SALTICIDAE (ARACHNIDA: ARANEAE) OF ORIENTAL, AUSTRALIAN AND PACIFIC REGIONS, VII. MOPSOLODES, ABRACADABRELLA AND PSEUDOSYNAGELIDES - NEW GENERA FROM AUSTRALIA

MAREK ZABKA

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Three unrelated genera of Salticidae: Mopsolodes, Abracadabrella and Pseudosynagelides are described from Australia. Their relationships and distribution are discussed. Diagnoses and figures of 10 species are given, including 9 new species: Mopsolodes australensis, Abracadabrella lewiston, A. birdsville, Pseudosynagelides yorkensis, P. raveni, P. australensis, P. monteithi, P. elae and P. bunya. A key for identification of species of Pseudosynagelides is proposed.

Salticidae, Mopsolodes, Abracadabrella, Pseudosynagelides, taxonomy, Australia.

Marek Zabka, Zaklad Zoologii WSR-P, 08-110 Siedlce, Poland; 1 Octob or, 1990.

According to Davies and Zabka (1989) at least 57 salticid genera have been recorded from Australia. Most of them are endemic for the continent and it seems that with further research the number of endemics will grow considerably. During the last 20 years substantial progress in taxonomic research of Salticidae of Australia and surroundings has been made. Papers by Proszynski, Wanless, Balogh, Chrysanthus, Zabka and others provided descriptions of many new genera and species and revisions of some taxa described earlier. Full bibliography of papers involved is given by Zabka (1987a) and Davies and Zabka (1989). The present paper is the next in series that started in 1987 to deal with Oriental, Australian and Pacific fauna (Zabka 1987a,b, 1988, 1990). It provides descriptions of three new genera and of nine new species - all of them recorded from Australia only.

MATERIAL AND METHODS

The paper is based on material from several collections listed below. Mean (in brackets) and ranges are given in millimetres. Leg spination format follows Platnick and Shadab (1975). Details of terminology and abbreviations are presented for each genus. Dissected epigynes were digested in lactic acid for 10–30 min. or in 10% KOH for 12–48 hrs at room temperature, rinsed in distilled water, stained in ethanol solution of chlorazol black E under control and mounted in glycerin. The drawings were made using grid system.

COLLECTIONS STUDIED

AMS Australian Museum, Sydney QMB Queensland Museum, Brisbane SAMA South Australian Museum, Adelaide ZMH Zoologisches Institut und Zoologisches Museum, Universität Hamburg

ABBREVIATIONS USED

AEW – anterior eyes width, ag – accessory gland, AL – abdomen length, c – conductor, ca – retrolateral cymbial apophysis, CL – cephalothorax length, co – copulatory opening, CW – cephalothorax width, da – retrodorsal tibial apophysis, dca – dorsal cymbial apophysis, e – embolus, EFL – eye field length, ep – epigynal pocket, f – femur, fd – fertilization duct, fp – femoral process, id – insemination duct, m – metatarsus, ms – metatarsal spines, p – patella, PEW – posterior eyes width, s – spermatheca, sr – seminal reservoir, ta – retrolateral tibial apophysis, tg – tegulum, tga – tegular apophysis, ti – terminal incision, tr – trochanter.

Mopsolodes gen. nov.

TYPE SPECIES

Mopsolodes australensis sp. nov.

ETYMOLOGY

The generic name is a combination of names *Sandalodes* and *Mopsus* and it is masculine in gender.

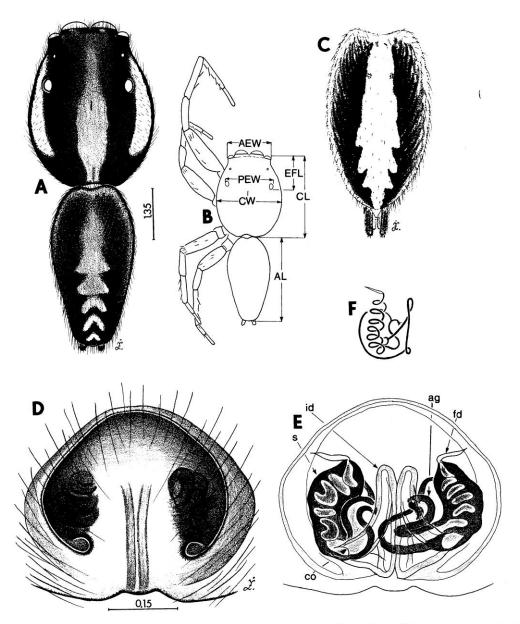


FIG. 1. Mopsolodes australensis sp. nov. A, colour pattern of male.. B, dimensions of the body. C, abdominal pattern of female. D,E, genitalia.

DIAGNOSIS

In comparison to related Sandalodes and Mopsus internal structures of female genitalia much longer - especially insemination ducts, male's cephalothorax without protruding, punk-like fringe.

Description (Fig. 1). Medium to large-size spider, 6.50-9.10 mm in body length. Cephalothorax robust, high. Abdomen elongate. Chelicerae of unident pattern with one retromarginal tooth and two promarginal teeth. Legs long with numerous spines. Leg I the strongest and

longest, leg III longer than IV. Male palpal organ with thin embolus (e), tegulum (tg) bag-like, seminal reservoir (sr) not meandering, retrolateral tibial apophysis (ta) with small teeth. Female genitalia with long, membraneous insemination ducts (id), spermathecae (s) large, strongly sclerotized, multichambered, accessory glands (ag) long.

RELATIONSHIPS, BIOLOGY AND DISTRIBUTION

Body form and genitalic structure suggest relationship to Sandalodes and Mopsus, from Australia and New Guinea (Davies, Zabka 1989). Genitalia of Mopsolodes, however, are more complex, its internal structures elongate, especially insemination ducts and accessory glands. Protruding, punk-like fringe on male's cephalothorax missing, while present in both genera mentioned above. According to Simon (1903) Mopsus and Sandalodes belong to Thyenae and Hyllae respectively. Petrunkevitch (1928) follows Simon's division in general and puts Mopsus and Sandalodes into Thyeninae and Hyllinae. Both authors seem to be creating groups (subfamilies) of unrelated genera. In fact, Mopsus, Sandalodes and Mopsolodes are closely related and probably originated in separation from other generic groups. In comparison to Mopsus that occurs in rainforest or similar humid habitats, most Mopsolodes australensis have been collected in dry Eucalyptus forest from Brisbane to Torres Strait (Fig. 3), mostly on understory vegetation. Only single individuals have been taken from nests in leaves and litter of oak forest and rainforest. Unlike Sandalodes no specimen has been found under Eucalyptus bark.

Mopsolodes australensis sp. nov. (Figs 1–3)

MATERIAL EXAMINED

Queensland: Holotype: δ , Allotype: \mathfrak{P} , Paratypes: 2δ , juv., Davies Ck., NEQ, Summer 1971–72, N. Clyde Coleman, QMB S479; \mathfrak{P} , Mossman, 2.II.1972, QMB S4782; δ , Thompson Lagoon, 7 miles E Edward River Mission, sweeping grass, 8.VI.73, V. Davies, QMB S4780; 2δ , Eureka Ck., 11.II.1972, N. Clyde Coleman, QMB S4787; 1δ , $2\mathfrak{P}$, Atherton Tableland, near Mareeba, nests in leaves, XII.1982, QMB S4791; \mathfrak{P} , 7 km NE Musgrave Stn., sweeping grass, 4.VI.1973, V. Davies, QMB S4788; \mathfrak{P} , Torres Strait, Horn Is., 24–29.I.1975, R. Raven, QMB S4785; \mathfrak{P} , Springfield Stn., W Mt. Garnet, 1.IX.1979, K. McDonald, QMB S4789; \mathfrak{P} , Oak Forest, N. Clyde Coleman, 7.X.1971, QMB S4784; 3δ , \mathfrak{P} , 2juv.,

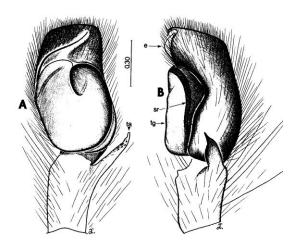


FIG. 2. Mopsolodes australensis sp. nov.: male: palpal organ.

Rochedale State Forest, sweeping, litter, 20.IX.1979, 11.X.1979, 7.XII., V. Davies, R. Raven, QMB S4777-9; 2\$\napprox\$, Molloy Rd., 18.II.1972, N. Clyde Coleman, QMB S4786; 4\$\napprox\$, Brisbane, Mt. Cooth-tha, dry Eucalyptus forest, sweeping grass, 15.VIII., 21.XI.1987, M. Zabka, ZMH A86/89. Northern Territory: Paratype: \$\delta\$, Radon Ck., rainforest, 14-16.VII.1979, G. Monteith, D. Cook, QMB S4783.

DIAGNOSIS

Same as for the genus.

Male (Fig. 1A,B). Cephalothorax brown with lighter median part and sides, the last and fovea

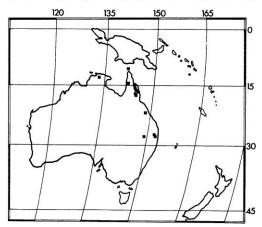


FIG. 3. Distribution of *Mopsolodes australensis* sp. nov.

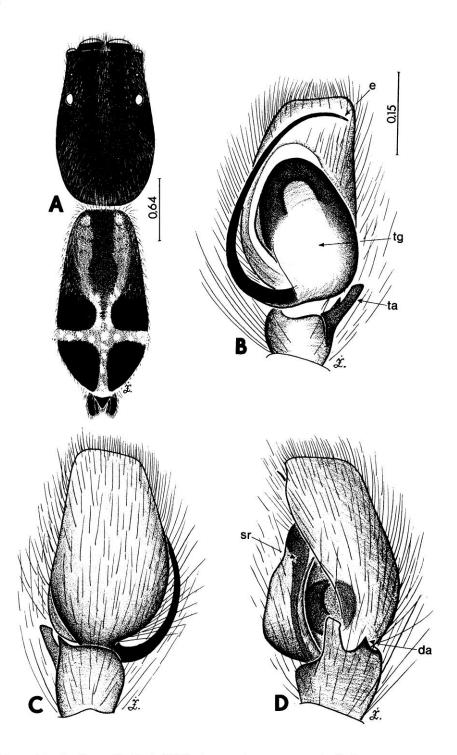


FIG. 4. Abracadabrella elegans (L. Koch, 1879), &, general appearance and palpal organ.

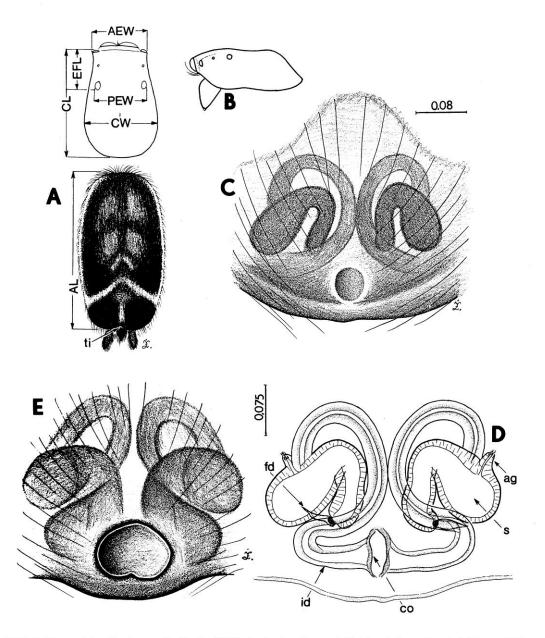


FIG. 5. Abracadabrella elegans (L. Koch, 1879), \Im . A, dorsal aspect. B, lateral view of cephalothorax. C-E, genitalia. A-D, syntype. E, specimen from Brisbane.

region covered with white hairs. Abdomen darkgrey with grey-yellow herring-bone median belt covered with numerous hairs. Spinnerets greybrown. Clypeus' and chelicerae brown, the last rather long. Maxillae and labium dark-brown with light tips, sternum orange, venter grey, darker centrally. Legs I brown with white hairs on ventral femora. Coxae, trochanters and femora of other legs yellow, distal segments brown, all legs with long spines.

brown, all legs with long spines.
Dimensions. CL 3.16–3.96 (3.63), CW 2.50–3.16 (2.95), EFL 1.18–1.51 (1.40), AEW 1.78–2.17 (2.02), PEW 1.78–2.17 (2.03), AL 3.49–5.14 (4.48).

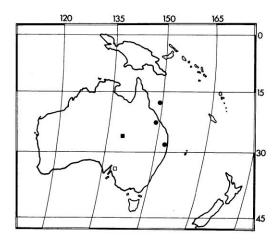


FIG. 6. Distribution of Abracadabrella

- A. birdsville sp. nov.
- A. elegans (L.K.)
- A. leviston sp. nov.

Female. Cephalothorax as in male. Abdomen (Fig. 1C) also similar, but central belt more contrasting. Lateral surfaces light. Spinnerets long, dirty-brown. Clypeus yellow with similar long hairs. Chelicerae long, dirty-orange with a frontal projection. Pedipalps yellow, darker distally, maxillae orange with yellow tips, labium long, darker laterally, sternum yellow, venter light, darker medially. Legs I orange-brown, darker distally, other legs lighter, spines as in male.

Epigyne (Fig. 1D-F) in a form of large depression, internal structures translucent. Insemination ducts long, membraneous, spermathecae strongly sclerotized, multichambered, accessory glands distinctive.

Dimensions. CL 3.16–3.89 (3.51), CW 2.50–3.03 (2.75), EFL 1.32–1.46 (1.37), AEW 1.81–2.11 (1.95), PEW 1.84–2.24 (2.03), AL 4.42–5.28 (4.82).

Abracadabrella gen. nov.

TYPE SPECIES

Marptusa elegans L. Koch, 1879.

ETYMOLOGY

The name is a random combination of letters and feminine in gender.

DIAGNOSIS

Body form rather flat, similar to some species of Afraflacilla-Pseudicius group but stridulatory

organ absent. Female's abdomen usually with terminal incision. The structure of epigyne similar to that of some *Holoplatys* species and to one undescribed genus, but body form and male's palpal organs completely different.

Description (Figs 3,4). Medium spiders, 3.50 –6.70 mm in length. The body slender, elongate and rather flat. In some species - especially in females - abdomen with terminal incision (ti). Chelicerae of unident pattern, promargin with 2 teeth, retromargin with 1. Leg I the strongest, leg IV the longest. Male palpal organ with long embolus (e), bag-like tegulum (tg), retrolateral (ta) and retrodorsal (da) tibial apophyses. Insemination ducts (id) very long, ~'S'-shaped, spermathecae (s) one-chambered, their distal parts elongate, accessory glands (ag) distinctive.

Remarks on synonymy. A. elegans (L. K.), the only previously known species, was described by Koch (1879) as Marptusa elegans and than wrongly transferred to Occisiona by Simon (1901).

RELATIONSHIPS, BIOLOGY AND DISTRIBUTION

The genus does not have any relatives among described salticid genera. Some similarities of female genitalia to one of undescribed Australian genera can well be convergence only. Body form and colour pattern similar to Afraflacilla-Pseudicius group but lack of stridulatory organs is a distinctive difference. The only data concerning biology of particular species come from labels. Some specimens were collected under Eucalyptus bark, others on vegetation. The genus has been recorded from Queensland and South Australia (Fig. 6).

Abracadabrella elegans (L. Koch, 1879) comb. nov. (Figs 4-6)

Marptusa elegans L. Koch, 1879: 1119. Ocrisiona elegans: Simon, 1901: 602, 608.

MATERIAL EXAMINED.

DIAGNOSIS

Embolus of male palpal organ shorter than in the species described below, retrodorsal tibial apophysis cone-shaped, abdominal pattern distinctive.

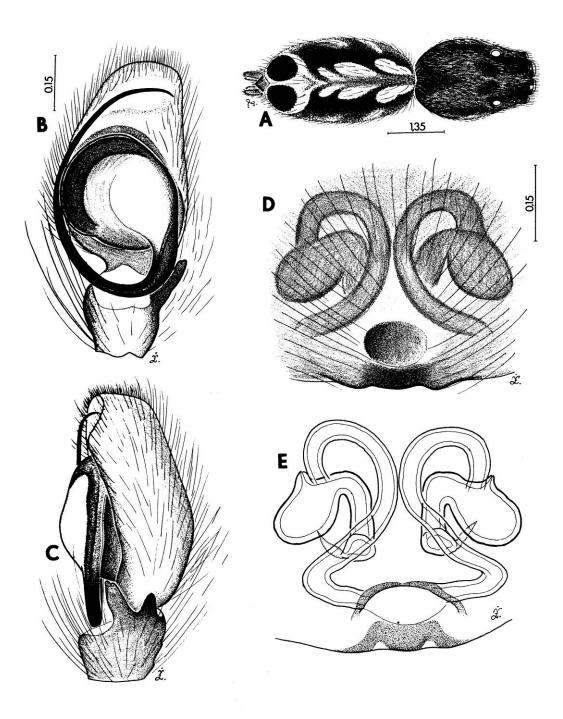


FIG. 7. Abracadabrella birdsville sp. nov. A, general appearance of female. B,C, palpal organ of male. D,E, genitalia of female.

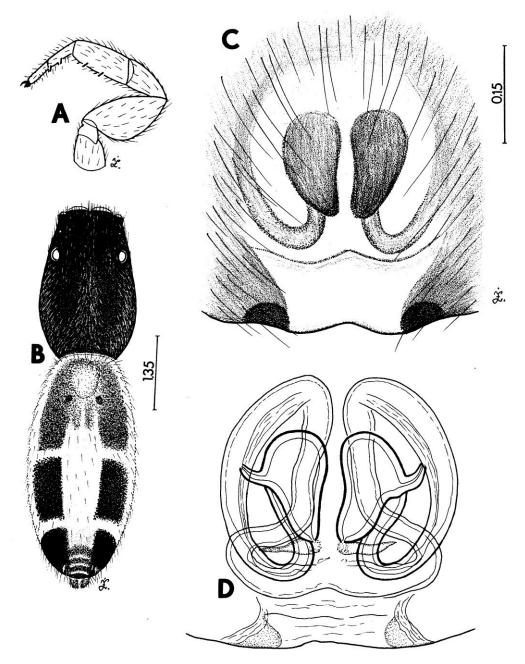
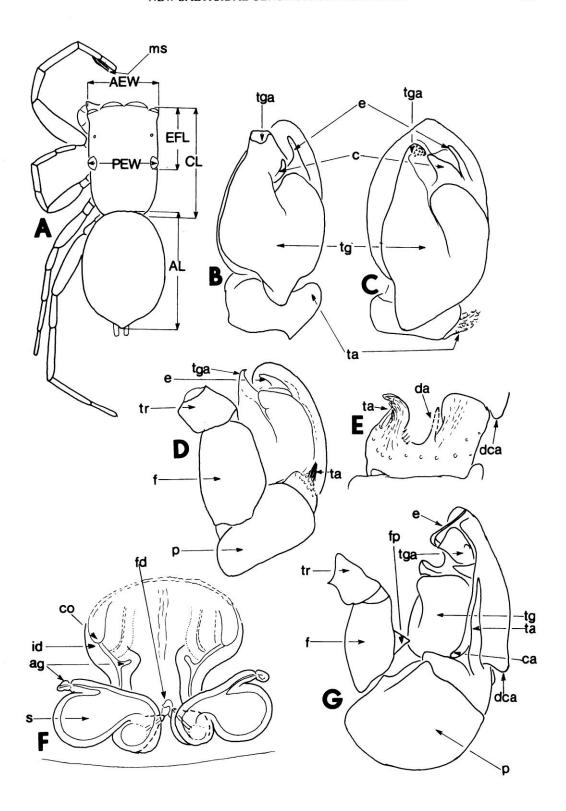


FIG. 9. Morphological characters of *Pseudosynagelides*.: A, general appearance. B-E, palpal organ and its comparison to Synagelides (G). F, genitalia of female.



Male (Fig. 4A). Eye field dark-brown, thorax slightly lighter. Light hairs numerous along median part and laterally. Abdomen with black and light posterior spots firming cross-like pattern. Clypeus brown with white hairs and 3 strong bristles. Chelicerae rather long, light-brown. Maxillae orange-brown, labium and sternum dirty-brown. Venter light-grey-brown. Spinnerets dark-brown. Legs covered with white and brown hairs, particular segments yellow to brown.

Palpal organ (Fig. 4B-D), with small, coneshaped retrodorsal apophysis on tibia.

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

Dimensions. CL 1.59, CW 1.02, EFL 0.59, AEW 0.78, PEW 0.83, AL 1.86.

The male described for the first time.

Female (Fig. 5A,B). Cephalothorax as in male, abdomen slightly different, with terminal incision. Spinnerets grey. Clypeus, chelicerae, maxillae, labium and sternum as in male. Venter grey centrally, lighter laterally. Leg I proximally yellow, distally darker, other legs lighter.

Epigyne's oval depression close to the epigastric furrow (Fig. 5C-E). Insemination ducts long, distal parts of spermathecae elongate.

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

Dimensions. CL 1.76, CW 1.17-1.19 (1.18), EFL 0.62, AEW 0.83-0.87 (0.85), PEW 0.88-0.90 (0.89), AL 2.69-2.75 (2.72).

Abracadabrella birdsville sp. nov. (Figs 6,7)

MATERIAL EXAMINED.

Queensland: Holotype: &, L. Muncoonie via Birdsville, beating, 16.XI.1976, A. Berg, R. Raven, OMB

S14148; Allotype: \mathfrak{P} , same data, QMB S14149; Paratypes: $2\mathfrak{F}$, \mathfrak{P} , 3juv. same data, QMB S14150.

DIAGNOSIS

The species can be recognized by abdominal pattern, long embolus and round top of retrodorsal tibial apophysis.

Male. Cephalothorax brown, darker on eye field, covered with numerous whitish hairs. Abdomen with characteristic pattern of brown, black and yellowish spots, covered with numerous brown and light hairs. Spinnerets greyish-brown. Clypeus brown with light hairs and 3 strong bristles in its median part. Chelicerae dark-brown, maxillae, labium and

sternum lighter, the last with white hairs. Venter light-grey, darker centrally. Leg I dark-brown, II brown, III and IV orange, darker laterally and around joints. All legs covered with numerous light and brown hairs.

Palpal organ (Fig. 7B-C) similar to that in A. elegans but embolus longer, tegulum oval and retrodorsal tibial apophysis larger, rounded at the top.

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

Dimensions. CL 2.50-2.64 (2.57), CW 1.84, EFL 0.79-0.86 (0.84), AEW 1.15-1.18 (1.17), PEW 1.19-1.25 (1:23), AL 2.90-3.63 (3.36).

Female colour pattern (Fig. 7A) almost identical to male. Pedipalps yellow covered with white lateral hairs forming flags. Legs generally lighter: I orange-brown, others yellow, all darker around joints.

Epigyne and internal genitalia (Fig. 7D,E) almost identical to previous species.

Leg spination as in male.

Dimensions. CL 2.44-2.64 (2.54), CW 1.66-1.78 (1.72), EFL 0.79-0.86 (0.82), AEW 1.12, PEW 1.18, AL 3.69-3.82 (3.75).

Abracadabrella lewiston sp. nov. (Figs 6,8)

MATERIAL EXAMINED

South Australia: Holotype: ♀, Two Wells, Lewiston Park, bark of *Eucalyptus* (fallen trees), 29.VI.1970, T.T.H. Szent-Ivany, SAMA N1988336.

DIAGNOSIS

Body form more elongate, colour pattern and epigyne different from two previous species.

Female (Fig. 8B). Thorax brown, eye field darker. Whole cephalothorax covered with numerous white hairs. Abdomen with small anterior scutum, and yellow and grey-brown pattern darkening posteriorly. Clypeus brown, covered with numerous white hairs. Chelicerae dark-brown, pedipalps yellow with light hairs. Maxillae and labium brown, sternum lighter with dark margin. Venter beige. Leg I (Fig. 8A) light-brown, others yellow-orange.

Spermathecae and accessory glands of female genitalia (Fig. 8C-D) of different shape than in other species.

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

Dimensions. CL 2.70, CW 1.78, EFL 0.89, AEW 1.19, PEW 1.25, AL 3.89.

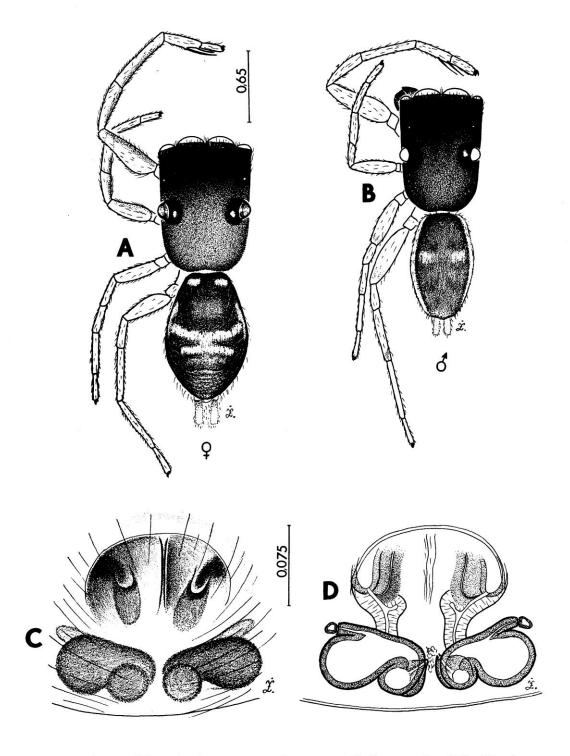


FIG. 10. Pseudosynagelides yorkensis sp. nov.: general appearance of both sexes and genitalia of female.

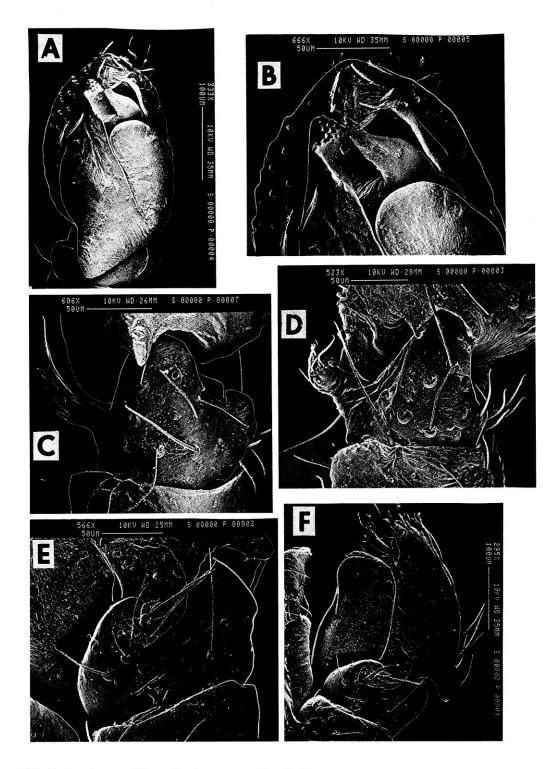


FIG. 11. Pseudosynagelides yorkensis sp. nov.: male: palpal organ.

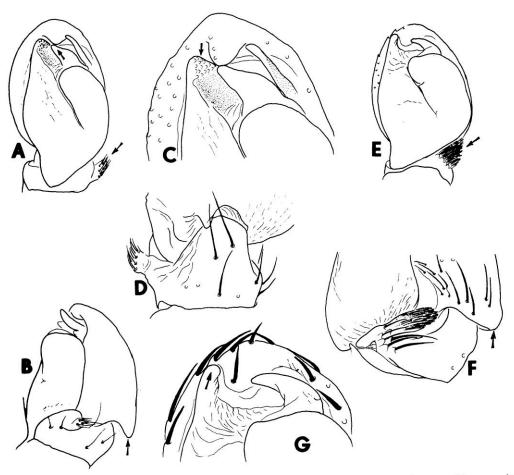


FIG. 12. Male palpal organs of *Pseudosynagelides yorkensis* sp. nov. (A-D) and *Pseudosynagelides raveni* sp. nov. (E-G).

Pseudosynagelides gen. nov.

TYPE SPECIES:

Pseudosynagelides yorkensis sp. nov.

ETYMOLOGY

Like Synagelides; masculine.

DIAGNOSIS

Body form similar to Asiatic genus Synagelides, but genitalia structure simpler and metatarsal spines missing.

Description (Fig. 9). Tiny to small spiders, ranging up to 2.90 mm in body length. Cephalothorax slender, its surface textured, posterior lateral eyes set on distinctive tubercles. Abdomen with scutum in some species, sometimes with transverse light stripes forming

pseudo-mimic pattern. Chelicerae with one or two small promarginal teeth and one retromarginal, unident tooth. Sternum large. Spinnerets rather long. Legs long and delicate, usually light, with longitudinal dark stripes, metatarsi I with four ventral spines (ms). Male palpal organ with fixed, vertical connection between femur (f) and patella (p). Retrolateral (ta) and, in some species, retrodorsal (da) apophyses on tibia present. Tegulum (tg) with large apophysis (tga) in its apical part, embolus (e) single or accompanied by conductor (c). Cymbium with retrolateral (ca) and dorsal apophyses (dca). Epigyne relatively simple, sometimes with anterior pocket (ep). Copulatory openings (co) cup-like. Insemination ducts (id) broad, accessory glands (ag) double. Spermathecae (s) large, fertilization ducts (fd) normal.

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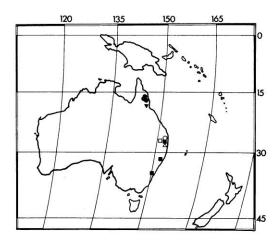


FIG. 13. Distribution of Pseudosynagelides

○ P. australensis sp. nov.
□ P.bunya sp. nov

△ P.elae sp. nov.

□ P. yorkensis sp. nov.

P. yorkensis sp. nov.

RELATIONSHIPS

Synagelides Bsenberg & Strand (Fig. 9D) seems the only relative of the genus (Bohdanowicz 1988). Both are highly specialized and distinctive for their body form and unique for their genitalic structure. Their subfamily status remains an open question. Petrunkevitch (1928) puts Synagelides into Synagelinae – together with many other accidental genera. Proszynski (1976), on the other hand, creates Synemosyninae for some ant-mimic genera (including Synagelides) but also his decision seems controversial. Probably separate subfamilies for both discussed genera would be the best solution.

BIOLOGY AND DISTRIBUTION

All species were collected from rainforest litter, mostly by pitfall trapping in tropical and subtropical Queensland;

P. raveni has also been recorded from New South Wales (Fig. 13). Distribution of the genus, so distant from Asiatic Synagelides, looks mysterious. The more so as no related spider has ever been found east and south of Viet-Nam (Zabka 1985) - perhaps because of lack of litter material from the area. At the present stage only hypotheses regarding real distribution and origin of both discussed genera are possible. The problem should be cleared up because of its zoogeographical and evolutionary implications.

KEY TO THE SPECIES OF PSEUDOSYNAGELIDES

Males. Conductor present
Conductor absent
Abdomen without scutum, with light lateral band, tegular apophysis knobby on the top, dorsal cymbial apophysis present, retrolateral tibial apophysis small
Tegular apophysis with apical collar (see arrow on Fig. 15C), retrolateral tibial apophysis large, spatular, dorsal cymbial apophysis missing
Tibial apophysis single, brush-like, oriented dorsal- ly
Two tibial apophyses present4
Retrolateral tibial apophysis large, hooked, dorsal cymbial apophysis present
Retrolateral tibial apophysis smaller, different in shape5
Tibial apophyses small, embolus with very distinctive ridge
Tibial apophyses larger, retrolateral one oriented apically, embolus without distinctive ridge
Females. Abdomen with scutum epigyne with anterior pocket, spermathecae pear-shaped
Abdomen without scutum, with light pattern, epigyne without pocket, spermathecae elongated

Pseudosynagelides yorkensis sp. nov. (Figs 10, 11, 12A–D,13)

MATERIAL EXAMINED

Queensland: Holotype: δ , Thornton Peak, N of Daintree, 610 m, site 40, rainforest survey, litter, XI.1975, M.R. Gray, AMS KS7653; Allotype: \mathfrak{P} , same data, AMS KS21059; Paratypes: $5\mathfrak{F}$, $5\mathfrak{P}$, 3 juv., same data, AMS KS21060; $2\mathfrak{F}$, 1juv., 4.5 km W of Cape Tribulation, 750 m, rainforest, site 9, Berlesate 436, sieved litter, 29-30.IX.1982, G.B. Monteith, D.K. Yeates, G.I. Thompson, QMB S4699; \mathfrak{F} , 3.5 km W of Cape Tribulation, 680 m, rainforest, Berlesate 517, sieved litter, I.1983, G.B. Monteith, QMB S4692; \mathfrak{F} , same locality, site 7, Berlesate 482, 2.X.1982, G.B.

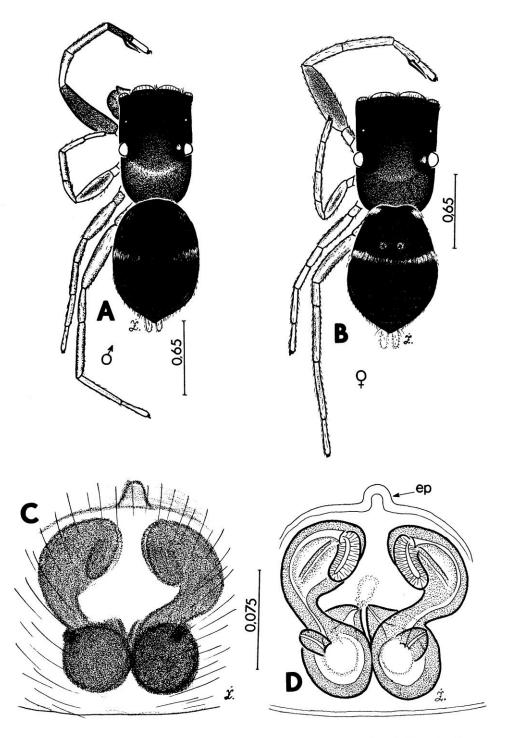
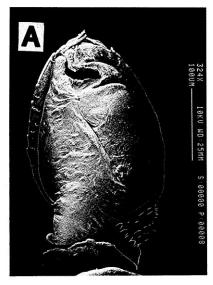
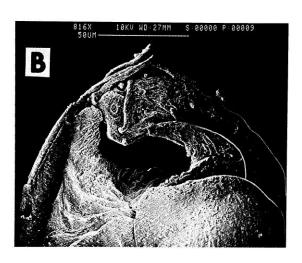
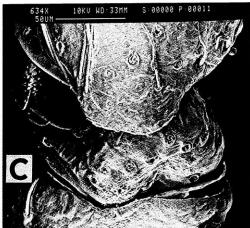


FIG. 14. Pseudosynagelides raveni sp. nov. general appearance of both sexes and genitalia of female.







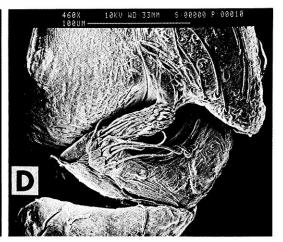


FIG. 15. Pseudosynagelides raveni sp. nov. male: palpal organ.

Monteith, D.K. Yeates, G.I. Thompson, QMB S4706; ♂, Mt. Finnigan summit via Helenvale, 1100 m, rainforest, pyrethrum knockdown, 28.XI.1985, G.B. Monteith, D. Cook, QMB S4768; 5♂, 5♀, 2juv., 2.5 km N Mt. Lewis via Julatten, 1040 m, rainforest, Berlesate 611-613, sieved litter, 3.XI.1983, D.K. Yeates, G.I. Thompson, QMB S4714, S4715, S4739

DIAGNOSIS

Abdominal scutum in both sexes missing. Male palpal organ with conductor, tegular apophysis knobby on the top, dorsal cymbial apophysis distinctive. Female epigyne without pocket.

Male (Fig. 10B). Cephalic part dark-grey to

black, thorax dirty- orange to brown. Whole cephalothorax covered with grey and black hairs. Median part of abdomen dirty-yellow to dirty-orange, laterally darker. Along sides white-yellow band present. Spinnerets long, dirty-orange. Chelicerae pale-yellow to orange, maxillae, labium and sternum orange to dirty-orange. Venter yellow to pale-orange. Legs pale-yellow to dirty-orange, darker laterally. Leg I the darkest, with 2 pairs of metalarsal spines.

darkest, with 2 pairs of metatarsal spines.
Palpal organ (Figs 11,12A-D) with conductor, tegular apophysis knobby on the top.

Dimensions. CL 0.99-1.10 (1.03), EFL 0.58-0.60 (0.59), AEW 0.68-0.76 (0.72), PEW 0.73-0.80 (0.76), AL 0.95-1.15 (1.03).

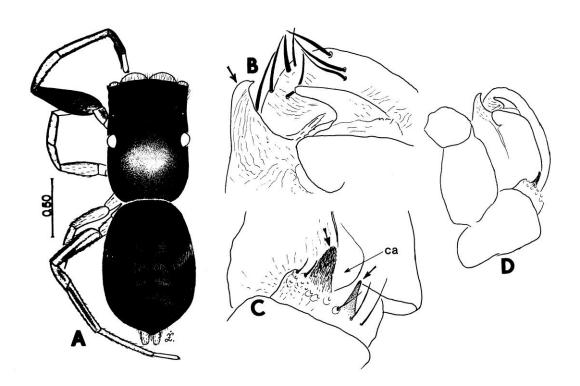


Fig. 16. Pseudosynagelides australensis sp. nov. male: general appearance and palpal organ.

Female (Fig. 10A). Cephalothorax similar to that in male. Abdomen more robust, dark-grey with light pattern formed by tufts of hairs. Spinnerets long, light. Chelicerae, maxillae, labium, sternum and legs similar to that in male, venter whitish.

Genitalia (Fig. 10C,D) relatively simple, proximal parts of insemination ducts cup-like and accessory glands in their proximal parts. Spermathecae double-chambered, elongate.

Dimensions. CL 1.20-1.25 (1.23), EFL 0.66-0,71 (0.69), AEW 0.80-0.85 (0.84), PEW 0.85-0.90 (0.88), AL 1.25-1.50 (1.32).

Pseudosynagelides raveni sp. nov. (Figs 12E–G, 13–15)

MATERIAL EXAMINED

Queensland: Holotype: \mathcal{S} , Allotype: \mathcal{P} , Rochedale State Forest, litter, 30.VI.1980, V. Davies, R. Raven, QMB S4749. New South Wales: Paratypes: \mathcal{S} , \mathcal{P} , Benandarah State Forest, 8 km N of Batemans Bay, in litter, pitfall trap, 30.XI.1978, AMS KS2286; \mathcal{P} , Lorne State Forest, Kendall Forest, Mena Cement

area, site 87.2, in litter, pitfall trap, 27.VIII.1978, D. Milledge, AMS KS19453.

ETYMOLOGY

For Dr. Robert Raven, Queensland Museum, Brisbane.

DIAGNOSIS

Abdominal scutum in male present. Female epigyne with anterior pocket. Male palpal organ without conductor, retrolateral tibial apophysis brush-like, oriented dorsally, dorsal cymbial apophysis missing.

Male (Fig. 14A). Eye field dirty-brown, thorax brown, lighter medially, with radial darker stripes towards lower margin. Abdomen with blackish scutum and with traces of transverse stripe of white hairs. Spinnerets yellow. Clypeus grey-brown, chelicerae dirty-yellow. Maxillae, labium and sternum light-grey. Venter blackish, medially lighter. Femora and metatarsi I grey-brown, proximal patella dark dorsally, tibia with dark dorsal and ventral stripes. Leg II dark along femur, patella and tibia, leg III additionally with metatarsal stripe, leg IV also with tarsal stripe.

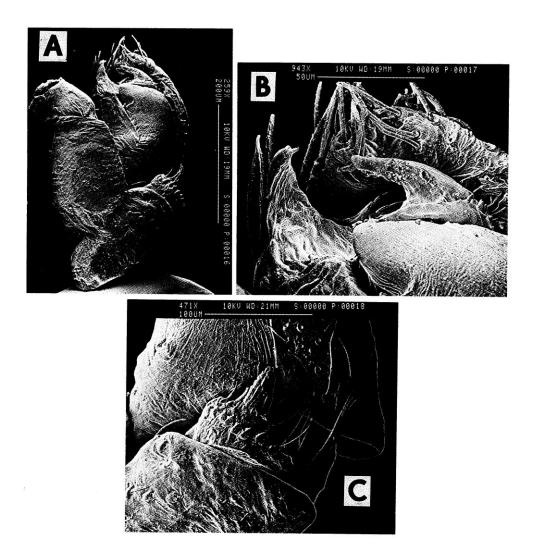


Fig. 17. Pseudosynagelides australensis sp. nov.: male: palpal organ.

Palpal organ (Figs 12E-G, 15A-D) with hooklike embolus and brush-like retrolateral tibial apophysis, conductor absent.

Dimensions. CL 0.99-1.05 (1.12), EFL 0.54-0.55 (0.54), AEW 0.62-0.65 (0.64), PEW 0.67-0.68 (0.67), AL 1.07-1.10 (1.09).

Female (Fig. 14B). Cephalothorax similar to the male. Abdomen without distinctive scutum, dark, with transverse stripe of white hairs, lighter apodemes and two anterior white spots. Spinnerets yellowish. Chelicerae, maxillae, labium and sternum pale-grey. Venter dark-grey with large median light spot. Leg I pale, only patella and tibia distally darker. Femur and tibia with dark-grey dorsal stripe. Legs II-IV pale-yellow with dark stripes along femur, patella and tibia.

Epigyne (Fig. 14C,D) with anterior pocket. Double accessory glands present. In comparison to *P. yorkensis* insemination ducts and spermathecae of different shape.

Dimensions. CL 1.05-1.25 (1.12), EFL 0.60-

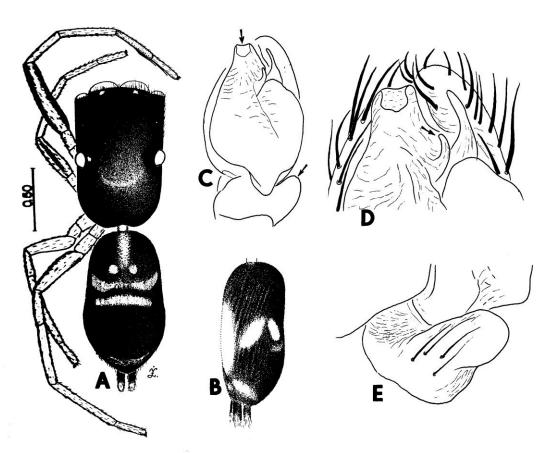


FIG.18. Pseudosynagelides monteithi sp. nov. & general appearance, lateral view of abdomen and palpal organ.

0.70 (0.64), AEW 0.70- 0.76 (0.73), PEW 0.74- **0.85** (0.77), AL 1.05-1.60 (1.30).

Pseudosynagelides australensis sp. nov. (Figs 13,16,17)

MATERIAL EXAMINED

Queensland: Holotype: δ , Rochedale State Forest, litter, pitfall traps, 2.IX-11.X.1979, V. Davies, R. Raven, QMB S4750.

DIAGNOSIS

Abdomen with characteristic colour pattern. Two tibial apophyses present: retrolateral one brush-like, but unlike *P. raveni* oriented apically. Dorsal cymbial apophysis and conductor missing.

Male (Fig. 16A). Eye field dark-brown, thorax lighter, dirty. Central part of cephalothorax darkorange. Abdomen similar to that in *P. raveni*, with brown scutum and lighter pattern. Spinnerets yellow. Clypeus dark, chelice-rae, maxillae and labium orange, sternum dirty-orange. Venter dark-grey with dirty-orange median stripe. Leg I with grey-brown femur and metatarsus, tibia dark dorso-ventrally. Other segments yellowish. Leg II-IV lighter with dark longitudinal stripes - especially on prolateral surfaces.

Palpal organ (FigS 16B-D, 17A-C) very similar to *P. raveni*, but retrolateral tibial apophysis of different shape, also retrodorsal apophysis present.

Dimensions. CL 1.00, EFL 0.62, AEW 0.64, PEW 0.68, AL 1.12.

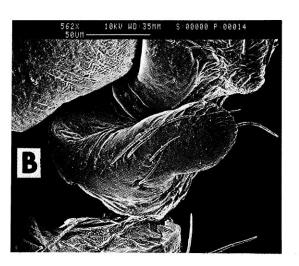
The female is unknown.

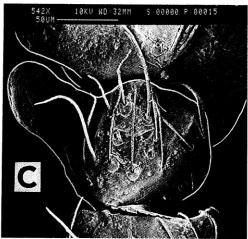
Pseudosynagelides monteithi sp. nov. (Figs 13,18,19)

MATERIAL EXAMINED

Queensland: Holotype: &, Windin Falls, NW Mt.







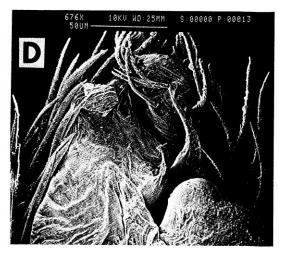


FIG. 19. Pseudosynagelides monteithi sp. nov. male: palpal organ.

Bartle-Frere, 580 m, Berlesate 244, 9.X.1980, G.B. Monteith, QMB S4718.

Етумогоду

For Dr. Geoffrey Monteith, Queensland Museum, collector of a large part of the material studied.

DIAGNOSIS

Abdominal scutum absent, colour pattern similar to the female of *P. yorkensis*. Palpal organ with conductor, tegular apophysis with apical collar. Tibia with single retrolateral spatular apophysis.

Male (Fig. 18A,B). Eye field dark-brown, thorax dirty-orange- brown, lighter centrally. Abdomen rather elongate, without scutum, dark-grey with lighter, yellowish pattern. Spinnerets grey with yellow tips. Clypeus dark, chelicerae and sternum dirty-orange, maxillae and labium yellowish, venter dark with large light spot. Femur I grey, lighter dorso-ventrally, tibia yellow, darker laterally, metatarsus dirty-orange, tarsus yellow. Other legs yellow with dark longitudinal stripes on prolateral femoral surfaces.

Palpal organ (Figs 18C-E, 19A-D) with wide spatular retrolateral tibial apophysis, conductor present, tegular apophysis with apical collar.

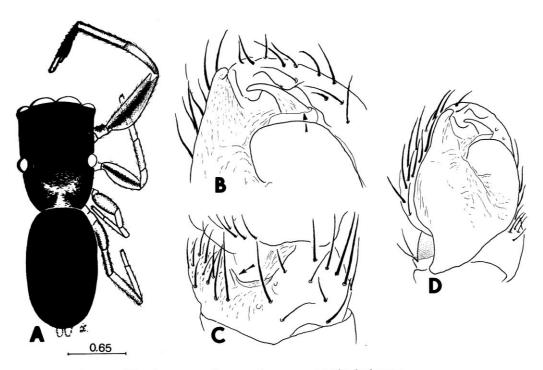


Fig. 20. Pseudosynagelides elae sp. nov. ♂, general appearance and palpal organ.

Dimensions. CL 1.05, EFL 0.55, AEW 0.71, **PEW** 0.73, AL 1.10.

The female is unknown.

Pseudosynagelides elae sp. nov. (Figs 13,20,21)

MATERIAL EXAMINED

Queensland: Holotype: 3, Upper Tallebudgera Valley, Below Springbrook, 550 m, rainforest, pitfall traps, 8.I-17.III.1985, G.B. Monteith, D. Cook, G.I. Thompson, QMB S4698.

ETYMOLOGY

For my wife Elizabeth (Ela in Polish).

DIAGNOSIS

Colour pattern and palpal organ similar to *P. raveni*, but tibia wider with two apophyses and the basis of embolus with distinctive ridge.

Male (Fig. 20A). Eye field dark, thorax lighter with radial darker lines. Abdomen with scutum, dark-brown, with transverse lighter stripe. Spinnerets yellow. Clypeus almost black, chelicerae, maxillae and labium grey-orange, sternum similar with dirty margin. Venter grey-brown with wide central yellowish stripe. Leg I with

dark metatarsus and femur, other segments light, darker around joints, tibia darker dorsoventrally. Other legs light, darker laterally. Femora of all legs with prolateral dark stripe.

Palpal organ (Figs 20B-D,21A-D) similar to *P. raveni* but embolus slightly different and tibia with additional retrodorsal apophysis.

Dimensions. CL 1.15, EFL 0.70, AEW 0.82, PEW 0.82, AL 1.35.

The female is unknown.

Pseudosynagelides bunya sp. nov. (Figs 13,22,23)

MATERIAL EXAMINED

Queensland: Holotype: δ , Bunya Mts, rainforest, Berlesate 200, sieved litter, 2.X.1979, G.B. Monteith, QMB S4718.

DIAGNOSIS

Tibia of palpal organ with two apophyses - retrolateral one hooked. Conductor missing.

Male (Fig. 22A). Cephalothorax dirty-brawn, lighter centrally. Abdomen with dark, dirty-brown scutum, two spots of white anterior spots and transverse median stripe. Spinnerets yellowish. Clypeus dark, chelicerae, maxillae and

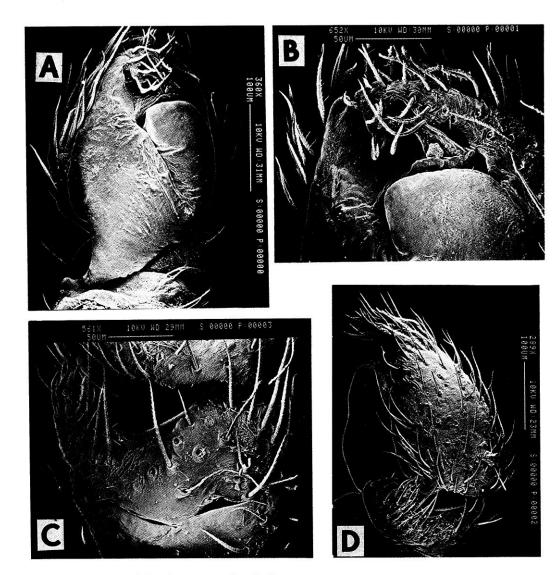


FIG. 21. Pseudosynagelides elae sp. nov., &, palpal organ.

labium dirty-orange, sternum dirty-yellow with darker margin. Venter dark-grey, with light median stripe. Femur I dirty-brown, patella and tibia lighter, other segments yellow. Further legs lighter with dark prolateral stripes, especially on femora.

Palpal organ (Figs 22B-D, 23A-D) with characteristic retrolateral tibial apophysis. Embolus hook-like, conductor absent.

Dimensions. CL 1.20, EFL 0.66, AEW 0.80, PEW 0.85, AL 1.25.

The female is unknown.

ACKNOWLEDGEMENTS

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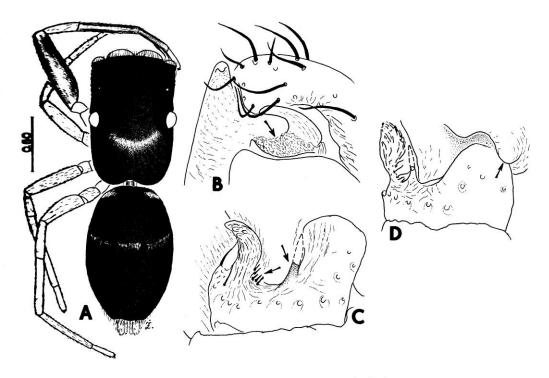


Fig. 22. Pseudosynagelides bunya sp. nov., 3, general appearance and palpal organ.

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LITERATURE CITED

- BOHDANOWICZ, A. 1988. Salticidae from the Nepal Himalayas. The genus *Synagelides* Bösenberg & Strand 1906. Courier Forsch.-Inst. Senckenberg 93: 65–86.
- DAVIES, V.T. AND ZABKA, M. 1989. Illustrated keys to the genera of jumping spiders (Araneae: Salticidae) in Australia. Mem. Qd Mus. 27(2): 189–266.
- KOCH, L. 1879. Die Arachniden Australiens, nach der Natur beschrieben und abgebildet. 2: 1045– 1156 (Bauer & Raspe: N ürnberg).
- PLATNICK, N.I. AND SHADAB, M.U. 1975. A revision of the spider genus *Gnaphosa* (Araneae: Gnaphosidae) in America. Bull. Amer. Mus. Nat. Hist. 155(1): 1-66

- PETRUNKEVITCH, A. 1928. Systema Aranearum. Trans. Conn. Acad. Arts Sci. 29: 1–270.
- PROSZYNSKI, J. 1976. Studium systematycznozoogeograficzne nad rodzina Salticidae (Aranei) Regionow Palearktycznego i Nearktycznego. Rozprawy WSP, Siedlce [6]: 1–260.
- SIMON, E., 1901. Histoire naturelle des Araignées 2(3): 381–668.
 - 1903. Histoire naturelle des Araignées 2(4): 669-1080.
- ZABKA, M. 1985. Systematic and zoogeographic study on the family Salticidae (Araneae) from Viet-Nam. Ann. zool. 39(11): 197–485.
 - 1987a. Salticidae (Araneae) of Oriental, Australian and Pacific Regions, I. Genera Clynotis and Tara. Ann. zool. 40(10): 437–450.
 - 1987b. Salticidae (Araneae) of Oriental, Australian and Pacific Regions, II. Genera *Lycidas* and *Maratus*. Ann. 2001. 40(11): 451-482.
 - 1988. Salticidae (Araneae) of Oriental, Australian and Pacific Regions, III. Ann. zool. 41(14): 421– 479
 - 1990. Salticidae (Araneae) of Oriental, Australian and Pacific Regions, IV. Genus Occisiona Simon, 1901. Rec. Austral. Mus. 42: 27-43.