

Biosystematics of Australian mygalomorph spiders: descriptions of three new species of *Teyl* from Victoria (Araneae: Nemesiidae)

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Abstract

Main, B.Y. 2004. Biosystematics of Australian mygalomorph spiders: descriptions of three new species of *Teyl* from Victoria (Araneae: Nemesiidae). *Memoirs of Museum Victoria* 61(1): 47–55.

Revised diagnostic notes on the tribe Teylini and the genus *Teyl* Main are presented. Three new species of *Teyl* from Victoria are described: *T. harveyi*, *T. walkeri* and *T. yeni*. The biogeography of the genus is briefly discussed.

Keywords

Araneae, Mygalomorphae, Nemesiidae, *Teyl*, Teylini, new species, biogeography, taxonomy

Introduction

The genus *Teyl* Main, 1975 is one of four genera of the tribe Teylini (Main, 1985b). *Teyl luculentus* Main, 1975 is the only named species attributed to the genus. However, many undescribed species are recognised in south-western Western Australia and further north in the Carnarvon Basin (Main, 1985b, 1996, 1999, Main et al., 2000). While it was formerly stated that the genus was confined to south-western Western Australia (Main, 1985b) examination of specimens in the South Australian Museum and Museum Victoria shows that it also occurs in Eyre Peninsula and western Victoria (Main, 1996: 168, 1997: 119, 1999: 237). Main (1999) suggested that the distribution of *Teyl* was fragmented in southern Australia during the Cretaceous inundation of central Australia and that the radiation of the genus in southern Western Australia has resulted from the continuing isolation in relictual habitats which have retained aspects of Gondwanan conditions. Similarly, occurrence of the genus in Eyre Peninsula and western Victoria may be related to persistence of microhabitats simulating Gondwanan characteristics.

Specimens collected from the Little Desert in Victoria by Museum Victoria are attributed to three new species described below. All specimens are lodged in Museum Victoria, Melbourne (NMV). Measurements are in millimetres. Abbreviations are as follows: ALE, anterior lateral eyes; AME, anterior median eyes; PLE, posterior lateral eyes; PME, posterior median eyes; d, dorsal; pd, prolaterodorsal; rd, retrolaterodorsal; v, ventral; pv, prolateroventral; rv, retrolateroventral; PMS, posterior median spinnerets; PLS, posterior lateral spinnerets; WA, Western Australia; SA, South Australia; WAM, Western Australian Museum.

In the species descriptions the leg formula is obtained by dividing the length of the leg by the length of the carapace. The patella width is measured across the dorsal proximal base (= knee); an indication of the relative thickness of the legs is given by the tibial index which = (100 x width of patella) divided by (length of tibia + patella) (Petrunkovitch, 1942).

Tribe Teylini Main

Teylini Main 1982: 274.—Main, 1983: 925.—Main, 1985b: 744.—Raven 1985: 82, 87.

Diagnosis. The main diagnostic features of the Teylini (and which distinguish the tribe from the Anamini) are: the narrow band of cuspules on the maxillae (covering no more than a third of the length of the maxillae) in contrast to the broader distribution in Anamini (*Chenistonia* Hogg, 2001 and some possibly misplaced species of *Aname* Koch, 1872 are exceptions); absence of a spine-bearing spur on tibia I of males except in *Teyloides* and the spherical, subspherical or gourd shaped bulb of the male palp with the embolus arising equatorially or from the apex; embolus sometimes reflexed, usually tapering but may be flanged proximal to or at tip. Inclusion of *Merredinia* Main, 1983 (which lacks a tibial spur) in the Anamini has already been noted as tentative (Main, 1985b).

Remarks. Main (1982) erected the tribe Teylini (to include at that time only the genus *Teyl*) as distinct from the Anamini. However it was not fully described until 1985 (Main, 1985b) when the four genera *Teyl* Main, 1975, *Namea* Raven, 1984, *Teyloides* Main, 1985 and *Pseudoteyl* Main, 1985 were attributed to it. Remarks by Raven (1985: 5 December 1985) that Teylini was a nomen nudum were redundant in that they were

predated by publication of a description of the tribe (Main, 1985b: 17 September 1985).

Representatives of the tribe occur in southwestern Western Australia, southern South Australia, western Victoria and the border country of southeastern Queensland and northeastern New South Wales.

Teyl Main

Teyl Main, 1975: 74.

Type species. *Teyl luculentus* Main, 1975 by monotypy (female holotype from 14.5 km N of Bruce Rock, WA, (WAM 75-944).—Raven, 1981: 341.—Main, 1982: 73.—Main, 1983: 925.—1985a: 39.—1985b: 746.—Raven, 1985: 82, 87, 88.

Diagnosis. As in Main (1985b) but with the following modifications/additions. Small to medium-sized spiders (carapace length 2.0 to 10.0 mm). Scopula sparse or absent on tarsi of palp and anterior legs of female. Scopula of male complete (i.e. covering whole ventral face) on tarsi I and II, on apical part only (if present) on anterior metatarsi. Metatarsus I of males straight (unmodified) or with “elbow” i.e. “bowed”; with many, few or no spines. Palpal bulb and embolus of male variable, as for tribe and with embolus short or long (based on described and undescribed species). Differs from *Namea* by the broad sternum which is convex behind labium and the short ovoid terminal segment of the posterior lateral spinnerets; from *Teyloides* by lacking a spined spur on tibia I in the male and lobate, not coiled, internal genitalia in the female; and from *Pseudoteyl* by absence of dark smudges on the legs.

Remarks. Raven (1985: 88) incorrectly stated that the holotype of *Teyl luculentus* was a “male”. The holotype is a female (Main, 1975: 74). The comment by Raven (1985: 88) “cymbium ... aspinose” requires modification in that some undescribed species and one species described here have spines on the male palpal tarsus. The first part of the third couplet of the key (Main, 1985b) requires modification as follows “Southwest WA, Eyre Peninsula, SA and western Victoria (instead of “Southwest WA only”). Species (including many undescribed) occur in southwestern Western Australia, Eyre Peninsula South Australia and western Victoria.

Key to males of species of *Teyl*

1. Spines on palp tarsus *T. harveyi*
— Palp tarsus without spines 2
2. Embolus tip tapering; metatarsus I with spines 3
— Embolus tip flanged; metatarsus I without spines
..... *T. walkeri*
3. Metatarsus I with few spines *T. yeni*
— Metatarsus I with many spines *T. luculentus*

Teyl harveyi sp. nov.

Figures 1–9, table 1

Material examined. Holotype, male, Victoria, 24.9 km SE of Murrayville, 35°24'S, 141°24'E (site 79), drift fence pitfall trap, Jun 1986, A.L. Yen (NMV T-3011). Paratype, male, Victoria, 20.3 km SE of Murrayville 35°24'S, 141°20'E (site 76), drift fence pitfall, Jun 1986, A.L. Yen (NMV T-3012).

Table 1. *Teyl harveyi* sp. nov. Holotype, male. Leg measurements and leg formulae

	F	P	T	MT	T	Total
I	2.8	1.8	2.2	2.1	1.4	10.3
II	2.5	1.3	2.0	2.0	1.0	8.8
III	2.2	1.2	1.6	2.1	1.3	8.4
IV	3.0	1.3	2.7	2.8	1.7	11.5
Palp	1.8	1.1	1.3	—	1.1	5.3

Width of patella I at knee = 0.4. Tibial index = 10.00.

Width of patella IV at knee = 0.4. Tibial index = 10.00.

Leg formulae: 4/3.7, 1/3.32, 2/2.83, 3/2.7.

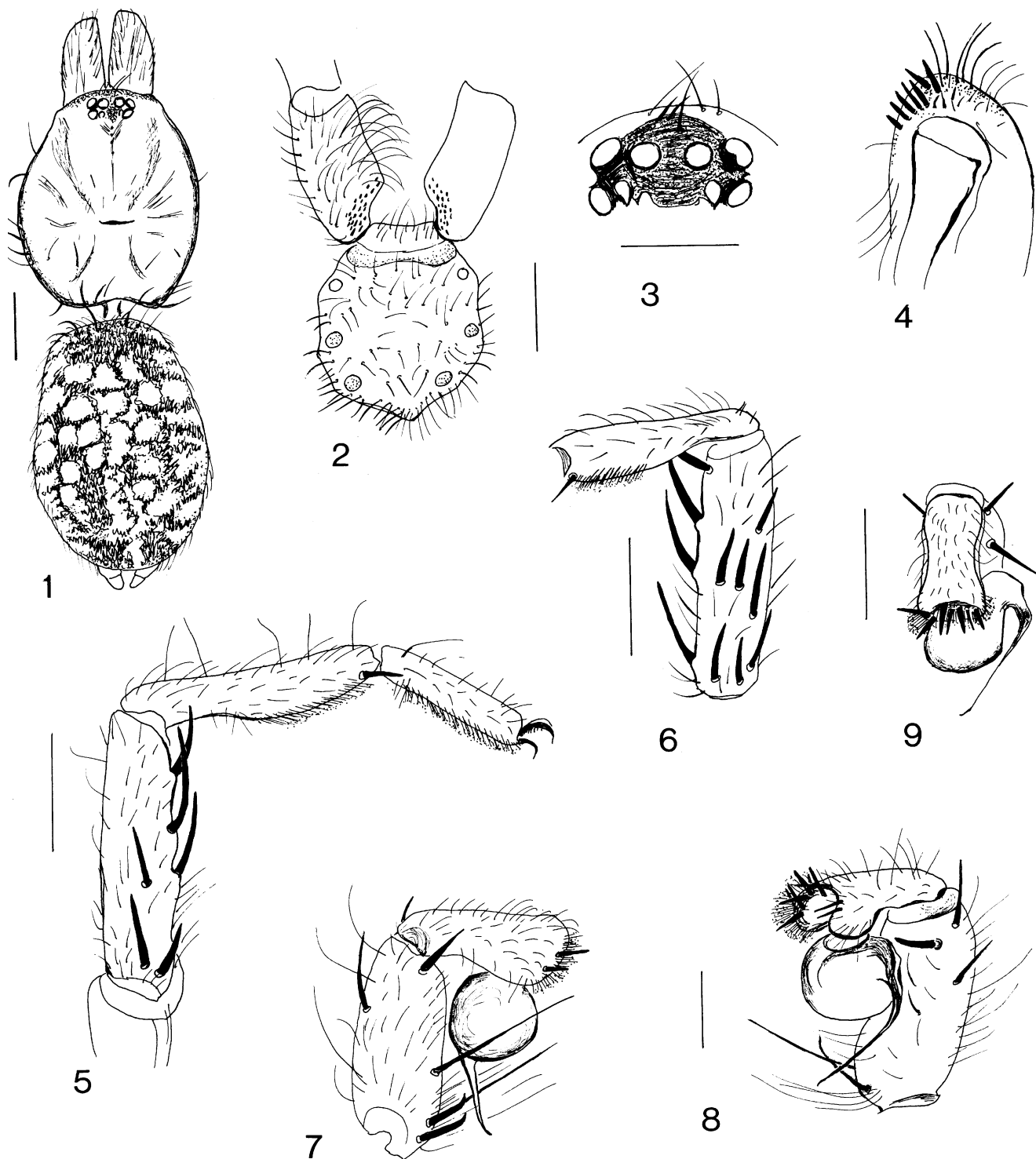
Diagnosis. Male. Light tan brown, glabrous carapace with sparse and delicate posterolateral spines. Abdomen with dorsal dark reticulated pattern, ventrally yellow with a few speckles anterior to spinnerets. Retrolateral spines of palp tibia: 1 heavy apical, 2 heavy proximal and 2 long, tapering spines on retroventral margin. A group of heavy apical, dorsal spines on palp tarsus. Embolus tapering. Metatarsus I with pair of thin apical ventral spines, moderate “elbow”. Tibia I with spines on all faces; a line of 4 megaspines on retroventral angle.

The group of dorsal apical spines on palp tarsus distinguishes the species from *T. luculentus* and the other two species (*T. walkeri* and *T. yeni*) described here; the presence of a pair of ventral apical spines on metatarsus I further distinguishes it from *T. walkeri* which lacks spines and *yeni* which has additionally several prolaterodorsal spines.

Female. Unknown.

Description of male (holotype). Carapace glabrous, light tan brown with darker margin and dark radial lines; abdomen with dorsal pattern of dark, mottled reticulations, venter pale yellowish with a few dark speckles in front of spinnerets. Carapace with few marginal spines, all delicate, median lateral group and posterior marginal group. Fovea straight. Carapace length 3.1, width 2.6mm; abdomen length 3.7, width 2.3. Eye group on mound 0.5 long; eye group 0.3 mm long, 0.7 wide; diameters of eyes: ALE 0.2, AME 0.2, PLE 0.15, PME 0.5. Sternum slightly convex, length 1.9, width 1.6; evenly covered with fine bristles; sigilla small, faint, submarginal; labium length 0.3. Chelicerae with pseudorastellum of about 8 thick spines on apical inner edge of paturon; groove with 8 promarginal teeth, proximal two large and separated by a gap from others; a few basal granular teeth on retromargin. Maxillae with 33 cuspules on right maxilla; about 30 on left, some damaged.

Legs with scopula on tarsi I and II (thin on II), and distal half of metatarsi I and II. Tarsal claws with double combs of superior claws with about 15, fine, close-set teeth decreasing in size proximally; median claw long and curved. Spination of legs – I, femur d 6, patella rv 1, tibia rv 3 megaspines on slight mounds in a line followed by 1 heavy proximal spine, r 1-1, v 2-2, pv 1-1-1, metatarsus pv 1 apical, rv 1 apical, tarsus 0. II, femur d 6, patella 0, tibia v 1-2-2, pd 1-1, metatarsus v 2-2, pd 1-1. III, femur d 6, patella pd 1-1, tibia v 2-2-4, pd 1-1, rd 1-1, metatarsus v 2-2-3, pd 1-1-1, rd 1-1-1, tarsus 0. IV, femur d 6,



Figures 1–9. *Teyl harveyi* sp. nov. Holotype, male. 1, dorsal view, carapace, chelicerae and abdomen; 2, sternal area; 3, eye group; 4, apical region left chelicera; 5, right leg I, retrolateral view tarsus, metatarsus and tibia; 6, right leg I, tibia and metatarsus (ventral aspect of tibia); 7, tarsus and tibia of right palp, retrolateral; 8, tarsus and tibia of right palp, prolateral; 9, right palp tarsus and palpal organ, dorsal. Scale = 1.0 mm. (figs 1, 2, 5, 6, 9); 0.5 mm. (figs 3, 7, 8).

patella, pd 1 apical, rd 1, tibia v 2-2-3, pd 1-1-1, rd 1-1-1, metatarsus v 2-1-2-3, pd 1-1-1, rd 1-1-1, tarsus 0.

Palp (Left palp missing). Tarsus with apical group of about 10 thick spines. Tibia with 2 heavy terminally hooked and 2 long thin proximal retrolateral spines, prolaterally with 2 tapering heavy apical spines and 1 finer spine. Bulb spherical but viewed dorsally, gourd shaped with embolus arising at sharp angle (reflexed) ; embolus finely tapering.

Variation. Paratype carapace length 3.0, width 2.5.

Etymology. The species is named as a tribute to M. S. Harvey for his vast contribution to arachnology.

Teyl walkeri sp. nov

Figures 10–30, table 2

Material examined. Holotype, male, Victoria, 17.8 km SE of Murrayville, 35°22'S, 141°19'E (site 74), drift fence pitfall, Jun 1986, A.L. Yen (NMV T-3008). Paratypes. Allotype female, 27.2 km SE of Murrayville, 35°25'S, 141°11'E, drift net fence pitfall trap (site 79), Jun 1986, A.L. Yen (NMV T-3009). Male, 20.3 km SE of Murrayville, 35°24'S, 141°20'E (site 76), drift fence pitfall, Jun 1986, A.L. Yen (NMV T-3010).

Diagnosis. Male. Generally pale yellow, abdomen with irregular dark brown, median dorsal pattern. Carapace non hirsute, heavy marginal bristles. Palp tarsus without spines; tibia retrolaterally with 2 hooked, proximal spines, 1 long tapering spine and 1 apical spine. Embolus slightly reflexed, flanged tip; bulb large, spherical but in some views gourd-shaped. Legs moderately hirsute, heavily spinose. Metatarsus I without spines. Tibia I with 4 large spines in retroventral line (3 megaspines terminally hooked, distal 2 on low mounds).

Absence of spines on metatarsus I and the flanged embolus tip distinguish the species from *T. luculentus*, *T. harveyi* and *T. yeni*.

Female. Small (< 4 mm), uniformly pale yellow except abdomen greyish with dorsal median darker streak; carapace glabrous. Legs with dark spines and sparse hairs and bristles.

The presence of thin, sparse scopula on tarsi of palps and legs I and II differs from *T. luculentus* which lacks scopula in female. Tibia I with fewer heavy spines than *T. luculentus*. Internal genitalia lobate with short, thick stems.

Description of male (holotype). Uniformly pale yellow except for ocular area black, abdomen dorsally with irregular dark

brown median pattern. Carapace non hirsute, with heavy marginal bristles. Legs not glabrous, moderately hirsute, heavily spinose. Fovea straight. Carapace length 3.2, width 2.5; abdomen length 3.5. Eye tubercle slightly wider than edges of ALE/PLE, tubercle 0.4 high; length of eye group 0.3, width 0.7. Diameters of eyes: ALE 0.15, AME 0.12, PLE 0.1, PME 0.1. Sternum length 1.5, width 1.3; labium 0.2. Chelicerae with heavy apical bristles intermixed with a few reduced spine-like bristles. Fang groove with 7 teeth on promargin and 6 or 7 small granule-like teeth retrobasally. Maxillae with narrow band of 18–20 cuspules (left and right).

Legs. Scopula present on tarsi and apical half of metatarsi I and II. Tarsal claws with 11 or 12 teeth in each line of all claws. Spination I, femur d 1-1-3-1 (pd apical), patella pd 1 (apical), tibia rd 1-1, pv 1-1-1, pd 1-1-1, r 1-1-1-1 (distal 3 megaspines with slightly hooked tip), metatarsus 0. II, femur 1-3-1-1 (pd apical), patella pd 1 apical, tibia pd 1-1, v 2-2, metatarsus pd midregion 1, rv midregion 1. III (right missing) left femur 1-1-3-3-2, patella pd 1 apical, rd 1 mid region, tibia d 1-3-2, metatarsus about 3 spines in a line on each face. IV, femur d 3 median, pd 3, rd 3, patella 0, tibia 2 or 3 spines in a line on each face, metatarsus about 3 spines in a line on each face (difficult to determine exact 'side'). (Note: also a half circle of dorsal curved bristles on trochanters). Metatarsus I with slight proximal ventral depression and slight "elbow" (Figs 14–16).

Palp. Tarsus without spines; tibia retrolaterally with 2 proximal, terminally hooked, stout spines and 1 long, bristle-like tapering spine, 1 midretrodorsal spine and 1 retrolateral apical spine, prolaterally with 3 stout spines and 2 prolateral-ventral proximal tapering bristle-like spines. Bulb subspherical to gourd-shaped, height 0.6 mm, width 0.5 mm; embolus arising mid (equatorial) region (Figs 19–21). Embolus not distinctly reflexed, tip flanged.

Comments on paratype. Carapace damaged on posterior edge (length approximately 3.0, width 2.5); retrolateral spination of right palp tibia as for holotype; retrolateral aspect of tibia I lacks median spine; abdomen missing.

Description of female (paratype). Uniformly pale yellow except abdomen greyish with dorsal median dark brown streak reaching about two-thirds from anterior margin. Legs with sparse hairs and bristles; brown spines. Carapace glabrous and

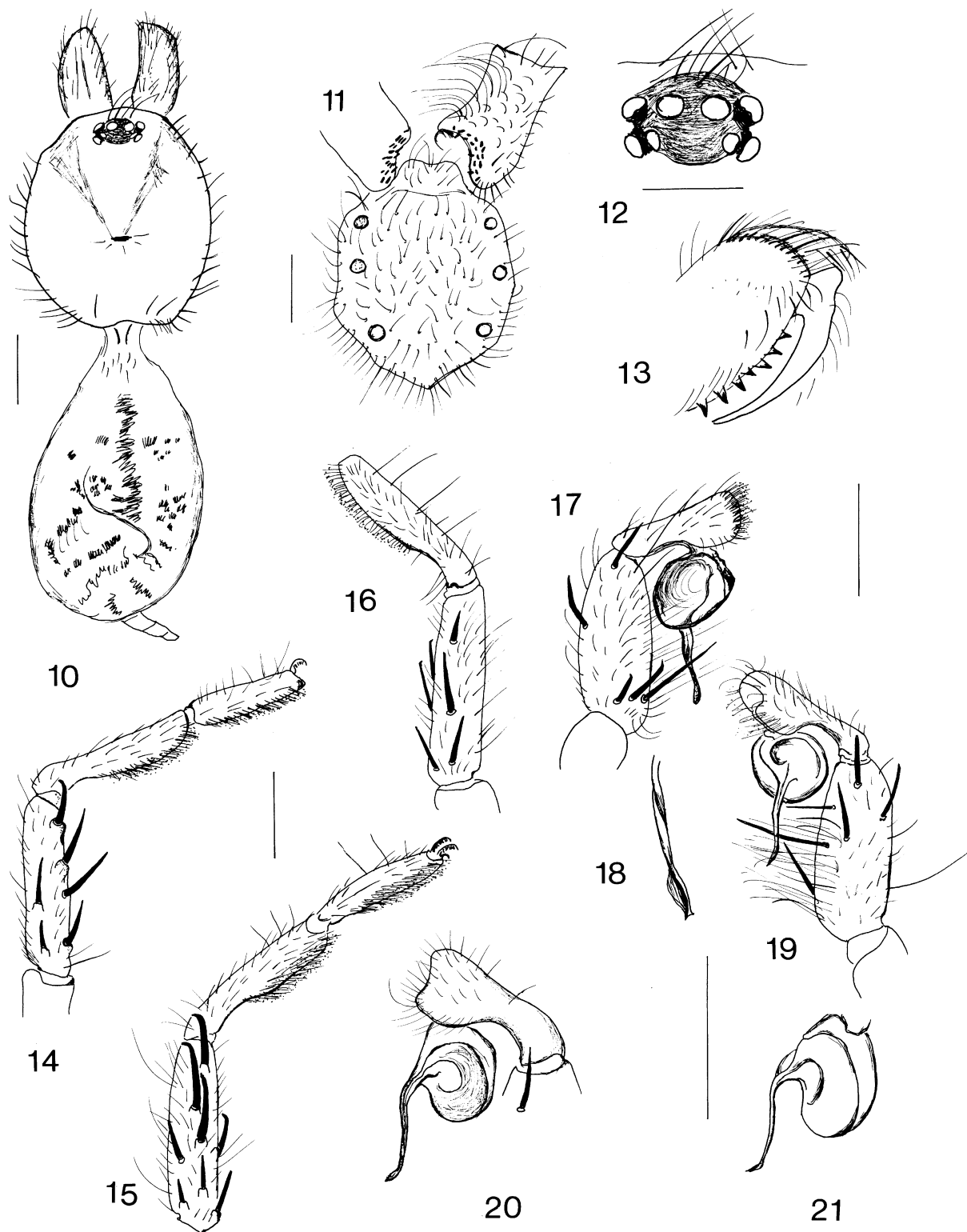
Table 2. *Teyl walkeri* sp. nov. Holotype, male and paratype, female. Leg measurements and leg formulae, male with female measurements in parentheses.

	F	P	T	MT	T	Total
I	2.8 (2.7)	1.5 (1.7)	2.1 (2.0)	1.6 (1.9)	1.4 (1.2)	9.4 (9.5)
II	2.6 (2.5)	1.2 (1.5)	1.9 (1.8)	1.9 (1.8)	1.5 (1.4)	9.1 (9.0)
III	2.4 (2.5)	1.1 (1.4)	1.7 (1.7)	2.1 (2.1)	1.3 (1.3)	8.6 (9.0)
IV	3.0 (3.1)	1.3 (1.6)	2.6 (2.7)	2.6 (2.9)	1.6 (1.6)	11.1(11.9)
Palp	1.8 (1.8)	0.8 (1.1)	1.2 (1.3)	–	1.0 (1.0)	4.8 (5.2)

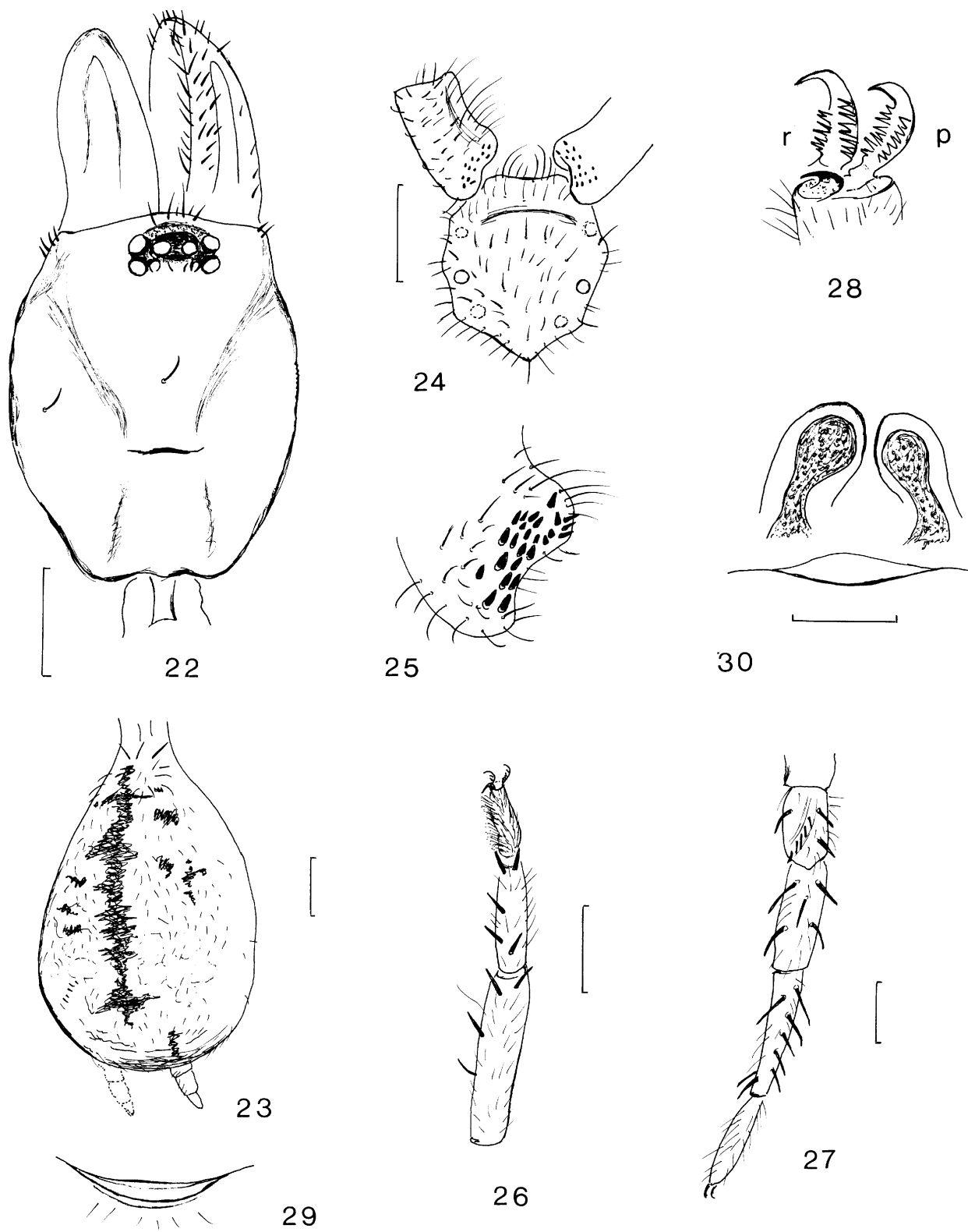
Width of patella I at knee = 0.45 (0.45). Tibial index = 12.5 (12.16).

Width of patella IV at knee = 0.40 (0.5). Tibial index = 10.2 (11.62).

Leg formulae: 4/3.0 (3.6), 1/2.9 (2.9), 2/2.8 (2.72), 3/2.7(2.72).



Figures 10–21. *Teyl walkeri* sp. nov. Holotype, male. 10, carapace, chelicerae and abdomen, dorsal view; 11, sternal area and maxillae; 12, eye group; 13, left chelicera, pro-view; 14, leg I, tarsus, metatarsus, tibia, retrolateral view; 15, right leg I, tarsus, metatarsus, tibia, retroventral view; 16, right leg I, metatarsus and tibia prolateral view; 17–21, right palp; 17, tibia, tarsus and palpal organ, retrolateral; 18, same view as for 17, palpal tip enlarged; 19, tibia, tarsus and palpal organ, prolateral view; 20, tarsus and palpal organ, prolaterodorsal; 21, palpal organ (bulb and embolus) dorsal. Scale = 1.0 mm. (figs 10, 14–17, 19); 0.5 mm. (figs 11, 12); 13 and 18 not to scale.



Figures 22–30. *Teyl walkeri* sp. nov. Paratype (allotype), female. 22, carapace and chelicerae; 23, abdomen, dorsal view; 24, sternal area and maxillae; 25, right maxilla, proximal with cuspules; 26, right leg I ventral, tarsus, metatarsus and tibia; 27, right leg III dorsal, tarsus, metatarsus and tibia and patella; 28, right leg I, tarsal claws, p, prolateral, r, retrolateral; 29, genital lobe/aperture; 30, internal genitalia (spemathecae). Scale = 1.0 mm (figs 22–24, 26, 27); 0.5 mm (fig. 30); figs 25, 28, 29 not to scale.

with black ocular area. Fovea straight. Carapace length 3.3, width 2.7, caput width 1.9; abdomen length 6.2. Carapace lacks marginal spines. Eye group 0.85 long, 0.4 wide. Diameters of eyes: ALE 0.2, AME 0.15, PLE 0.15, PME 0.5; ALE apart 0.55. Sternum length 1.7, width 1.5. Labium 0.3 long. Chelicerae with pseudorastellum of stout bristles and long thin spines. Fang groove with 7 (left), 8 (right) promarginal teeth and 5 basal retromarginal teeth. Maxillae with cuspules in narrow band around incurved edge (about 22 on left maxilla, 35 on right), small rounded heel.

Legs. Scopula thin on palp tarsus and tarsus I; a few proximal scopula hairs on tarsus II; a few thin apical hairs on metatarsus I. Tarsal claws. Palp claw with 6 prolateral teeth (left) (right claw detached); legs with 6–9 teeth in each row of all claws. Spination I, femur pd 1 apical, rd a few, patella pd 1-1-1 bristle-like, tibia rv 1-1, v 2 bristle-like, metatarsus v 2-1 (rv) -2. II, femur pd 1 apical, patella pd 1 apical, tibia v 1-1-2 (bristles), pd 1-1, metatarsus v 2-2-2, pd 1. III, femur pd 1 apical, patella d 2-1, tibia v 1-2-2 (bristles), d 3- 2, metatarsus v 2-2-3, d 8 or 9 spines and heavy bristles. IV, femur pd 1 apical, patella rd 1, tibia v 2-2-2, rd 1-1, metatarsus v 2-2-3, d 2-1-1-2-1.

Palp, tibia pv 4 distal, pd 1 proximal, tarsus pv 1 proximal. Internal genitalia lobate with short, thick stems, terminally bulbous (Fig. 30).

Etymology. The species is named in honour of Dr Ken Walker in recognition of his entomological and arachnological work.

Teyl yeni sp. nov.

Figures 31–40, table 3

Material examined. Holotype, male, Victoria, 22.2 km SE of Murrayville, 35°25'S, 141°21'E (site 77), drift fence pitfall trap, Jun 1986, A.L. Yen (NMV T-3013). Paratype, male, Victoria, 17.8 km SE of Murrayville, 35°23'S, 141°19'E (site 74), drift fence pitfall trap, Jun 1986, A.L. Yen. (NMV T-3014).

Diagnosis. Male. Generally pale yellowish brown with dark median pattern on abdomen dorsum. Palp tibia retrolaterally with 2 basal and 1 apical stout, heavy spines and 2 long thin tapering spines. Tarsus without apical spines. Embolus base arising equatorially and slightly reflexed, tapering. Metatarsus I slightly bowed, 2 retrolateral spines in proximal half. Tibia I retrolaterally with 3 megaspines in proximal line.

Differs from *T. harveyi* by having 2 retrolateral spines (instead of 1) on metatarsus I, and further from *T. harveyi* and *T. walker* by having more metatarsal spines (including a prolaterodorsal line) on metatarsus I. Differs from *T. luculentus* by having a more strongly “bowed” metatarsus I, the strongly hooked retrolateral spines on the palp, smaller size and delicate marginal spines on carapace and from all the other species by the more widely spread maxillary cuspules.

Female. Unknown.

Description of male (holotype). Carapace, sternum, legs yellowish brown with faint smudge of darker brown. Abdomen pale yellowish brown with reticulated dark brown pattern on median dorsal area. Legs with short evenly distributed hairs and sparsely scattered strong spines. Carapace with delicate

Table 3. *Teyl yeni* sp. nov. Holotype, male. Leg measurements and leg formulae.

	F	P	T	MT	T	Total
I	4.4	2.0	3.4	3.3	2.3	15.4
II	4.2	1.9	3.1	3.2	2.3	14.7
III	4.3	1.4	2.5	3.0	2.1	13.3
IV	3.9	1.8	3.7	4.5	2.3	16.2
Palp	2.7	1.5	2.1	–	1.0	7.3

Width of patella I at knee = 0.4. Tibial index = 7.4.

Width of patella IV at knee = 0.4. Tibial index = 7.27.

Leg formulae: 4/4.26, 1/4.05, 2/3.86, 3/3.5

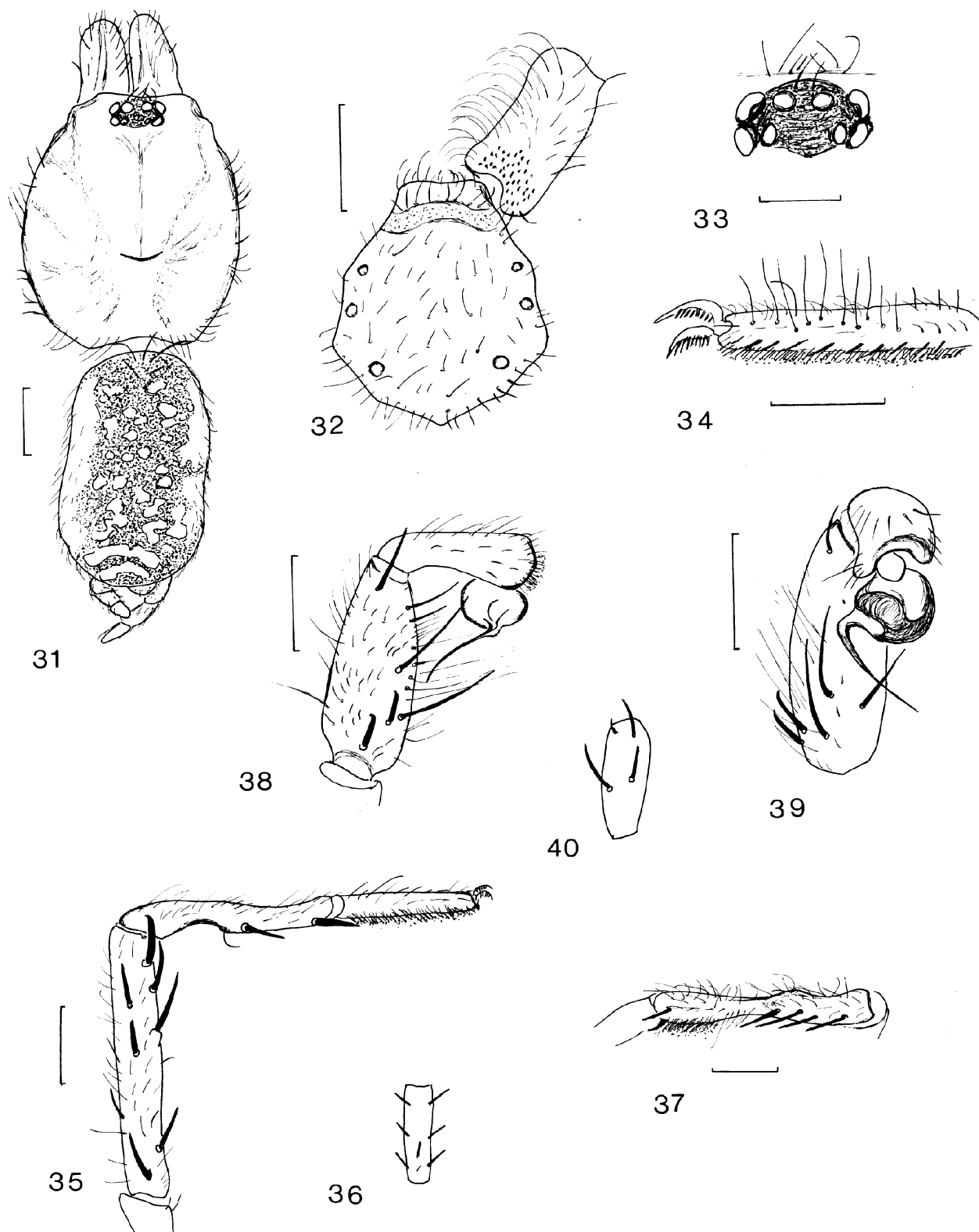
marginal spines. Caput low. Height of carapace at fovea 0.6, at eyes 1.0. Fovea straight, slightly reflected at edges. Carapace length 3.8, width 3.5, caput width 2.0. Abdomen length 4.2, width 2.4. Eye group broad on low tubercle 0.4 long, 0.9 wide. Diameters of eyes: ALE 0.25, AME 0.2, PLE 0.2, PME 0.1. Sternum length 2.3, width 2.0; with long fine bristles uniformly scattered. Labium 0.3 long. Sternal sigilla small, round, indistinct, marginal although posterior pair separated by a marginal line of bristles. Chelicerae long and narrow with a pseudorastellum of short apical spines on inner edge. Promargin of cheliceral groove with 8 teeth, 5 basal retromarginal teeth. Maxillae with broad band of about 50 cuspules around inner edge (extending farther from inner edge than is usual for *Teyl* specimens).

Legs. I, metatarsus “bowed” i.e. with a distinct “elbow”. Scopula complete (that is covering full extent of segment) on tarsus I, thin on II, sparse and divided by a line of bristles on III and IV; present on metatarsi I and II only (apical half). Trichobothria. Palp tarsus at least 8. Tarsus I with about 9, plus four rigid, vertical hairs, metatarsus about 12 trichobothria. Tarsal claws 8–12 teeth on each comb of paired claws, basal ones may be fused. Spination, I, femur d 14, patella pd 2, tibia d 2-1-2-2 (including pd and rd), rv 3 megaspines in apical half, 1 in lower third (Fig. 35), metatarsus pd 1-1-1-1-1 (left 1-1-1-0-1), rv 2 distal to elbow, pv 1 apical. II, femur d 11, patella pd 2, tibia d 7, v 2-2-3, metatarsus d 5, v 2-2-2. III, femur d 11, patella pd2, rd 1, tibia d 3-3-3, v 2-2-2, metatarsus d 9, v 2-2-3. IV, femur d 11, patella d 0, tibia d 6, v 2-2-2, metatarsus d 2-1-1-2-3.

Spinnerets. PMS length 0.4, PLS, basal segment 0.6, median 0.4, terminal 0.5.

Comments on paratype. Specimen larger than holotype; carapace length 4.4, width 4.0. Left palp with 3 basal retrolateral heavy spines (instead of 2). Right legs II, III, IV and left III, IV missing. Tibia I spination (right) d 2-1-1-2, rv 5 in a line (2 proximal, 3 distal megaspines), pv 2-1, metatarsus pd 1-1 (proximal) - 1 (distal/apical), rv 1 distal to elbow and 1 very small apical spine; (left) d 2-1-2-2, rv 3 in line (1-1-1 distal megaspines), pv 1-1-1, metatarsus pd 1-1-1, rv 1-1 distal to elbow.

Etymology. The species is named in recognition of Dr Alan Yen’s untiring activities in entomology and arachnology.



Figures 31–40. *Teyl yeni* sp. nov. Holotype, male. 31, dorsal view, carapace, chelicerae and abdomen; 32, sternal area and left maxilla; 33, eye group; 34, right tarsus I, prolaterodorsal; 35, right leg I, retrolateral, tibia, metatarsus, tarsus; 36, schematic dorsal spination right tibia I; 37, right metatarsus I, prolaterodorsal; 38, right palp, retrolateral; 39, right palp, prolateroventral; 40, schematic spination of right palp tibia, prolateral. Scale = 0.1 mm (figs 31, 32, 34, 35, 37–39); 0.5 mm (fig. 33); figs 36, 40 not to scale.

Acknowledgements

I thank Drs K. Walker and A.L. Yen of Museum Victoria for making available the specimens from the biological survey of the Little Desert.

References

- Main, B.Y. 1975. The citrine spider: a new genus of trapdoor spider (Mygalomorphae: Dipluridae). *The Western Australian Naturalist* 13: 73–78.
- Main, B.Y., 1982. Adaptations to arid habitats by mygalomorph spiders. Pp. 273–283 in: Barker, W.R. and Greenslade, P.J.M. (eds), *Evolution of the Flora and fauna of Arid Australia*. Peacock Publications: Frewville.
- Main, B.Y. 1983. Further studies on the systematics of Australian Diplurinae (Chelicerata: Mygalomorphae: Dipluridae): two new genera from south western Australia. *Journal of Natural History* 17: 923–949.
- Main, B.Y. 1985a. Mygalomorphae. Pp. 1–48 in: Walton, D.E. (ed.), *Zoological Catalogue of Australia, Arachnida*. Vol.3. Australian Government Publishing Service: Canberra.
- Main, B.Y. 1985b. Further studies on Australian Diplurinae: a review of the genera of the Teylini (Araneae: Mygalomorphae: Diplurinae). *Australian Journal of Zoology* 33: 743–759.
- Main, B.Y. 1996. Microcosmic biogeography: trapdoor spiders in a time warp at Durokoppin. Pp. 163–167 in: Hopper, S.D., Chappill, J.A., Harvey, M.S., and George, A.S. (eds), *Gondwanan heritage. Past, present and future of the Western Australian biota*. Surrey Beatty and Sons: Chipping Norton.
- Main, B.Y. 1997. Granite outcrops: A collective ecosystem. *Journal of the Royal Society of Western Australia* 80: 113–122.
- Main, B.Y. 1999. Biological anachronisms among trapdoor spiders reflect Australia's environmental changes since the Mesozoic. Pp. 236–245 in: Ponder, W., and Lunney, D. (eds), *The other 99%. The conservation and biodiversity of invertebrates*. Royal Zoological Society of New South Wales: Mosman.
- Main, B.Y., Sampey, A., and West, P.L.J. 2000. Mygalomorph spiders of the southern Carnarvon Basin, Western Australia. *Records of the Western Australian Museum Supplement* 61: 281–293.
- Petrunkévitch, A. 1942. A study of amber spiders. *Transactions of the Connecticut Academy of Arts and Sciences* 34: 119–464.
- Raven, R.J. 1981. A review of the Australian genera of the mygalomorph spider subfamily Diplurinae (Dipluridae: Chelicerata). *Australian Journal of Zoology* 29: 321–363.
- Raven, R. J. 1985. The spider infraorder Mygalomorphae (Araneae): cladistics and systematics. *Bulletin of the American Museum of Natural History* 182(1): 1–180.

