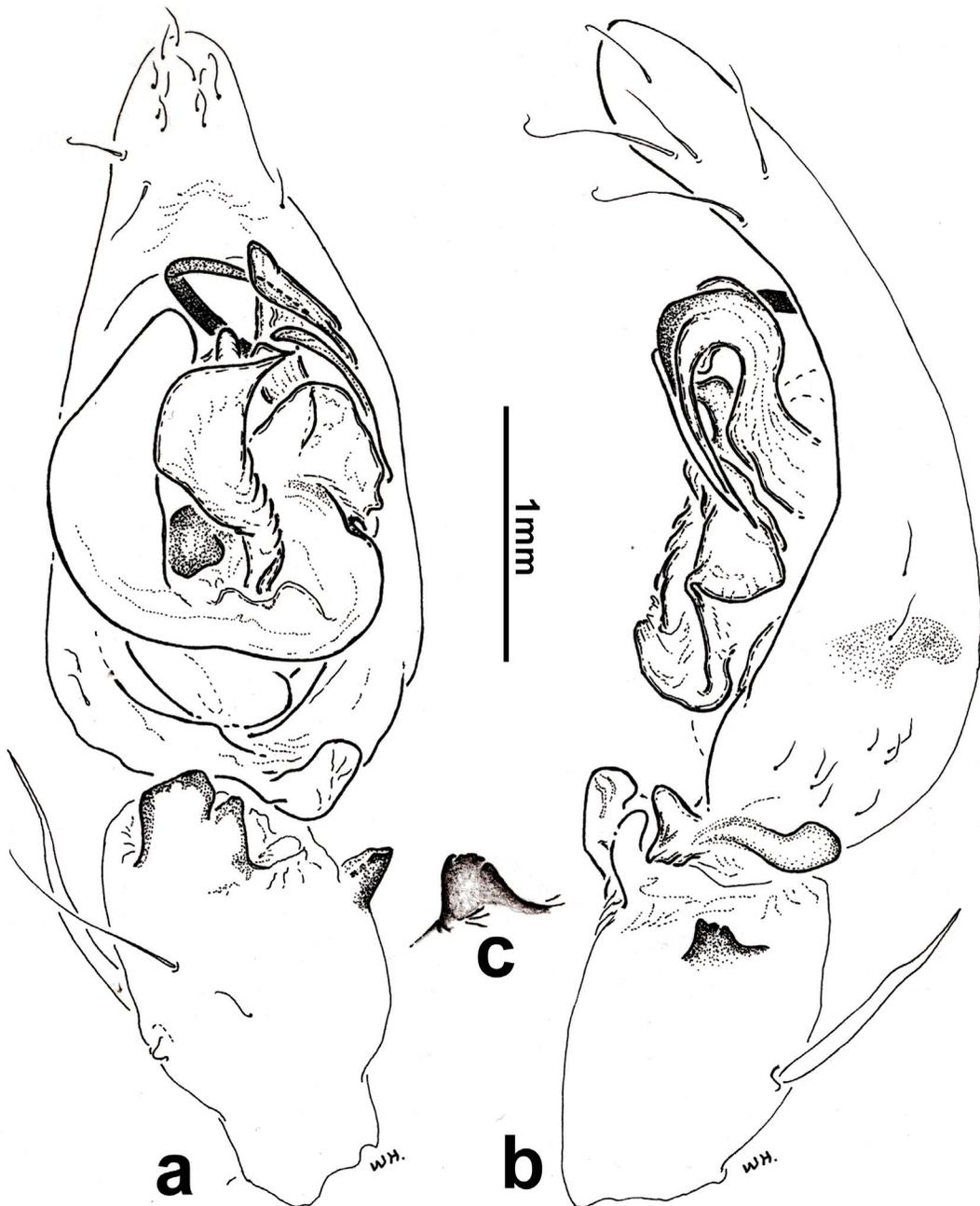


FIG. 31. *Dolomedes alexandri* sp. nov., holotype male (ANIC 42:001795), palpal tibia and cymbium. Ventral (a), retrolateral (b) and RTAmax (c) view, scale line for c=0.7 mm.

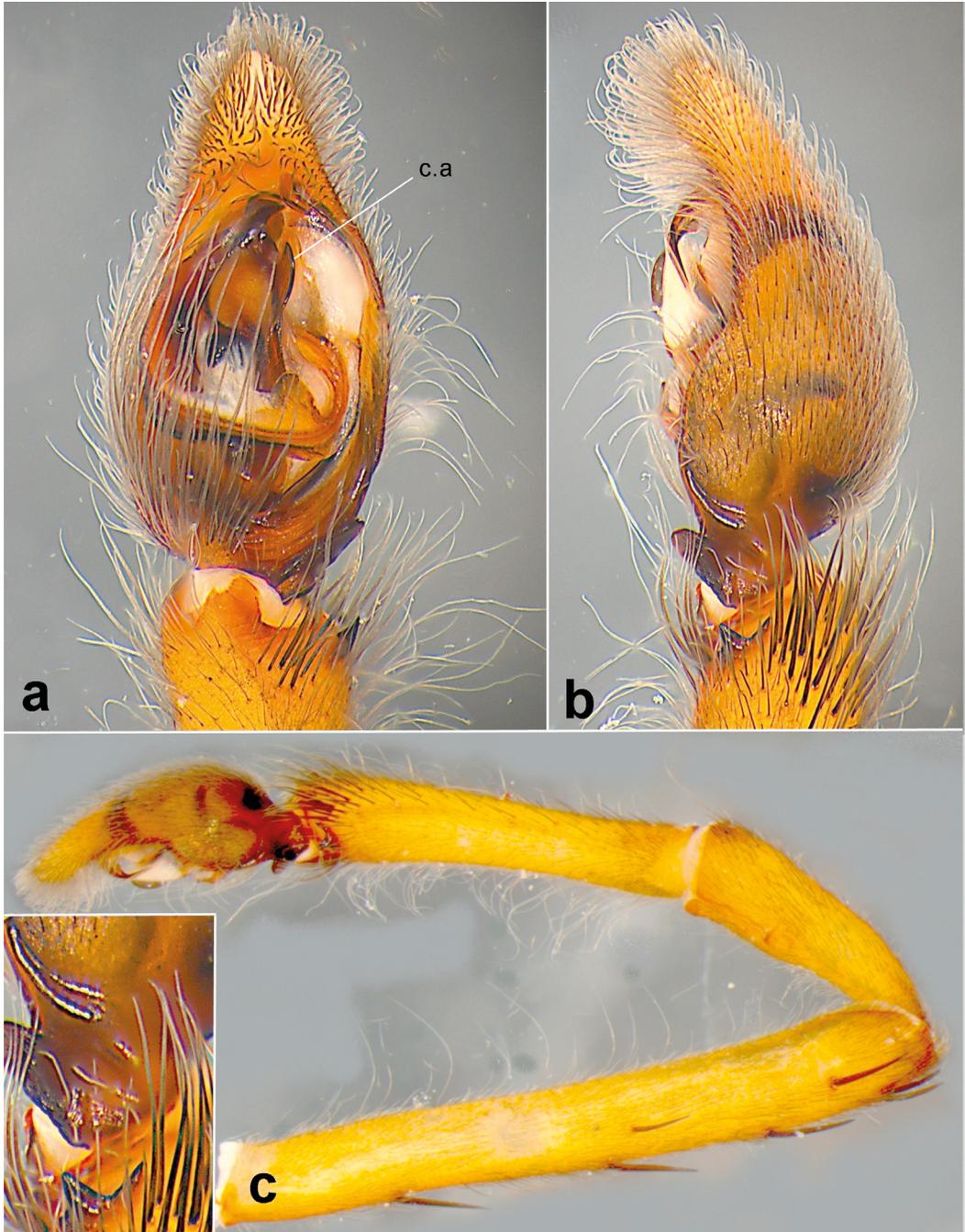


FIG. 32. *Dolomedes lizturnerae* sp. nov., holotype male TMAG J4124. **a-c**, Tibia, cymbium and bulb. **a**, Ventral view showing chelate apophysis (c.a). **b**, Retrolateral view. Inset. RTA and cymbium base, RTAmax view. **c**, Palpal femur to cymbium, retrolateral view.

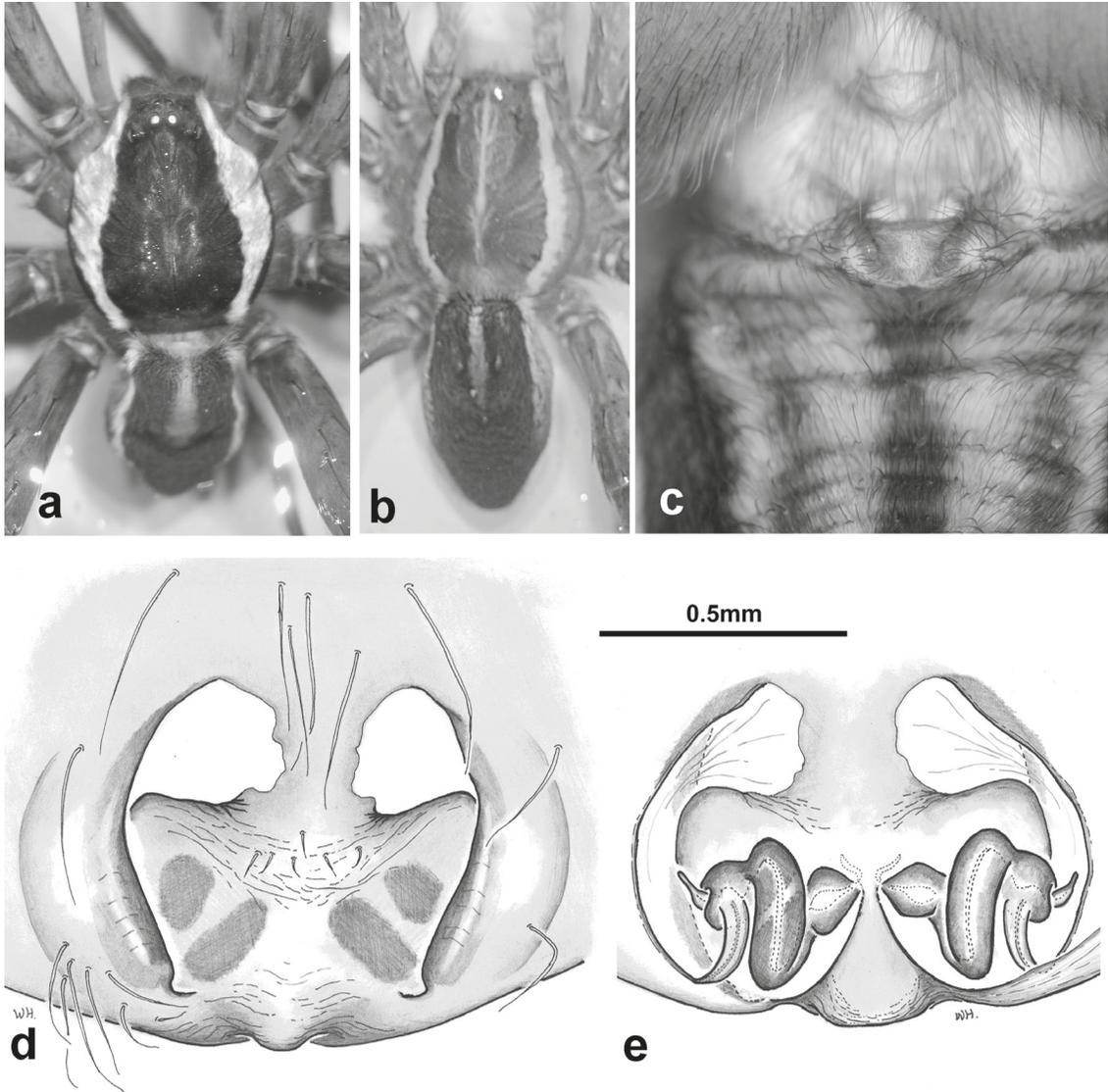


FIG. 33. *Dolomedes lizturnerae* sp. nov. **a**, holotype male TMAG J4124, habitus, dorsal view. **b-e**, female TMAG J4125, **b**, habitus, dorsal view; **c**, abdomen, ventral view showing pattern; **d-e**, epigyne, external (**d**) and internal (**e**) view.

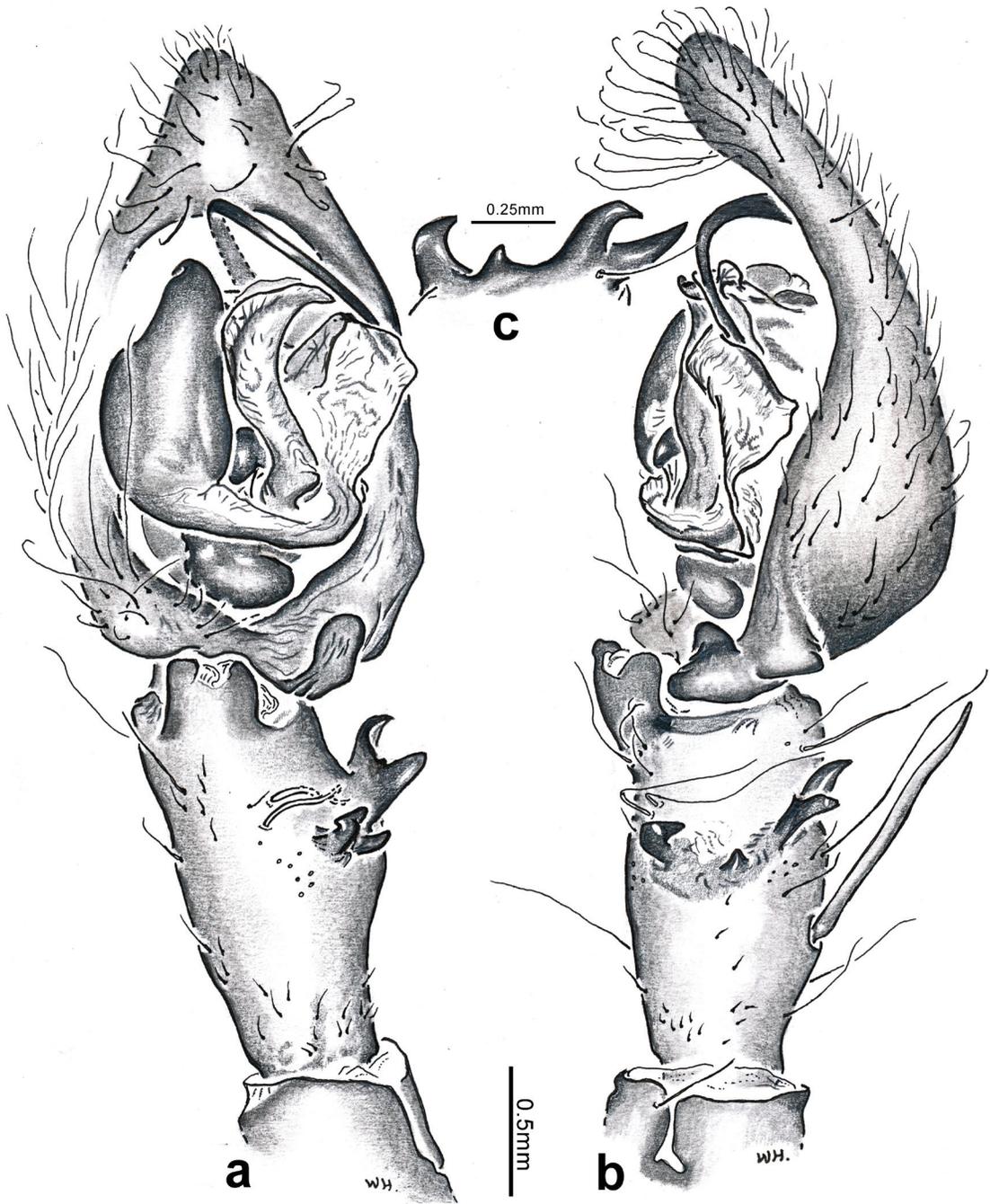


FIG. 34. *Dolomedes pedder* sp. nov., holotype male, AM KS107495, palpal tibia and cymbium. Ventral a, retrolateral; b, and RTAmax; c, view.



FIG. 35. *Dolomedes titan* Berland, 1924, female QM S13542, habitus.

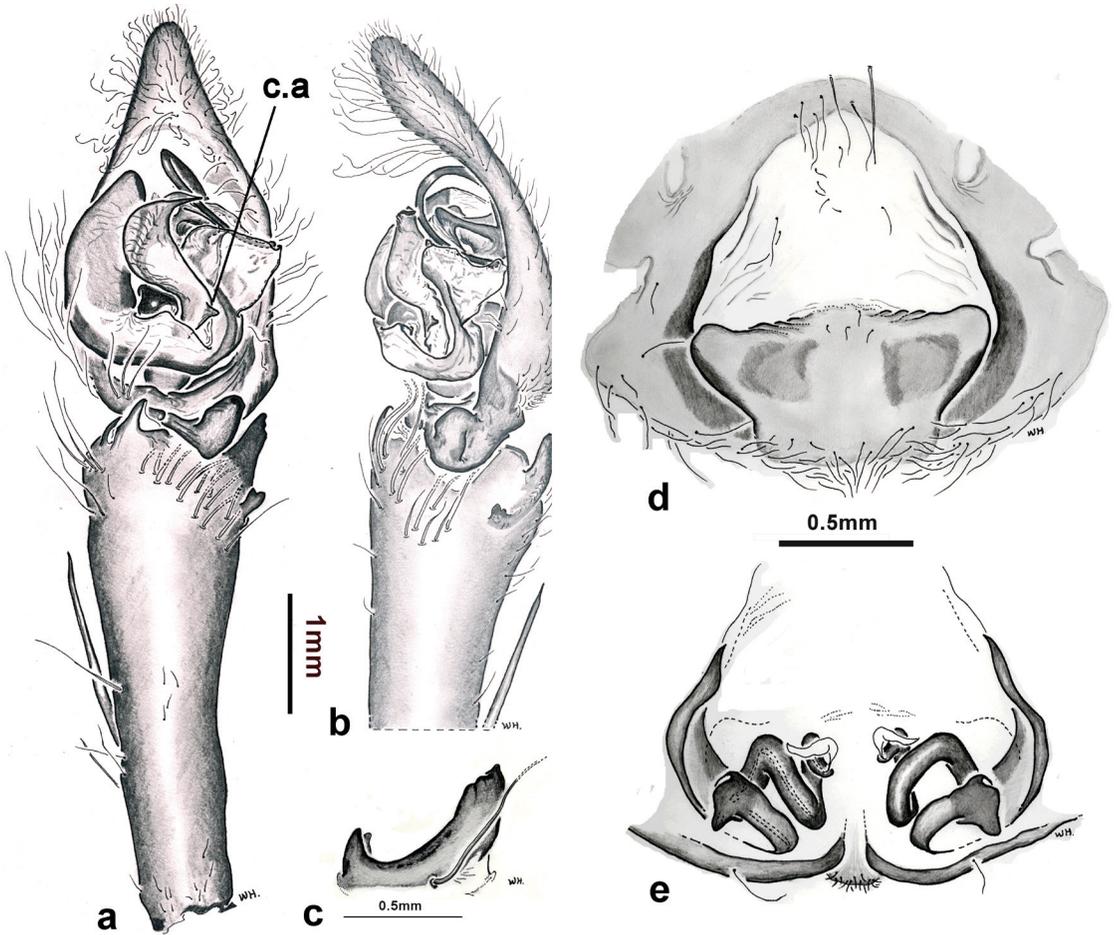


FIG. 36. *Dolomedes titan* Berland, 1924, male (QM S30678) and female (QM S13542). **a, b**, palpal tibia and cymbium, ventral showing chelate apophysis (c.a) (a) and retrolateral (b) view; **c**, retrolateral tibial apophysis, RTA max view; **d, e**, epigyne, external (d) and internal (e) views.

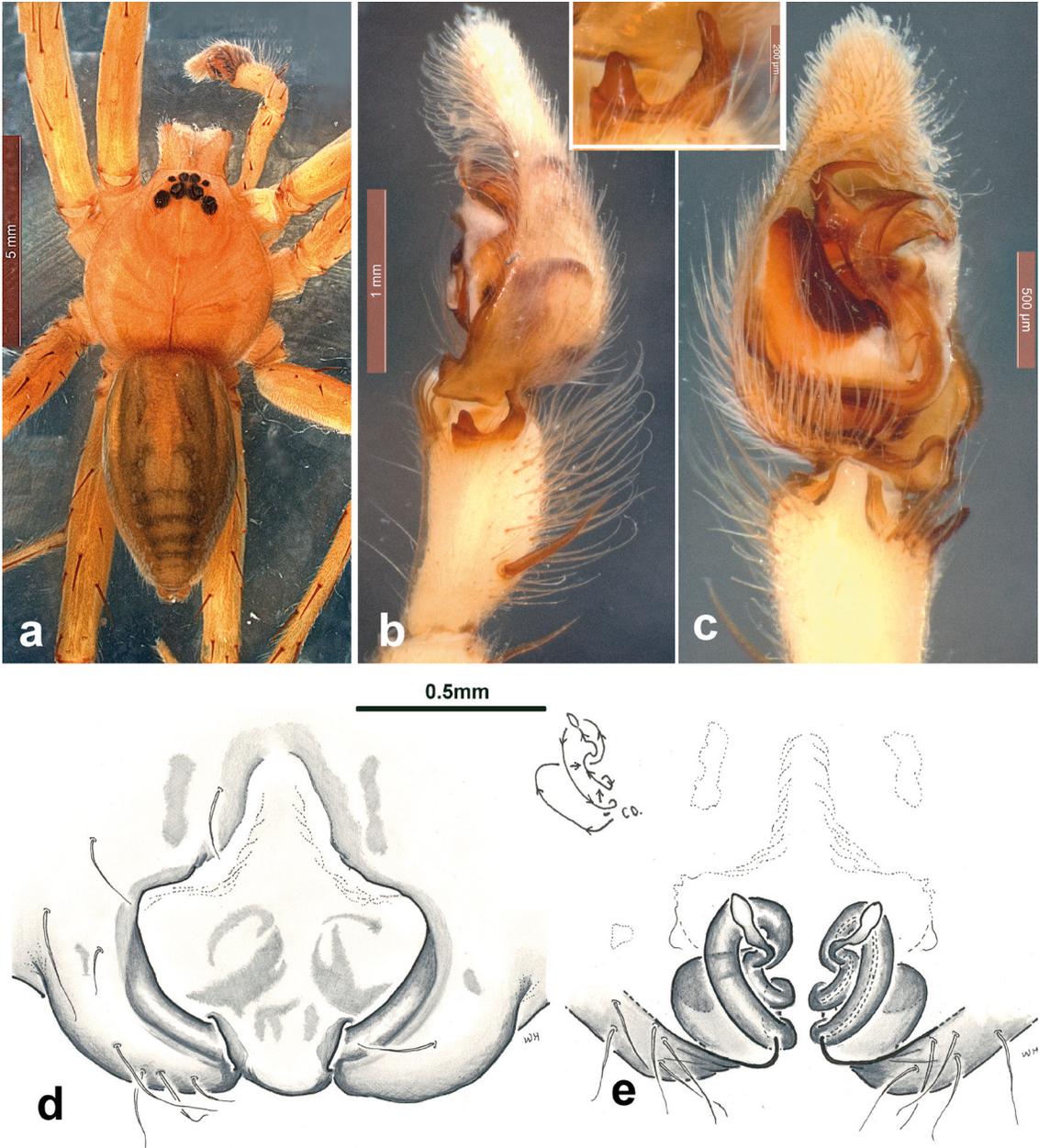


FIG. 37. *Dolomedes neocaledonicus* Berland, 1924. **a–c**, male QM S13826; **a**, habitus, dorsal view; **b**, **c**, palpal tibia and cymbium: **b**, retrolateral view; inset, RTA, maximal view, ventral (**c**) view; **d**, **e**, female MNHP 3.85, epigyne, external (**d**) and internal (**e**) views.

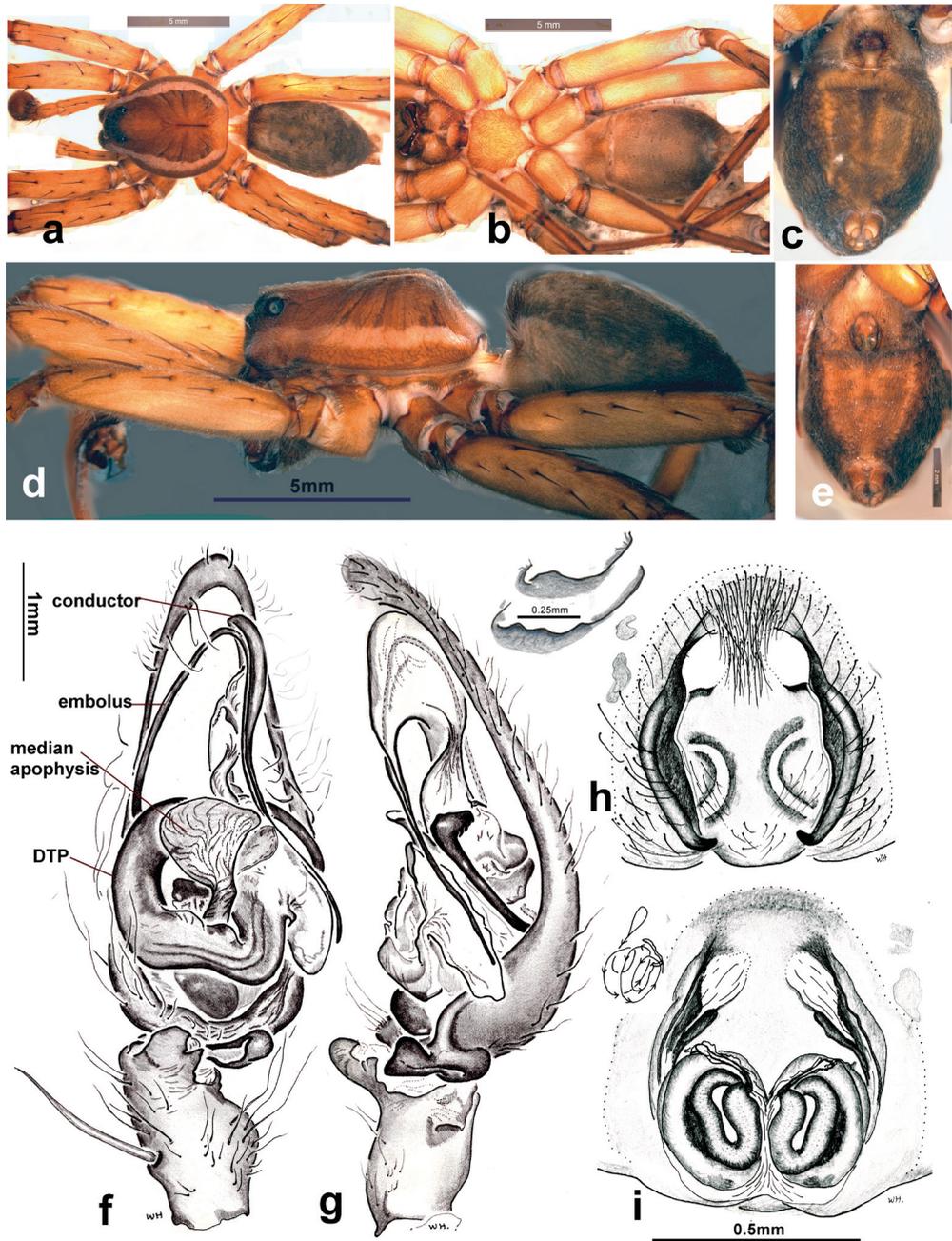


FIG. 38. *Tasmomedes eberhardarum* (Strand, 1913). a–g, male; a, b, d, QM S48771; a, habitus, dorsal view; b, habitus, ventral view; d, habitus, lateral view; c, e, female habitus, ventral view, QM S70499 (c), QM S75700 (e); f, g, male, palpal tibia and cymbium, QM S22403; f, ventral view; g, retrolateral view; inset showing RTAMax view, QM S67787; epigyne, external (h) and internal (i) views. Abbreviation: DTP, distal tegular process.



FIG. 39. *Megadolomedes*, habitus. **a-c**, *Me. trux* (Lamb, 1911), habitus, dorsal view: **a**, **b**, female; **b**, male, ca. twice its size cf. female figured; **c**, face of female; **d**, *Me. johndouglassi* sp. nov. female, habitus, dorsal view.

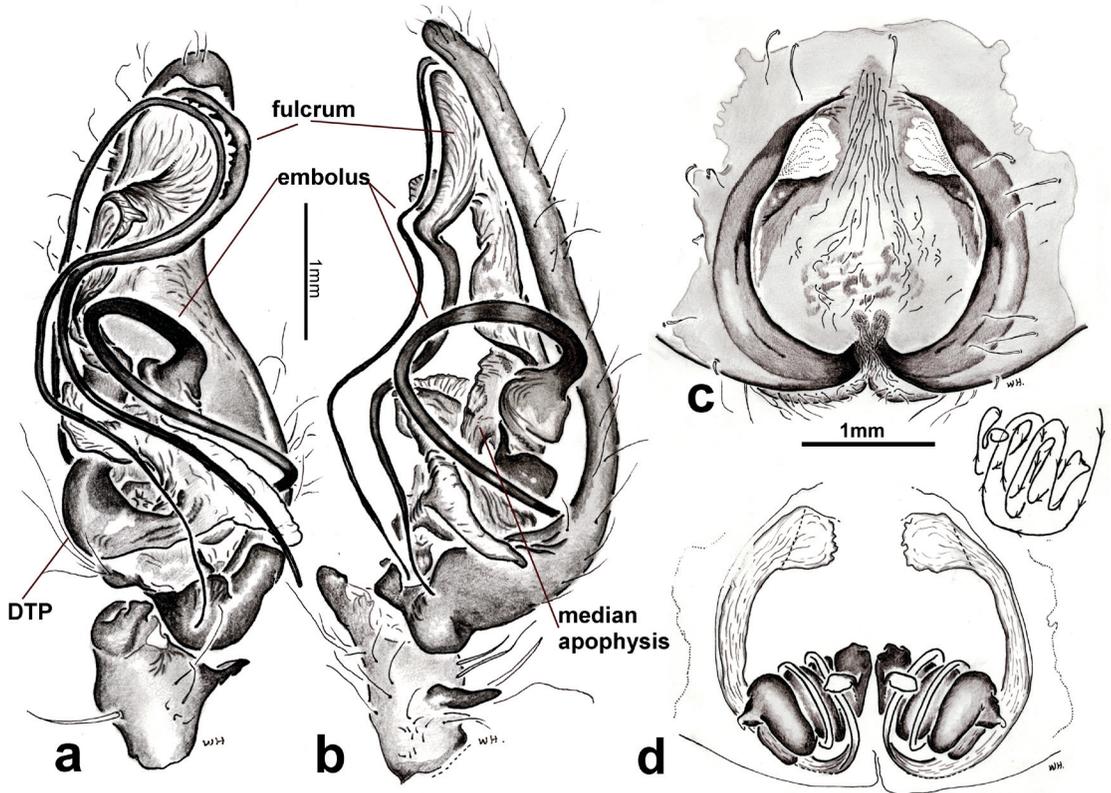


FIG. 40. *Megadolomedes australianus* (L. Koch, 1865), male, AM KS39496. **a, b**, Palpal tibia and cymbium, ventral (a) and retrolateral (b) view; female ANIC 42-002260, Minnamurra Falls, New South Wales, epigyne, external (c) and internal (d), with spermathecal path) views. Abbreviation: DTP, distal tegular process.

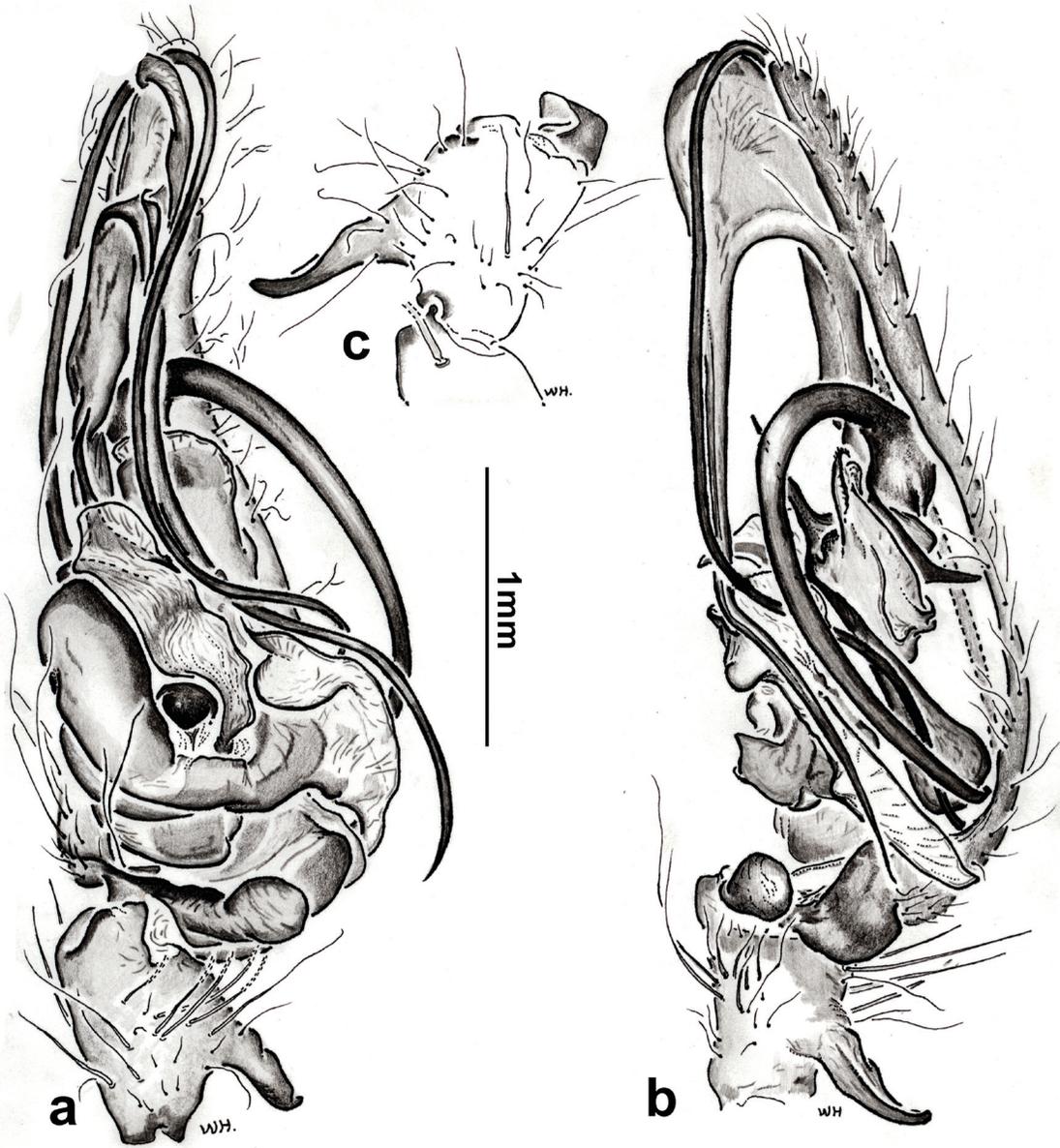


FIG. 41. *Megadolomedes trux* (Lamb, 1911), male QM S79215, palpal tibia and cymbium. a, ventral view; b, retrolateral view; c, dorsal view of RTA.

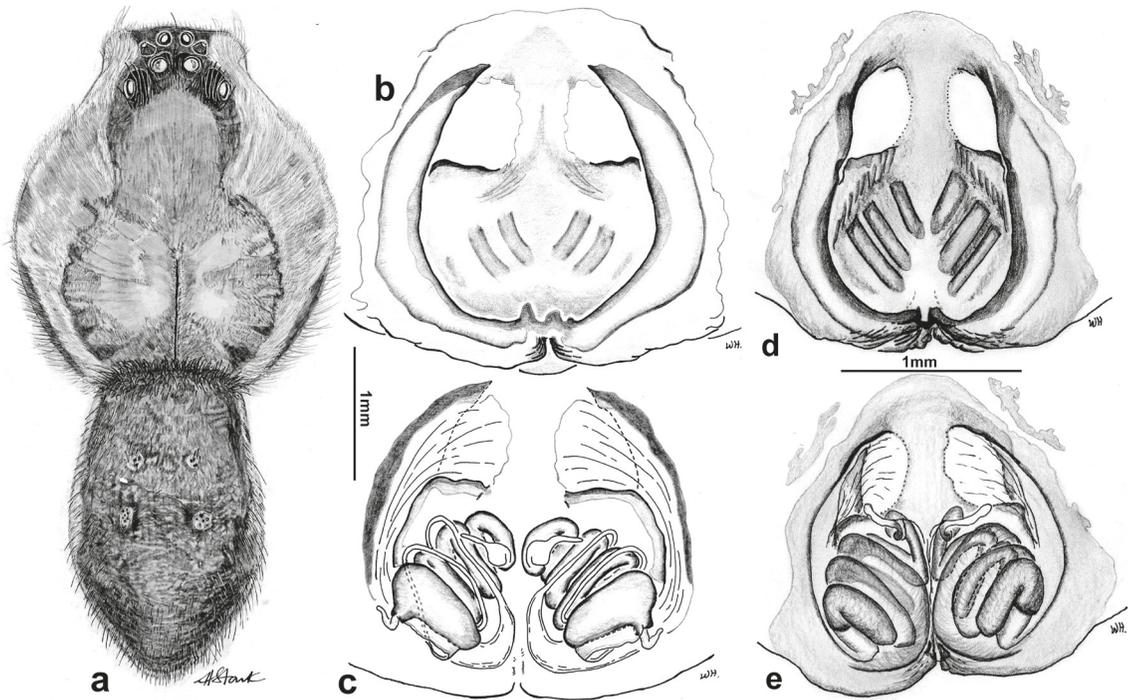


FIG. 42. *Megadolomedes*. **a–c**, *Me. trux* (Lamb, 1911), female, Kroombit Tops. **a**, habitus, dorsal view; **b**, **c**, Mt Tamborine, QM S13478, epigyne, external (**b**) and internal (**c**) view; **d**, **e**, *Me. nord* sp. nov., holotype, QM S67749, female epigyne, external (**d**) and internal (**e**) views.

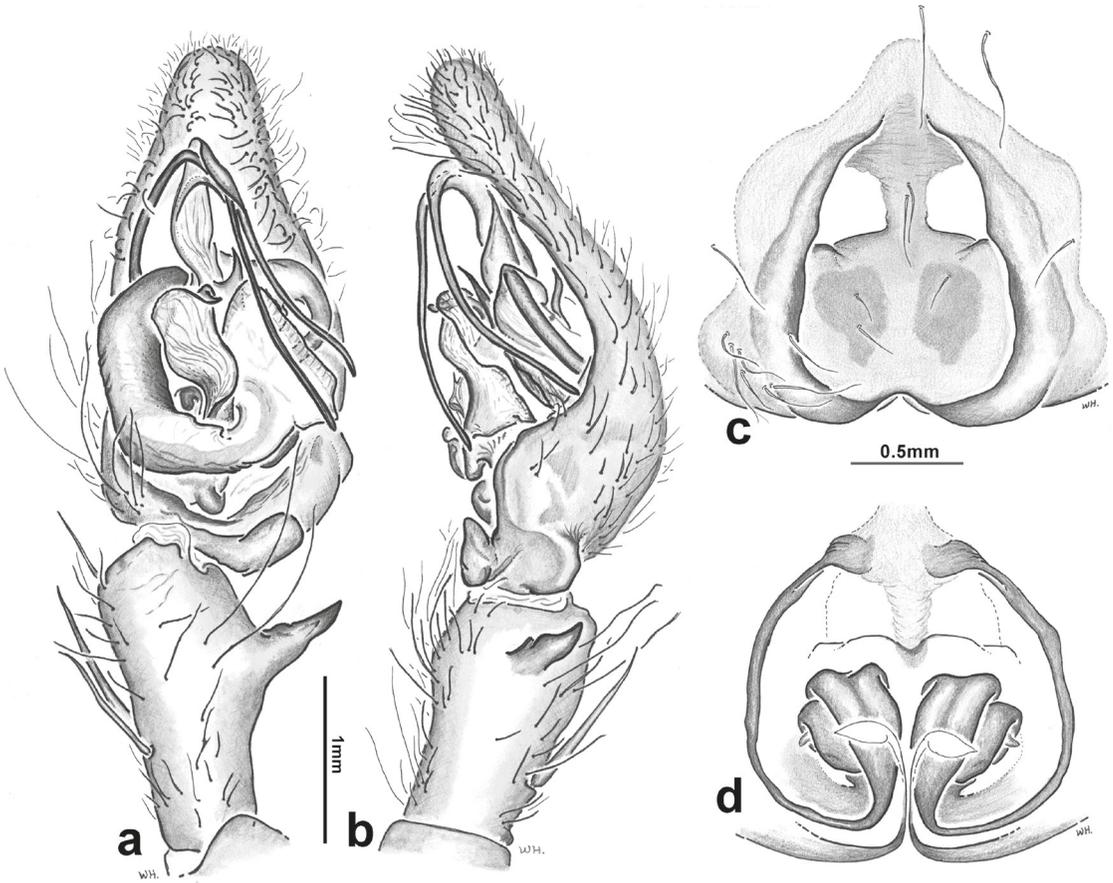


FIG. 43. *Megadolomedes johndouglassi* sp. nov. **a, b**, holotype male QM S28796; palpal tibia and cymbium: **a**, ventral view; **b**, retrolateral view. **c, d**, female paratype, TMAG J2851, epigyne: **c**, external and internal (**d**) view.

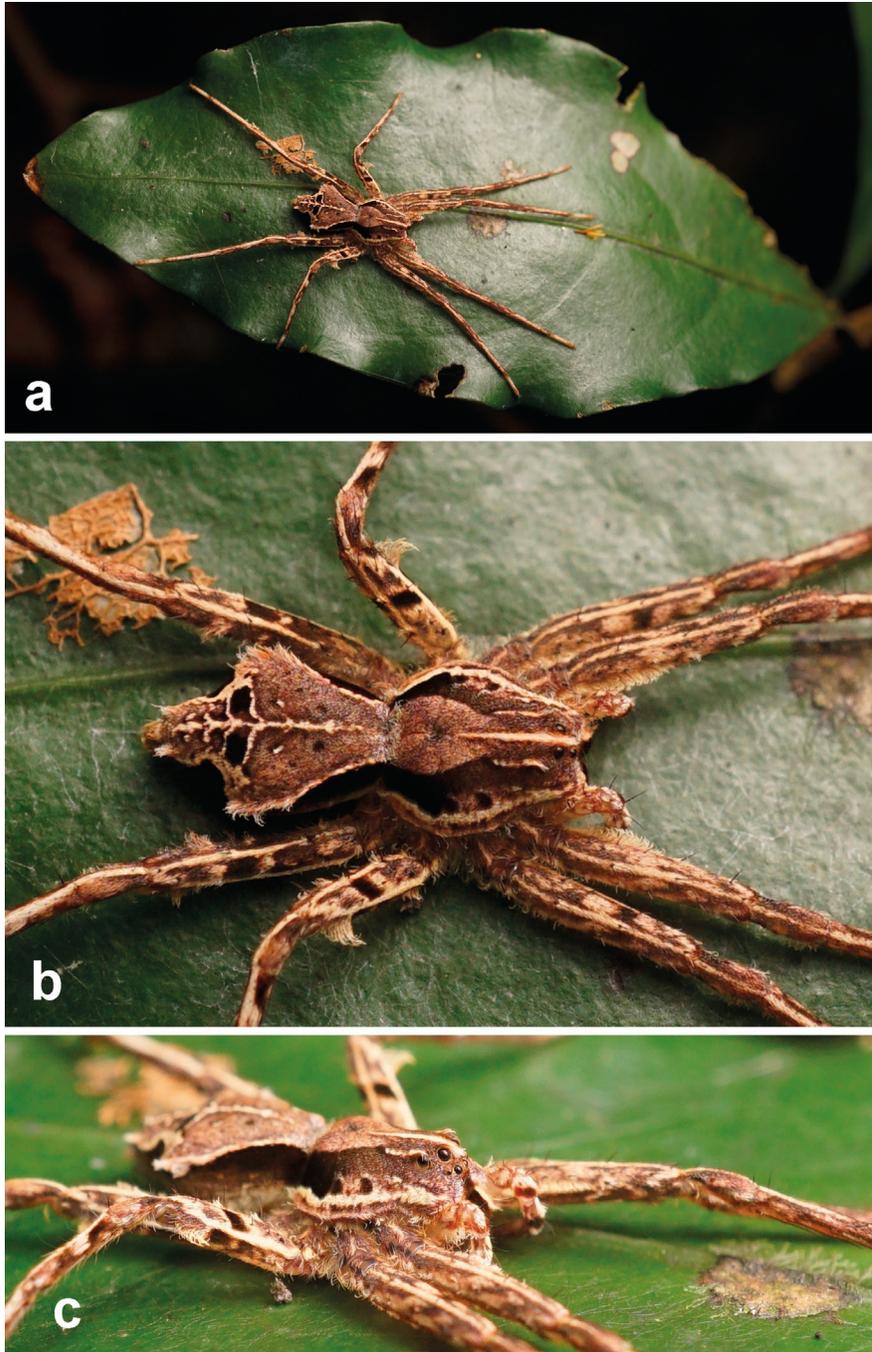


FIG. 44. *Ornodolomedes benrevelli* sp. nov. a-c, female, habitus; a, b, dorsal view; c, lateral view. Images, B. Revell.

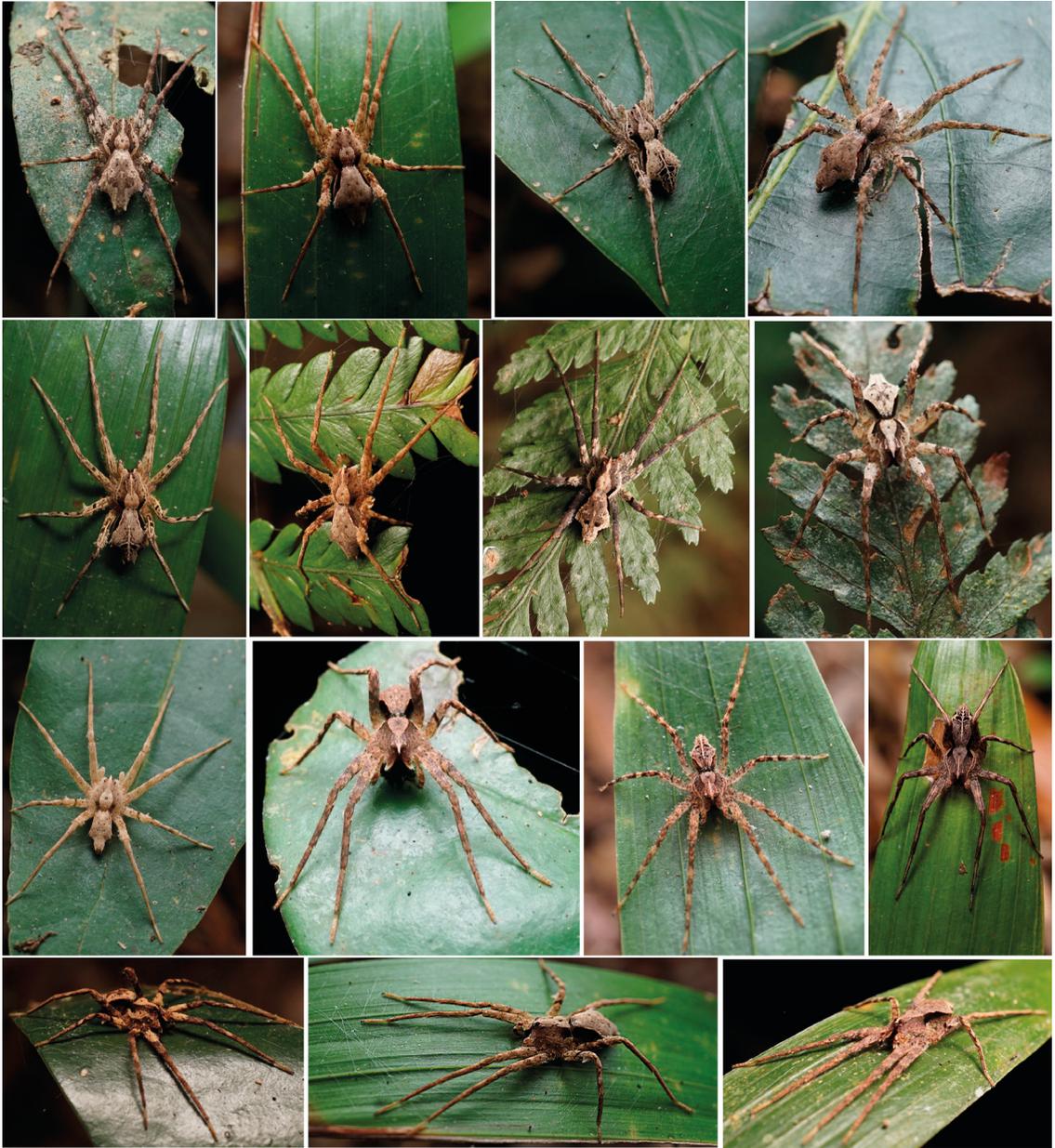


FIG. 45. *Ornodolomedes benrevelli* sp. nov., different female, habitus. Images, B. Revell.

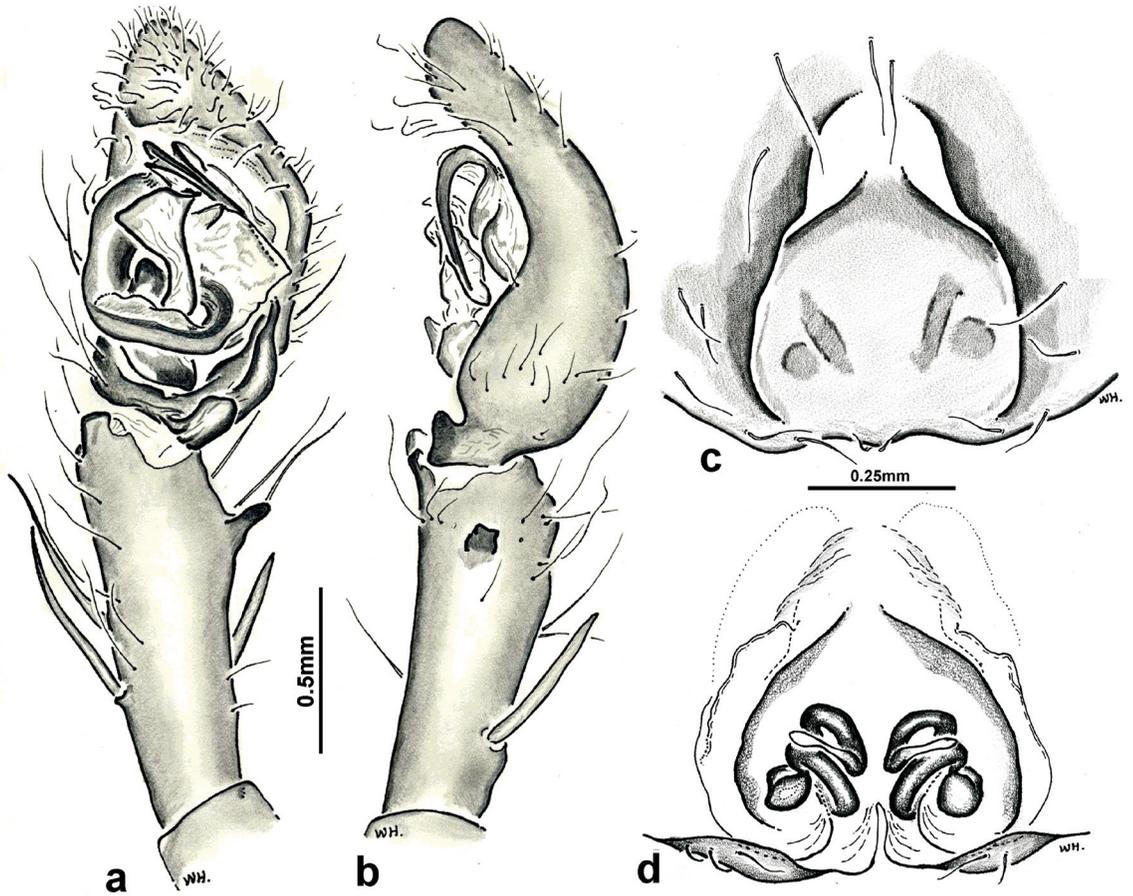


FIG. 46. *Ornodolomedes benrevelli* sp. nov. a, b, holotype male, QM S104920, palpal tibia and cymbium; a, ventral view; b, retrolateral view. c, d, female QM S10496, epigyne: c, external and internal (d) views.

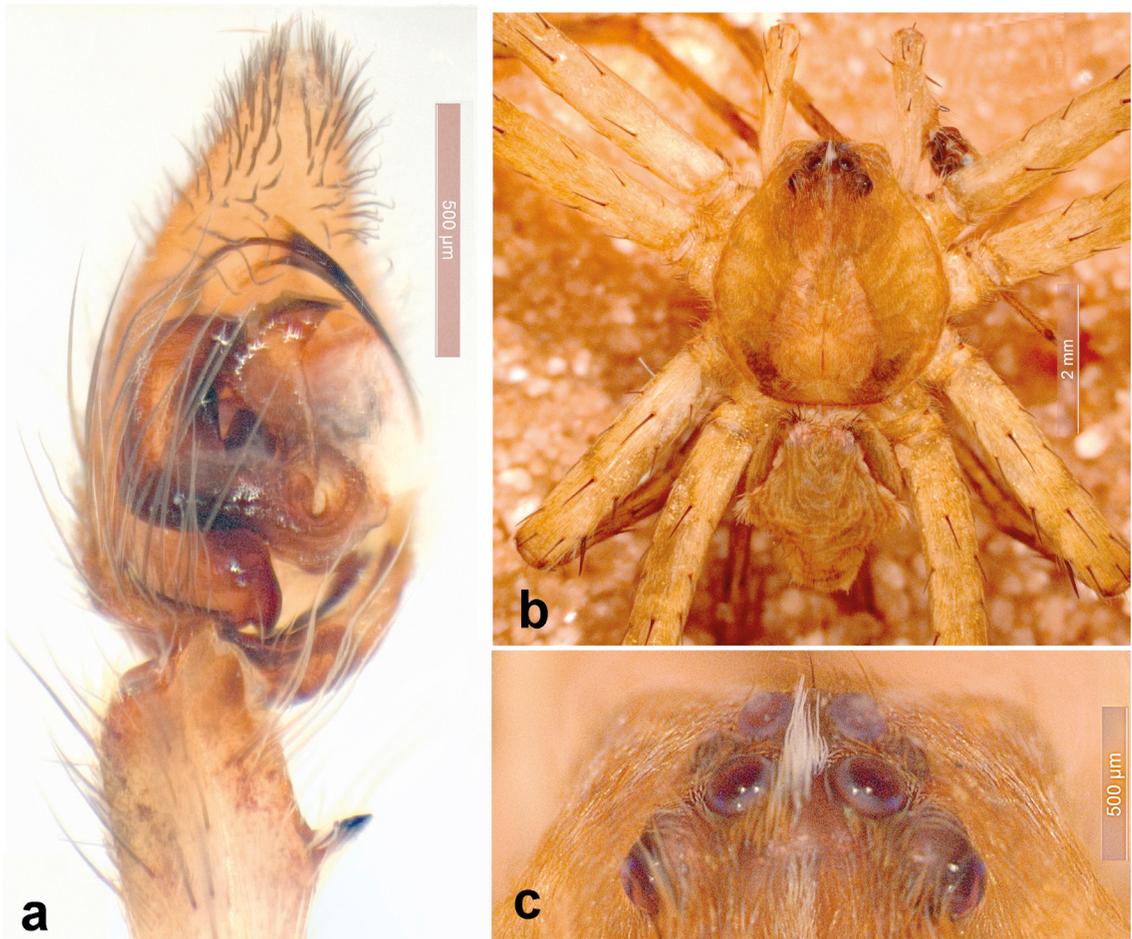


FIG. 47. *Ornodolomedes benrevelli* sp. nov.: a–c, holotype male QM S104920. a, palpal tibia and cymbium, ventral view; b, habitus, dorsal view; c, eyes, dorsal view.

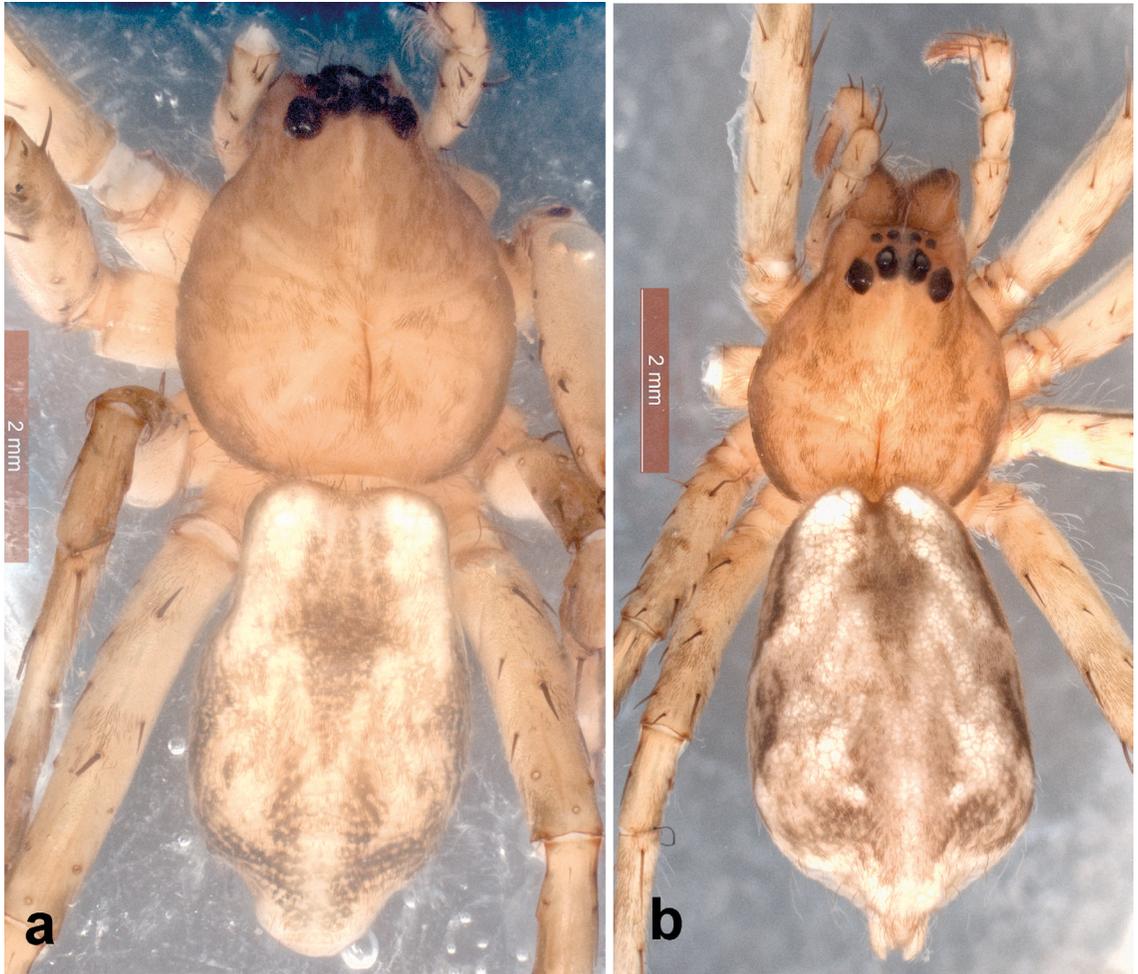


FIG. 48. *Ornodolomedes gorenpul* sp. nov. **a**, holotype male, QM S55979, habitus, dorsal view; **b**, female QM S55979, habitus, dorsal view.

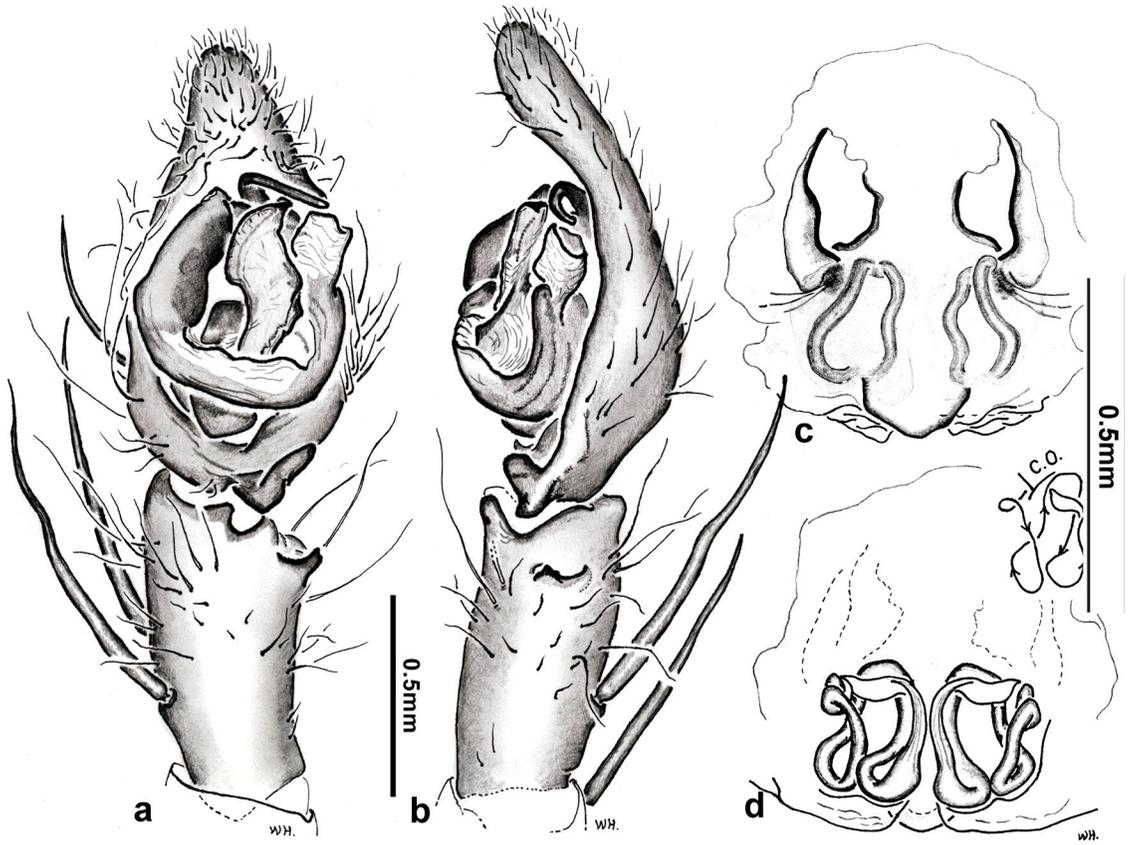


FIG. 49. *Ornodolomedes gorenpul* sp. nov. **a, b**, male QM S55979, palpal tibia and cymbium; **a**, ventral view; **b**, retrolateral view; **c, d**, female QM S108401, epigyne: **c**, external and internal (**d**) view.



FIG. 50. *Ornodolomedes mickfanningi* sp. nov. **a, c, d**, holotype male, QM S104681; **a**, habitus, dorsal view; **c**, carapace, lateral view; **d**, eyes, dorsal view. **b**, female, habitus, dorsal view.

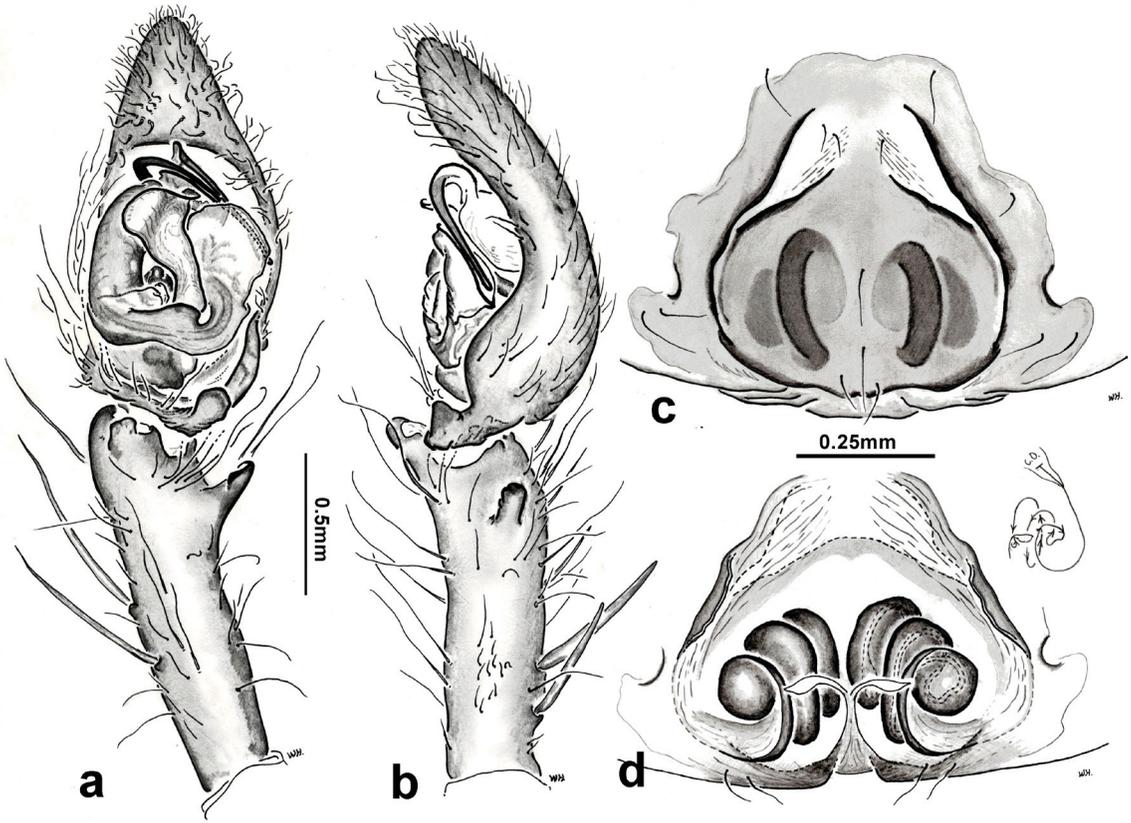


FIG. 51. *Ornodolomedes mickfanningi* sp. nov. **a, b**, holotype male, QM S104681, palpal tibia and cymbium; **a**, ventral view; **b**, retrolateral view. **c, d**, female QM S81158, epigyne: **c**, external and internal (**d**) view.

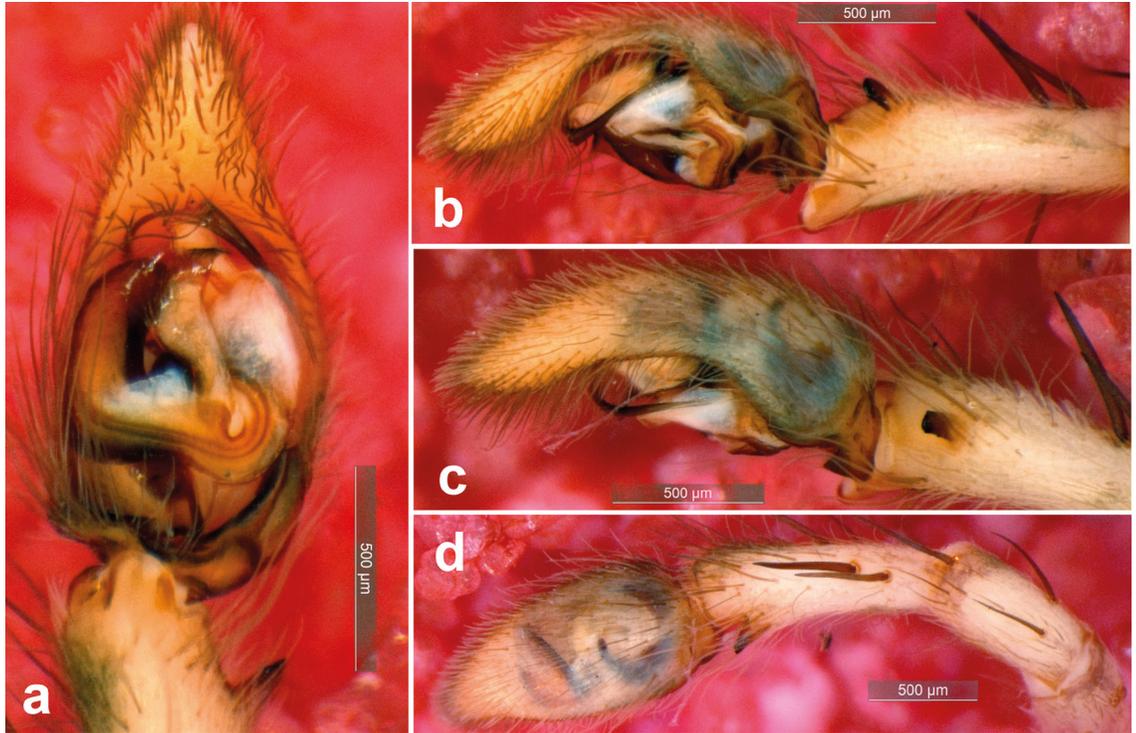


FIG. 52. *Ornodolomedes mickfanningi* sp. nov. **a, b**, holotype male, QM S104681, palpal tibia and cymbium; **a**, ventral view; **b**, retrolateral view, **c**, retrodorsal view; **d**, dorsal view.

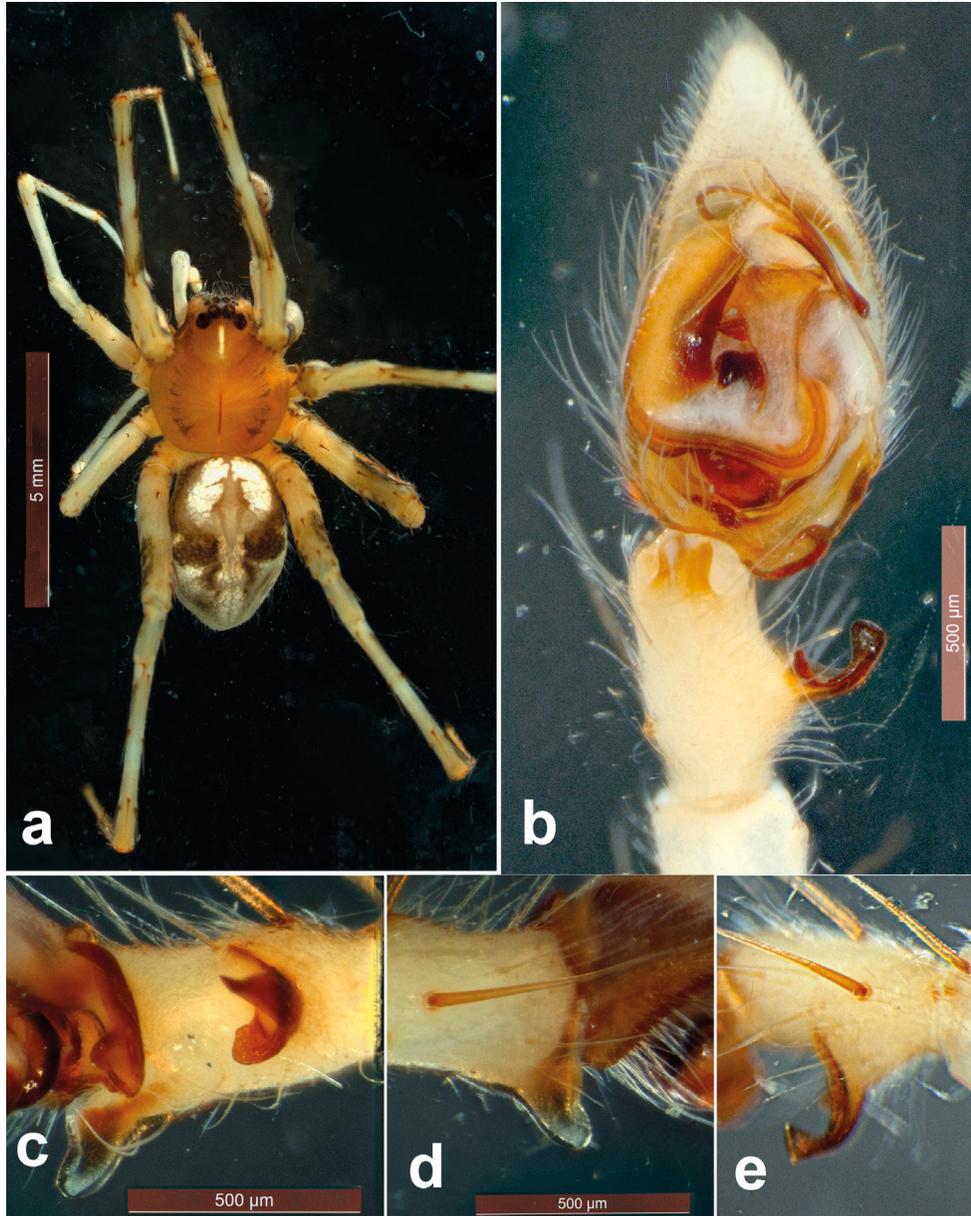


FIG. 53. *Ornodolomedes nebulosus* sp. nov., holotype male, QM S27998. **a**, habitus, dorsal view; **b–e**, palpal tibia and cymbium; **b**, ventral view; **c**, retrolateral view, **d**, prolateral view; **e**, dorsal view.

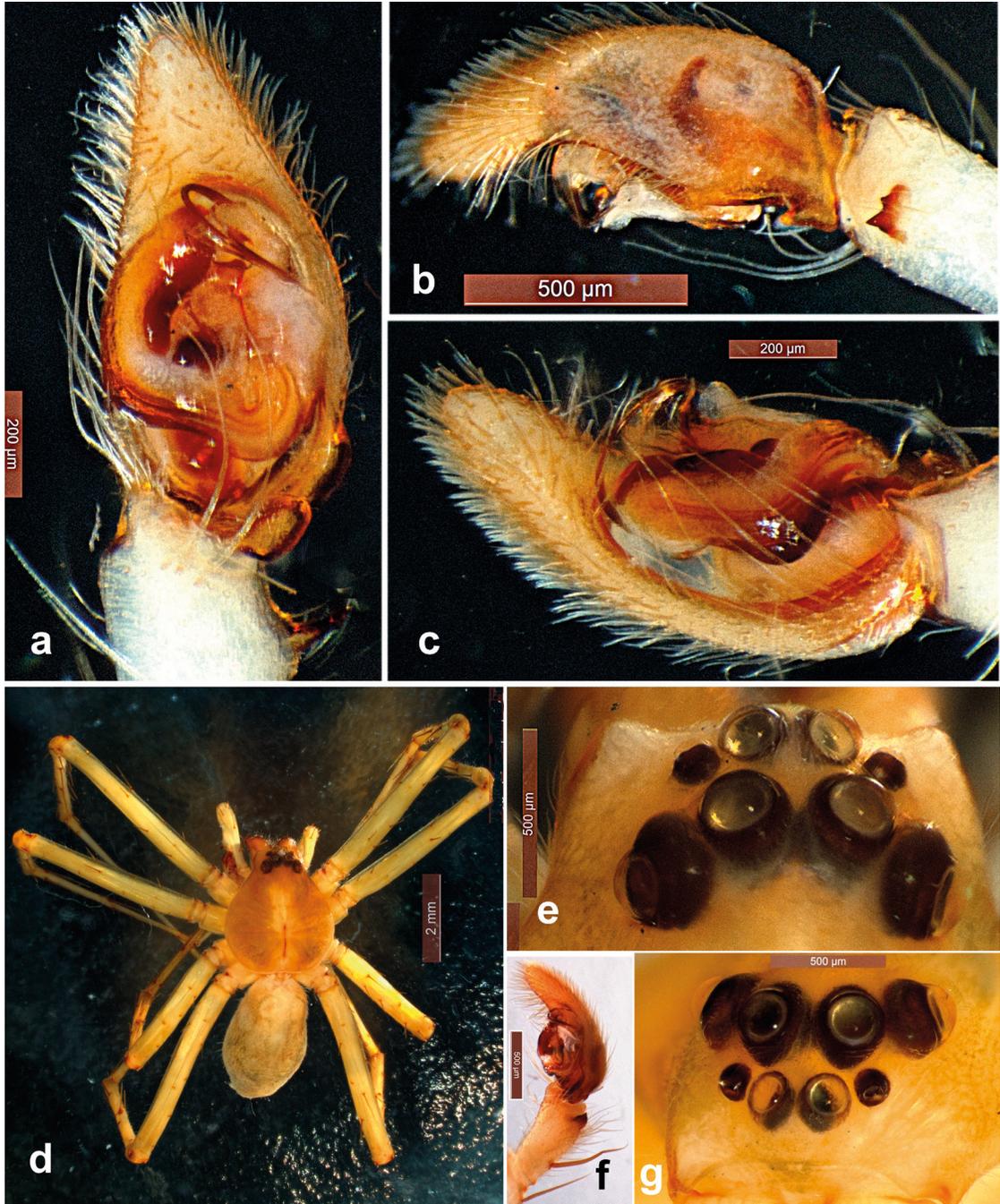


FIG. 54. *Ornodolomedes yalangi* sp. nov., holotype male QM S59162. a-c, f, palpal tibia and cymbium; a, ventral view; b, retrolateral view; c, prolateral view; f, retrolateral view showing full tibia; d, habitus, dorsal view; prolateral view; e, eyes, dorsal view; g, eyes, face.

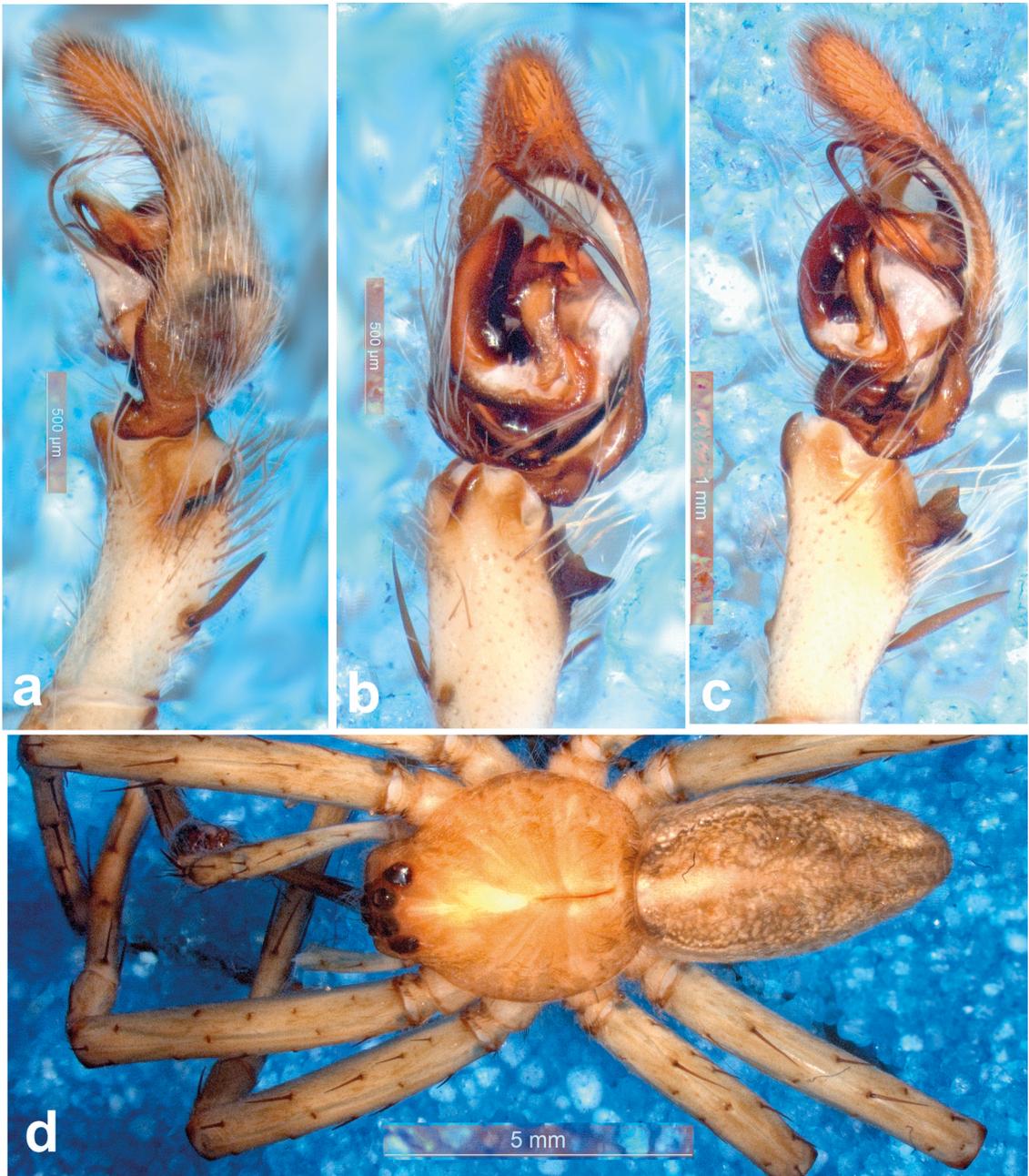


FIG. 55. *Ornodolomedes staricki* sp. nov., holotype male ANIC 42-002259. **a–c**, palpal tibia and cymbium; **a**, retrolateral view; **b**, ventral view; **c**, retrodorsal view; **d**, habitus, dorsal view.

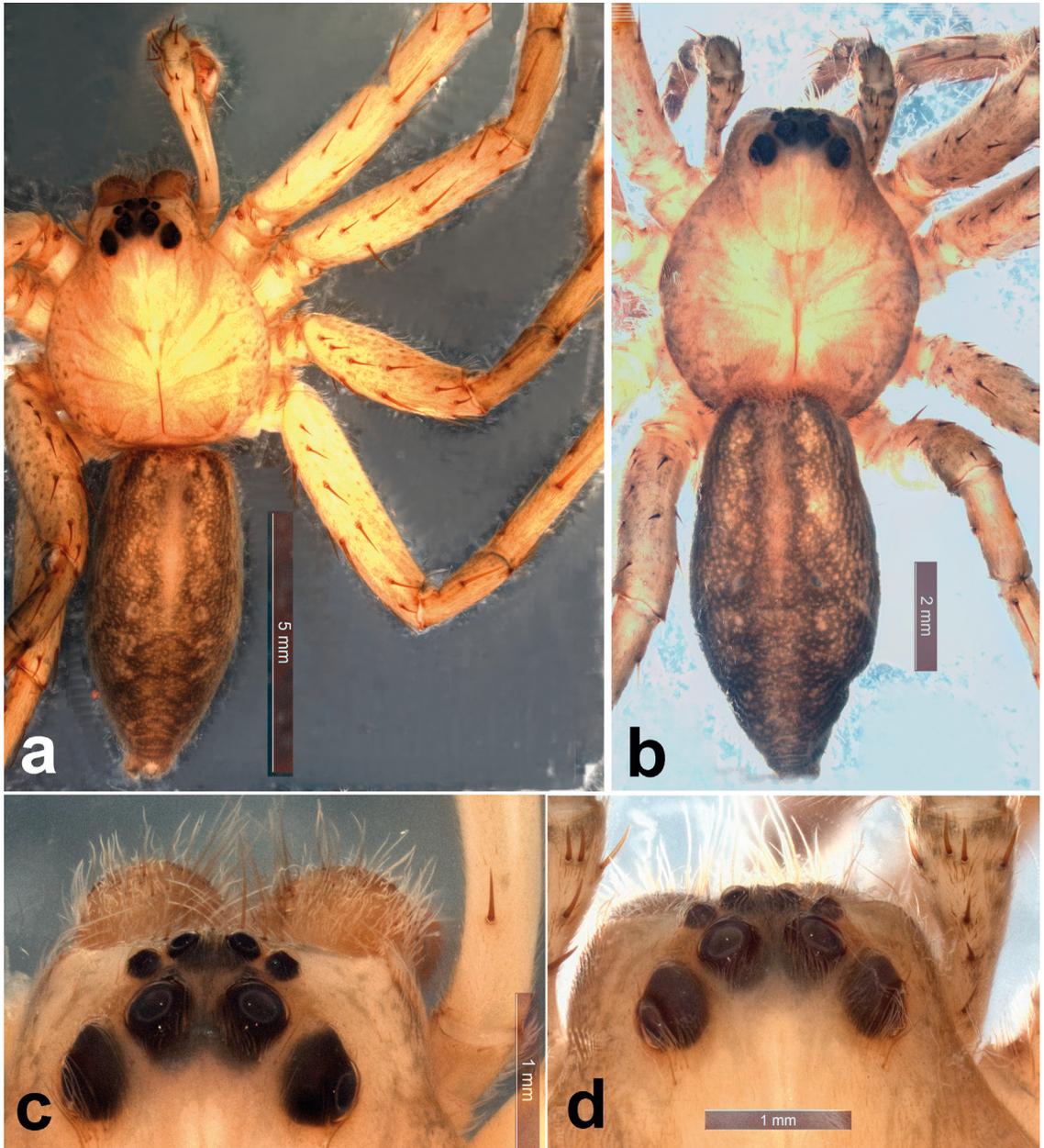


FIG. 56. *Ornodolomedes southcotti* sp. nov., holotype SAMA NN1997939, male. **a**, habitus, dorsal view; **c**, eyes, dorsal view; SAMA NN1997940, penult. female: **b**, habitus, dorsal view; **d**, eyes, dorsal view.

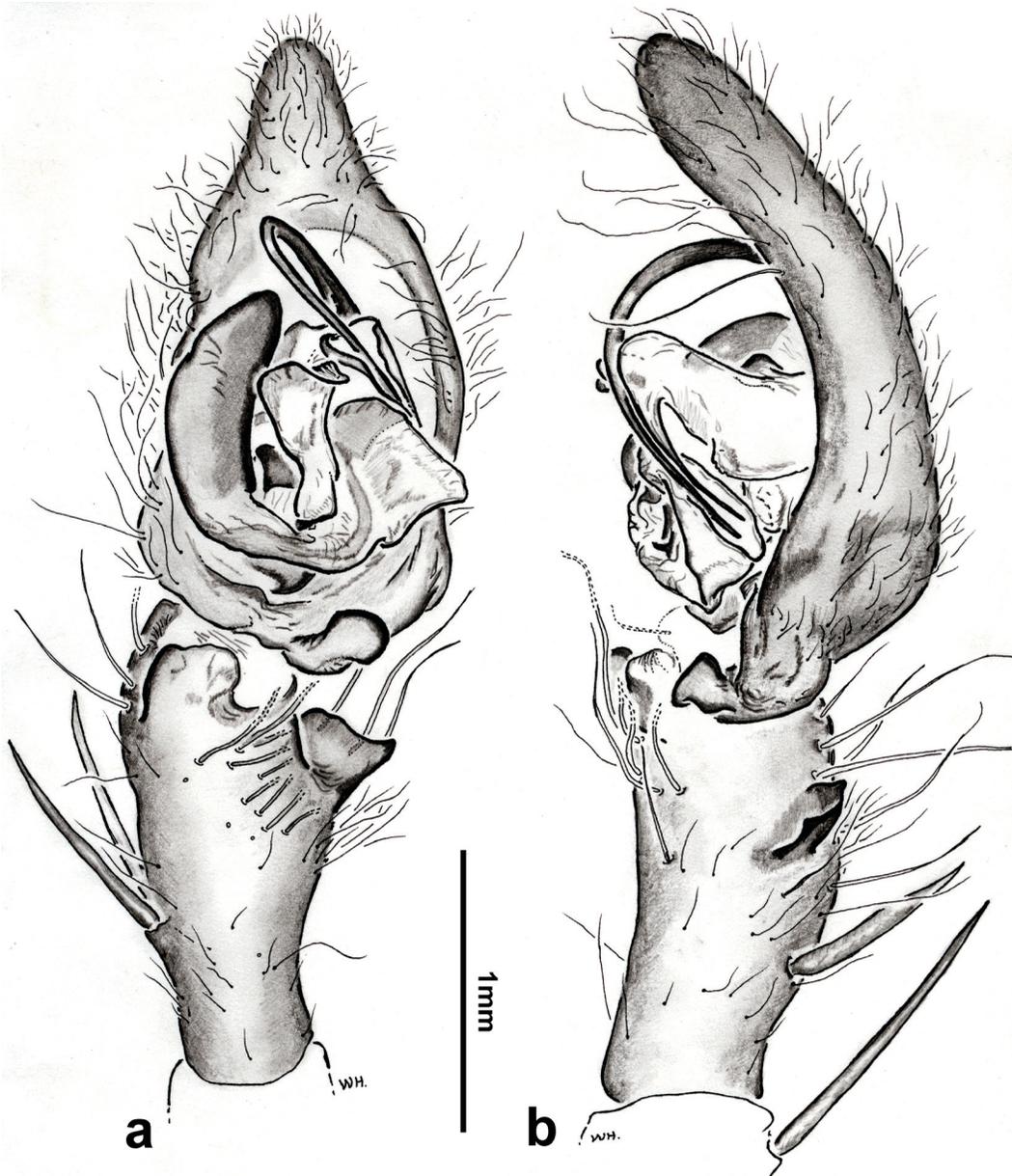


FIG. 57. *Ornodolomedes southcotti* sp. nov., holotype SAMA N1997939, male. a, b, palpal tibia and cymbium; a, ventral view; b, retrolateral view.

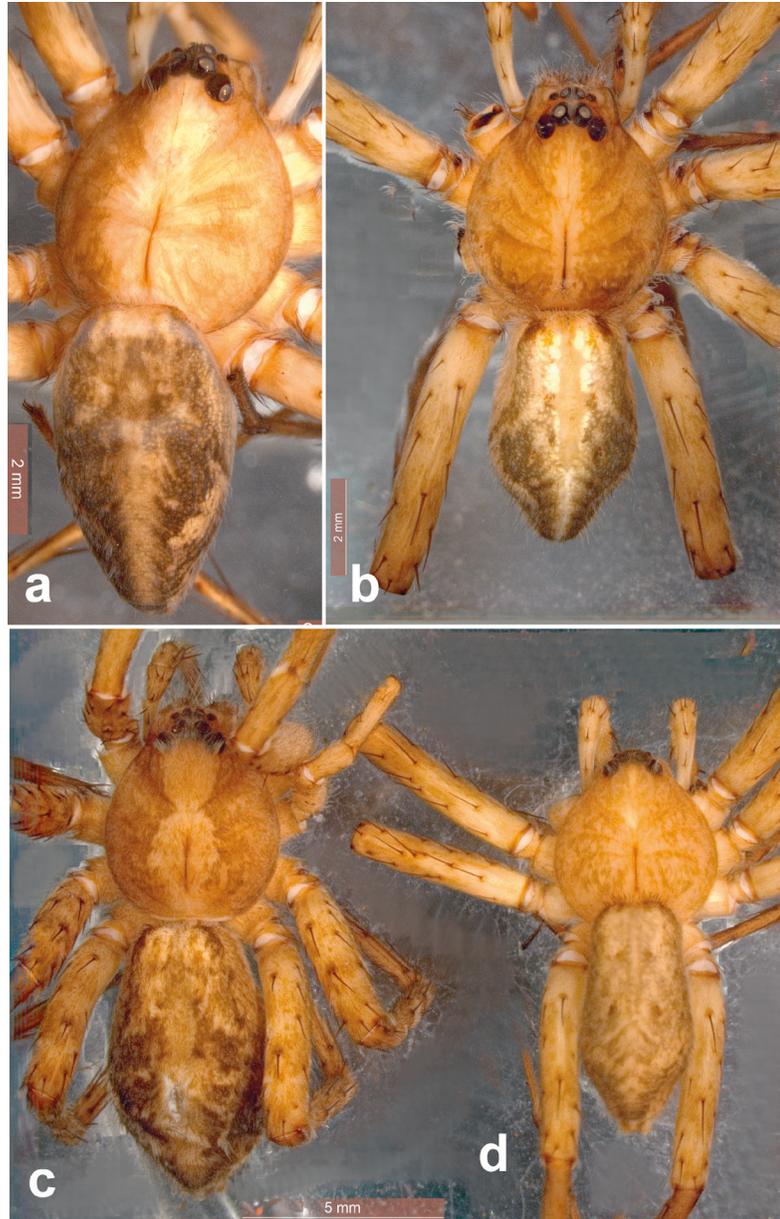


FIG. 58. *Ornodolomedes nicholsoni* sp. nov., habitus, dorsal view. **a**, holotype WAM T75675; **b**, male WAM 111262; **c**, **d**, Glenbourne, WAM T111341; **c**, male, dorsal view; **d**, female, dorsal view.

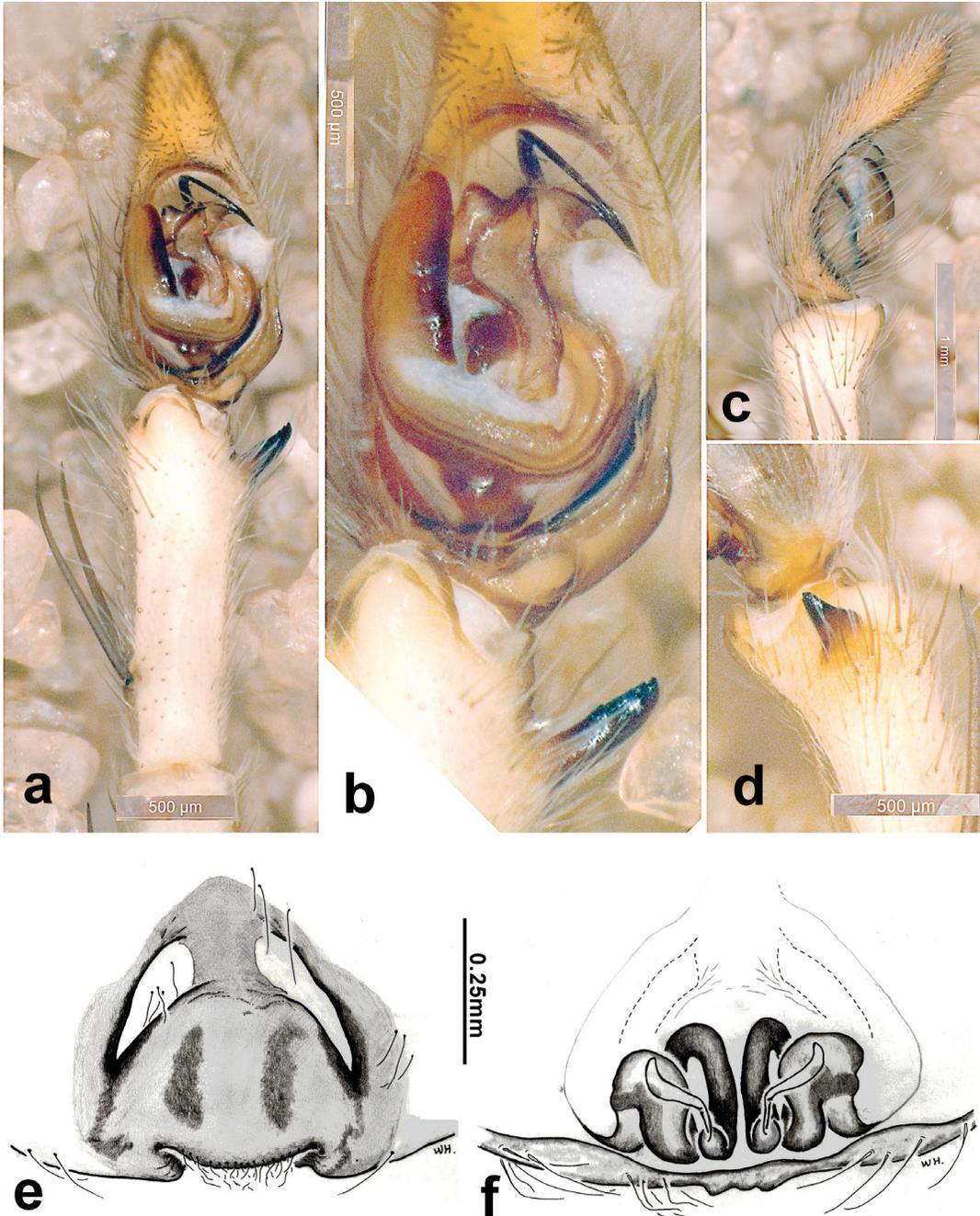


FIG. 59. *Ornodolomedes nicholsoni* sp. nov. a–d, holotype WAM T75675, palpal tibia and cymbium; a, b, ventral view; c, prolateral view; d, retrolateral view. e, f, female WAM T111341, epigyne: e, external and internal (f) view.

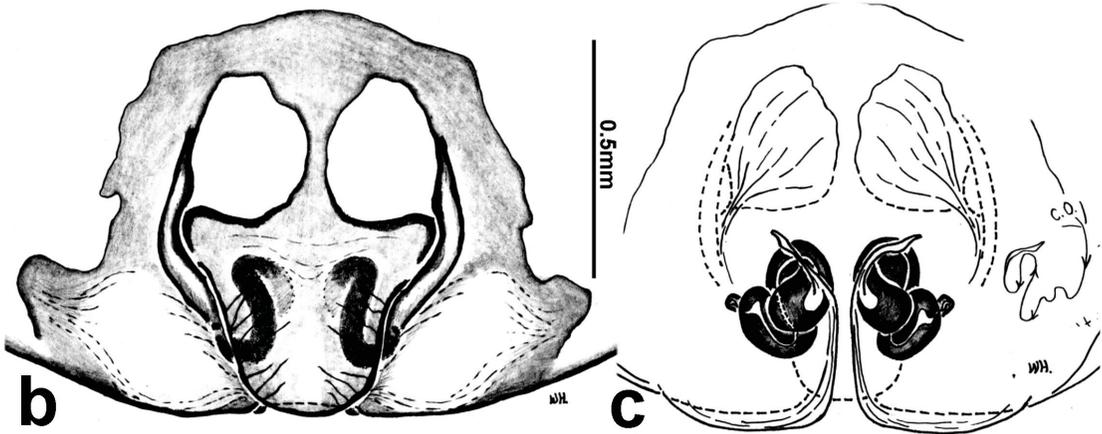


FIG. 60. *Ornodolomedes xypee* sp. nov. a-c, holotype female QM S86872; a, habitus, lateral view; b, c, epigyne: b, external and internal (c) view.

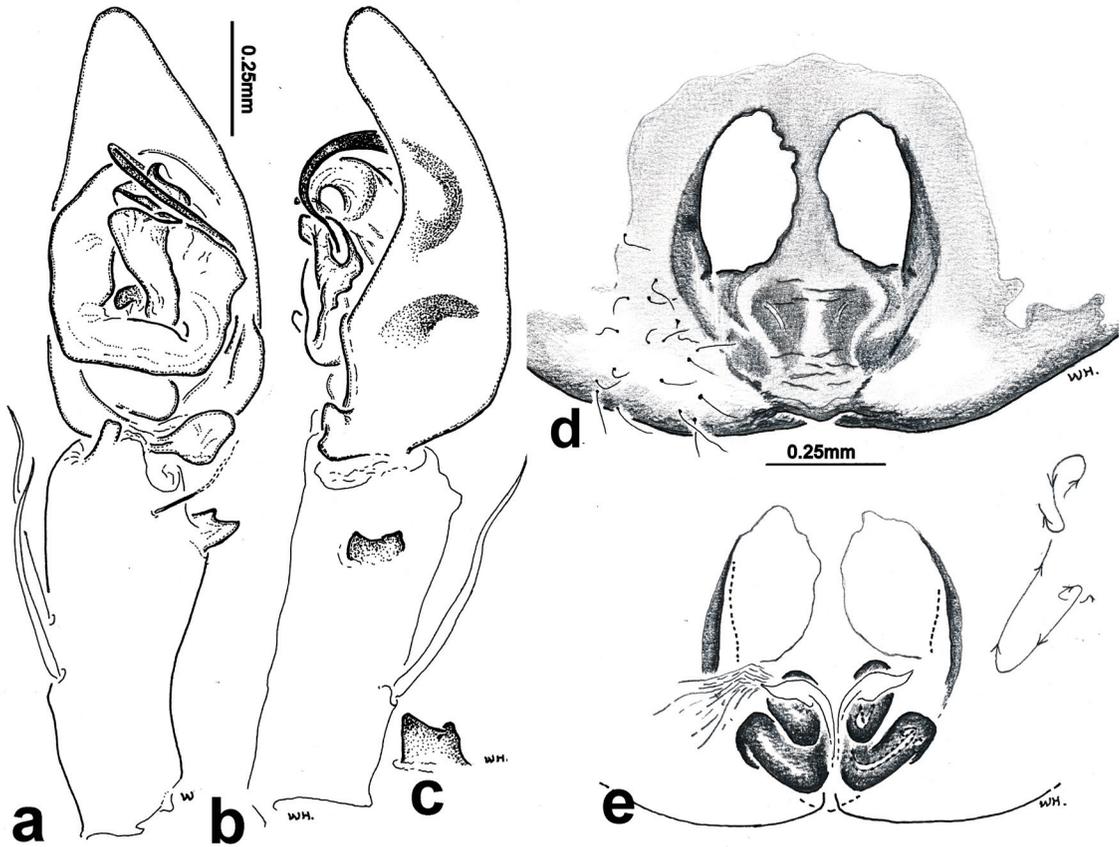


FIG. 61. *Ornodolomedes marshi* sp. nov. **a-c**, holotype male QM S28805; **a**, **b**, palpal tibia and cymbium; **a**, ventral view; **b**, retrolateral view; **c**, retrolateral tibial apophysis, RTAmax view. *Ornodolomedes nebulosus* sp. nov., female AM KS103149, **d**, **e**, epigyne: **d**, external and internal, showing path of ducts (**e**) view.

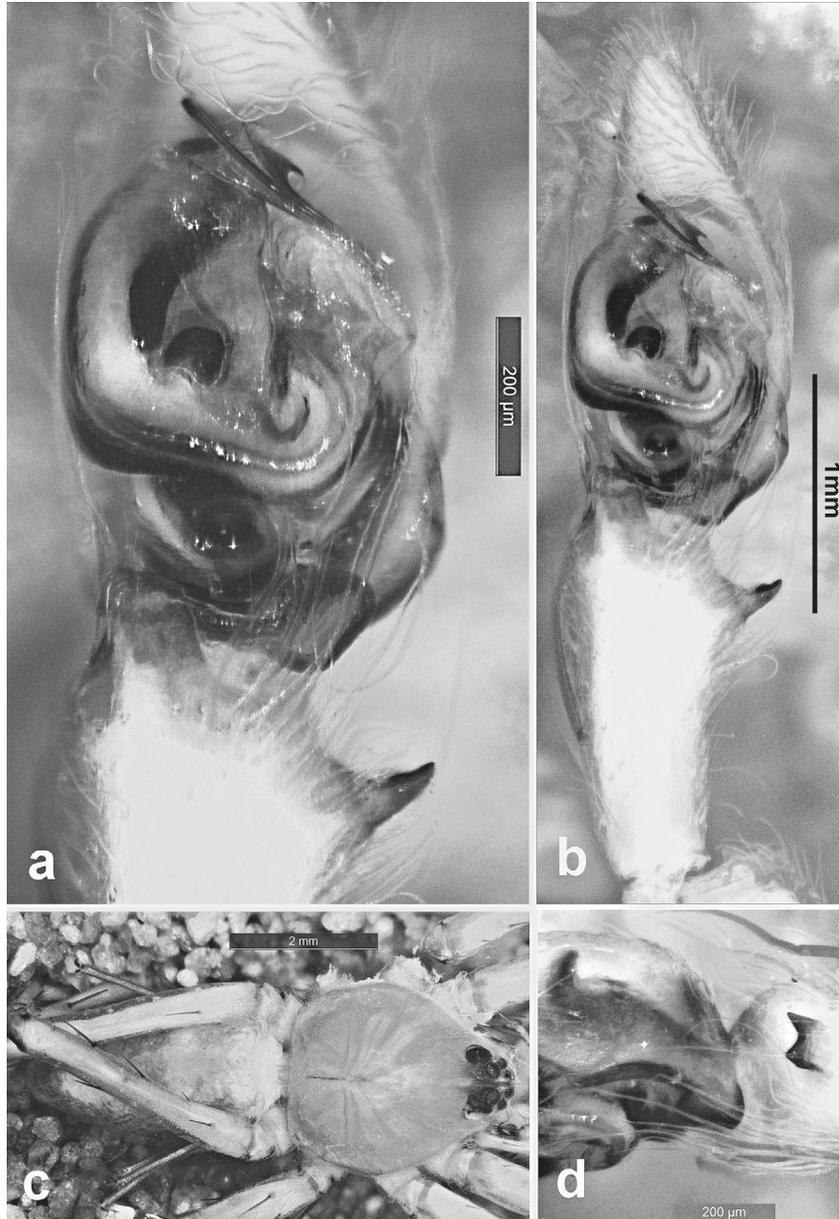


FIG. 62. *Ornodolomedes marshi* sp. nov. a–d, holotype male QM S28805; a, b, d, palpal tibia and cymbium; a, b, ventral view; c, habitus; dorsal view; d, RTAMax view.

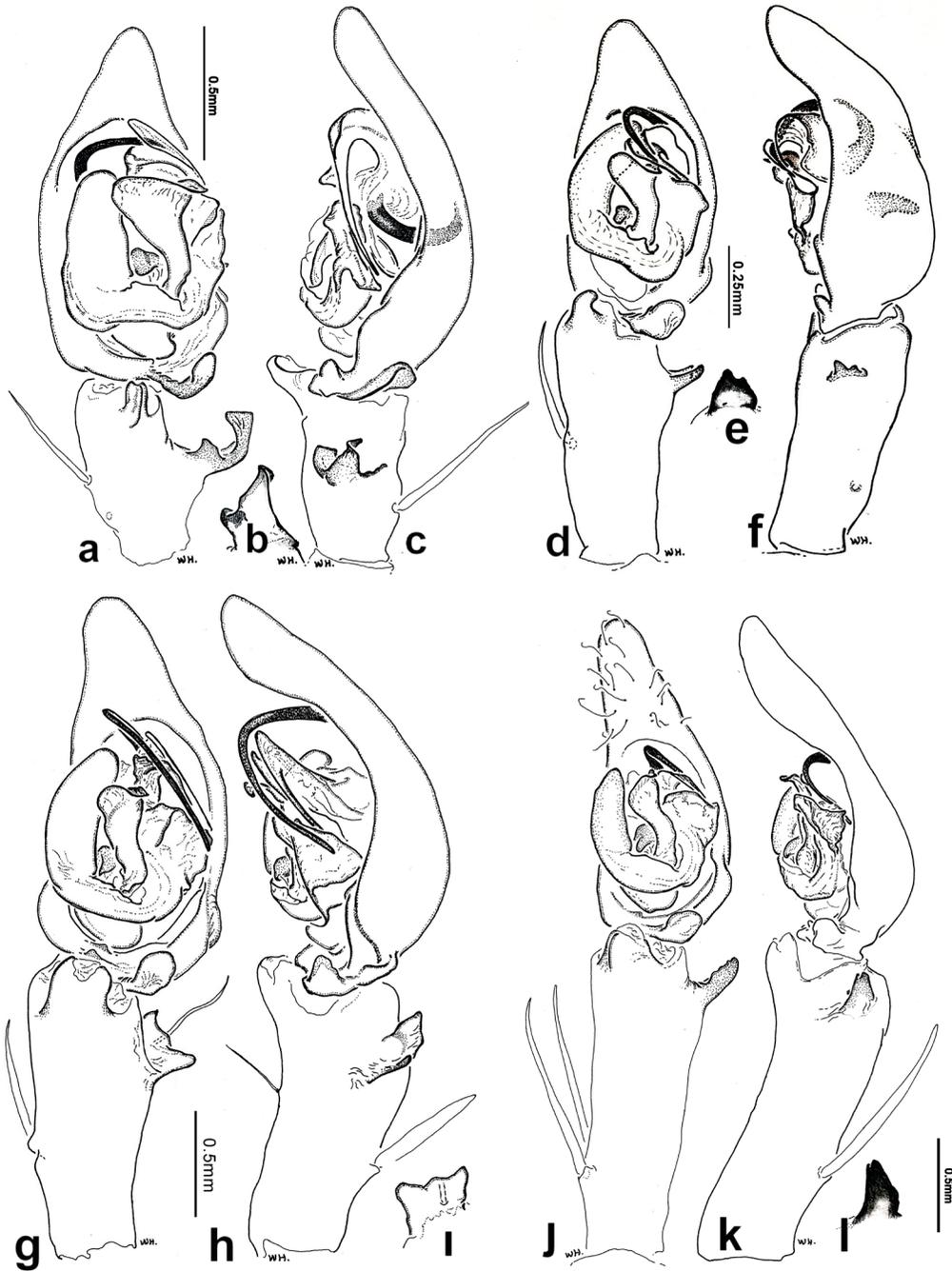


FIG. 63. *Ornodolomedes*, male palpal tibia, cymbium and bulb, with RTA, holotypes. **a-c**, *O. nebulosus*, (mirrored), **a**, ventral view; **b**, retrolateral view; **c**, RTA in RTAmax view; **d-f**, *O. yalangi*, **d**, ventral view; **e**, retrolateral view; **f**, RTA in RTAmax view; **g-i**, *O. staricki*, **g**, ventral view; **h**, retrolateral view; **i**, RTA in RTAmax view; **j-l**, *O. nicholsoni*, **j**, ventral view; **k**, retrolateral view; **l**, RTA in RTAmax view.



FIG. 64. *Mangromedes kochi* (Roewer, 1951). **a**, male, habitus on mangrove, dorsal view; **b**, female QMS14041, habitus, dorsal view; **c**, **d**, mangroves on foreshore at Wynnum, south-east Queensland, the spiders are most common on the dark “sock” and to a lesser extent on the mud.

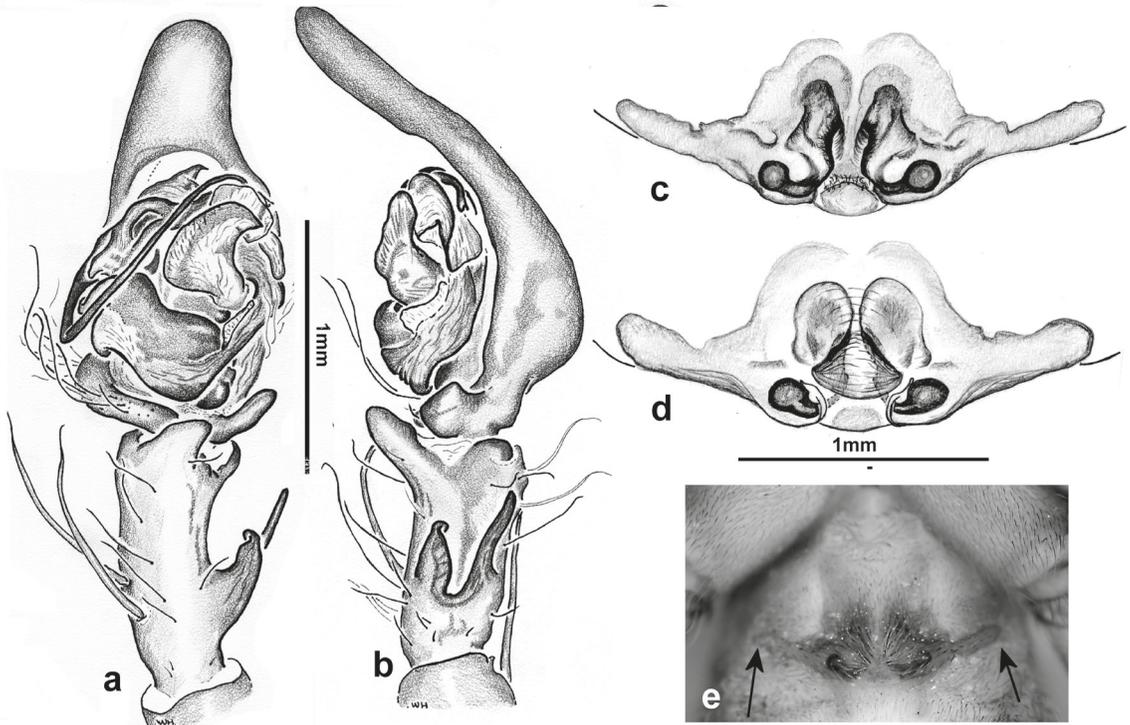


FIG. 65. *Mangromedes kochi* (Roewer, 1951). **a, b**, male QM S34613, palpal tibia and cymbium, mirrored; **a**, ventral view; **b**, retrolateral view; **c-e**, female QM S14041 epigyne; **c**, external view; **d**, internal view; **e**, genital region showing extent of "wings" (arrows) on venter, ventral view.

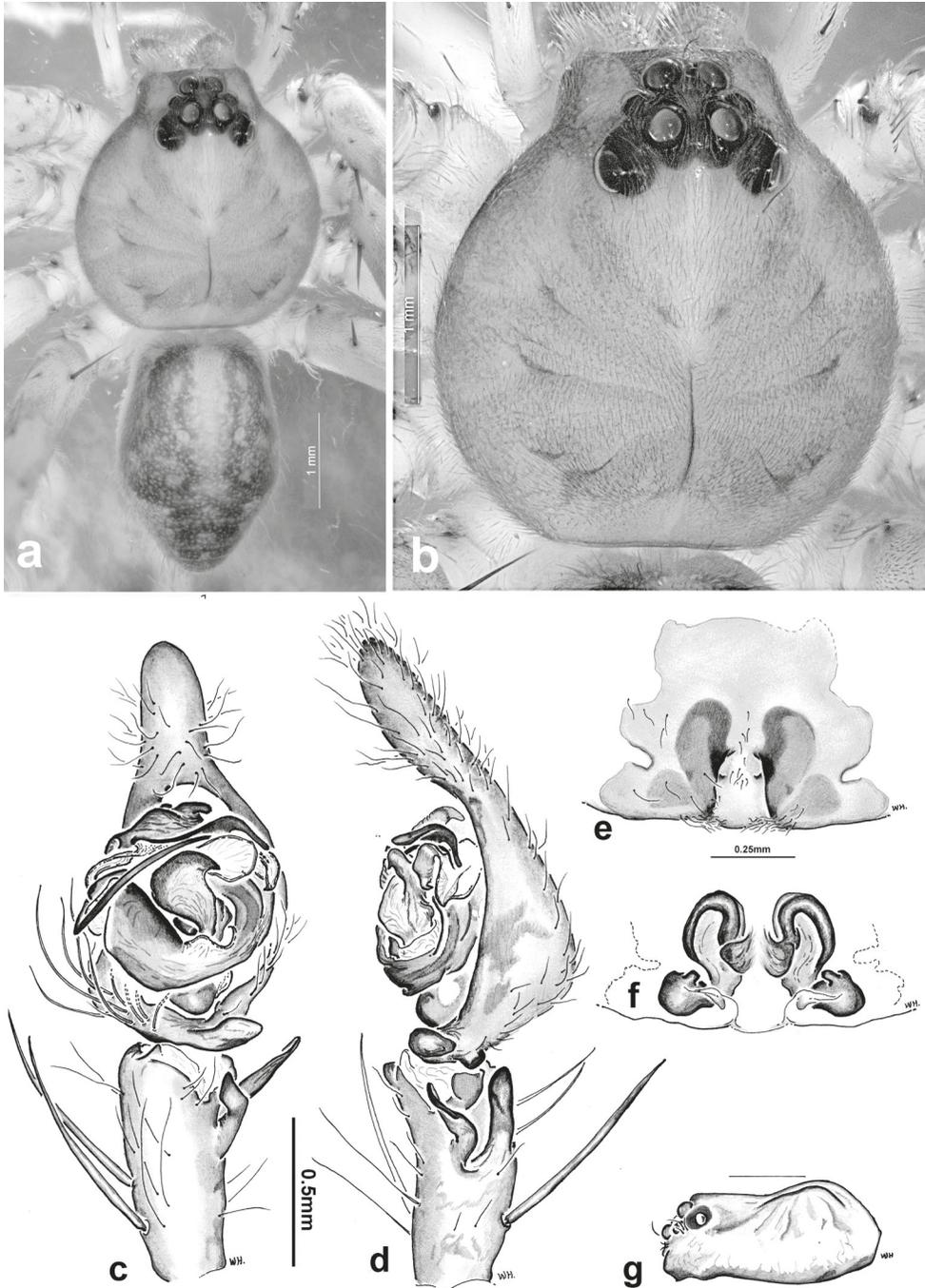


FIG. 66. *Mangromedes porosus* sp. nov., holotype male, MAGNT A004618, **a, b**, habitus, dorsal view; **c, d**, palpal tibia and cymbium; **c**, ventral view; **d**, retrolateral view; **e, f**, epigyne, external (**e**), internal (**f**) view, **g**, habitus, lateral view.

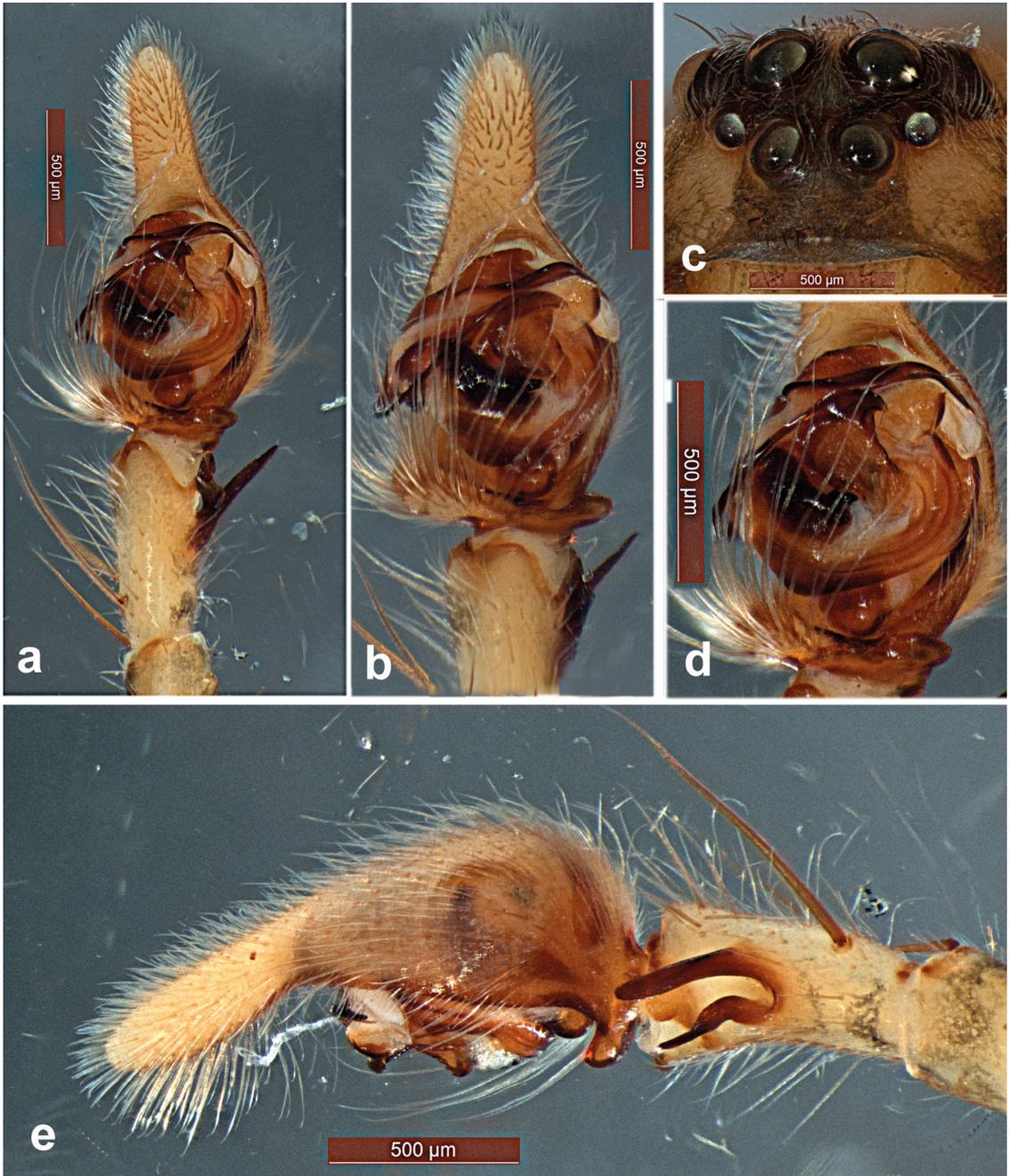


FIG. 67. *Mangromedes porosus* sp. nov., holotype male, MAGNT. **a, b, d, e**, palpal tibia and cymbium; **a**, retroventral view; **b, d**, ventral view; **c**, face; **e**, retrolateral view.

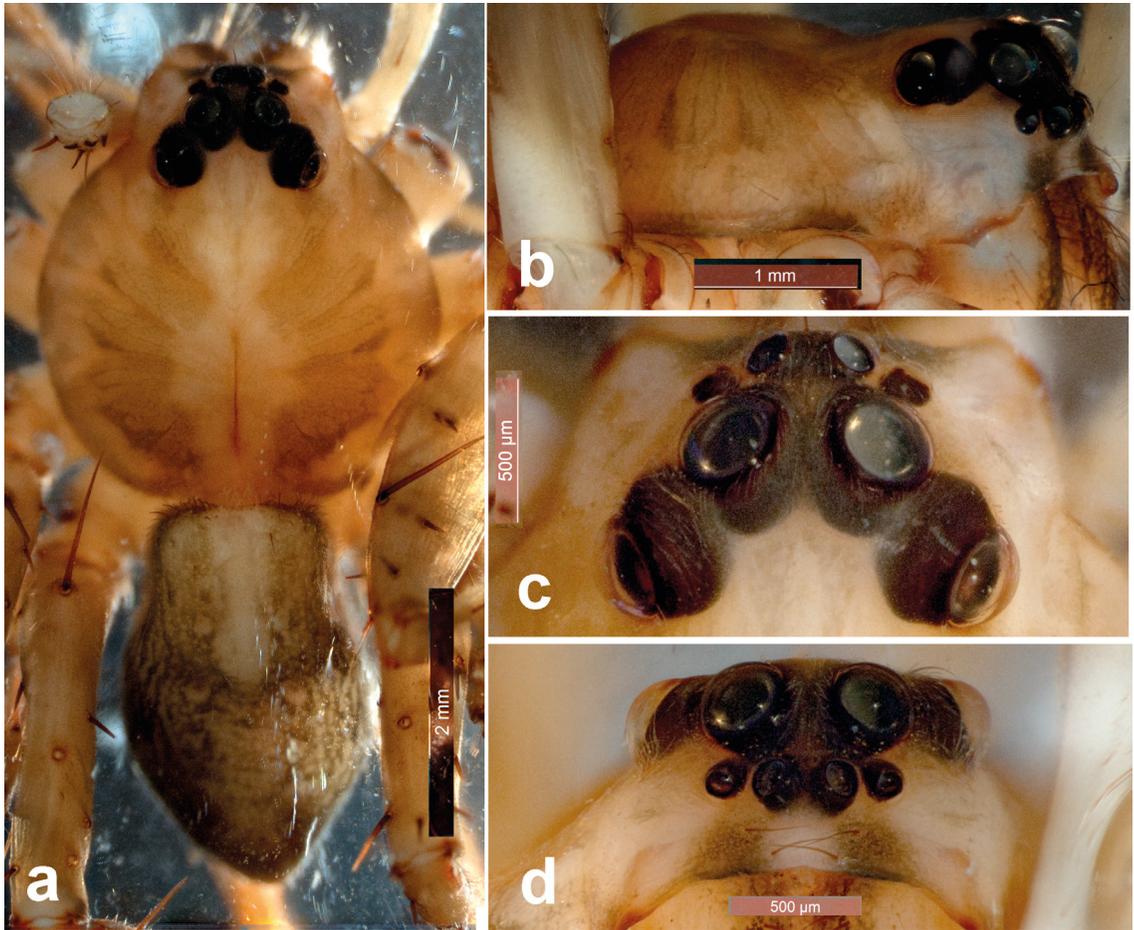


FIG. 68. *Caledomedes flavovittatus* (Simon, 1880), male, QM S108411. **a**, habitus, dorsal view; **b**, carapace, lateral view; **c**, eyes, dorsal view; **d**, face.

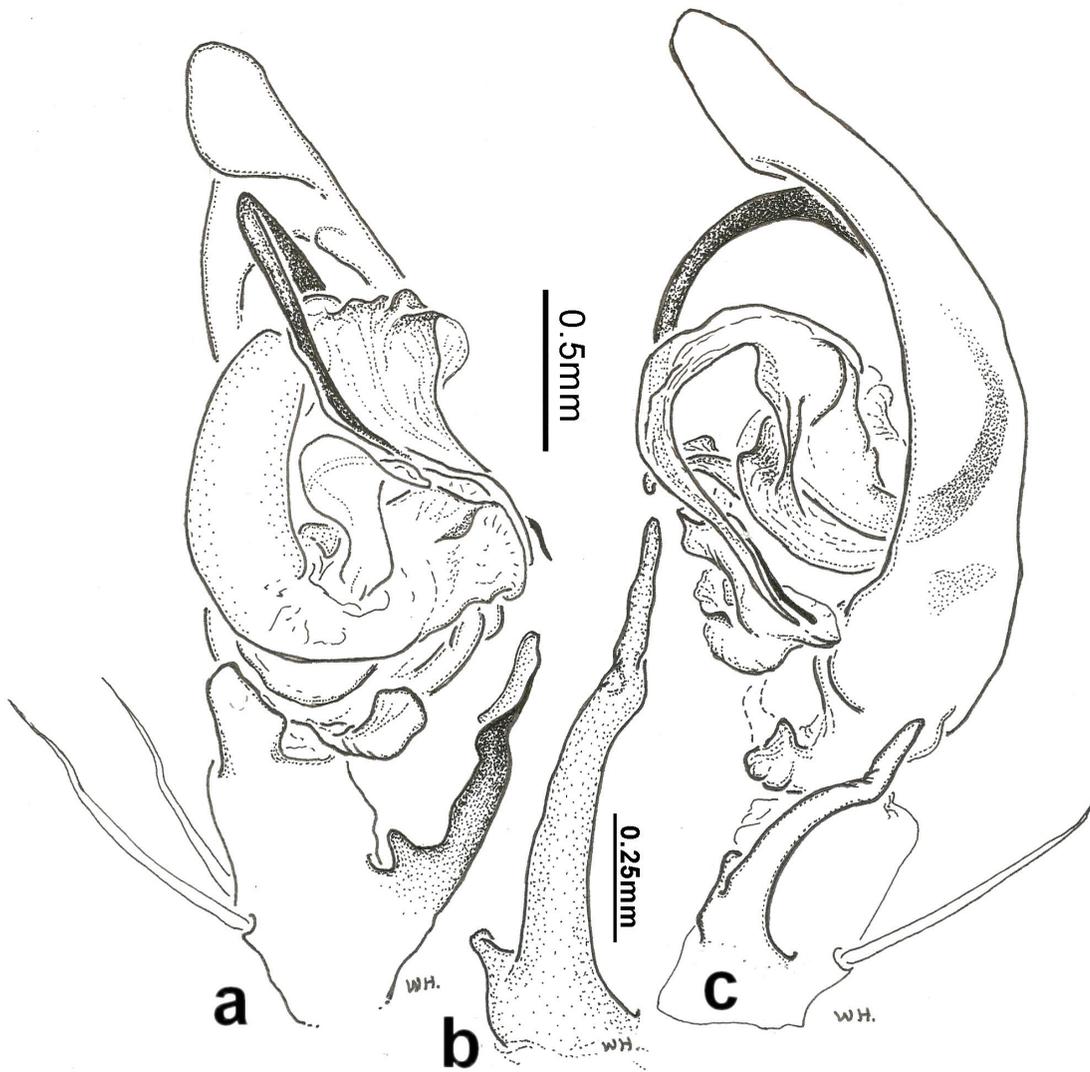


FIG. 69. *Caledomedes flavovittatus* (Simon, 1880), male, QM S108411. **a**, **b**, male palpal tibia and cymbium; **a**, ventral view; **b**, RTAmax view; **c**, retrolateral view.

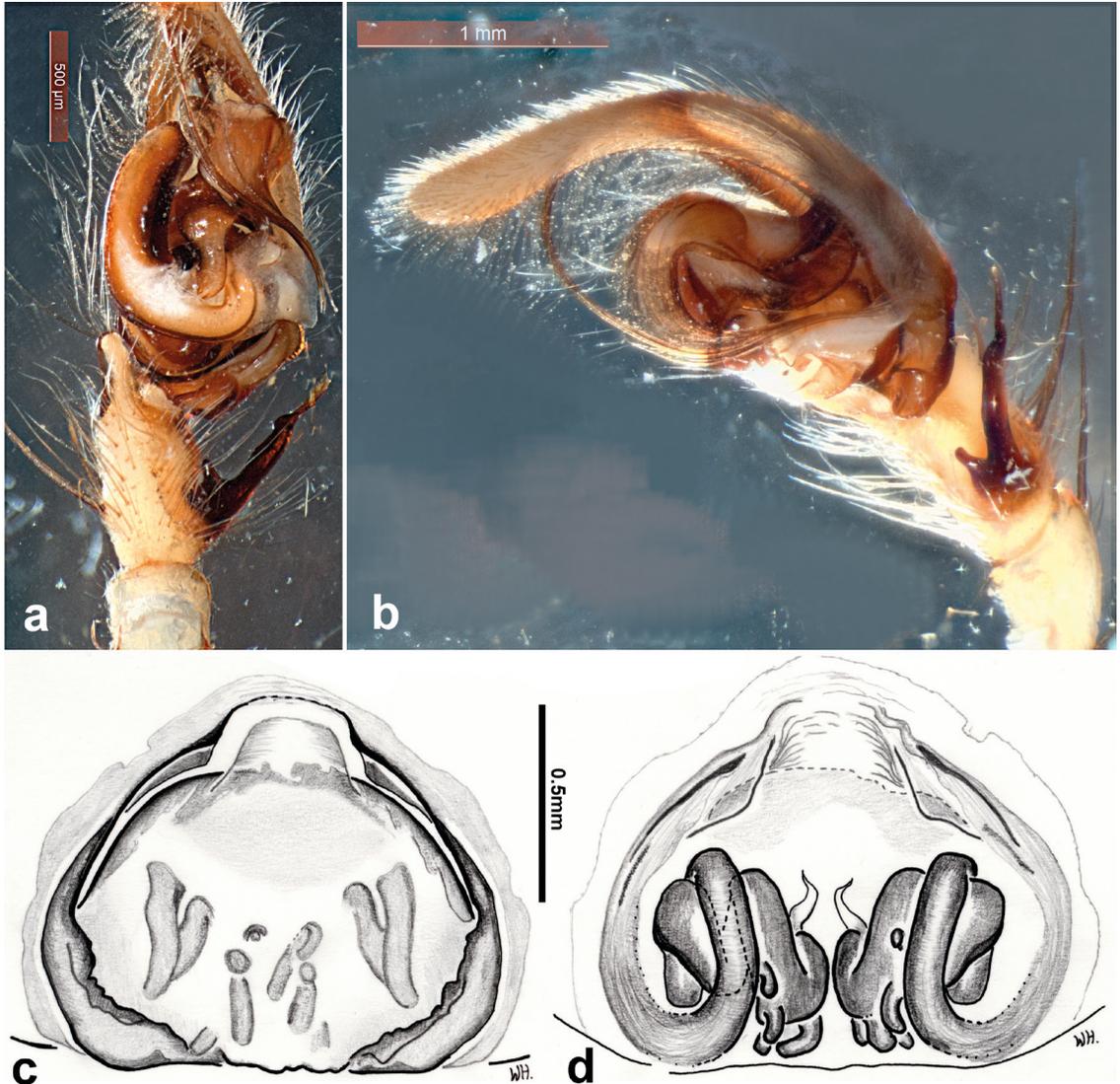


FIG. 70. *Caledomedes flavovittatus* (Simon, 1880). Male, QM S108411. **a, b**, male palpal patella, tibia and cymbium; **a**, ventral view; **b**, retrolateral view; **c, d**, epigyne QM S67859; external (**c**) and internal (**d**) views.

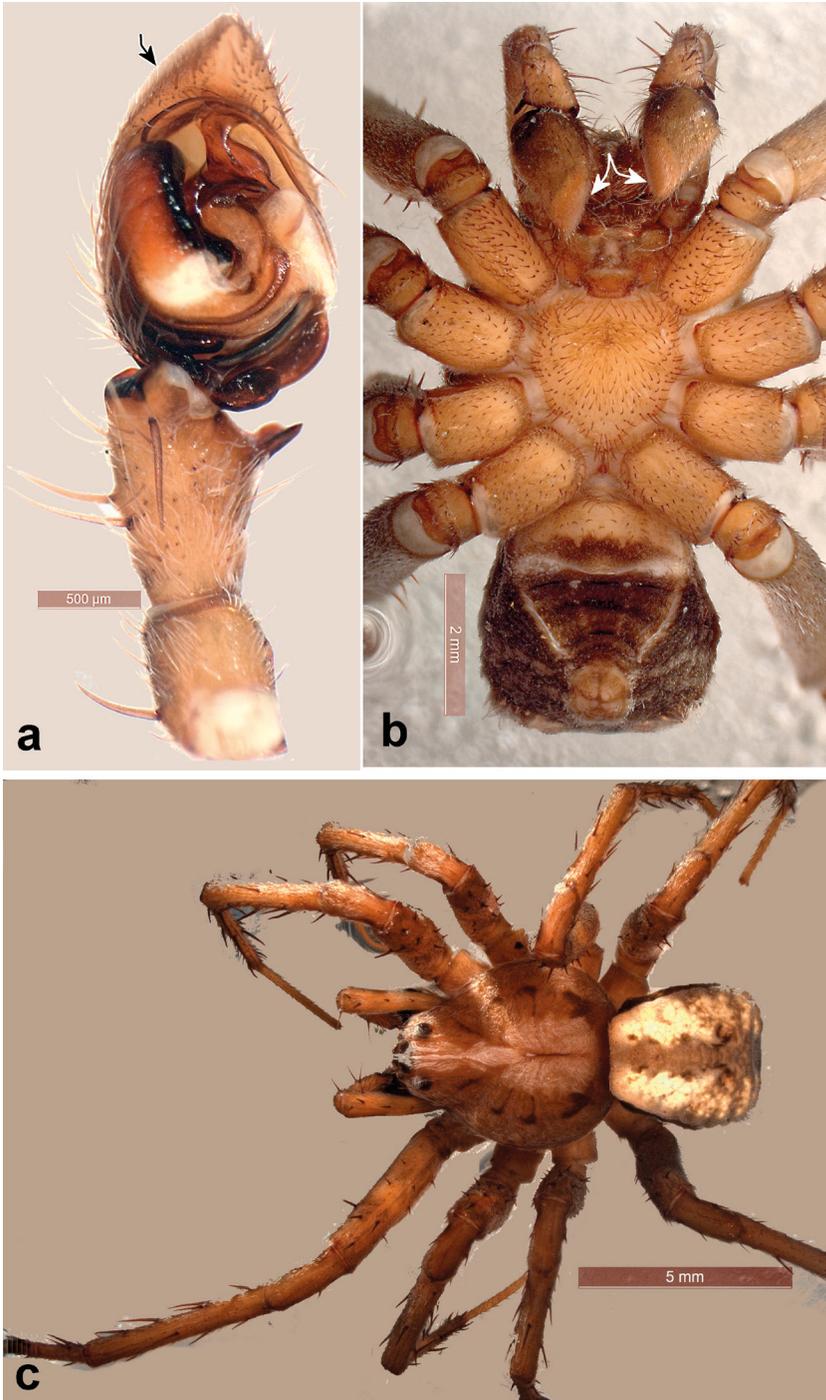


FIG. 71. *Bradystichus calligaster* Simon, 1884, male, QM S25653. **a**, palpal patella, tibia and cymbium, ventral view, showing scopula (arrow); **b**, venter, showing scopula on ental cymbium edge; **c**, habitus, dorsal view.

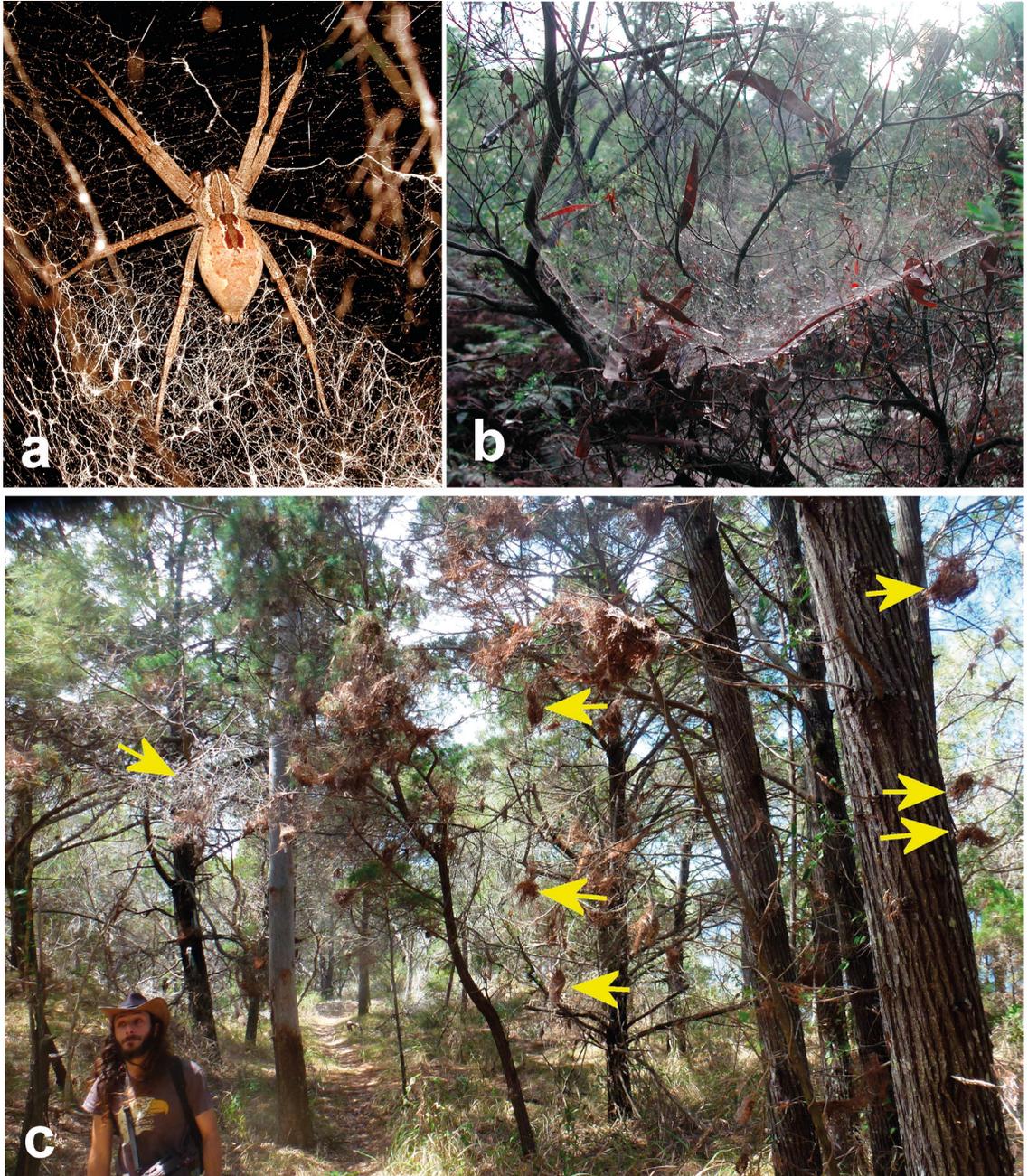


FIG. 72. *Dendrolycosa icadia* (L. Koch, 1876). **a**, habitus on web; **b**, single web showing broad agelenid-like sheet web and basal nest; **c**, forest with arrows showing nests.

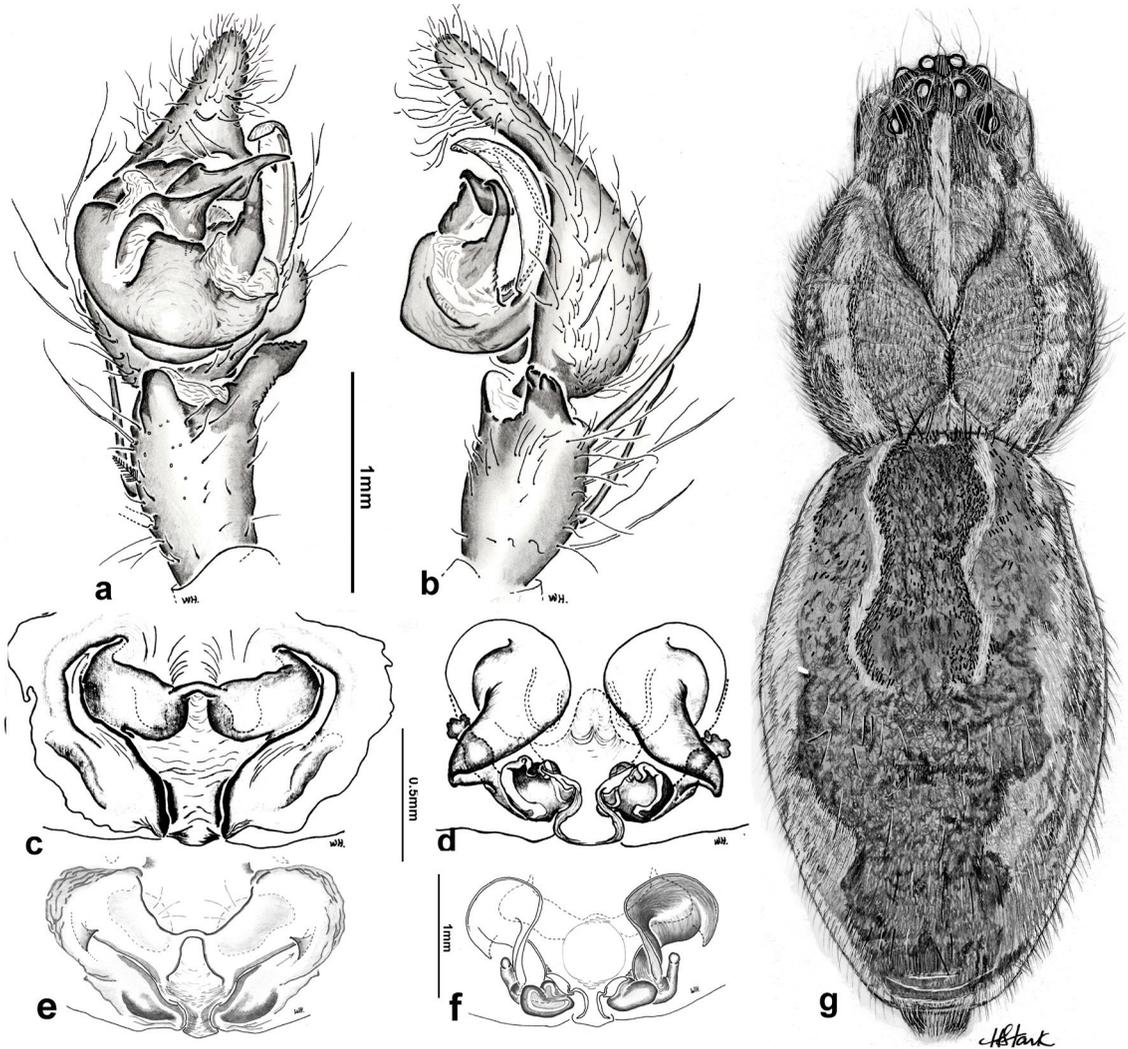


FIG. 73. *Dendrolycosa icadia* (L. Koch, 1876). **a, b**, male QM S104602, palpal patella, tibia and cymbium; **a**, ventral view; **b**, retrolateral view; **c-f**, epigyne; **c, d**, QM S80175; external (**c**) and internal (**d**) views; **e, f**, QM S12344, Torres Strait, external (**e**) and internal (**f**) views; **g**, female, habitus.

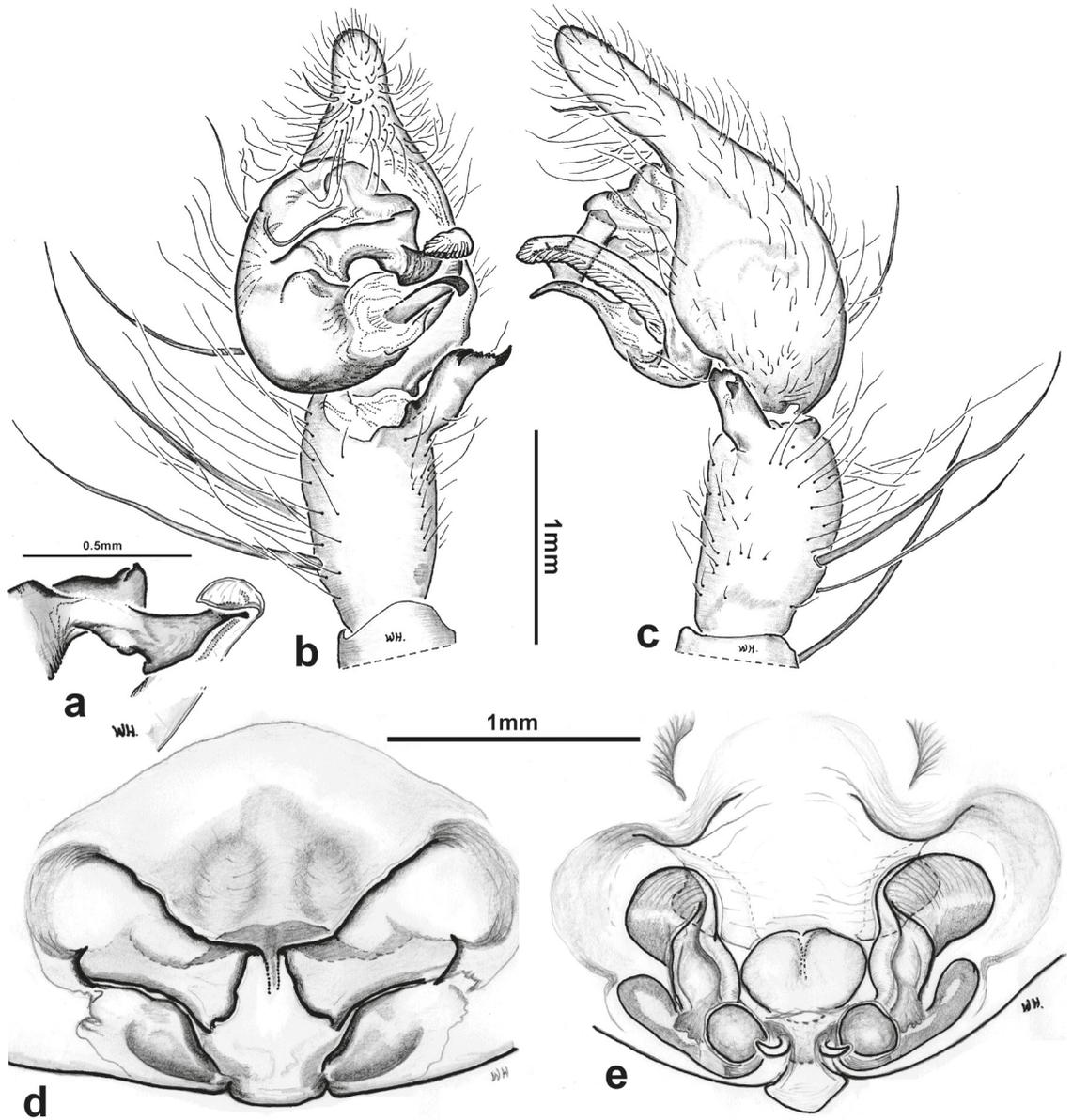


FIG. 74. *Dendrolycosa kakadu* sp. nov. **a-c**, male QM S53981, palpal patella, tibia and cymbium; **a**, apex of embolus; **b**, ventral view; **c**, retrolateral view; **d**, **e**, epigyne QM S53981; external (**d**) and internal (**e**) views.

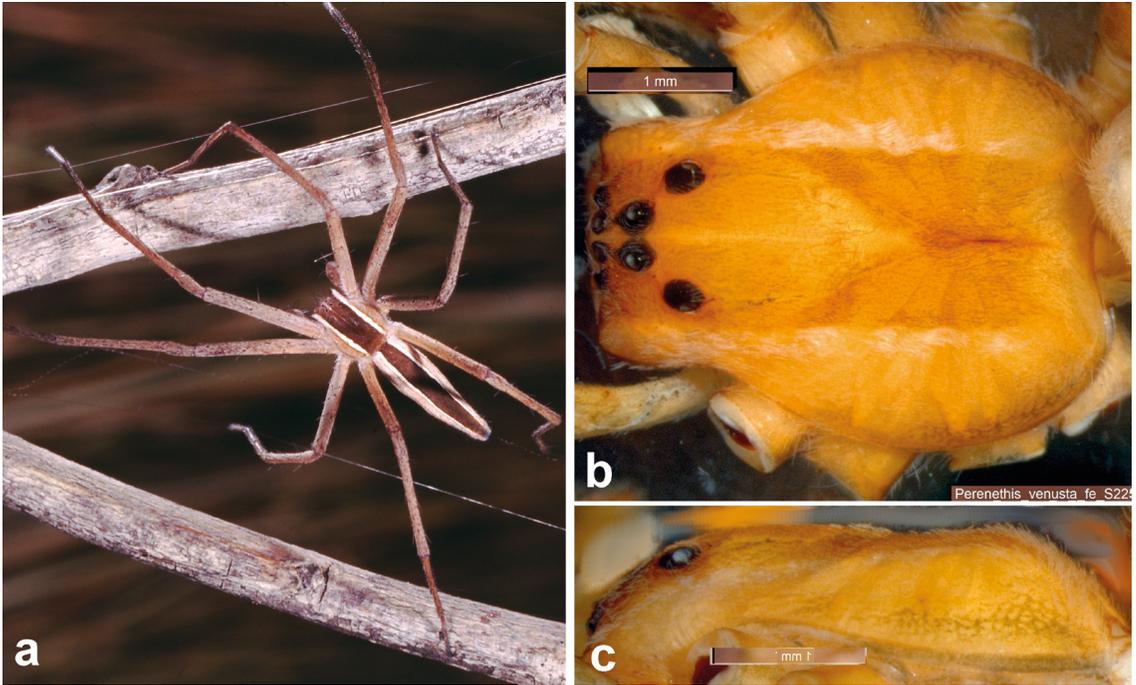


FIG. 75. *Perenethis venusta* L. Koch, 1878. **a**, female, habitus, dorsal view; image, J. Wright, QM; **b**, **c**, female, QM S22591, carapace; **b**, dorsal view; **c**, lateral view.

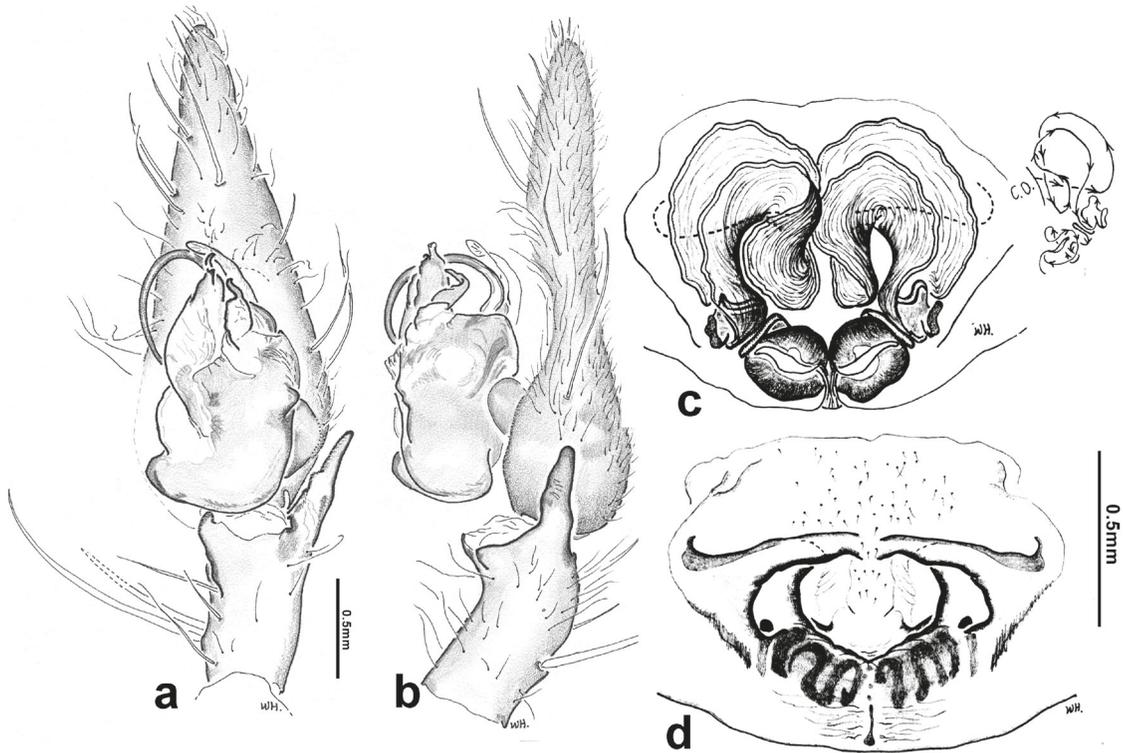


FIG. 76. *Perenethis venusta* L. Koch, 1878. **a, b**, QM S28787, male palpal patella, tibia and cymbium; **a**, ventral view; **b**, retrolateral view. **c, d**, epigyne QM S22591; external (**c**) and internal (**d**) views.



FIG. 77. *Hygropoda lineata* (Thorell, 1881), female on fine sheet, Fitzroy Island. Image, R. Raven.

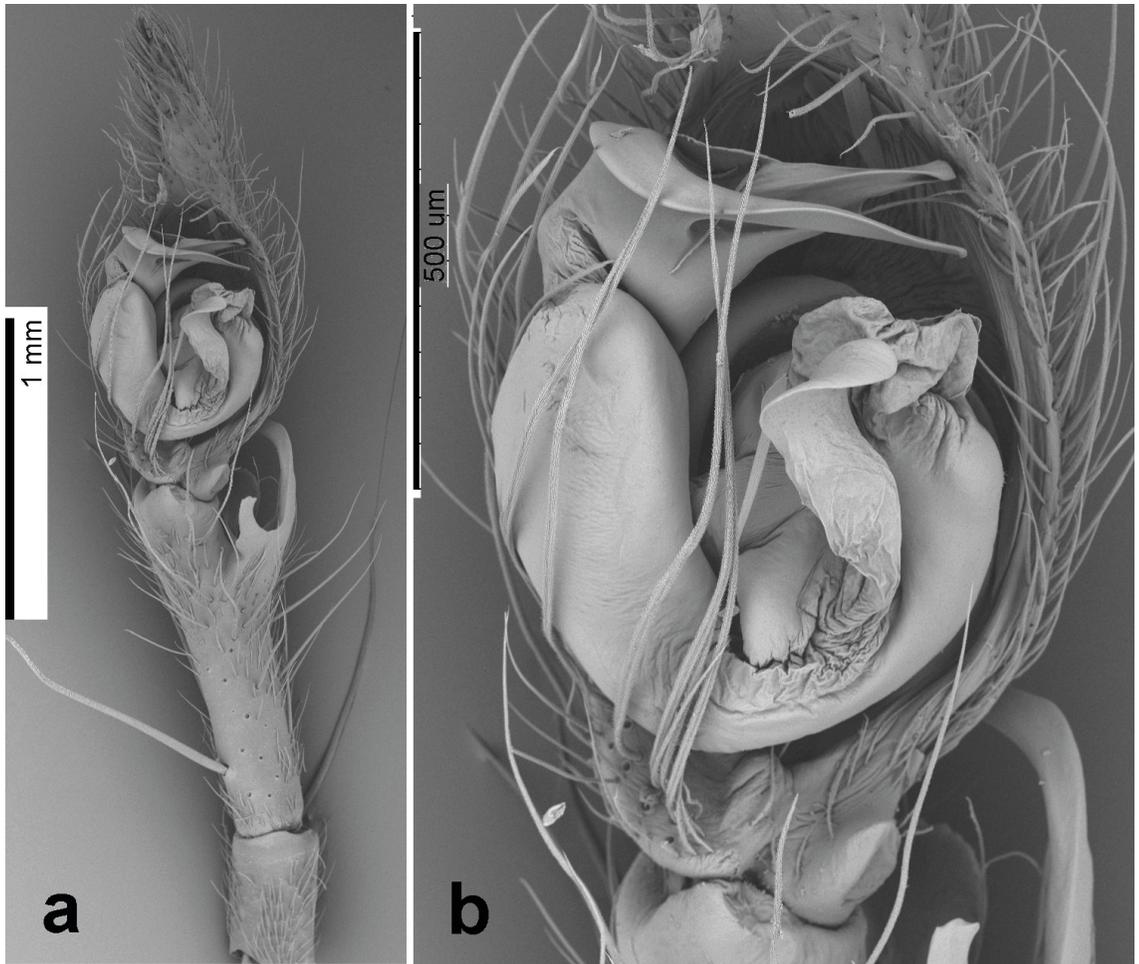


FIG. 78. *Hygropoda lineata* (Thorell, 1881), male palpal patella, tibia and cymbium, QM, Scanning electron micrographs; **a**, **b**, ventral view.

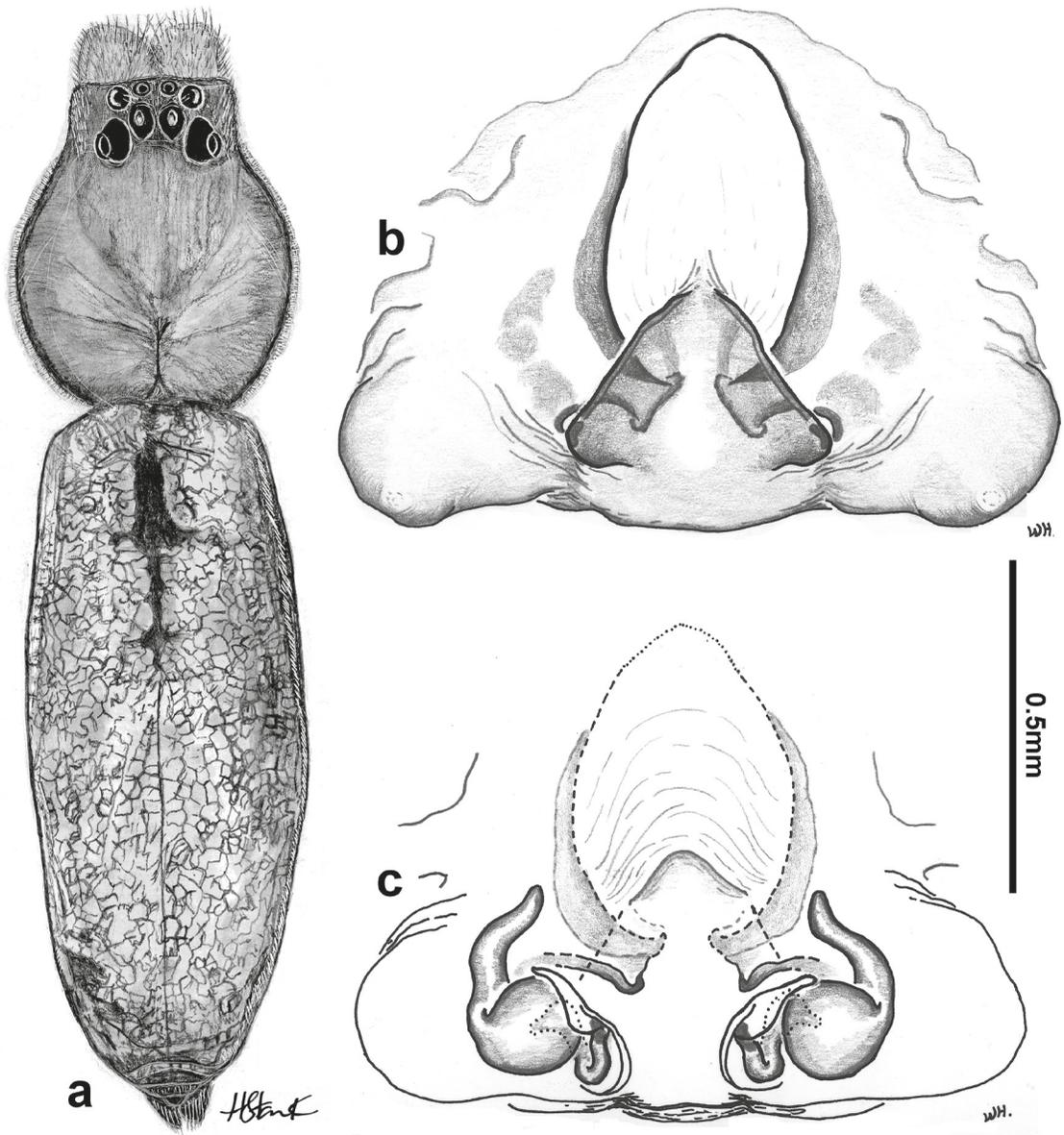


FIG. 79. *Hygropoda lineata* (Thorell, 1881), female. **a**, habitus, dorsal view; **b**, **c**, epigyne QM S28852; external (b) and internal (c) views.



FIG. 80. *Inola amicabilis* Davies, 1982, male QM S881. **a**, habitus, dorsal view; **b**, carapace, dorsal view; **c**, face; **d**, **e**, male palpal patella, tibia and cymbium; **d**, retrolateral view; **e**, ventral view.

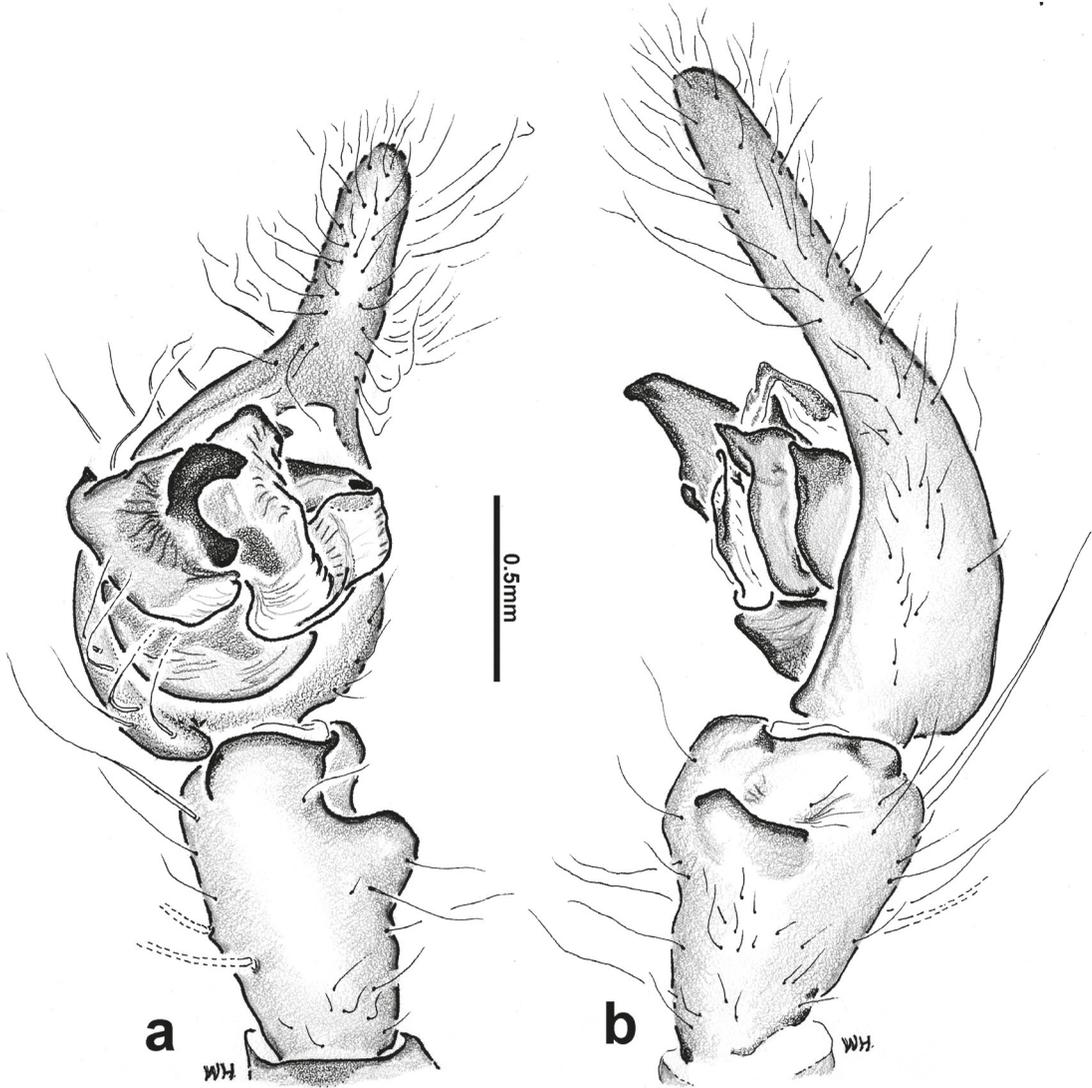


FIG. 81. *Inola amicabilis* Davies, 1982, male QM S870. **a, b**, male palpal patella, tibia and cymbium; **a**, ventral view; **b**, retrolateral view.

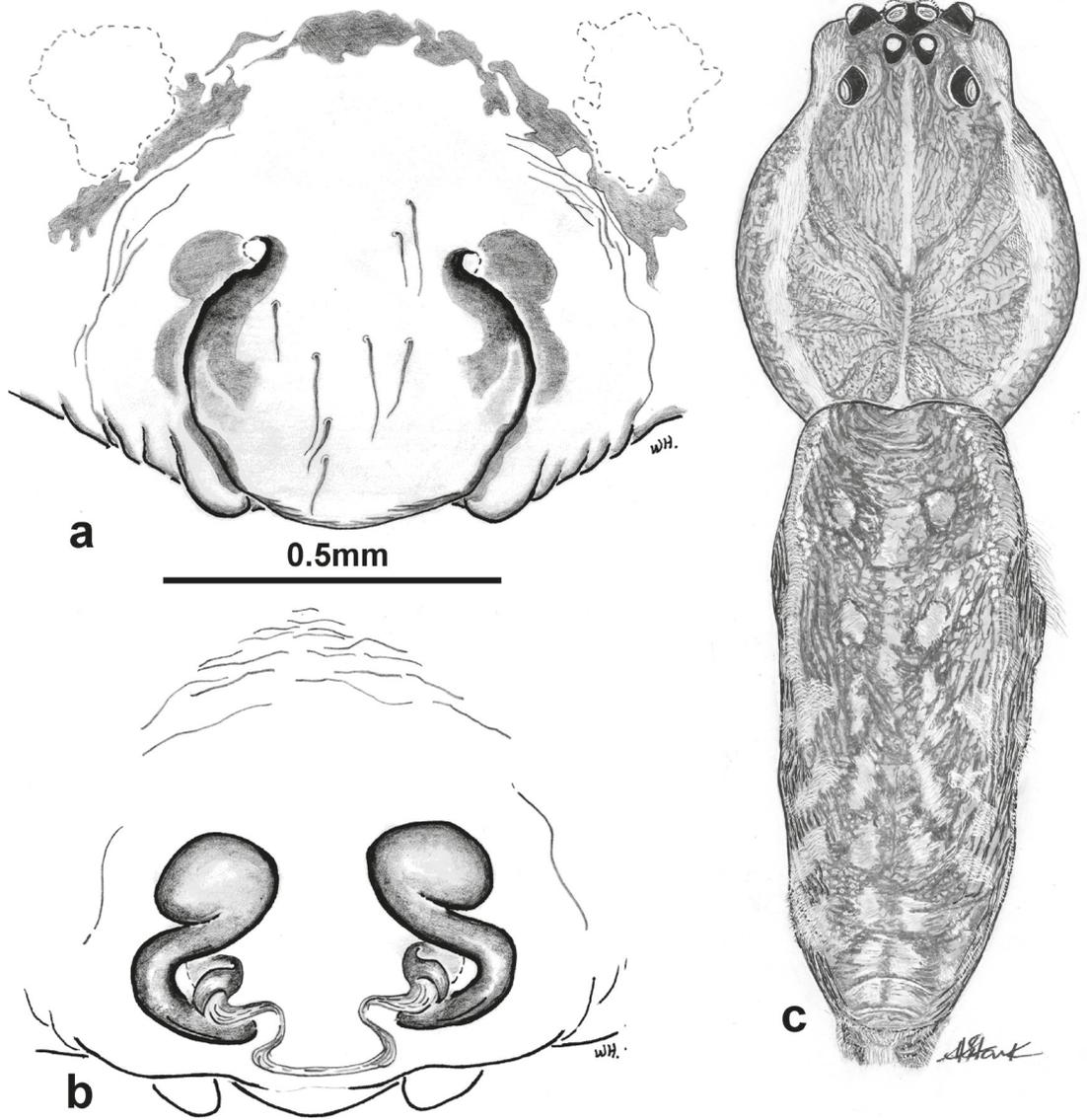
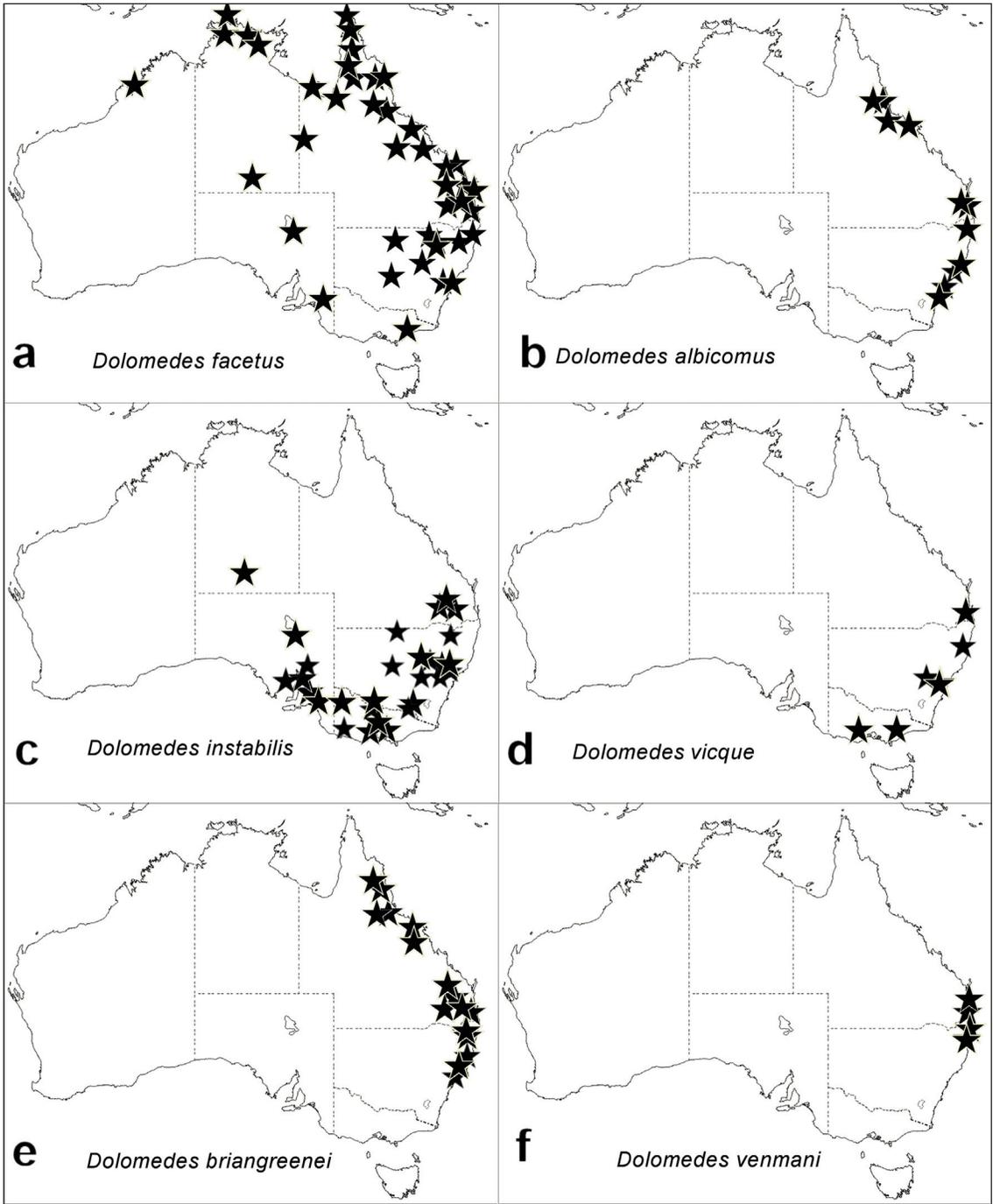
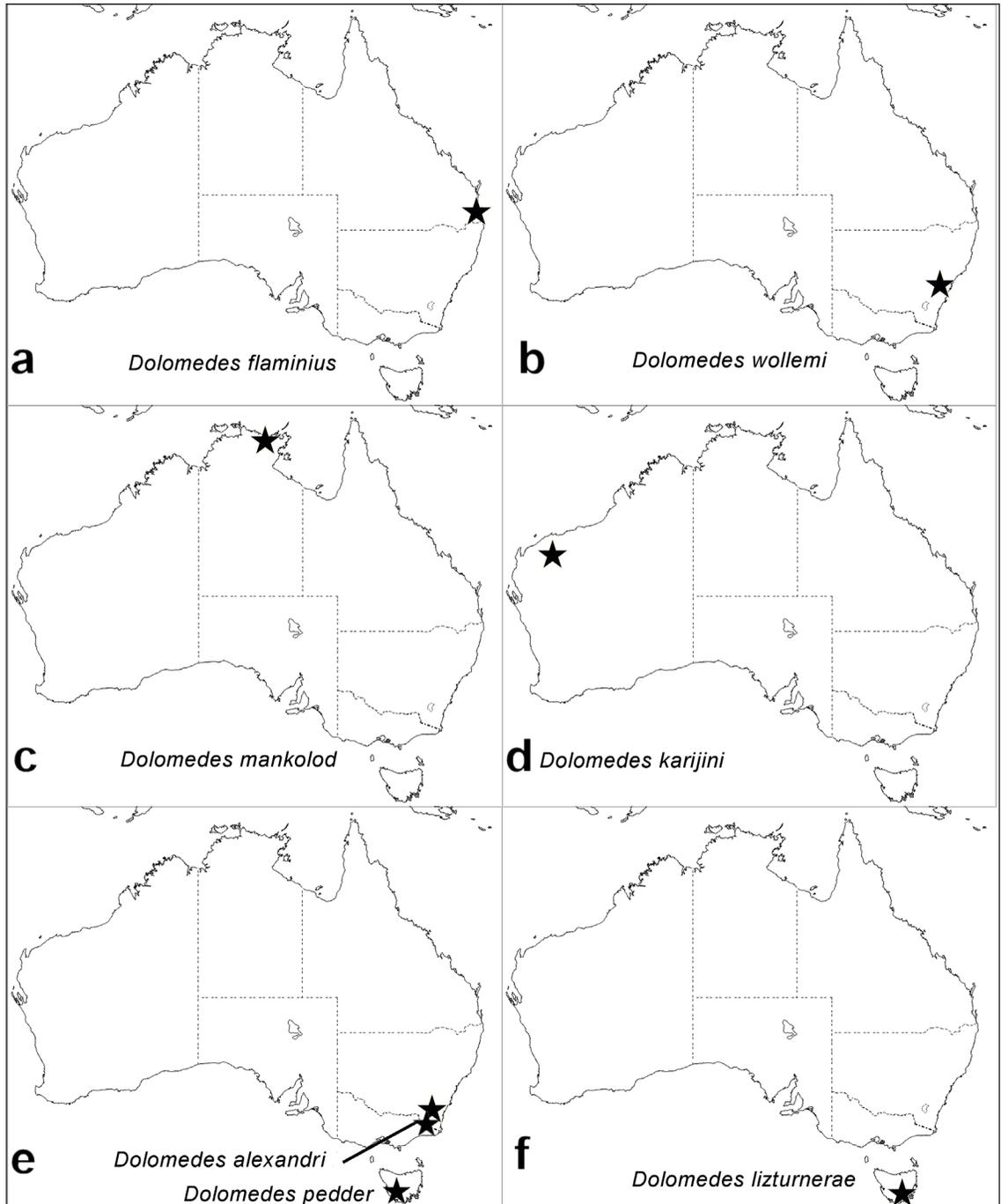


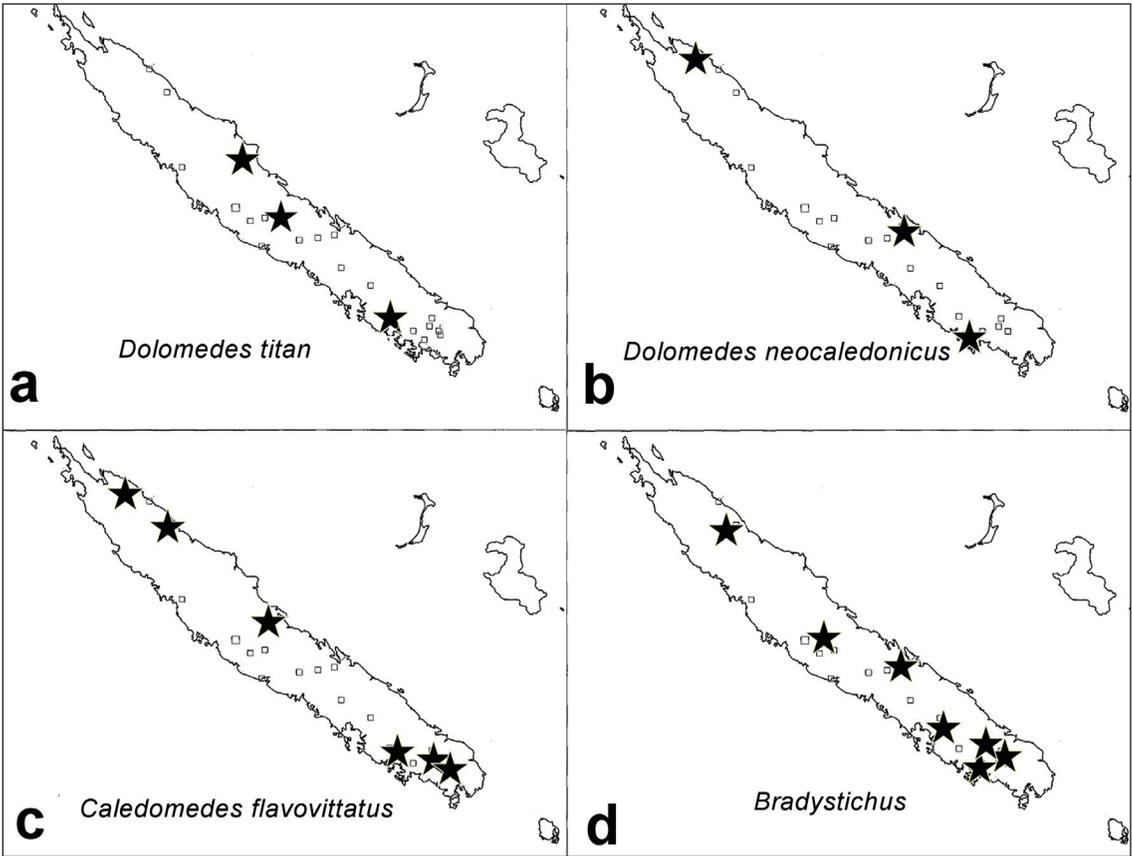
FIG. 82. *Inola amicabilis* Davies, 1982, female QM S865. a, b, epigyne; external (a) and internal (b) views; c, habitus, dorsal view.



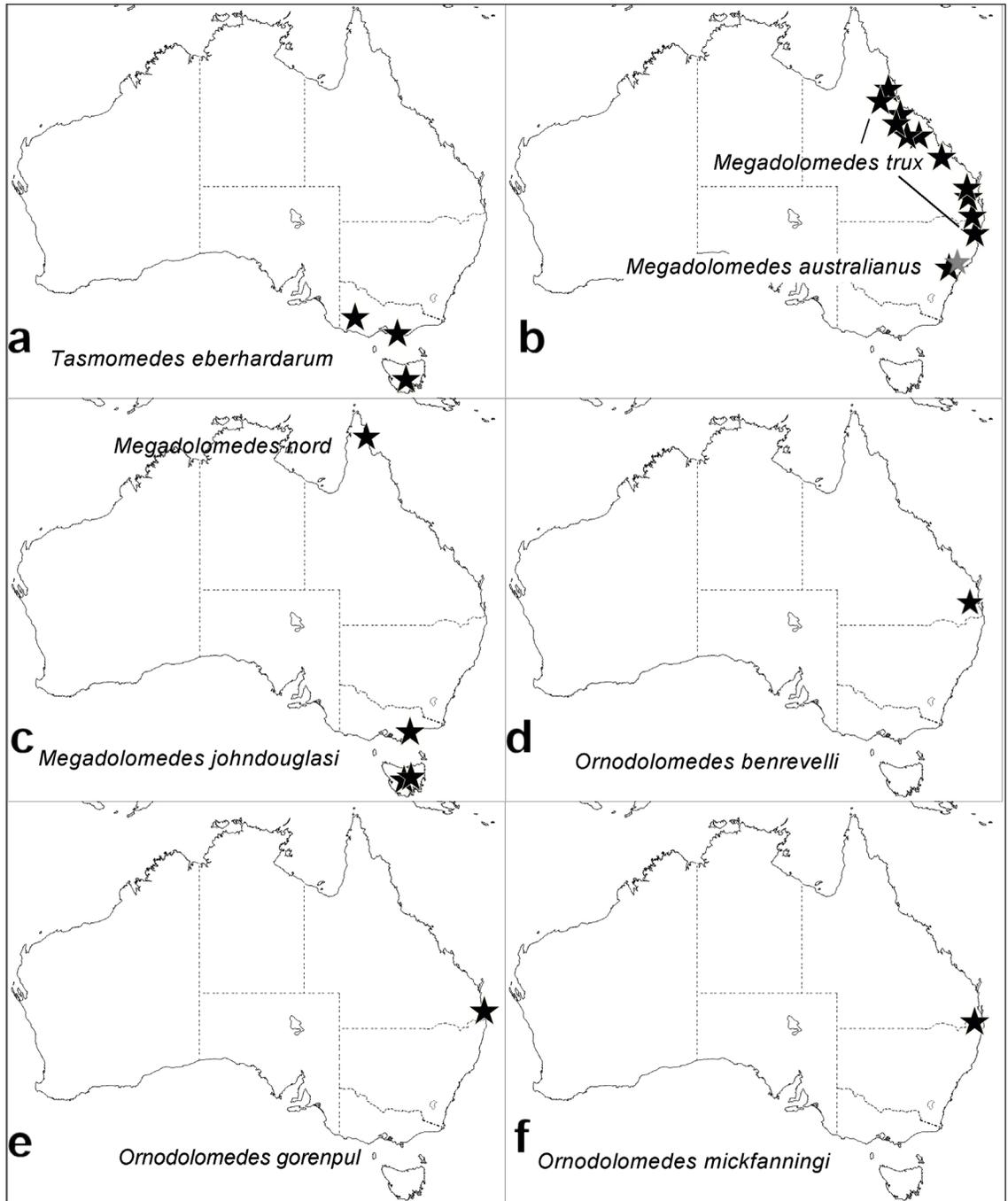
MAP 1. Records of *Dolomedes* species.



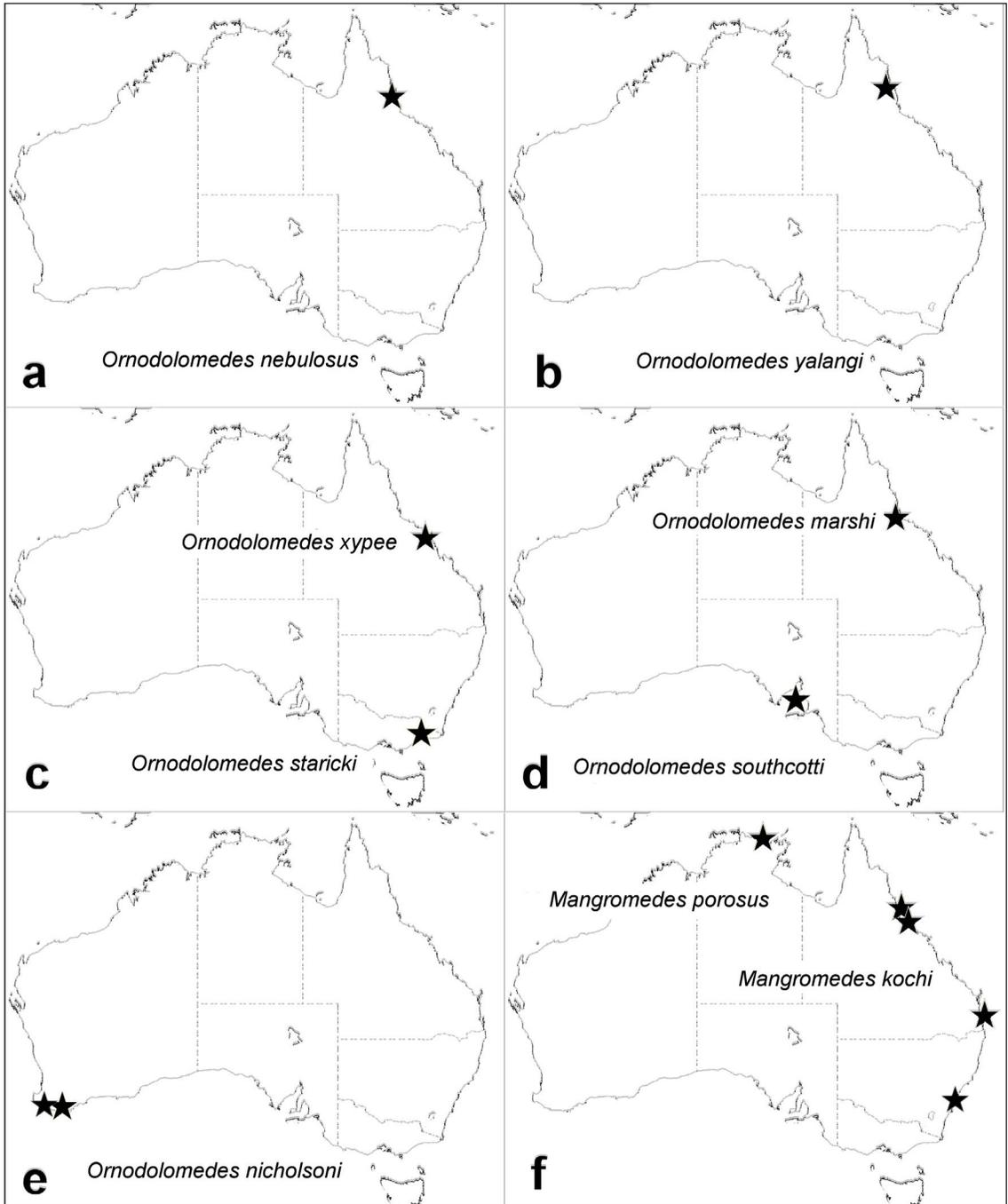
MAP 2. Records of *Dolomedes* species.



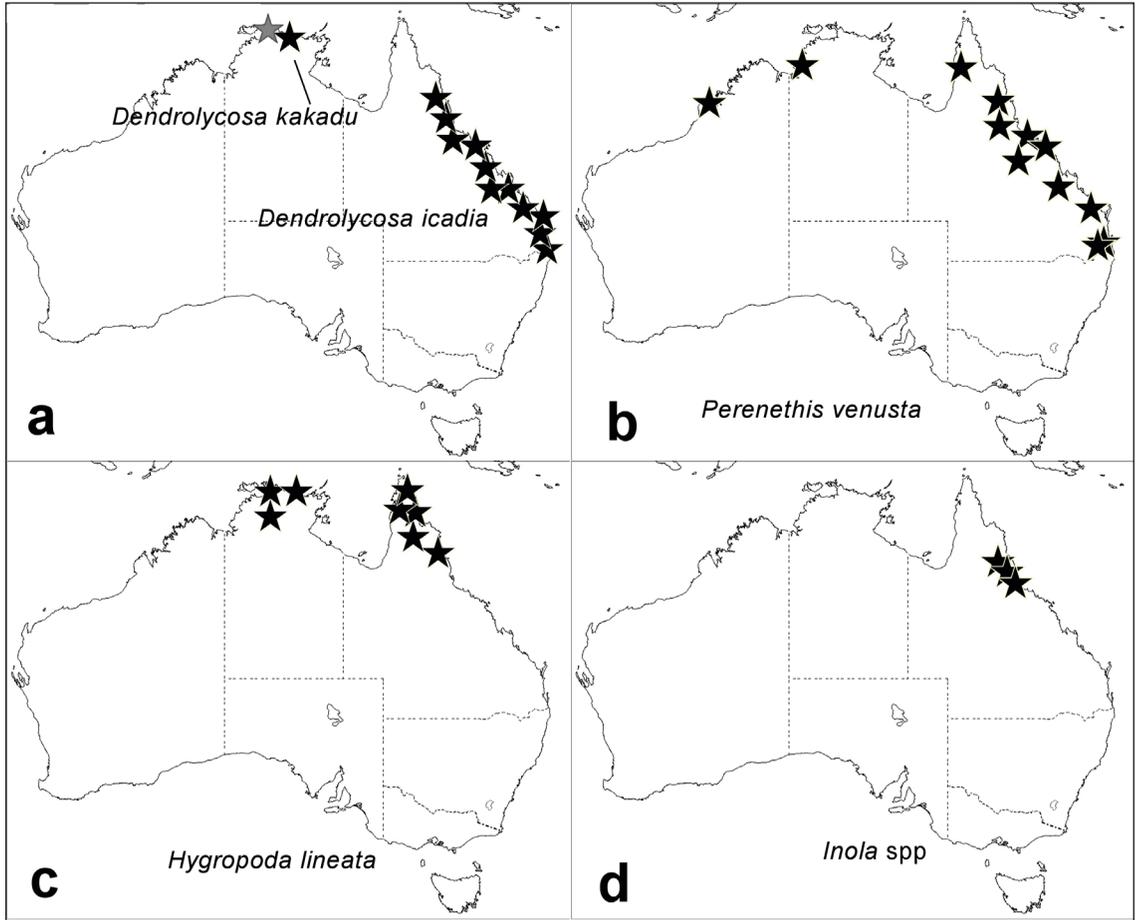
MAP 3. Records of New Caledonian Pisauridae.



MAP 4. Records of *Tasmomedes*, *Megadolomedes* and *Ornodolomedes*. N.B.: *Megadolomedes trux* is greyed star also.



MAP 5. Records of species of *Ornodolomedes*, gen. nov., and *Mangromedes*, gen. nov.



MAP 6. Records of species of *Dendrolycosa*, *Perenethis*, *Hygropoda* and *Inola*. N.B.: *Dendrolycosa icadia* is also a grey star.