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**Salticidae (Arachnida: Araneae) from
Oriental, Australian and Pacific Regions, VII.
Paraplatoides and *Grayenulla* – New Genera
from Australia and New Caledonia**

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ABSTRACT. Genera *Grayenulla* from Australia and *Paraplatoides* from Australia and New Caledonia are diagnosed, described and illustrated. *Marptusa tenerrima* L. Koch, 1979 is established as the generic type of *Paraplatoides*. *Holoplatys caledonica* Berland, 1932 is included in *Paraplatoides*, as are four other new species: *P. longulus*, *P. hirsti*, *P. christopheri* and *P. nigrum*. Five new representatives of *Grayenulla* are described: *G. wishartorum*, *G. nova*, *G. dejongi*, *G. waldockae* and *G. australensis*.

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Material and Methods

The paper is based on material from several collections listed below. Dimensions are given in millimetres. Details of terminology are presented for each genus separately. Format of leg spination follows Platnick & Shadab (1975). Dissected epigynes were digested in lactic acid for 10 to 30 minutes or in 10% KOH for 12 to 48 hours at room temperature, rinsed in distilled water and stained in ethanol solution of chlorazol black E under control and mounted in glycerin. The drawings were made using grid system.

Collections studied are as follows: AM – Australian Museum, Sydney; ANIC – Australian National Insect

Collection CSIRO, Canberra; NMV – National Museum of Victoria, Melbourne; QM – Queensland Museum, Brisbane; SAM – South Australian Museum, Adelaide; TM – Tasmanian Museum and Art Gallery, Hobart; WAM – Western Australian Museum, Perth; ZMH – Zoologisches Institut und Zoologisches Museum, Universität Hamburg.

Abbreviations used are as follows: AEW – anterior eyes width, ag – accessory gland, AL – abdomen length, c – cymbium, CH – cephalothorax height, CL – cephalothorax length, co – copulatory openings, CW – cephalothorax width, da – retrodorsal tibial apophysis, e – embolus, EFL – eye field length, ep – epigynal pocket, f – femur, fd – fertilisation duct, fp – femoral

process, id – insemination duct, m – metatarsus, P – prolateral spine, pt – patella, PEW – posterior eyes width, r – retrolateral spines, s – spermatheca, sc – scutum, sr – seminal reservoir, t – tibia, ta – retrolateral tibial apophysis, tg – tegulum, tf – tegular furrow, tr – trochanter, tp – tegular process.

***Paraplatoides* n.gen.**

Type species. *Marptusa tenerrima* L. Koch, 1879 by original designation.

Etymology. The generic name is a random combination of letters and it is masculine in gender.

Diagnosis. The body flat and elongate. In some species similar to *Holoplatys*. Spines on first tibia always present, male palpal organ club-shaped, cymbium truncate at the top, embolus and insemination ducts long, the last coiled.

Description (Fig.1). Medium spiders, ranging from 4.30 to 7.20 mm in length. The body flat, narrow and elongate. Chelicerae of unident pattern, with 2 promarginal teeth and 1 retromarginal tooth. Legs I the strongest, *Holoplatys*-like, or more elongate, usually with prolateral (p) and retrolateral (r) spines on tibiae (t) and metatarsi (m). Legs IV longer than III. Genitalia almost identical in all species. Male palpal organ club-shaped, with tegular furrow (tf), embolus (e) long and thin, tibia (t) short and wide with single retrolateral

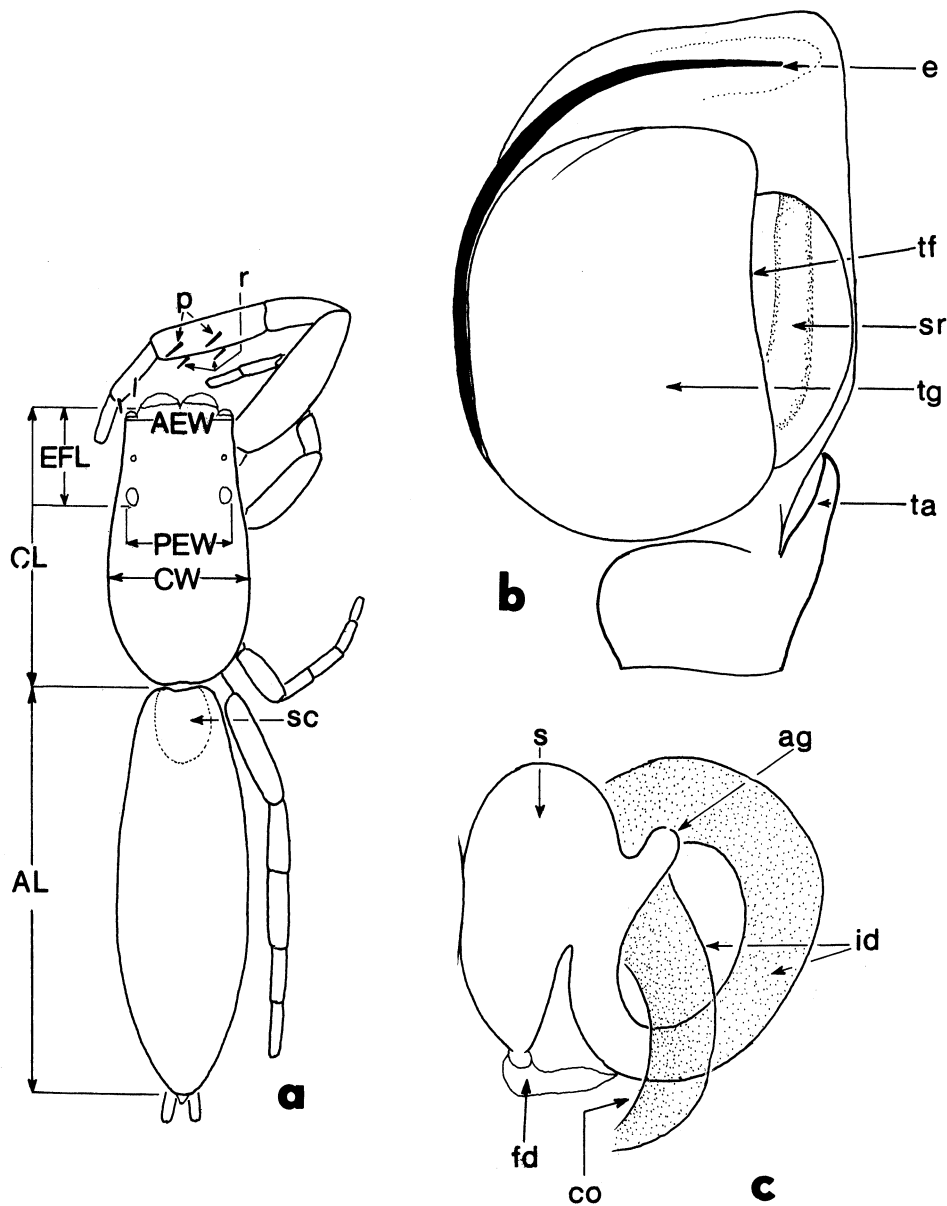
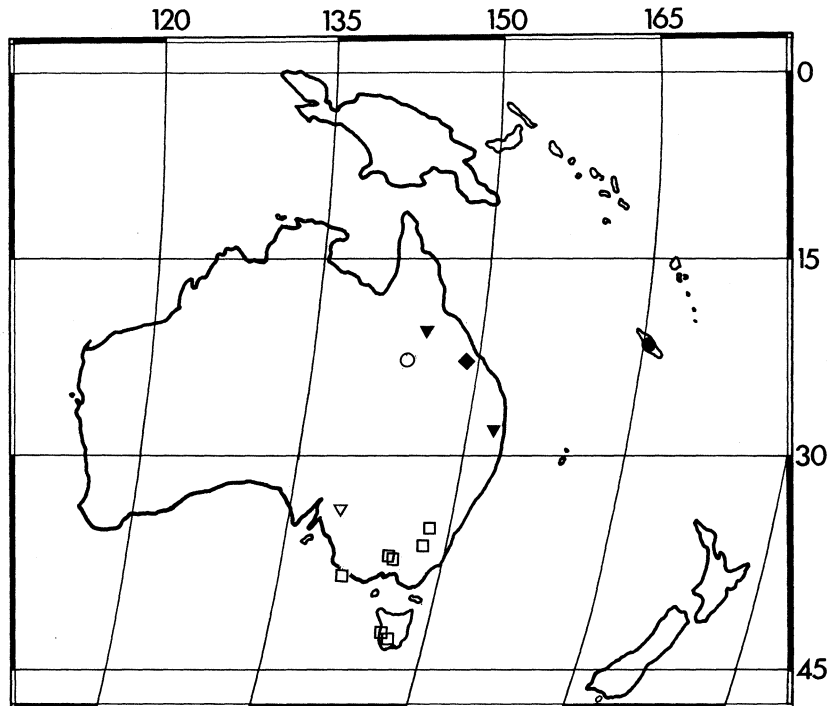


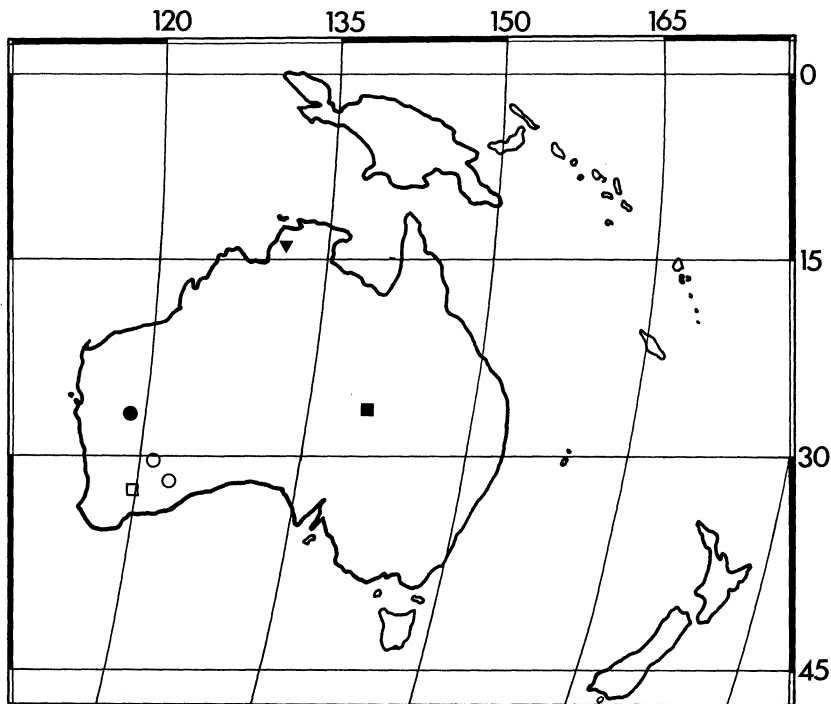
Fig.1. General characters of *Paraplatoides*: a – dorsal aspect, b – male palpal organ, c – female genitalia. (Abbreviations in the text).

apophysis (ta), sometimes with ventral process. Insemination ducts (id) long, with a single loop, their distal parts more sclerotised. Spermathecae (s) single-chambered, pear-shaped, accessory glands (ag) distinctive, fertilisation ducts (fd) oriented posteriorly.

Relationships. Genitalia and body form of most species show homologies with *Holoplatys* (Zabka, 1991a), *Ocrisiona* (Zabka, 1990) and some at present undescribed Australian genera. All represent one subfamily but because of the confused state of higher



Map 1. Distribution of *Paraplatoides*: closed circle – *P. caledonica* Berland; open circle – *P. longulus* n.sp.; closed inverted triangle – *P. christopheri* n.sp.; open inverted triangle – *P. hirsti* n.sp.; closed diamond – *P. tenerrima* (L.K.); square – *P. nigrum* n.sp.



Map 2. Distribution of *Grayenulla*: open circle – *G. australensis* n.sp.; closed circle – *G. waldockae* n.sp.; closed inverted triangle – *G. dejongi* n.sp.; closed square – *G. wishartorum* n.sp.; open square – *G. nova* n.sp.

taxonomy of the Salticidae it would be inadvisable to create any formal subfamily before revisions of the other genera involved are completed. The body structure and biology suggests that *P. nigrum* and *P. christopheri* are the closest relatives of *Holoplatys*. Other species seem more distant with *P. longulus* to be the most specialised in body form and leg armament. As in some other related genera (Zabka, 1991a), genitalia of particular species are very uniform in pattern, sometimes identical and as such almost useless

as diagnostic characters. Other features are probably essential for interspecific separation. Unfortunately, except for the research of Jackson & Harding (1982) on the behaviour of some representatives of *Holoplatys*, there are no other studies dealing with the biology of this group of genera. *Paraplatoides tenerrima* (L. Koch, 1879) described as *Marptusa tenerrima*, and wrongly transferred to *Copocrossa* by Simon (1901), has been the only species of the genus known so far. *Copocrossa*, a genus of plurident

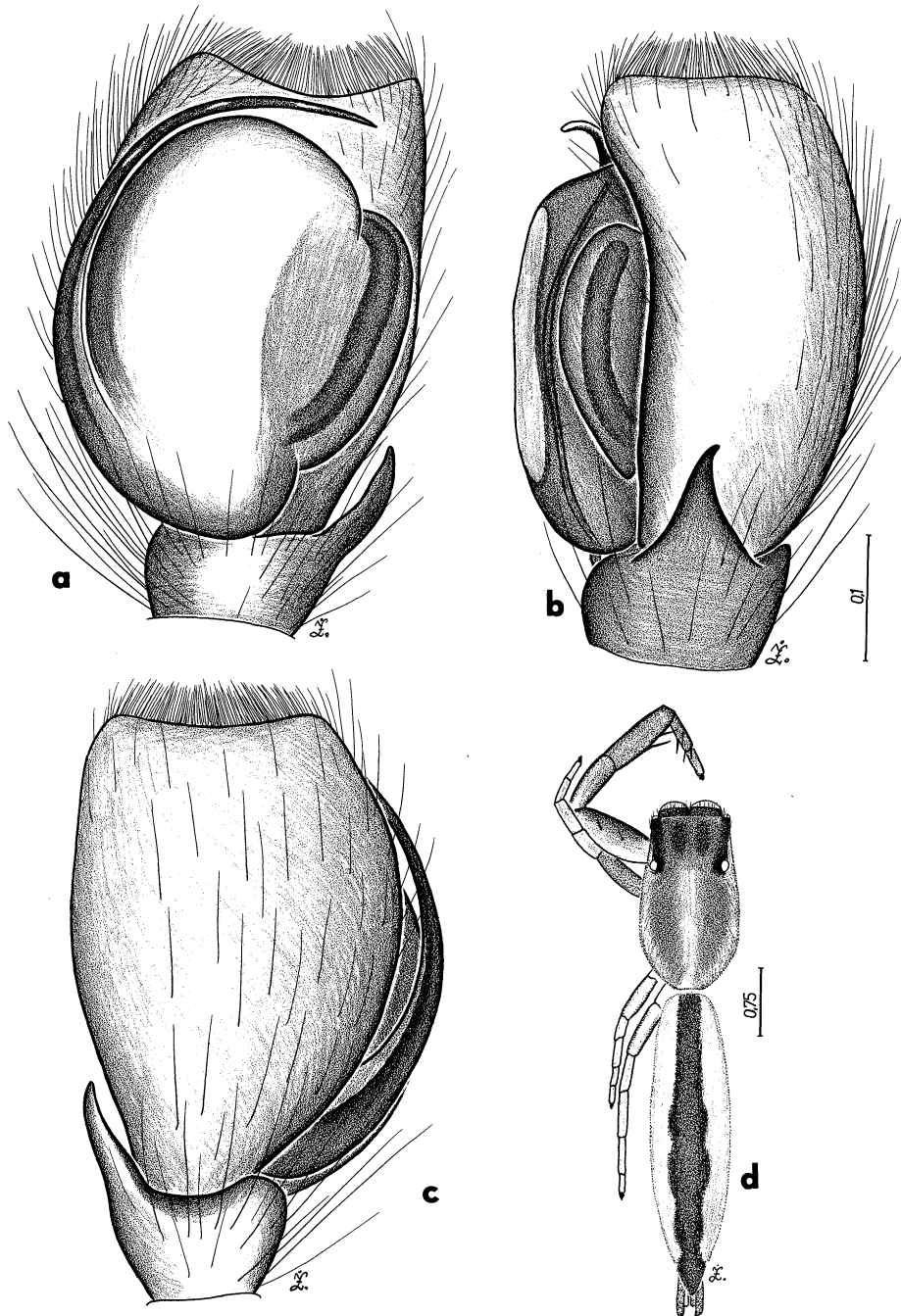


Fig.2. Male *Paraplatoides tenerrima* (L. Koch, 1879): ventral (a), retrolateral (b) and dorsal (c) aspects of palpal organ and general appearance of the holotype (d).

spiders with a completely different genitalic structure, represents a phylogenetically distant group (Davies & Zabka, 1989). Specimens of *Holoplatys caledonica* (Berl.) have not been located in any of main arachnological collections but the original description (Berland, 1932) gives sufficient information to allow the transfer of the species to *Paraplatooides*.

Biology and distribution. Little is known of the biology and distribution of species of *Paraplatooides*. Particular species have been collected under *Eucalyptus* bark or swept from vegetation, mostly from grass. The last have cryptic colour patterns, strongly elongated bodies and well-developed (oxyopid-like) spines on the first legs.

The genus appears to be widely distributed in Eastern Australia though most species are known

only from single localities (Map 1). *Paraplatooides caledonica* (Berl.) is recorded from New Caledonia only.

Paraplatooides tenerrima (L. Koch, 1879) n.comb.

Fig.2, Map 1

Marptusa tenerrima L. Koch, 1879: 1115, n.syn.
Copocrossa tenerrima.—Simon, 1901: 475, n.syn.

Material examined. Queensland, HOLOTYPE, male, Peak Downs, (Mus. Godeffroy 16530), ZMH.

Diagnosis. Small, slender, long spider. Abdomen light with dark median stripe. First tibia and metatarsus

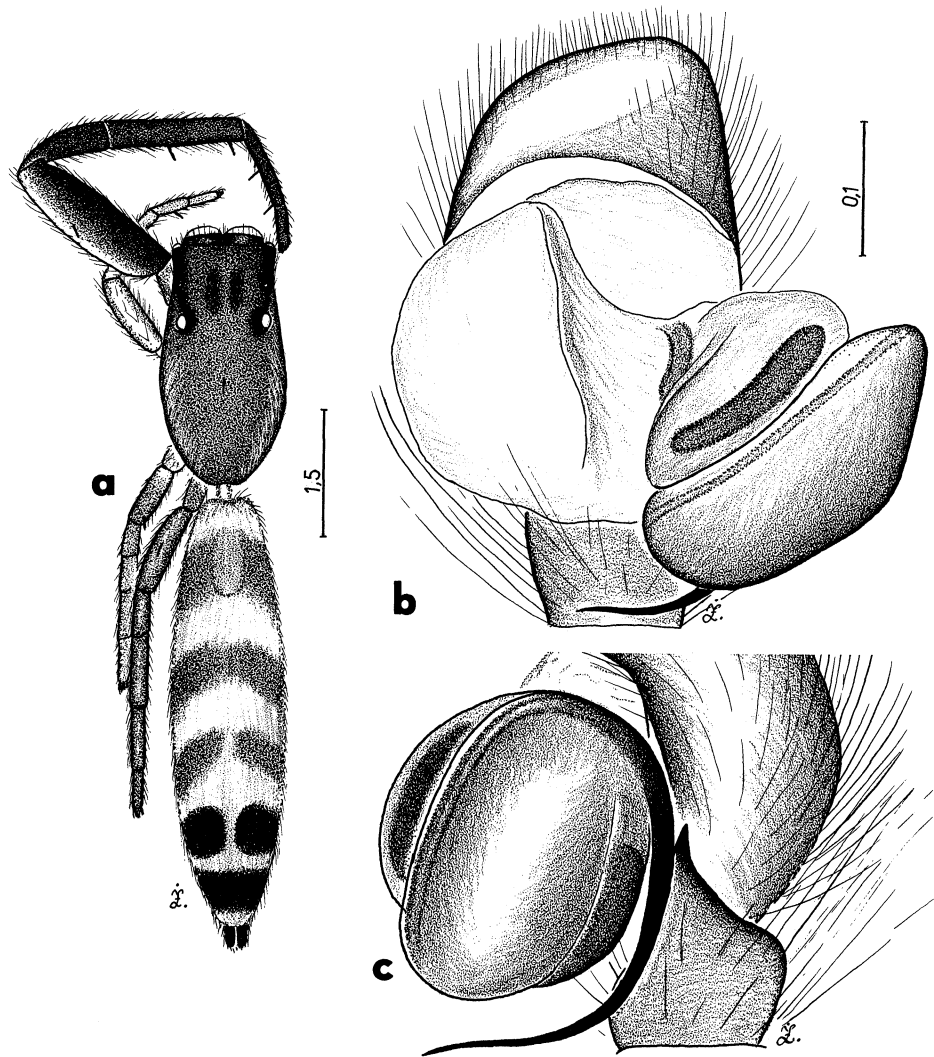


Fig.3. Male *Paraplatooides longulus* n.sp.: general appearance (a), ventral (b) and retrolateral (c) aspects of expanded palpal organ of the holotype.

with 2 pairs of long spines. In comparison to closely related *P. hirsti* abdominal scutum and spines on second metatarsi missing.

Male (Fig.2d). Cephalothorax dark-orange, darker around eyes, with 2 darker spots on eye field and lighter median and lateral stripes. Abdomen yellowish with dark median stripe. Spinnerets long and dark. Clypeus brownish, chelicerae brown, maxillae and labium lighter, with yellow tips. Sternum yellow, venter beige. Legs I orange-brown, strong. Other legs yellowish, their lateral surfaces darker.

Palpal organ as illustrated in Figure 2a-c.

Leg spination. tI: p1-1, r1-1, mI: p1-1, r1-1.

Dimensions. CL 1.65, CW 0.85, EFL 0.54, AEW 0.67, PEW 0.70, AL 2.70.

The female is unknown.

***Paraplatoides longulus* n.sp.**

Fig.3, Map 1

Material examined. Queensland, HOLOTYPE, male, Mount Cameron. Winton, pitfall trap, 15-28 May 1977, A. Rozefelds, QM S3587.

Diagnosis. Abdomen very long with transverse zebra-like stripes and spots.

Male (Fig.3a). Cephalothorax dark-orange with darker eye surrounding and 2 dark spots on eye field. White hairs present marginally. Abdomen more elongate than in previous species, with transverse orange, black and beige stripes. Spinnerets black. Clypeus brown, chelicerae darker, maxillae and labium brown with lighter tips. Sternum orange, venter light-grey darkening posteriorly. Legs I longer than in *P. tenerrima* (L. K.), brown, dorsoventrally lighter. Other legs lighter, especially II and III.

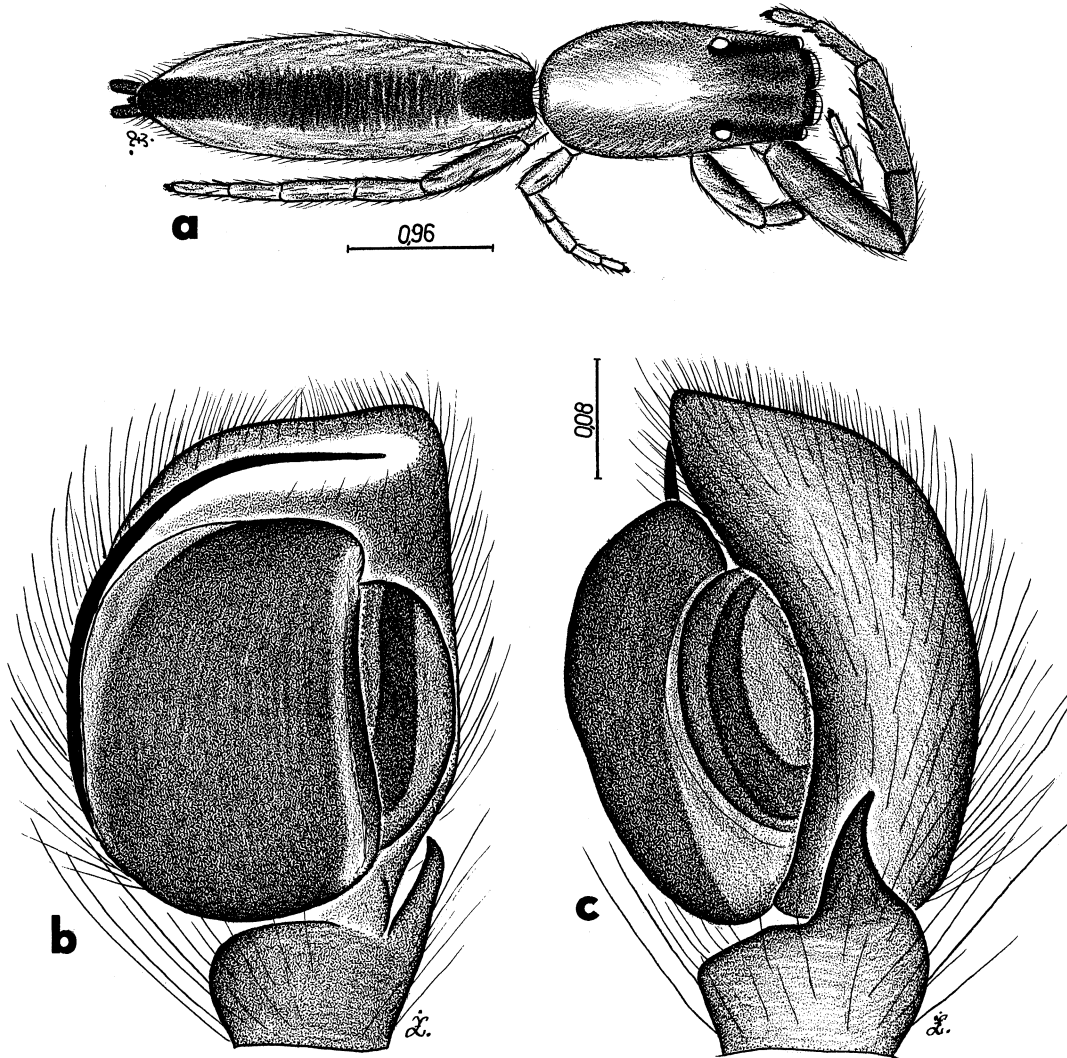


Fig.4. Male *Paraplatoides hirsti* n.sp.: general appearance (a), ventral (b) and retrolateral (c) aspects of palpal organ of the holotype.

Palpal organ (Fig.3b-c) expanded, difficult to compare with other species, but its general pattern as in type species.

Leg spination. tI: p1-1, r1-1; mI: p1-1, r1-1; mII: r1-0.

Dimensions. CL 1.90, CW 1.05, EFL 0.60, AEW 0.85. PEW 0.87, AL 3.45.

The female is unknown.

Parplatoides hirsti n.sp.

Figs 4-5, Map 1

Material examined. South Australia, HOLOTYPE, male, 5

km south of Marcollat, 2 Feb. 1982, D. Hirst, SAM N1988358; ALLOTYPE, female, Morgan, 7 km north-west pipeline, Grass Tussock National Park, 18 Dec. 1976, P.J.M. Greenslade, SAM N1988359.

Etymology. The specific name is a patronym in honour of Mr David Hirst, collector of part of the material studied.

Diagnosis. In comparison to related *P. tenerrima*, anterior abdominal scutum and spines on second metatarsi are present.

Male (Fig.4a). Cephalothorax light-brown, lighter medially, dark around eyes, with 2 dark spots on eye field. Whole surface covered with white hairs.

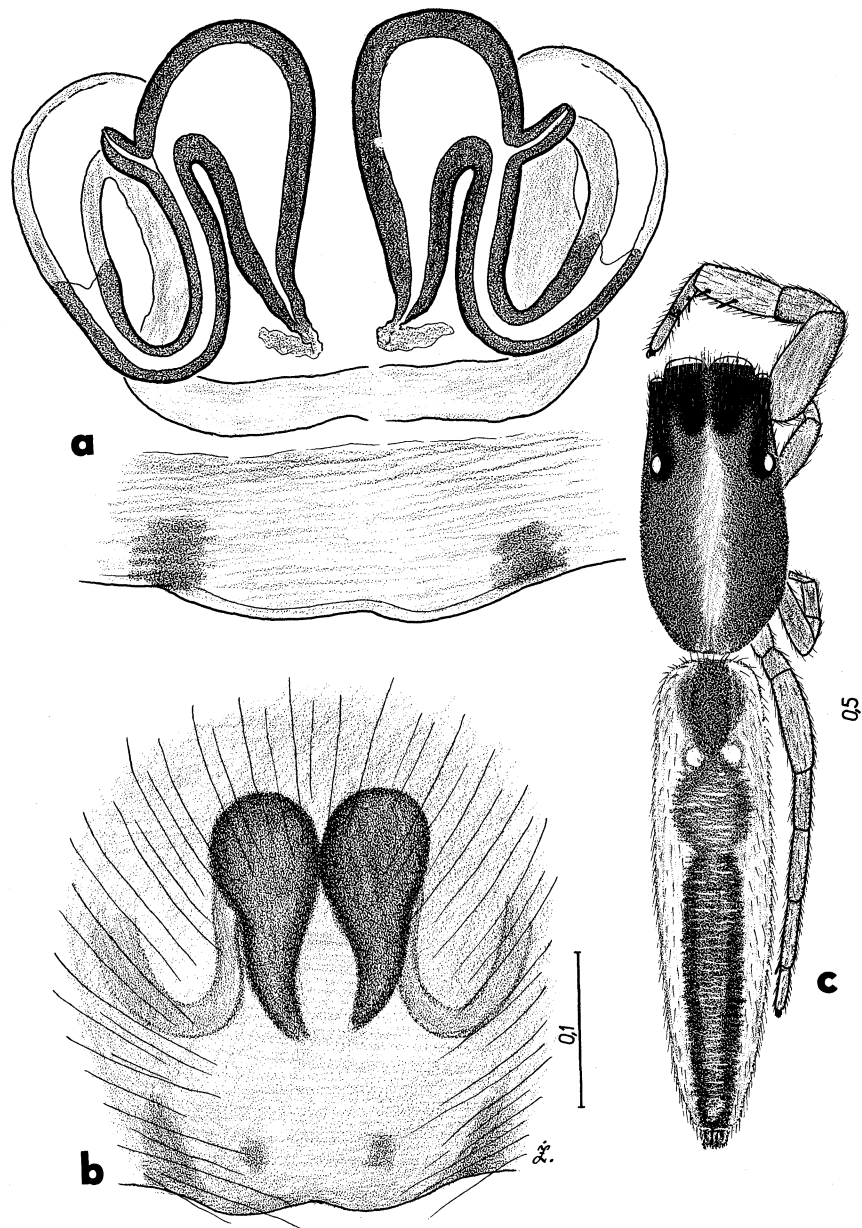


Fig.5. Female *Parplatoides hirsti* n.sp.: internal genitalia (a), epigyne (b) and general appearance (c) of the allotype.

Abdomen beige with small anterior scutum and dark median stripe. Spinnerets dark. Clypeus dark, chelicerae dark-brown, maxillae and labium slightly lighter, sternum yellow with darker margin, venter beige. Legs I long, grey-brown. others orange, all legs darker laterally.

Palpal organ (Fig.4b-c) almost identical to other species, slightly less massive than in *P. tenerrima* (L. K.).

Leg spination. tl: p1-1, r1-1; ml: p1-1, r1-1; mII: r1-0.

Dimensions. CL 1.80, CW 1.00, EFL 0.58, AEW 0.75, PEW 0.78, AL 3.00.

Female (Fig.5c). Body form and colour pattern very similar to that in male, only legs lighter, yellow to orange, legs I shorter and more swollen than in male.

Genitalia (Fig.5a-b) with long insemination ducts, their proximal parts membranous, distal ones more sclerotised. *Leg spination.* tl: p1-1, r1-1; ml: p1-1, r1-

1; mII: p1-0.

Dimensions. CL 1.65, CW 0.85, EFL 0.60, AEW 0.70, PEW 0.75, AL 2.85.

Paraplatoides christopheri n.sp.

Fig.6, Map 1

Material examined. Queensland, HOLOTYPE, male, Braemar State Forest, pitfall trap, Cypress and brigalow, 4-8 Feb. 1980, R. Raven, QM S3563; PARATYPE, male, Brisbane, Mount Coot-tha, dry *Eucalyptus* forest, sweeping grass, 21 Nov. 1987, M. Zabka, ZMH A87J89.

Etymology. The specific name is proposed in honour of my son Christopher (Krzysztof in Polish).

Diagnosis. Body almost black, abdomen with 2 transverse white spots in its posterior part. Spinnerets

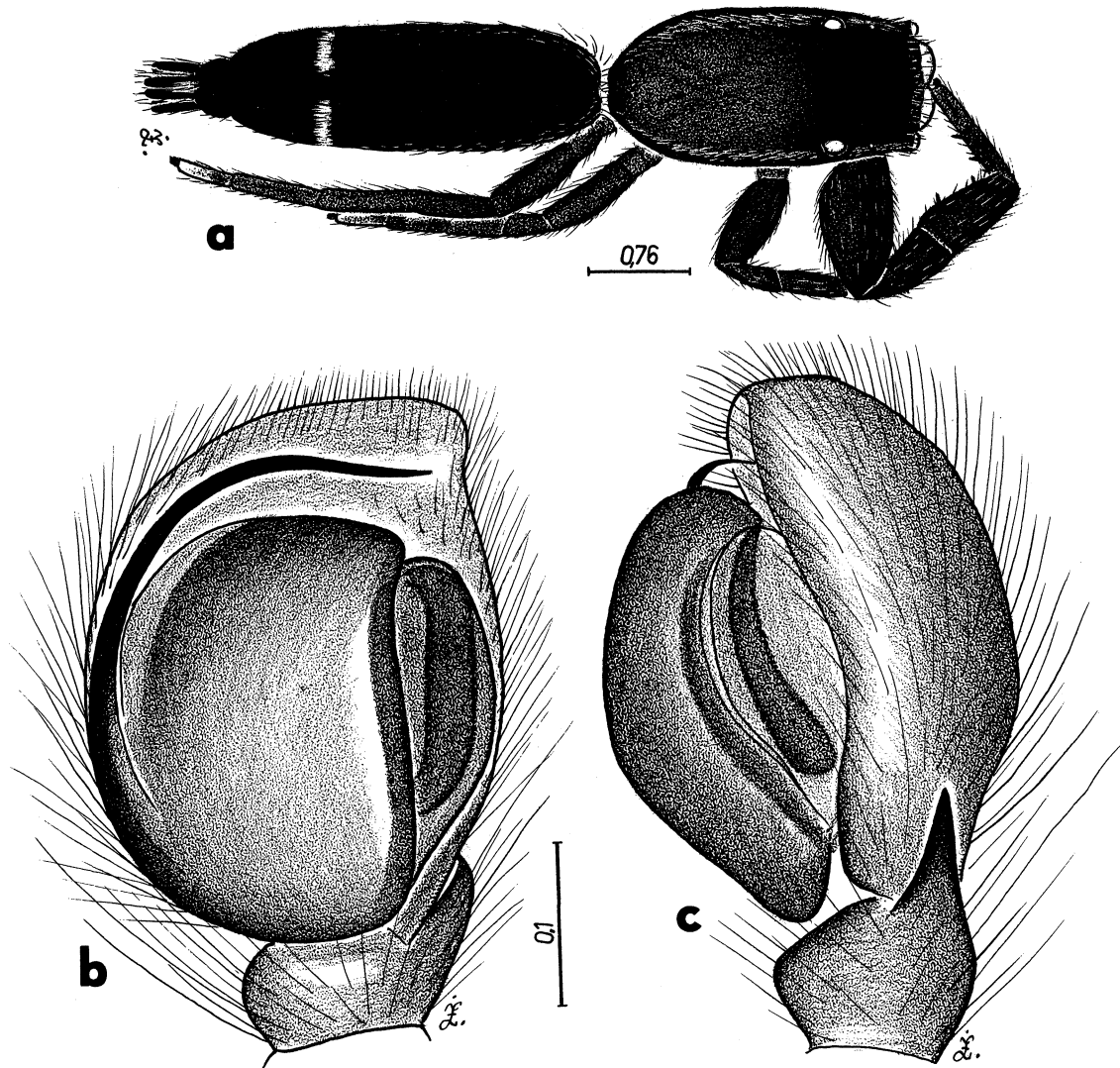


Fig.6. Male *Paraplatoides christopheri* n.sp.: general appearance (a), ventral (b) and retrolateral (c) aspects of palpal organ of the holotype.

particularly long.

Male (Fig.6a). Eye field black, thoracic part of cephalothorax slightly lighter. White hairs on lateral surfaces present. Abdomen black with white hairs marginally and with 2 transverse spots of white hairs in its posterior part. Spinnerets long, black clypeus and chelicerae dark-brown. Maxillae and labium dirty-brown, their tips lighter. Sternum dirty-brown, venter almost black. Legs generally dark, first ones almost black, massive, others slightly lighter.

Palpal organ (Fig.6b-c) as in other species of the genus.

Leg spination. tI: p1-1, r0-1; mI: p1-1, r1-1; mII: p0-1, r1-0.

Dimensions (holotype). CL 1.60, CW 1.00, EFL 0.55, AEW 0.77, PEW 0.81, AL 2.90.

The female is unknown.

Paraplatooides nigrum n.sp.

Figs 7-8, Map 1

Material examined. Tasmania, HOLOTYPE, male, Franklin River, 15 Jan. 1983, ANZES expedition, NMV; PARATYPES, 2 males, female, juvenile, Franklin, 8-9 June 1974, R. Mesibov, TM J995. Victoria, ALLOTYPE, female, Blackwood, Loam Creek, along Lerderberg Road, under ribbon bark, 10 Sept. 1977, ex Parnaby collection, AM

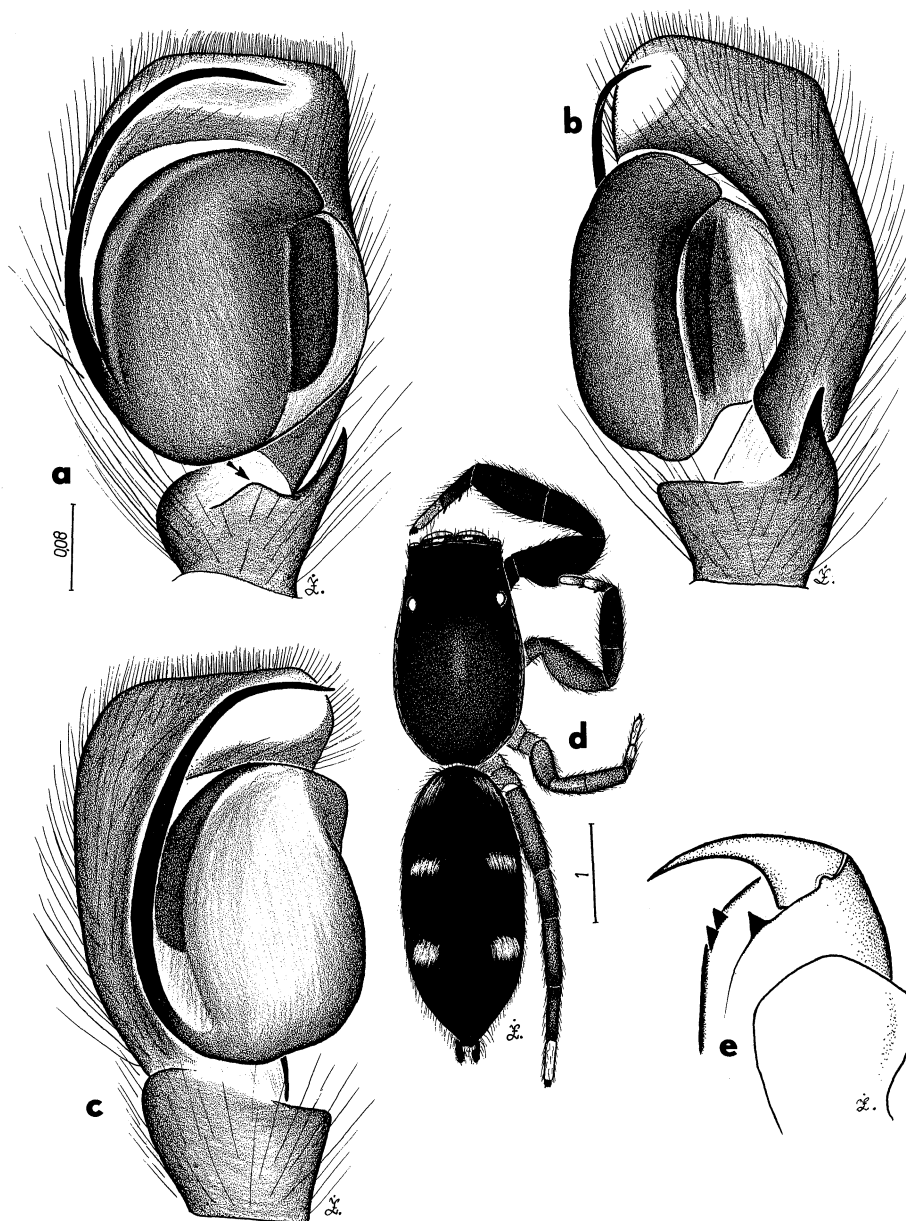


Fig.7. Male *Paraplatooides nigrum* n.sp.: ventral (a), retrolateral (b) and proximal (c) aspects of palpal organ, general appearance (d) and cheliceral dentition (e) of the holotype. Ventral process on tibia marked with an arrow.

KS19287; PARATYPES, female, juvenile, Coranderrk Reserve, Healesville, under bark, 5 Mar. 1979, M.S. Harvey, WAM 89/274-5. New South Wales, PARATYPES, female, Brindabella Range, Moonlight Hollow, 2 km south-west of Bulls Head, Franklin Road, under bark of *Eucalyptus* sp. (gum bark), 3 Mar. 1983, M.S. Harvey, WAM 89/270; female, Kosciusko National Park, Tom Groggin, under bark of *Eucalyptus* sp., 12 May 1982, M.S. Harvey, WAM 89/271. South Australia, PARATYPE male, Ewen Ponds Reserve, pasture, under dead logs, 21 Apr. 1979, D. Lee, SAM N1988.

Diagnosis. Black spider, abdomen and spinnerets much shorter than in *P. christopheri*, the first with 3 pairs of white spots. Palpal organ with ventral tibial process (arrow).

Male (Fig.7d). Eye field black, thoracic part of

cephalothorax brown with white hairs around lower margin. Abdomen almost black, with anterior scutum and 3 pairs of white tufts of hairs. Spinnerets black. Clypeus, chelicerae, maxillae and labium dark-brown, the last with lighter tips. Sternum orange to dirty-brown, darker marginally. Venter dark. Legs I black, only tarsi lighter. Other legs lighter distally and dorsoventrally.

Palpal organ (Fig.7a-c) with distinctive ventral process on tibia, in comparison to other species tegulum relatively smaller.

Leg spination. mI: p1-1, r1-1; mII: p1-1, r1-0.

Dimensions (holotype). CL 2.70, CW 1.75, EFL 0.75, AEW 1.10, PEW 1.10, AL 2.87.

Female (Fig.8a) coloured as male. Legs I shorter than those in male, dark-brown, other legs orange, darker

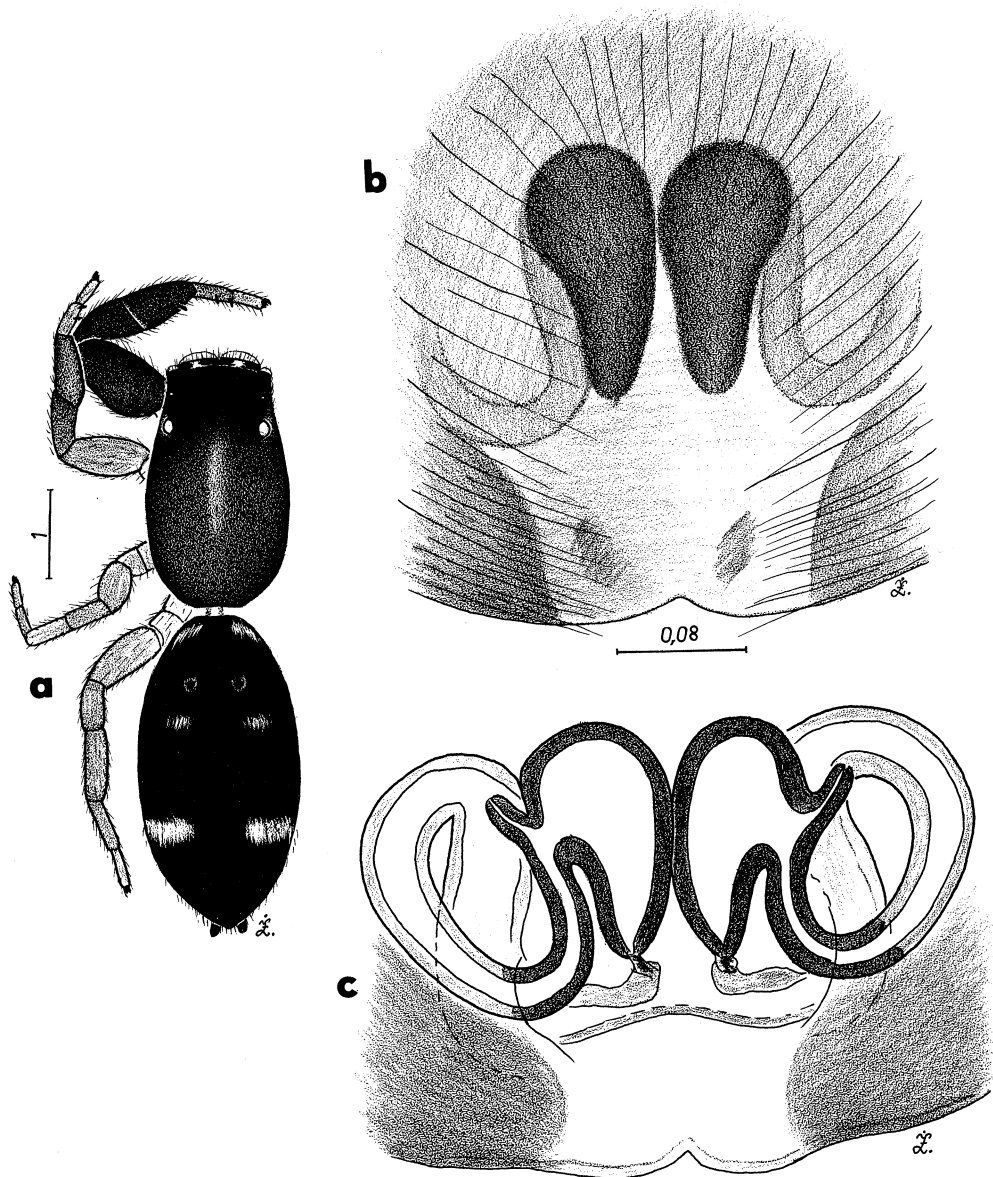


Fig.8. Female *Paraplatoides nigrum* n.sp.: general appearance (a), epigyne (b) and internal genitalia (c) of the paratype from Franklin.

around joints.

Genitalia (Fig.8b-c) similar to *P. hirsti*.

Leg spination. tI: p0-1; mI: p1-1, r1-1; mII: p1-1, r0-0 or r1-0.

Dimensions (allotype). CL 2.90, CW 1.75, EFL 0.80, AEW 1.20, PEW 1.20, AL 4.15.

***Grayenulla* n.gen.**

Type species. *Grayenulla dejongi* n.sp. by original designation.

Etymology. The generic name is proposed in honour of Dr Michael R.B. Gray, arachnologist, Australian Museum, Sydney. The name is feminine in

gender.

Diagnosis. The representatives of the genus can be recognised by body shape, 3 central bristles on clypeus and unique genitalic structure. Third legs distinctly the longest.

Description (Fig.9). Small to medium spiders, ranging from 2.55 to 4.50 mm in body length. Cephalothorax robust and high with distinctive cephalic and thoracic slopes. Abdomen oval, usually shorter than cephalothorax. Spinnerets normal. Clypeus with 3 protruding strong median bristles. Chelicerae vertical, with 1 fissident retrolateral tooth and a few teeth on prolateral margin. Legs III the longest, others more or less uniform in length. Male palps heavily haired. Between femur (f) and

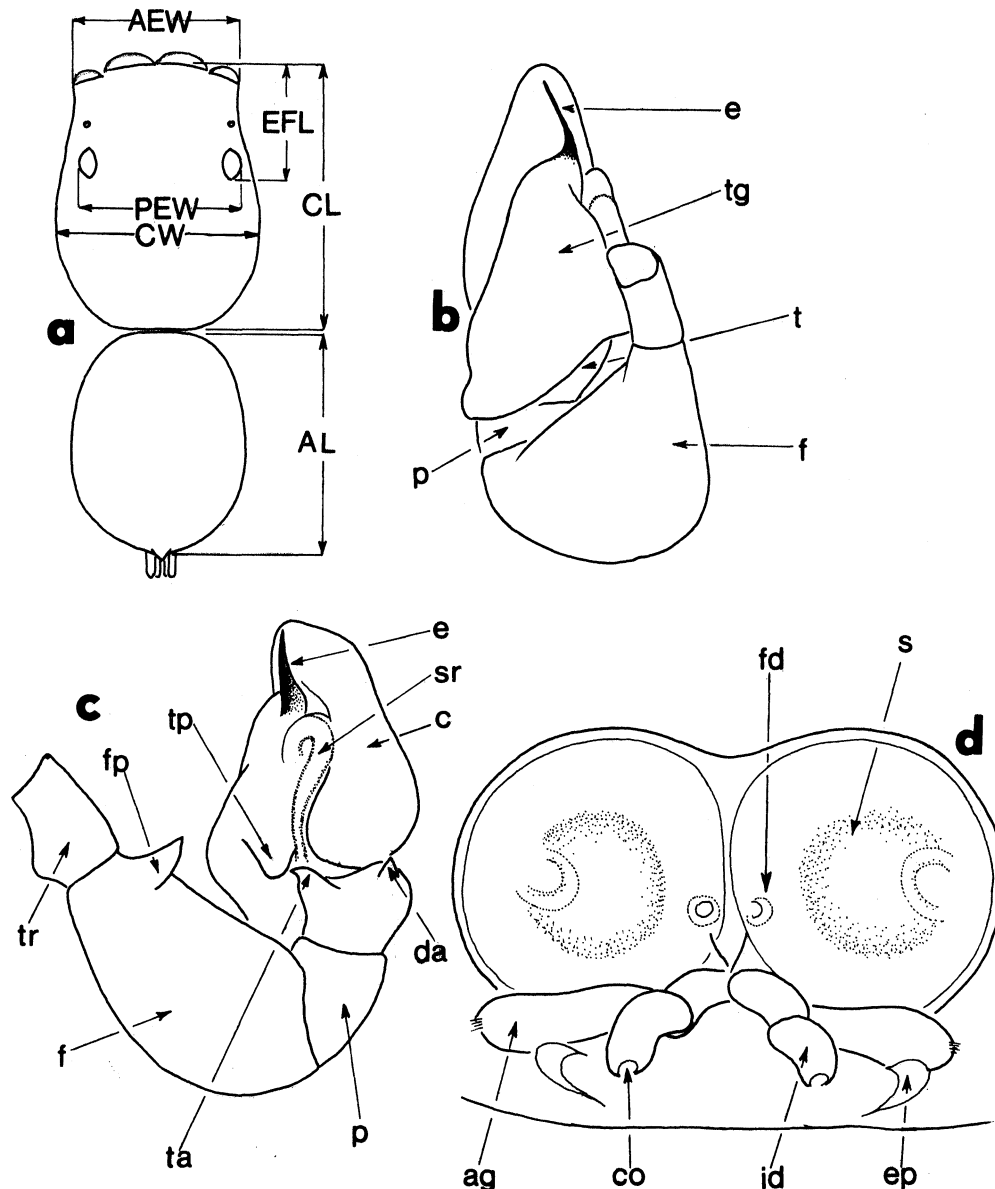


Fig.9. Morphological characters of *Grayenulla*: a – dorsal aspect, b-c – palpal organ, d – female genitalia. (Abbreviations in the text).

patella (pt) stable vertical connection, the first segment swollen with a triangular process (fp). Patella and tibia (t) with lateral brush of hairs, the last with retrolateral (ta) and retrodorsal (da) apophyses. Tegulum (tg) often triangular in shape, with process, embolus (e) straight or coiled distally. In one species cymbium laterally twisted. Seminal reservoir (sr) meandering. Epigyne with double pockets, accessory glands (ag) distinctive, insemination ducts (id) rather long, spermathecae (s) very large, spherical.

Relationships. *Grayenulla* is probably an endemic Australian genus that originated after Post-Gondwanan separation of the continent. It does not appear to be closely related to any other described salticid genus. There are some similarities in the structure of the genitalia with the South American genus *Hisucattus* (Galiano, 1985), the Asiatic *Synagelides* (e.g., Bohdanowicz, 1988) and the Australian genus *Pseudosynagelides* (Zabka, 1991b) but these are considered to be the result of convergence.

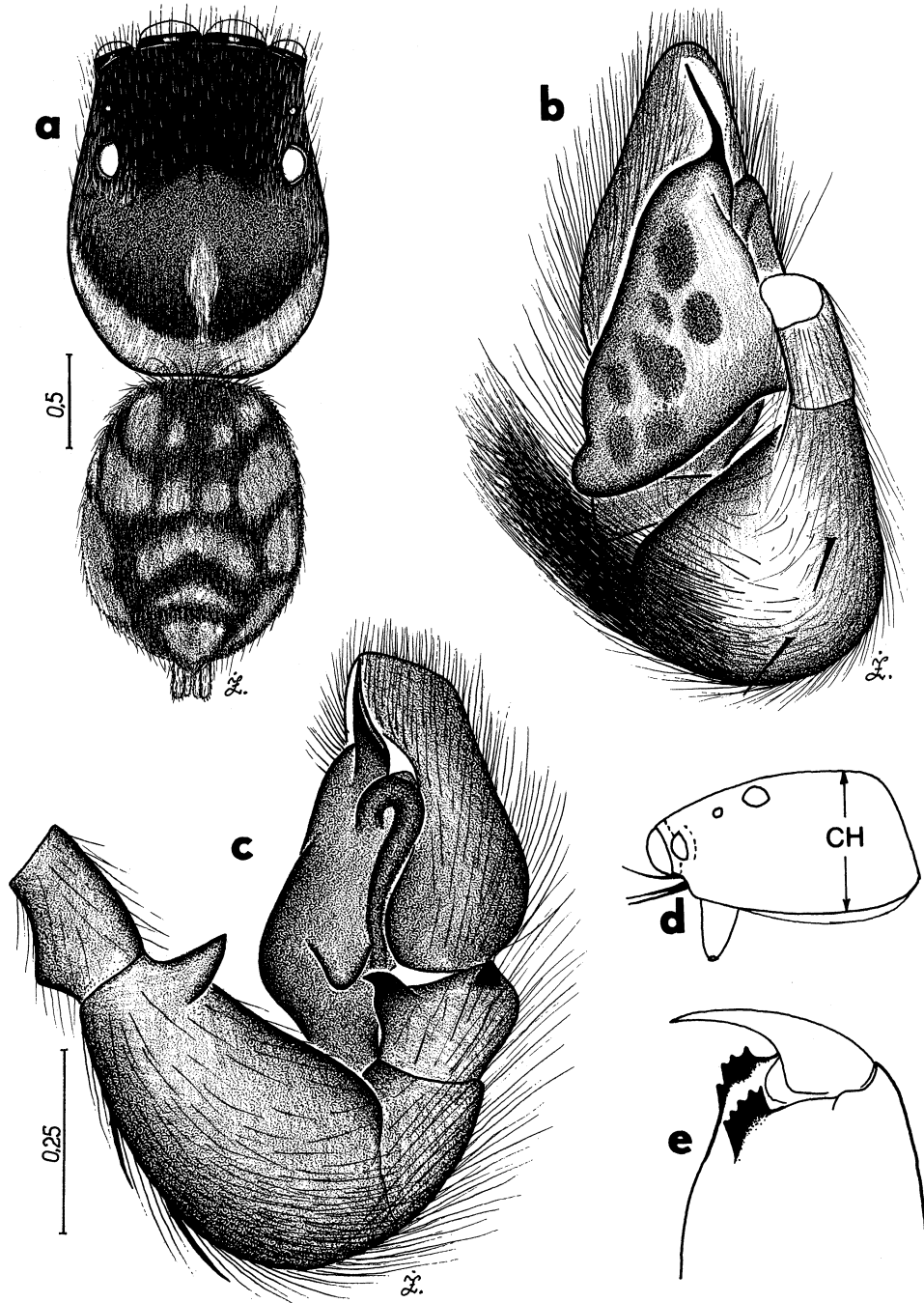


Fig.10. Male *Grayenulla dejongi* n.sp.: general appearance (a), ventral (b) and retrolateral (c) aspects of palpal organ, lateral view of cephalothorax (d) and cheliceral dentition (e) of the holotype.

Biology and distribution. All species are cryptic in colour and have been collected in dry, semidesert inland regions of Queensland and Western Australia, mostly by pitfall traps. No specimens have been found in the coastal part of the continent. Although there is little material available, the Australian interior seems to be a rich source of new, mostly endemic taxa (Zabka, unpublished).

Grayenulla dejongi n.sp.

Figs 10-11, Map 2

Material examined. Western Australia, HOLOTYPE, male, ALLOTYPE, female, PARATYPES, 2 males, female, 18 juveniles, Mitchell Plateau, Lone Dingo, pitfall traps, 9-

19 May 1983, J. Cardale and I. Naumann, ANIC.

Etymology. The specific epithet is taken from the name of Mr Aris E. de Jong, Western Australian naturalist.

Diagnosis. Femora of the first legs in males metallic-black, palpal femora with prolateral brush of hairs, tegulum almost triangular, embolus pointed. Insemination ducts long and coiled.

Male (Fig.10a). Eye field dark-brown, thorax dirty-brown, with marginal belt of white hairs. Abdomen dark-grey with large light spots. Spinnerets dirty-beige. Clypeus light-brown with single hairs and 3 strong bristles (Fig.10d). Chelicerae (Fig.10e) orange, maxillae and labium orange with yellow

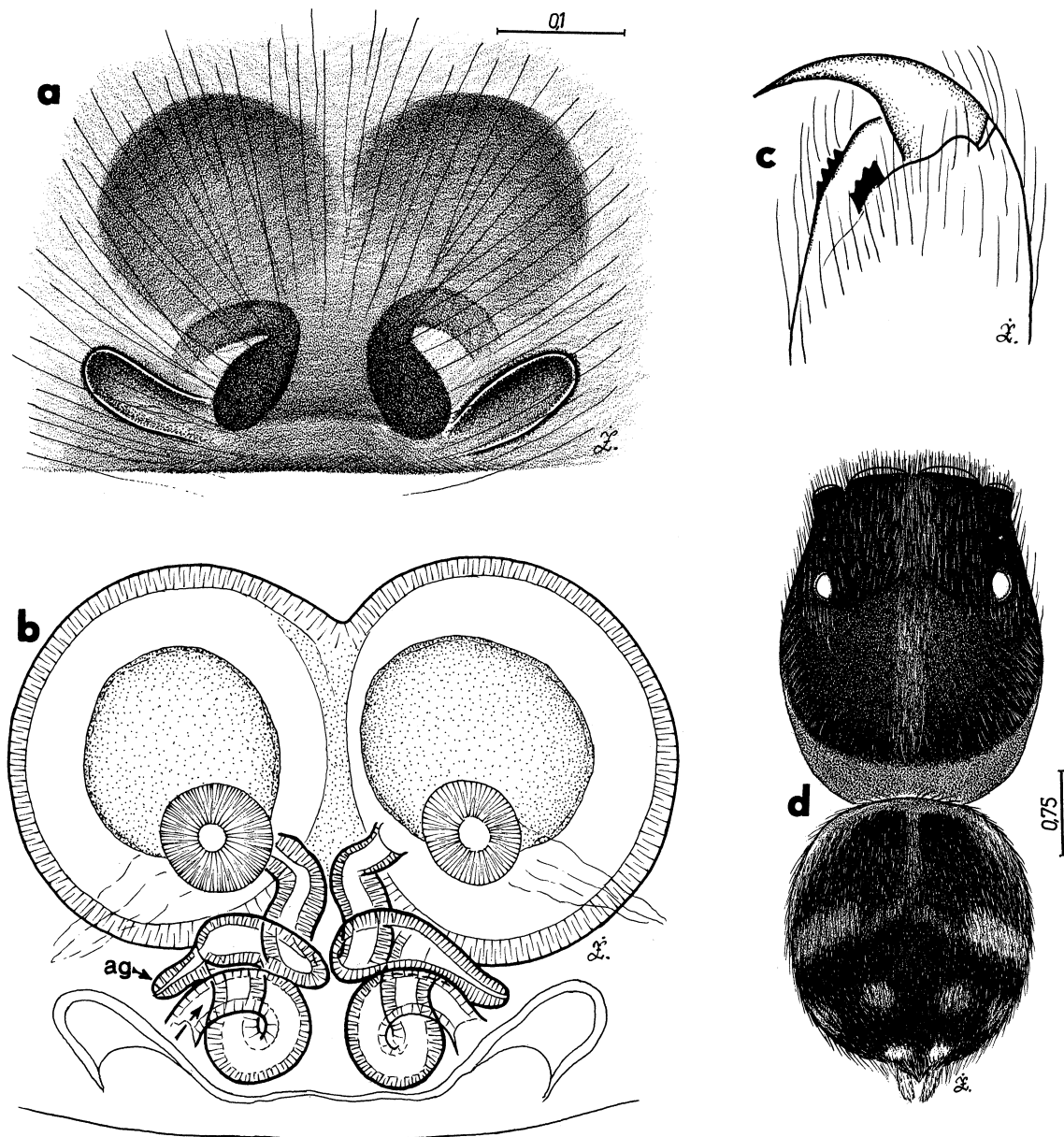


Fig.11. Female *Grayenulla dejongi* n.sp.: epigyne (a) and internal genitalia (b), cheliceral dentition (c) and general appearance (d) of the allotype.

tips, sternum and venter yellowish. Prolateral femora of legs I metallic black, also other segments dark. Legs IV beige, lighter ventrally, darker around joints.

Palpal organ (Fig.10b-c) with triangular, dark spotted tegulum. Retrolateral tibial apophysis hook-like, retrodorsal apophysis small, conical.

Dimensions (holotype). CL 1.80, CW 1.40. CH 0.95, EFL 0.71, AEW 1.15. PEW 1.05, AL 1.45.

Female (Fig. 11d) similar in colour to the male, but more robust and haired. All legs almost uniform in colour, beige, darker around joints. Chelicerae (Fig.11c) coloured as in male.

Epigyne and internal genitalia as illustrated in Figure 11a-b. Insemination ducts coiled, longer than in *G. nova*.

Dimensions (allotype). CL 2.40, CW 1.95, CH 1.33, EFL 0.80, AEW 1.48, PEW 1.48, AL 2.30.

***Grayenulla wishartorum* n.sp.**

Figs 12-13, Map 2

Material examined. Queensland, HOLOTYPE, male. PARATYPES, 2 males, Birdsville, L. Muncoonie, desert, pitfall trap, 12-17 Nov. 1976, R. Raven, A. Berg, QM S4772.

Etymology. The specific epithet is proposed in honour of my Australian friends, amateur arachnologist Mr Graham Wishart and his wife Gwenneth.

Diagnosis. Embolus long, twisted distally, chelicerae with prolateral fringe.

Male (Fig.12a). Cephalothorax dark-brown with numerous white hairs. Abdomen beige with large lighter spots, its anterior part darker medially. Spinnerets beige. Clypeus light-brown, fringed with numerous white hairs. Chelicerae (Fig.12b) with fringe

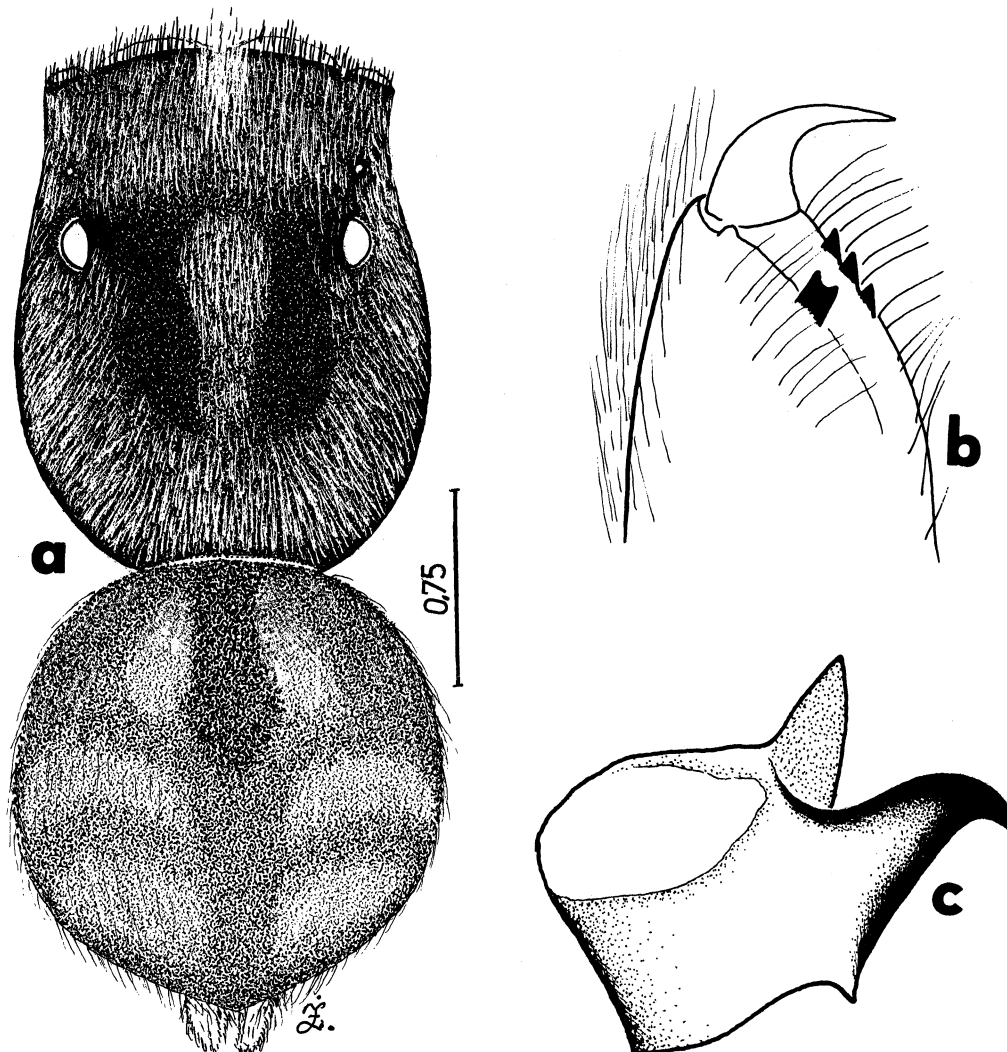


Fig.12. Male *Grayenulla wishartorum* n.sp.: general appearance (a), cheliceral dentition (b) and palpal tibia (c) of the holotype.

of long white hairs on prolateral surface. Maxillae and labium honey-yellow with lighter tips. Sternum dirty-brown, covered with numerous white hairs. Venter beige. Legs yellowish with darker joint area, tarsi with dark hairs, especially on first and second legs.

Palpal organ (Figs 12c, 13a-d) more specialised than in other species; cymbium laterally twisted, embolus long and coiled distally.

Dimensions. CL 1.90, CW 1.49, CH 0.98, EFL 0.88, AEW 1.34, PEW 1.28, AL 1.67.

The female is unknown.

Grayenulla waldockae n.sp.

Fig.14, Map 2

Material examined. Western Australia, HOLOTYPE, male, PARATYPES, 2 males, 2 juveniles, Woodstock Station, site WS5, wet pitfall traps, May 1988, J.M. Waldock, WAM 88/2156-60.

Etymology. The specific epithet is proposed in honour of Miss Julianne M. Waldock, arachnologist, Western Australian Museum, Perth, collector of the material studied.

Diagnosis. Femur strongly swollen, tegulum oval,

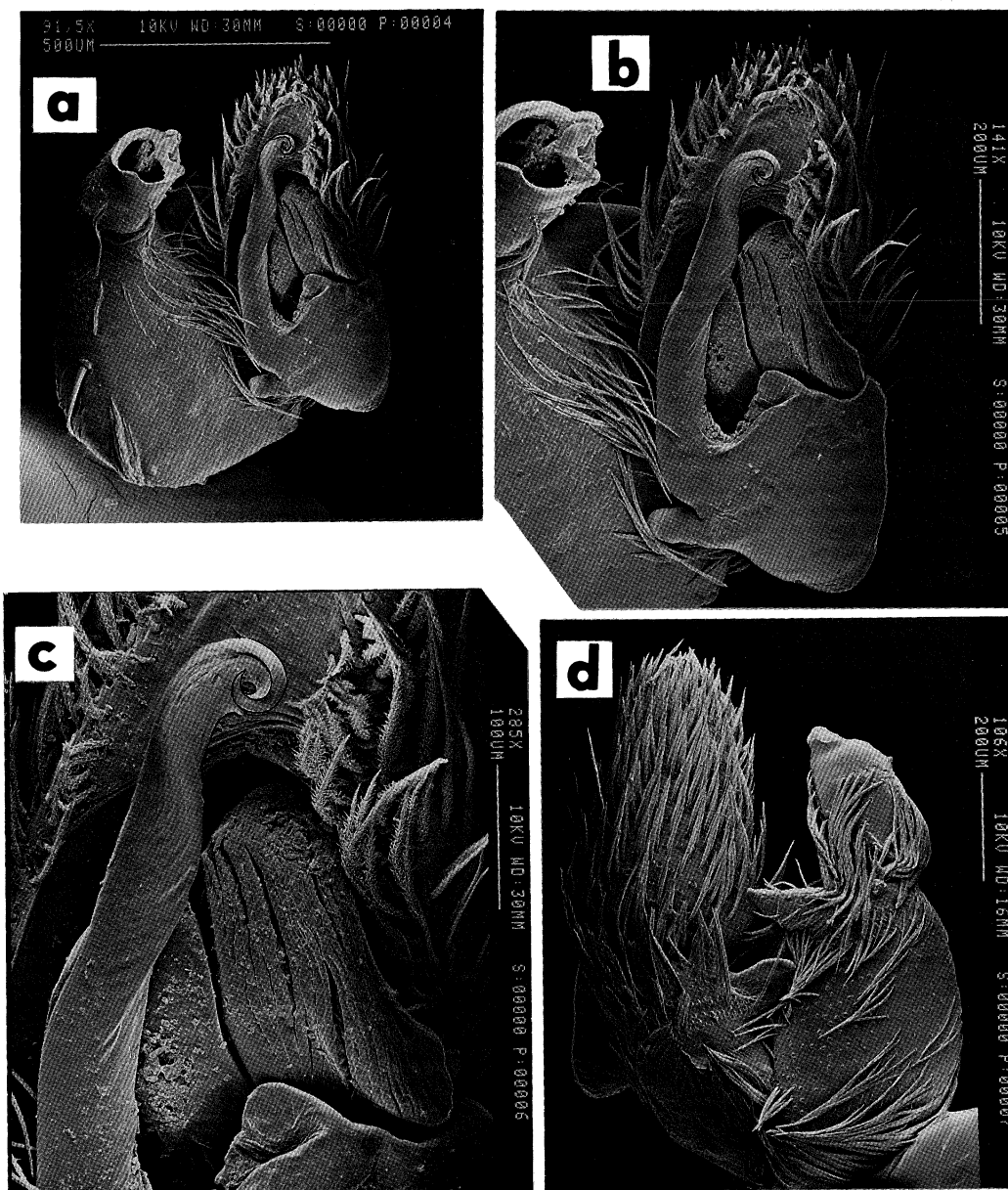


Fig.13. Male *Grayenulla wishartorum* n.sp.: ventral (a-c) and prolateral (d) aspects of palpal organ of holotype.

seminal reservoir distinctive, embolus thick.

Male (Fig.14a,c). Eye field grey-brown, thorax orange. Abdomen beige with darker anterior median stripe. Spinnerets beige. Clypeus dirty, with orange and grey hairs and with central fringe. Chelicerae (Fig.14b) dirty-brown, their tips orange. Maxillae and labium yellow to honey-orange, sternum and venter yellow to beige. Legs yellow to beige, slightly lighter distally tarsal tips contrasting black.

Palpal organ as illustrated in Figure 14d-f.

Dimensions (holotype). CL 1.46, CW 1.17, CH 0.72, EFL 0.56, AEW 0.99, PEW 0.98, AL 1.21.

The female is unknown.

Grayenulla australensis n.sp.

Fig.15, Map 2

Material examined. Western Australia, HOLOTYPE, male, Woodline, WAM Goldfield Survey, *Eucalyptus dundasii* woodland, pitfall traps, 7-12 Mar. 1980, W.F. Humphreys *et al.*, WAM 88/2161; PARATYPE, male, Goongarrie, dune, pitfall traps, 6-11 Oct. 1980, W.F. Humphreys *et al.*, WAM 88/2142.

Diagnosis. Palpal organ similar to *G. waldockae* but femur less swollen, tegulum more irregular in shape, without spots and embolus pointed. In

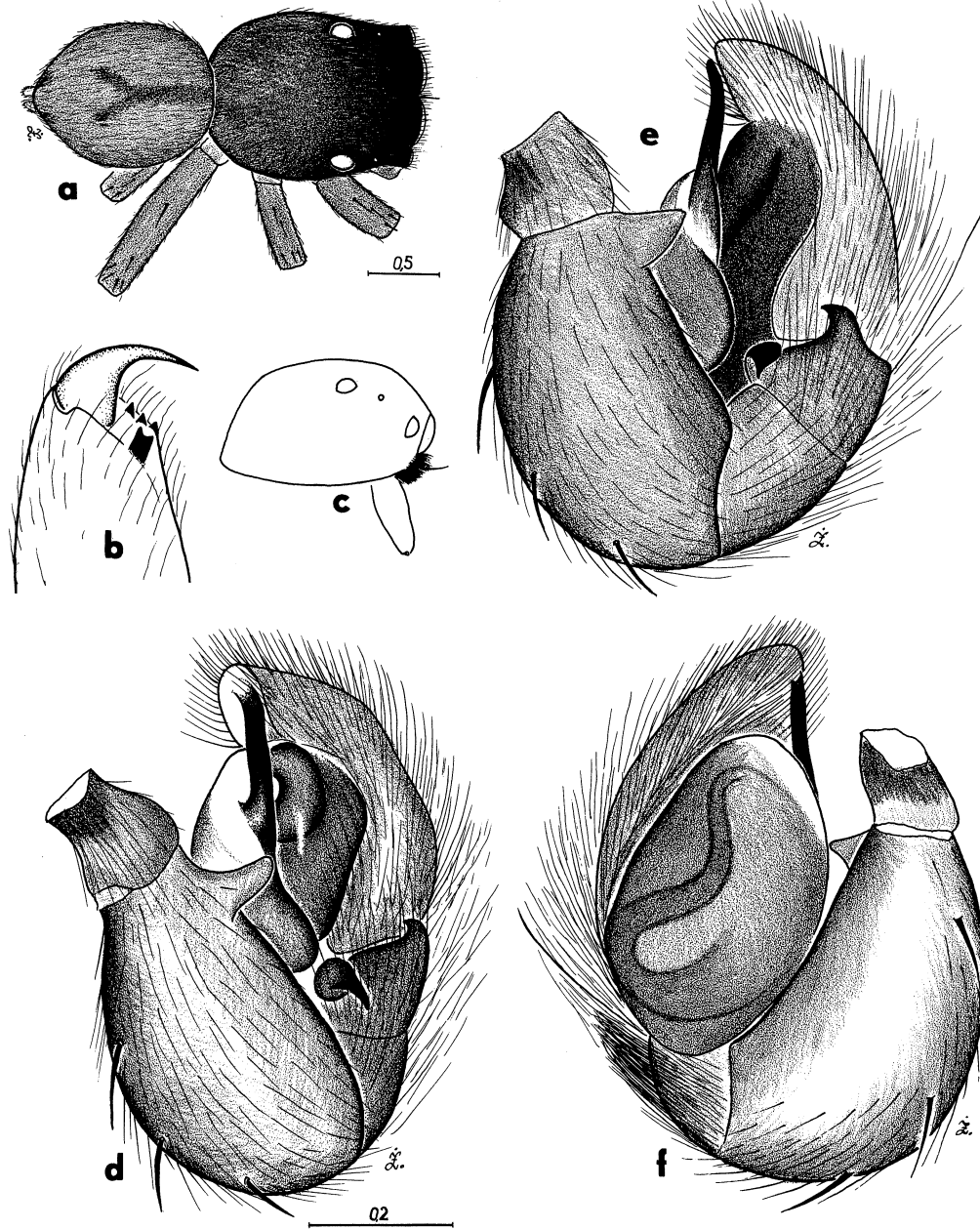


Fig.14. Male *Grayenulla waldockae* n.sp.: general appearance (a), cheliceral dentition (b), lateral view of cephalothorax (c), retrolateral (d-e) and proteral (f) aspects of palpal organ of the holotype.

comparison to *G. dejongi* tegular spots missing and tibial apophyses of different shape.

Male (Fig.15d). Eye field dirty-brown with black surroundings of eyes. Thorax lighter. Abdomen generally similar to *G. wishartorum*, beige, darker along its anterior median part, with lighter spots posteriorly. Spinnerets beige. Clypeus yellowish, chelicerae (Fig.15e) dirty-yellow. Maxillae and labium honey-yellow with lighter tips. Sternum dirty with whitish hairs, less numerous than in *G. wishartorum*. Legs I hairier than others, their proximal segments yellowish, tibiae and proximal metatarsi dirty-orange, tarsi distally dark. Other legs slightly lighter, joints area darker.

Palpal organ as illustrated in Figure 15b-c.

Dimensions (holotype). CL 1.75, CW 1.40, CH 0.93, EFL 0.85, AEW 1.21, PEW 1.16, AL 1.50.
The female is unknown.

***Grayenulla nova* n.sp.**

Fig.16, Map 2

Material examined. Western Australia, HOLOTYPE, female, Lake Cronin, Mallee/Triodia, LCR, pitfall trap, 6-11 Oct. 1980, W.F. Humphreys *et al.*, WAM 88/2149.

Diagnosis. Species larger than other

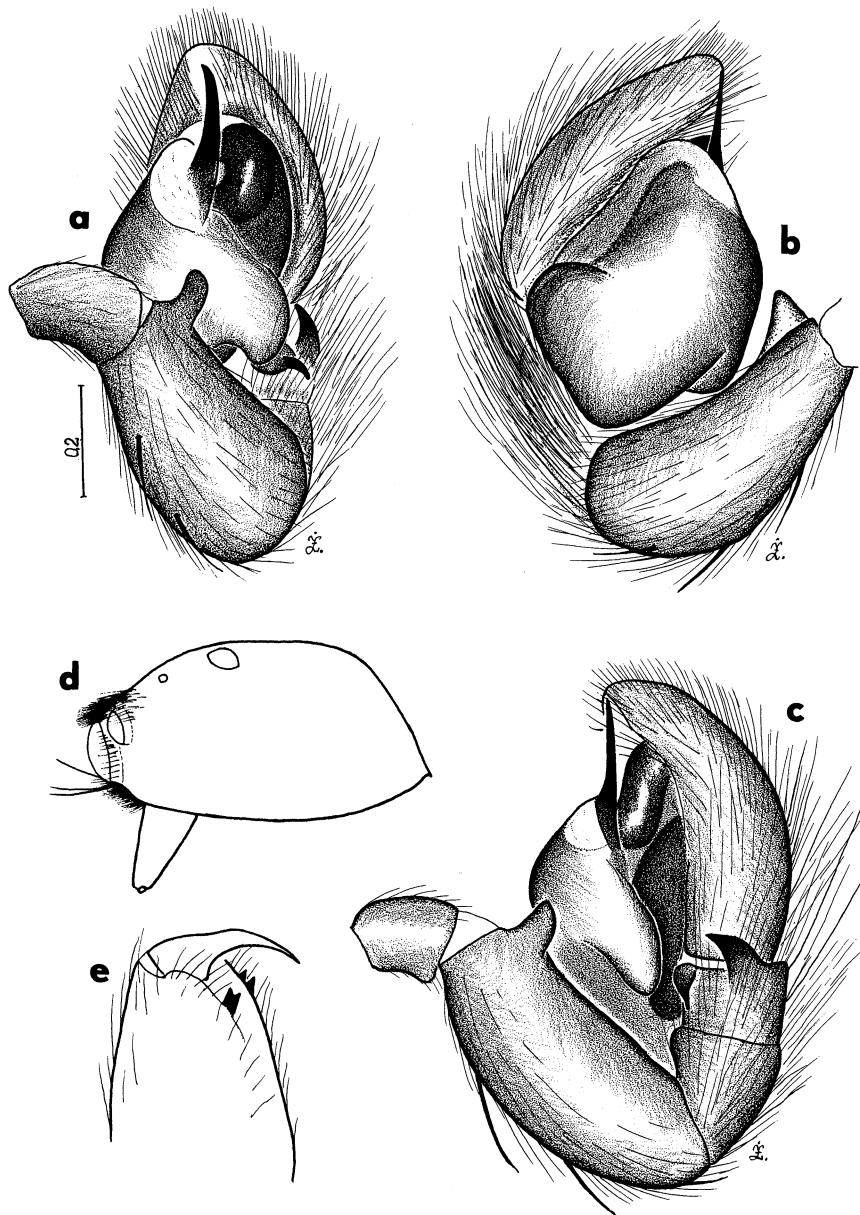


Fig.15. Male *Grayenulla australensis* n.sp.: ventral (a), proteral (b) and retrolateral (c) aspects of palpal organ, lateral aspect of cephalothorax (d) and cheliceral dentition (e) of the holotype.

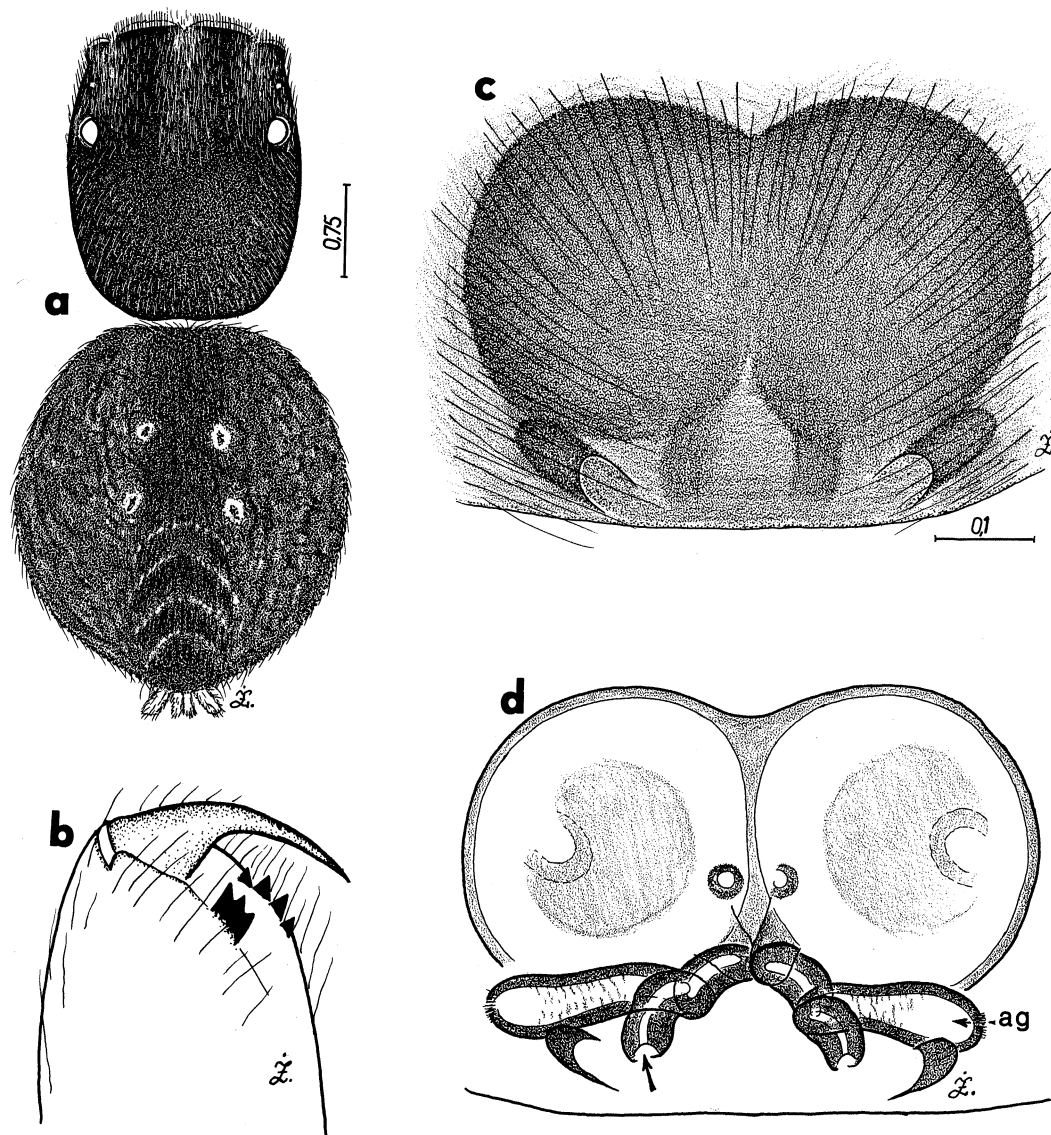


Fig.16. Female *Grayenulla nova* n.sp.: general appearance (a), cheliceral dentition (b), epigyne (c) and internal genitalia (d) of the holotype.

representatives of the genus, accessory glands of epigyne much longer and insemination ducts shorter than in *G. dejongi*.

Female (Fig.16a). Cephalothorax brown, surrounding of eyes darker. White hairs numerous on eye field and lateral surfaces. Abdomen robust, dirty-grey with 4 lighter spots. Clypeus orange with whitish hairs. Chelicerae (Fig.16b) dark-orange. Pedipalps yellow. Maxillae and labium dirty-orange, sternum darker. Venter light with dark-grey spots. Legs orange with grey bands.

Epigyne as illustrated in Figure 16c-d.

Dimensions. CL 1.90, CW 1.70, CH 0.85, EFL 0.75, AEW 1.35, PEW 1.30, AL 2.40.

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