

A REVISION OF THE SPIDER GENUS *TAURONGIA* (ARANEAE, STIPHIDIOIDEA) FROM SOUTH-EASTERN AUSTRALIA

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ABSTRACT. The spider genus *Taurongia* Hogg 1901 and the species *T. punctata* (Hogg 1900) are redescribed. *Taurongia punctata* is shown to be a rather variable species with a widespread distribution across the eastern central Victorian highlands. *Taurongia punctata* is a robust spider, contrasting with a more gracile new species, *T. ambigua*, described from the western Victorian highlands. The placement of the latter in *Taurongia* is provisional and may change once other undescribed ‘*Taurongia* group’ genera from eastern Australia have been examined. The *Taurongia* species dealt with here differ from the latter taxa in having an increased number of cylindrical spigots and a large palpal median apophysis.

Keywords: Taxonomy, cribellate, new species

Hogg (1900) described two ‘dictynid’ spiders from central Victoria under the name *Hylobius*. This name (preoccupied in Coleoptera) was subsequently replaced by *Taurongia* (Hogg 1901). Lehtinen (1967) characterized the genus, figuring *T. punctata* (Hogg 1900), and placed it in his Desidae, Desinae. Forster (1970) noted that the available data were insufficient for accurate placement of *Taurongia* in his concept of the Desidae. *Taurongia* has long been confused with related ‘*Taurongia* group’ taxa that are widely distributed in eastern Australian forests from Tasmania to Queensland. These taxa comprise several undescribed genera that are morphologically diverse but united by characteristics of the genitalia, notably the palpal tegular structure and the placement of the median apophysis (reduced to a slender, spine-like process in most taxa, except *Taurongia*). Here, the genus *Taurongia* is reviewed as a step toward characterizing this group of spiders and clarifying their relationships.

METHODS

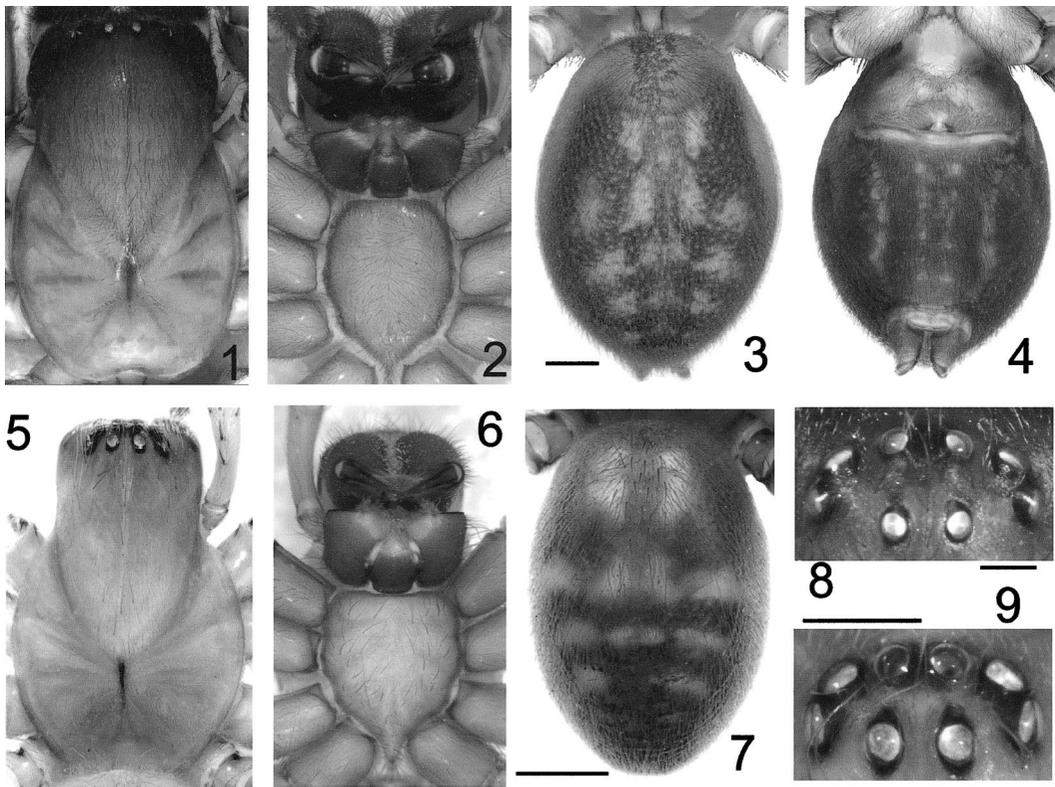
Specimen examinations, measurements and drawings were made using a Wild M5 or Leica M12 microscope with graticule and drawing attachment. Epigynal preparations were cleared in lactic acid, before mounting in glycerol for microscopic examination. The left side male palp is illustrated. Specimen preparations for scanning electron microscopy

were taken through 80–100% alcohol stages, 100% acetone and then air dried.

Abbreviations and definitions.—“Tegular window” refers to the gap between the proximal embolus and the basal part of the conductor. BL = body length; CL = carapace length; CW = carapace width; CapW = caput width; LL = labium length; LW = labium width; SL = sternum length; SW = sternum width; EGW = eye group width; AME = anterior median eyes; ALE = anterior lateral eyes; PME = posterior median eyes; PLE = posterior lateral eyes; MOQ = median ocular quadrangle; RTA = retrolateral tibial apophysis; RVTA = retroventral tibial apophysis; MA = median apophysis; ALS = anterior lateral spinneret; PMS = posterior median spinneret; PLS = posterior lateral spinneret; MAP = major ampullate spigot; mAP = minor ampullate spigot; Cyl = cylindrical spigots; Pc = paracribellar spigots; mPLS = modified PLS spigot; n = nubbin. The material examined in this study is lodged in the following repositories: AM = Australian Museum, Sydney; NHM = Natural History Museum, London; NMV = Museum of Victoria, Melbourne; WAM = Western Australian Museum, Perth.

TAXONOMY

Superfamily Amaurobioidea Thorell 1870
Taurongia Hogg 1901
Hylobius Hogg 1900: 82 (preoccupied by *Hylobius* Germar 1817).



Figures 1–9.—*Taurongia* species: 1–4, 8, *T. punctata* (Hogg); 5–7, 9, *T. ambigua* new species. 1, 5. Carapace; 2, 6. Sternum and mouthparts; 3, 4, 7. Abdomen, 3, 7. dorsal; 4. ventral; 8, 9. Eyes, anterodorsal. Scale bars: 1 mm (Figs. 1–4, 5–7); 0.5 mm (Figs. 8, 9).

Taurongia Hogg 1901: 278 (replacement name); Lehtinen 1967: 267, 326; Platnick 2004.

Hylobihoggia Strand 1935: 304 (superfluous replacement name); Lehtinen 1967: 267; Platnick 2004.

Type species.—*Hylobius divergens* Hogg 1900 by original designation, currently a junior synonym of *Hylobius punctatus* Hogg 1900.

Comment on synonymy of type species.—Hogg (1900) described two species in his genus *Hylobius* and designated *H. divergens* as the type. In 1901 he replaced the preoccupied generic name with *Taurongia*. Hogg's material came from the Macedon District in Victoria. It comprised the female holotype of *Taurongia divergens* and the male and female syntypes of *T. punctata*, although Lehtinen (1967) noted that the female syntype was a juvenile specimen. Lehtinen (1967) placed *T. divergens*, the type species, in synonymy with *T. punctata*, presumably because

the male *T. punctata* specimen provided the better character set. Subsequent collecting by the author has not revealed a second species of *Taurongia* in the Macedon District.

Diagnosis.—Cribellate spiders with a robust or gracile body form. Carapace dark brown without obvious patterning. Male palp: cymbium digitiform, spinous; median apophysis large, spatulate; RTA large, ventrad. Epigynum divided by a median septum, or septum indistinct. PMS with 4–6 cylindrical spigots.

Redescription.—Medium-large robust or gracile cribellate spiders. Carapace, jaws and legs dark reddish brown, anterior caput and jaws darkest; lateral carapace with dark radial streaks from fovea; legs not banded. Dorsal and lateral abdomen dark brownish-grey, with more or less distinct pallid chevrons dorsally, the 3 anterior pairs with small sigillae; venter grey, bounded laterally by pallid, dotted lines,

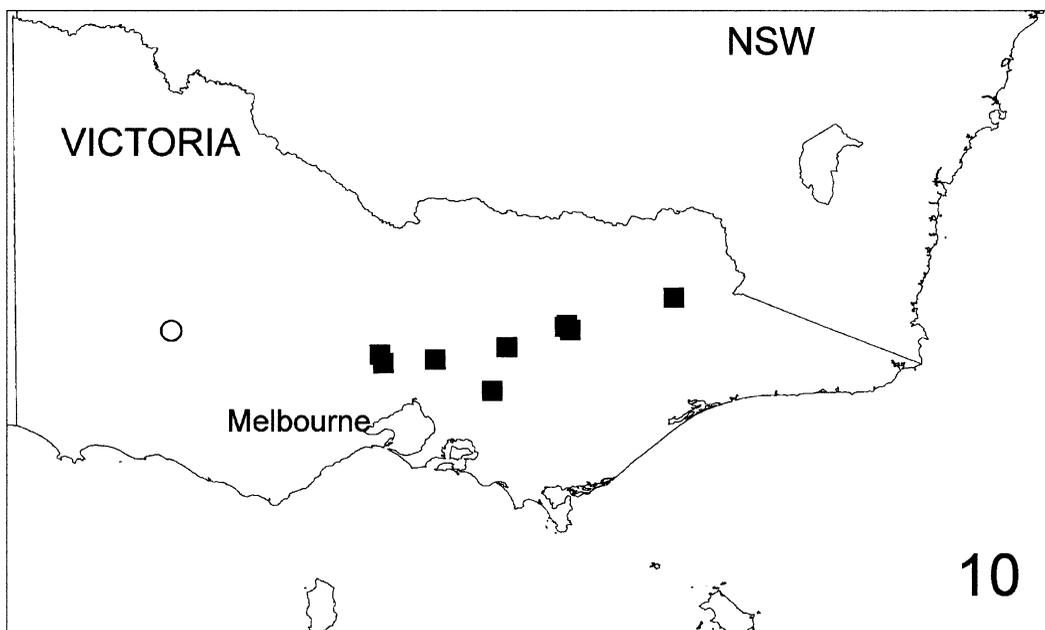


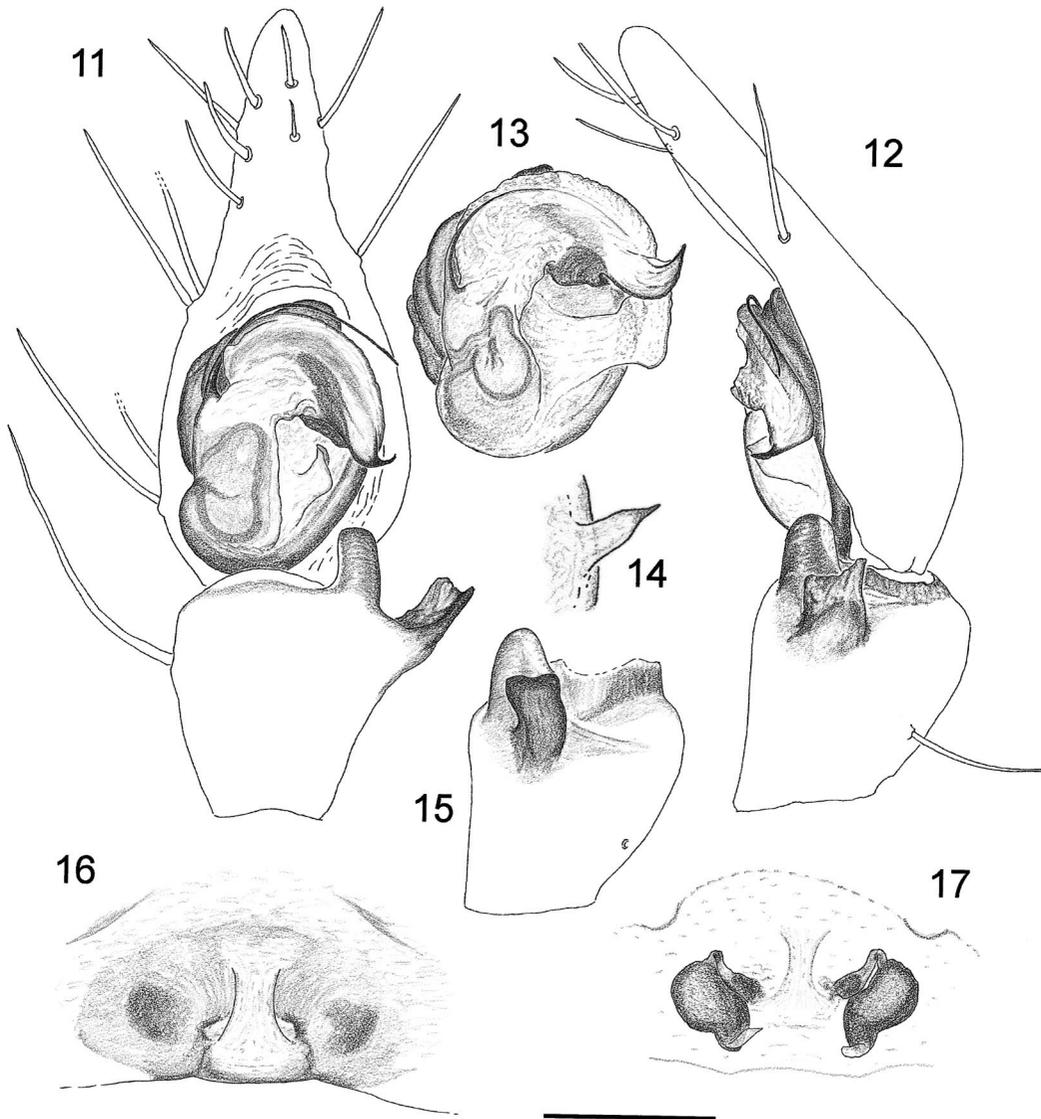
Figure 10.—Distribution of *Taurongia punctata* (closed squares) and *T. ambigua* (open circle).

with two lines of paired spots medially (Figs. 1–4, 7).

Body and leg hairs plumose, feathery hairs absent. Carapace with prominent caput; profile moderately arched, highest in mid-caput region; foveal slit moderately long and deep, curving down onto concave rear slope of carapace (Figs. 1, 5). Clypeus wide, ca. $3 \times$ width of an AME, anterior margin strongly convex. Chilum an undivided, median plate. Eyes eight, AME or PME smallest (Figs. 8, 9). Eye group moderately narrow, EGW ca. $0.50\text{--}0.60 \times$ width of caput; eyes in two rows, from above AER recurved, PER procurved-straight; MOQ longer than wide, slightly narrower anteriorly. PME, PLE and ALE with canoe-shaped tapeta. Cheliceral paturon robust, proximally kneed, with large boss; fangs strong, short; fang groove short (Fig. 2, *T. punctata*); paturon and fangs more gracile and longer in *T. ambigua* (Fig. 6). Two adjacent retromarginal teeth (sometimes set in paler area of cuticle); and 3 adjacent promarginal teeth, last tooth extended as a strong carina; retromargin with one long modified seta near base of fang, several modified setae above promargin. Maxillae broad, longer than wide, lateral margins convex with a strong anterolateral linear serrula. Labium longer than wide, widest anterior to baso-lateral excava-

tions, narrowing to a weakly concave apex. Sternum cordate, longer than wide, shortly to strongly pointed between coxae 4 (Figs. 2, 6). Legs 1423, with inclined and vertical hairs. Trochanters slightly to strongly notched. Retrocoxal hymen absent. Three tarsal claws, superior 9–11 teeth, inferior 2–3 teeth; claw tufts and scopulae absent but ventral tarsi and metatarsi 1–4 strongly hirsute in *T. punctata*, much less hirsute in *T. ambigua*. Female palpal tarsi spinose; palpal claw with 11–12 teeth. Trichobothria increasing in length distally, in single row on tarsi (6–7) and metatarsi (5–6); two rows on tibia; present on male and female palpal tarsus and tibia. Bothria collariform, proximal plate with weak to well defined longitudinal ridges (Figs. 31, 35). Tarsal organ placed distal to trichobothria, capsulate with an ovoid, more or less key-hole shaped pore (Figs. 32, 36). Calamistrum: ca. $0.4 \times$ length of metatarsus, subcentrally to proximally placed, with a dorsally contiguous field of recumbent setae; delimited at each end by a retrodorsal spine.

Male palp (Figs. 11, 12, 37, 38): Cymbium with a digitiform apex with several bristles and spines. Bulb subcircular to ovoid. Tegulum with a narrow prolateral-basal sclerotised region within which the sperm duct runs in an ovoid loop, and from which the conductor



Figures 11–17.—*Taurongia punctata*. 11–15. Male palp. 11, 12. Palp, ventral, retrolateral; 13. Bulb, ventral (Mt Donna Buang); 14. Median apophysis (Mt Buller); 15. Tibia, retrolateral (Woodend). 16, 17. Epigynum, ventral, dorsal. Scale bar: 0.25 mm

arises anteriorly; and a large retrolateral-basal membranous region from which the MA arises basally. MA usually large, membranous and hyaline, often 'spatula-shaped'; less commonly reduced in size (Fig. 14). Embolus spiniform, curving in a semicircle from its prolateral tegular origin around the conductor margin. Small tegular window present at embolus/conductor base. Conductor weakly T-shaped, with a short, membranous stalk supporting a semicircular-falciform head with a

marginal embolic groove, narrowing retro-distally as a reflected or elongate tip (Figs. 11, 37). Tibia about as long as wide, with two distal apophyses, the RVTA and a ventrad placed RTA. Patella about as long as wide with a dorsal bristle.

Epigynum: Fossa divided by a distinct median septum expanding posteriorly into a posterior lobe (Fig. 16), or fossa open and septum indistinct (Fig. 39). Lateral teeth absent. Copulatory ducts narrow, very short or simply

coiled, opening postero-laterally (Figs. 17, 41). Paired spermathecae ovoid, well separated, placed lateral to copulatory duct openings at posterior end of fossa.

Tracheal system simple, with four unbranched tracheal tubes confined to the abdomen. Spiracle just anterior to cribellum, about $0.4 \times$ as wide as cribellum plate (Fig. 18). Spinnerets: PMS with 4–6 cylindrical spigots (Fig. 20).

Included species.—*Taurongia punctata* (Hogg), *T. ambigua* new species.

Comments.—The new species described here, *T. ambigua*, is attributed to *Taurongia* largely on the basis of its similarities to the type species in genitalic and spinneret characters (similar cymbial, tegular and MA structure; relatively simple copulatory ducts; increased numbers (4–6) of cylindrical spigots on PMS (only 1 or 2 spigots present in related taxa (pers. obs.)). However, there are also significant differences in body build, eye sizes, trochanteral notches and cuticular sculpturing, which make the placement of *T. ambigua* in *Taurongia* provisional.

Taurongia punctata (Hogg 1900)

Figs. 1–4, 8, 10, 11–23, 34–36

Hylobius punctatus Hogg 1900: 84, plate XII, fig. 3.

Hylobius divergens Hogg 1900: 82, plate XII, fig. 2.

Taurongia punctata (Hogg): Hogg 1901: 279; Lehtinen 1967: 267, figs. 122, 123, 127; Platnick 2004.

Taurongia divergens (Hogg): Hogg 1901: 279; Lehtinen 1967: 267 (placed in synonymy with *T. punctata*).

Hylobihoggia divergens (Hogg): Strand 1935: 304.

Hylobihoggia punctata (Hogg): Strand 1935: 304.

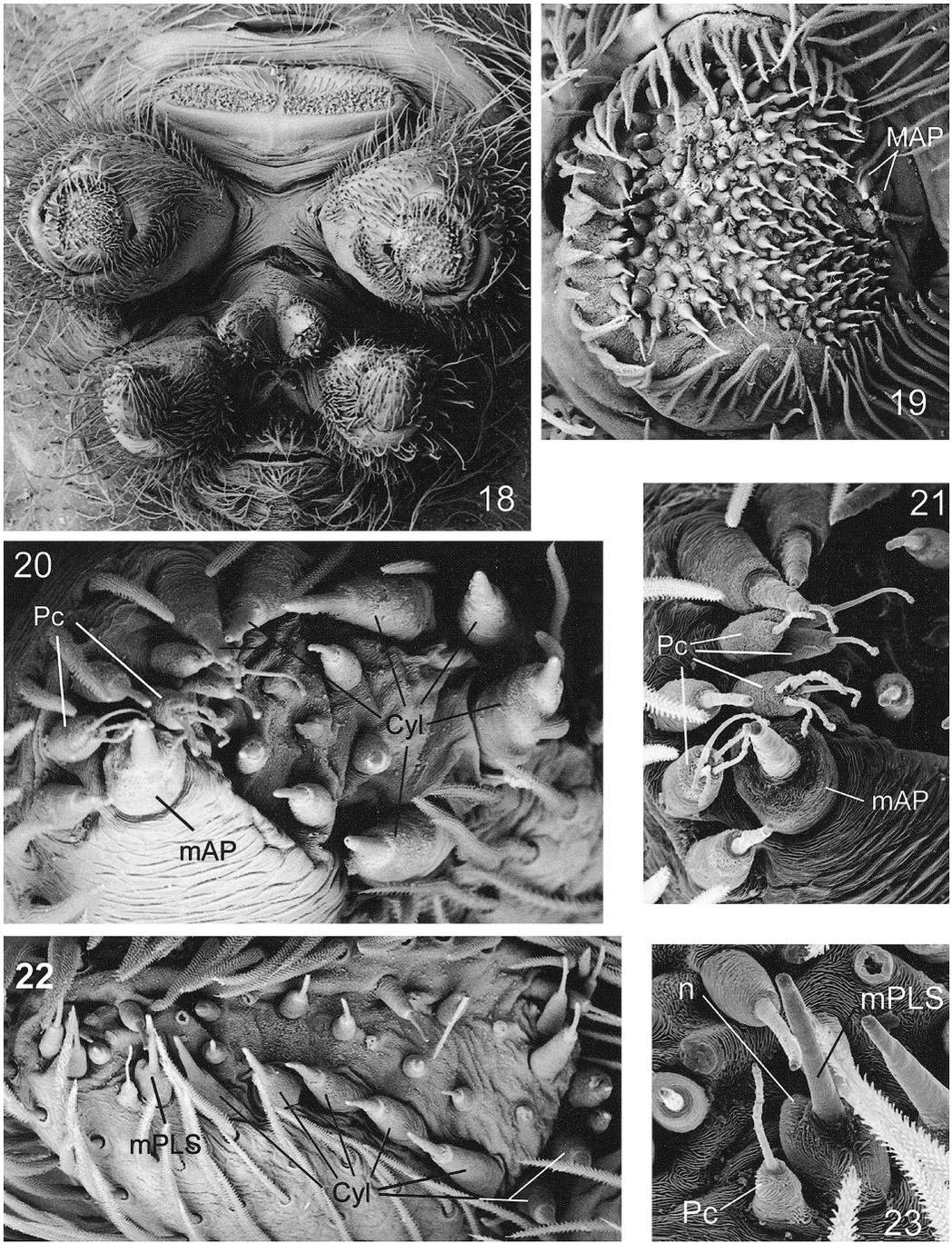
Type material.—*Hylobius punctatus*: lectotype (present designation) male (examined), 1 paralectotype juvenile female [not examined, noted by Lehtinen (1967)], Macedon District, Victoria, Australia, H.R. Hogg (NHM).

Hylobius divergens: Holotype female (examined), Macedon District, Victoria, Australia, H.R. Hogg (NHM).

Other material.—AUSTRALIA: *Victoria*: 1 ♂, 1 ♀, Sanitorium Picnic Ground Lake, Mt Macedon, 37°23'S 144°35'E, irregular sheet web on rotting log with egg sac, 23 February 1996, M. & A. Gray (AM KS45401); 1 ♀ same data as KS45401 (AM KS45403); 1 ♀, same data as KS45401 (no egg sac) (AM

KS45402); 1 ♀, same data as KS45402 (AM KS45404); 1 ♀, Mt Disappointment area, 37°26'S 145°08'E, 26 August 1973, M. Gray (AM KS34511); ♀, Warburton, 37°45'S 145°42'E, 8 September 1959, A. Neboiss (AM KS34512); 2 ♀, Mt Macedon, 37°23'S 144°35'E, rainforest, in rotting log, 14 March 1970, M. Gray (AM KS34513–14); 1 ♀, Blue Range Rd, 13 km S. of Thornton, 37°19'S 145°51'E, 9 April 1978, M.R. Gray (AM KS88187); 1 ♂, 1 ♀, 1 juvenile, Rubicon State Forest, 13 km S. of Thornton on Royston Rd via Rubicon, 37°19'S 145°51'E, 7 April 1978, M.R. Gray (AM KS88180); 2 ♂, data as for AM KS88180, collected as juveniles, matured July and August 1978 (AM KS88181–2); 1 ♂, 1 ♀, 7.5 km SE. of Woodend on Mt Macedon Road, 37°28'S 144°37'E, in log, 4 April 1978, M.R. Gray (abdomen of AM KS88176 used for SEM) (AM KS88176–77); 1 ♀, data as for AM KS88176 except 6 April 1978 (AM KS88179); 2 ♀, Omeo Highway 52 km N. of Omeo between Glen Wills and Sunnyside, 36°50'S 147°31'E, 13 April 1978, M.R. Gray (AM KS88188–89); 2 ♀, 3 km E. of Mirimbah on Mt Stirling Rd, 37°06'S 146°27'E, 8 April 1978, M.R. Gray (AM KS88183–84); 1 ♀, 7 km E. of Mirimbah on Mt Stirling Rd, 37°09'S 146°29'E, 920 m, irregular sheet web leading to retreat in crevice in bank, 8 April 1978, M.R. Gray (AM KS88185); 1 ♂, Box Corner, 4.5 km N. of Mt Buller Village, 37°07'S 146°26'E, 8 April 1978, 1000 m, M.R. Gray (AM KS88186); 1 ♂, Central Highlands, Forestry Rd 26, 0.2 km WNW. of Donna Buang Rd junction, 37°43'00"S 145°39'30"E, flight intercept trap, *Eucalyptus* forest, 21 January–7 April 1995, G. Milledge (NMV K6557); 1 ♂, Central Highlands, 0.7 km N of Acheron Gap, 7 km N. of Mt Donna Buang, 37°40'17"S 145°44'20"E, pitfall trap, *Eucalyptus* forest, 28 December 1995–21 February 1996, G. Milledge (NMV K6558); 1 ♀, The Beeches, 37°28'S, 145°49'E, 25 May 1991, M.S. Harvey, M.E. Blosfelds (WAM 98/2049); 1 ♀, Cumberland Falls, 37°34'S, 145°53'E, under log, 27 May 1991, M.S. Harvey, M.E. Blosfelds (WAM 98/1995).

Diagnosis.—Differs from *T. ambigua* by its more robust build, smaller eye size, absence of deep trochanteral notches, male palp with conductor apex strongly curved and epigynal fossa divided by a median septum.



Figures 18–23.—*Taurongia punctata*, spinnerets (female). 18. Spinneret field; 19. ALS (LHS); 20. PMS (RHS); 21. PMS, anterior area; 23. PLS (LHS), 24. mPLS and Pc spigots on apical PLS.

Description.—*Male (Mt Macedon, AM KS45401)*: BL 9.54, CL 5.67 (range 5.20–5.67), CW 3.87, CapW 2.98, EGW 1.66, LL 0.97, LW 0.79, SL 2.94, SW 2.29. Body robust, caput wide (Fig. 1). Eyes: smaller and eye group narrower (ca. 0.5 caput width) than in *T. ambigua*; PME smallest, ALE > AME \geq PLE > PME; AME weakly protuberant on a low common tubercle (Fig. 8). Sternum cordate, moderately long and shortly pointed posteriorly (Fig. 2). Legs: robust, relatively short, 1423 (I: 17.00; II: 15.07; III: 12.87; IV: 15.87); ratio tibia I length: CW = 1:0.93. Ventral tarsi and metatarsi moderately hirsute. Trochanters 1, 2 unnotched, 3, 4 slightly notched. Spination: I: femur d1-1-0-2, p0-0-2-0; patella 0; tibia v2-2-2, p1-1-1-0, r1-1-1-0; metatarsus d0-0-2, v2-2-1, p0-1-0-1, r0-1-0-1; tarsus 0; II: femur d1-2-0-2, p0-1-0-1; patella 0; tibia v2-2-2, p1-1-1-0, r1-1-1-0; metatarsus d0-1-2, v2-2-1, p1-1-0-1, r1-1-0-1; tarsus 0; III: femur d1-2-0-2, p0-1-0-1; patella 0; tibia d0-0-1-0-0, v1-2-2, p1-1-0-1-0, r1-1-0-1-0; metatarsus d0-1-2, v2-2-1, p1-1-1, r1-1-1; tarsus 0; IV: femur d1-1-0-2, p0-1-0-1; patella 0; tibia v1-1-2, p1-1-0-1-0, r1-1-0-1-0; metatarsus d0-1-2, v2-2-1, p1-1-1, r1-1-1; tarsus 0. Male palp (Figs. 11–15): distal conductor strongly tapered and curved to a short, spine-like apex; MA usually large and prominent; RTA a large ventrad, rectangular plate; RVTA thick, peg-like.

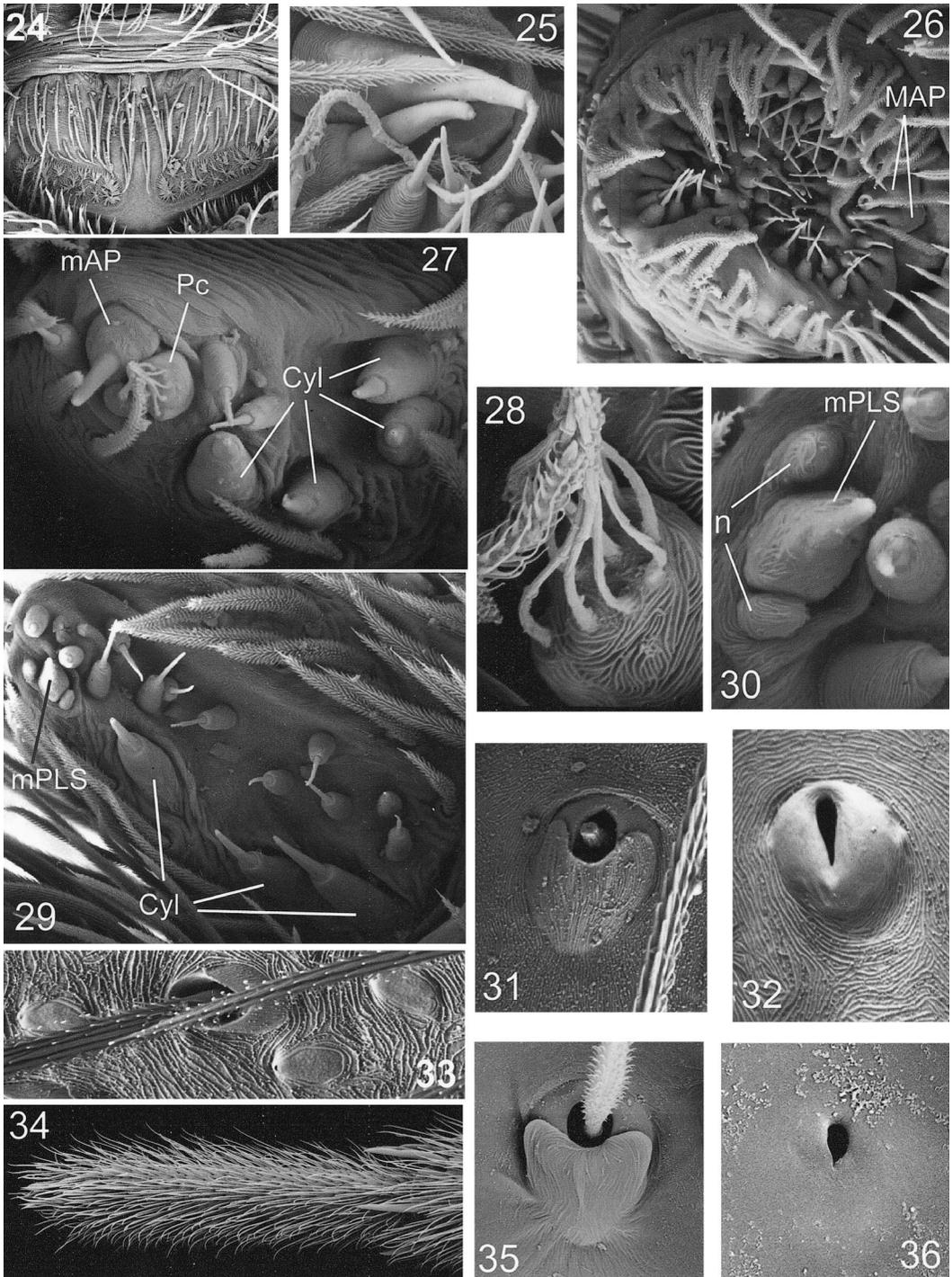
Female (Mt Macedon, AM KS45402): BL 14.47, CL 7.27 (range 5.36–7.27), CW 4.87, CapW 4.00, EGW 2.07, LL 1.17, LW 0.97, SL 3.49, SW 2.76. Body, eyes and legs similar to male. Legs: 1423 (I: 17.73; II: 15.73; III: 13.40; IV: 16.53); ratio tibia I length to CW = 1:0.90. Cuticle surface smooth to weakly ridged. TO capsule smooth, pore ovoid with a short, narrow slit proximally (Fig. 36). Spination: I: femur d1-2-0-2, p0-0-2-0; patella 0; tibia v2-2-2, p0-1-1-1-0, r1-0-1-0-1-0-0; metatarsus d0-0-2, v2-2-1, p0-1-1-0-1, r0-0-1-0-1; tarsus 0; II: femur d1-2-2, p0-1-1; patella 0; tibia v2-2-2, p1-1-1-0, r1-1-1-0; metatarsus d0-0-2, v2-2-1, p1-1-0-1, r1-1-0-1; tarsus 0; III: femur d1-2-2, p0-1-1; patella 0; tibia d1-0-1-0-0, v1-1-2, p1-1-0-1-0, r1-1-0-1-0; metatarsus d0-1-2, v2-2-1, p1-1-1, r1-1-1; tarsus 0; IV: femur d1-1-0-2, p0-1-0-1; patella 0; tibia v1-1-2, p1-1-1-0, r1-1-1-0; metatarsus d1-2-2, v2-2-1, p1-1-1, r0-0-1; tarsus 0. Epigynum (Figs. 16, 17): fossa divided by a moderately

wide and arched median septum, becoming wider and lobe-like posteriorly; copulatory duct openings postero-lateral, ducts very short and narrow, entering the spermathecae antero-medially; spermathecae ovoid, well separated. Spinning organs (Figs. 18–23): cribellar plate bipartite, each field about a quarter as wide as long and separated by a narrow seam (about $0.1 \times$ of a field length); seam and posterior plate margin sclerotized (in male, cribellum almost as wide as in female but with non-functional fields). Spinnerets short, ALS = PLS, PMS shortest; ALS broad, very short apical segment with wide margins; PLS slender with longer, conical apical segment. Spigots: ALS: 2 MAP spigots, mesal, adjacent, unequal; ca. 100 piriform spigots; PMS: 1 MAP with 4 fused paracribellar bases antero-ectally adjacent [5, 5, 2, 2 spigots respectively (2, 2 spigots basally fused only)]; 6 aciniform spigots (1 anterior, rest distributed); 6 cylindrical spigots; PLS: ca. 16 aciniform spigots, distributed; 1 subapical “modified PLS” spigot with 1 paracribellar spigot, and 1 nubbin almost entirely fused to side of mPLS; 7–8 cylindrical spigots (basal to subapical).

Variation.—Given the distribution of this species across dissected highland forest terrain, it is not surprising that considerable morphological variation is encountered. In females, the epigynal septum may be moderately wide (Fig. 16) or much narrower. The loops of the sperm duct on the tegulum may be open or closed and vary in size. The MA is usually large and obvious but its size and shape vary (Figs. 11, 13); some reduction is evident in a male specimen from the Mt Buller region (Fig. 14), but the specimen is badly damaged and more material is needed to check its specific status.

Distribution.—Central Highlands of Victoria (Southern Great Dividing Range) from the Mt Buller region to Warburton and west to the Macedon region.

Biology.—Cribellate sheet webs associated with logs, rocks and soil banks, guyed out with coarse retreat threads; sheet tapers to a variably defined retreat funnel ending inside a log or rock cavity or in a shallow soil burrow. Spiders run underneath sheet. Two egg sacs made of fine white flocculent silk (AM KS45401 and KS45403) were observed at Mt Macedon in February 1996. They were both found within cavities in rotting logs near the



Figures 24–36.—*Taurongia* species: 24–30. *T. ambigua* new species, spinnerets (female). 24. Cribellum; 25. MAP spigots, ALS (RHS); 26. ALS (LHS); 27. PMS (LHS); 28. Paracribellar spigots, PMS; 29. PLS (LHS); 30. mPLS spigot and nubbins (n) on apical PLS. 31–36. Sensilla (tarsus 1). 31–33. *T. ambigua* new species: 31. Trichobothrium base; 32. Tarsal organ; 33. Cuticular patterning and ovoid sensillae. 34–36. *T. punctata*. 34. ventral tarsal hairs; 35. Trichobothrium base; 36. Tarsal organ.

base of their respective retreat funnels. Each sac was ca. 1cm in diameter, circular in plan, curved above but flatter below and suspended within a network of strong threads attached to the retreat walls.

Taurongia ambigua new species
Figs. 5–7, 9, 10, 24–33, 37–41

Type material.—AUSTRALIA: *Victoria*: Holotype ♂, 12 km from Halls Gap on Victoria Valley Road, Grampians Range, 3708'S 142°31'E, under log in small, irregular sheet web, tall open forest, 26 March 1974, M.R. Gray (AM KS45501). Paratypes: 1 ♀, same data as holotype (AM KS5292); 3 ♀, same data as holotype except 27 March 1974 (AM KS5290, KS88171–72); 1 ♀, same data as KS5290 except web under rock in gully (AM KS45502).

Other material.—AUSTRALIA: *Victoria*: 1 ♀, same data as AM KS5290, abdomen used for SEM (AM KS88173).

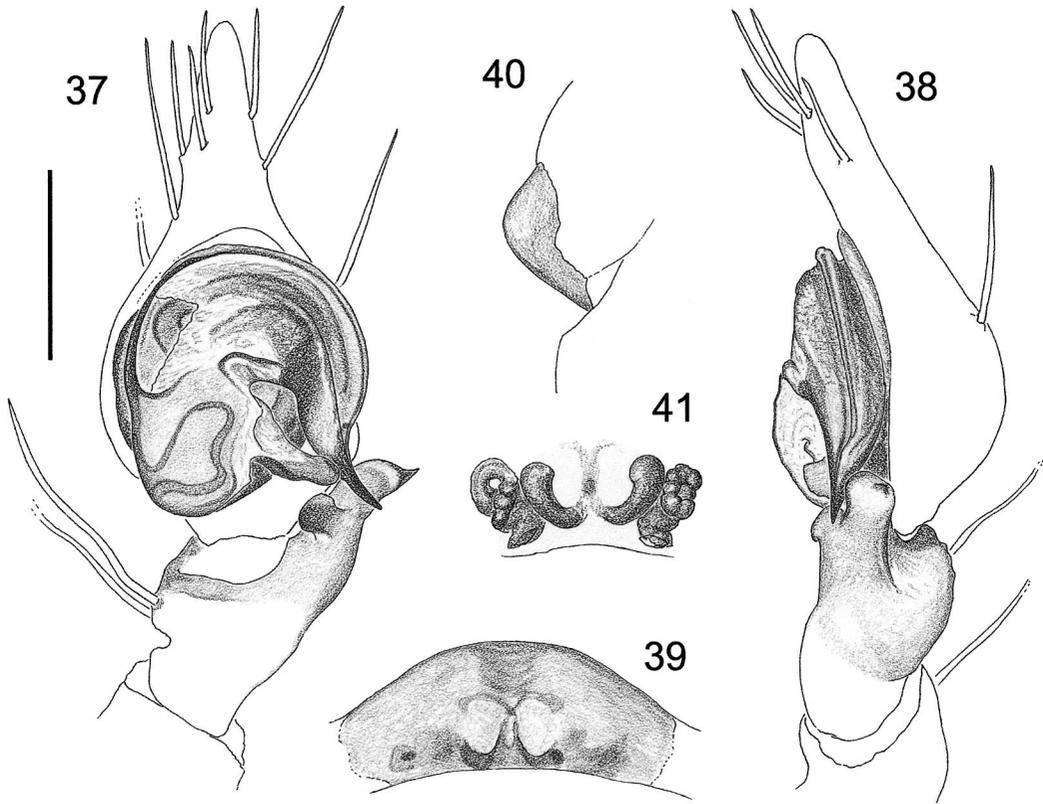
Etymology.—A reference to the uncertain generic placement of this species.

Diagnosis.—Differs from *T. punctata* by its gracile build (narrow caput, slender legs), relatively larger eyes with AME smallest, deeply notched trochanters, undivided epigynal fossa, elongate retrolateral conductor limb and strong cuticular sculpturing.

Description.—*Male (holotype)*: BL 6.77, CL 3.75, CW 2.65, CapW 1.45, EGW 0.88, LL 0.59, LW 0.54, SL 1.78, SW 1.56. Gracile cribellate spiders. Carapace amber-brown, darkest at caput; patterning restricted to radiating darker lines from fovea. Abdomen dark grey-brown with dark anterodorsal stripe flanked by 5 pallid patches smallest posteriorly, and 3 pairs of pallid lateral stripes (Fig. 7). Carapace weakly arched. EGW ca. $0.6 \times$ width of caput. Eyes normal size (relatively larger than in *T. punctata*), AME smallest: ALE \geq PLE \geq PME $>$ AME (Fig. 9). Jaws vertical, boss small. Sternum cordate, extending posteriorly between coxae 4. Legs: relatively long, slender, 1423 (I: 18.73; II: 14.55; III: 12.47; IV: 15.60); ratio tibia I length: CW = 1:0.54. All trochanters deeply notched. Hairs plumose, most inclined, a few vertical; feathery hairs absent; metatarsi and tarsi not ventrally hirsute; 1st and 2nd metatarsi and tarsi with many long, curled hairs. Spination: I: femur d1-2-0-2, p0-1-1-1; patella 0; tibia v2-2-2, p1-1-0-1-0, r0-1-0-1-0; metatarsus d0-0-2, p1-1-0-1-0, r0-1-0-1-0; metatarsus d0-0-2, v2-2-1, p0-1-0-1, r0-1-0-1; tarsus 0; II: femur d1-2-1-2, p0-1-1-1; patella 0; tibia v2-2-2, p0-1-0-1-0, r0-1-0-1-0; metatarsus d0-0-2, v2-2-1, p1-1-0-1, r0-1-0-1; tarsus 0; III: femur d1-2-0-2, p0-1-1-1; patella d0-0-1; tibia d1-0-1-0, v2-2-2, p0-1-0-1-0, r0-1-0-1-0; metatarsus d2-1-2, v2-2-1, p0-1-0-1, r0-1-0-1; tarsus 0; IV: femur d1-0-1-0-2, p0-1-0-1; patella 0; tibia d1-0-0-1-0, v2-2-2, p0-1-0-1-0, r0-1-0-1-0; metatarsus d2-1-2, v2-2-1, p0-1-0-1, r0-0-1; tarsus 0. Calamistrum short, less than $0.25 \times$ length of metatarsus, in 2nd proximal quarter of metatarsus IV. Epigynum (Figs. 39–41): epigynal fossa open, without a distinct septum but with a median seam or low ridge. Copulatory duct openings postero-lateral, ducts longer and wider than in *T. punctata* and curved around spermathecae. Spinning organs: (Figs. 24–30). PLS very slender

v2-2-1, p0-1-0-1, r0-1-1; tarsus 0; II: femur d1-2-0-2, p0-1-1-1; patella 0; tibia d0-0-1-0, v2-2-2, p0-1-0-1-0, r0-1-0-1-0; metatarsus d2-2-2, v2-2-1, p0-0-1, r0-0-1; tarsus 0; III: femur d1-2-2, p0-1-1; patella d1-0-1; tibia d1-0-1-0, v2-2-2, p0-1-0-1-0, r0-1-0-1-0; metatarsus d2-0-2, v2-2-1, p0-1-0-1, r0-1-0-1; tarsus 0; IV: femur d1-1-2, p0-0-1; patella d0-0-1; tibia d1-0-0-1-0, v2-2-2, p0-1-0-1-0, r0-1-0-1-0; metatarsus d2-1-2, v2-2-1, p0-1-0-1, r0-0-1; tarsus 0. Male palp (Figs. 37, 38): conductor T-shaped with a slender, elongate retrodistal spine. TW present, larger than in *T. punctata*. Large 'spatulate' MA, membranous, partly hyaline. Large ventrad RTA with pointed apex, with a smaller, blunt RVTA arising at its base.

Female (Grampians Range, AM KS5292): BL 7.35, CL 3.64 (range 2.85–3.68), CW 2.47, CapW 1.56, EGW 0.86, LL 0.61, LW 0.54, SL 1.82, SW 1.55. Legs lacking numerous curled hairs of male and ventral metatarsi III, IV more hirsute distally. Otherwise body, eyes and legs similar to male. Legs: 1423 (I: 13.71; II: 11.56; III: 10.55; IV: 12.80); ratio tibia I length: CW = 1:0.71. Tarsal claws: superior, 5–7, inferior, 0–2; with 2–3 curved sustentacular hairs. Cuticle strongly sculpted with a closely ridged surface pattern, interrupted by numerous ovoid, plaque-like putative sensilla with small distal pores (Fig. 33). TO capsule finely ridged with a narrow, ovoid, keyhole-like pore (Fig. 32). Spination: I: femur d1-2-2, p0-1-1-1; patella 0; tibia v2-2-2, p1-1-0-1-0, r0-1-0-1-0; metatarsus d0-0-2, v2-2-1, p0-1-0-1, r0-1-0-1; tarsus 0; II: femur d1-2-1-2, p0-1-1-1; patella 0; tibia v2-2-2, p0-1-0-1-0, r0-1-0-1-0; metatarsus d0-0-2, v2-2-1, p1-1-0-1, r0-1-0-1; tarsus 0; III: femur d1-2-0-2, p0-1-1-1; patella d0-0-1; tibia d1-0-1-0, v2-2-2, p0-1-0-1-0, r0-1-0-1-0; metatarsus d2-1-2, v2-2-1, p0-1-0-1, r0-1-0-1; tarsus 0; IV: femur d1-0-1-0-2, p0-1-0-1; patella 0; tibia d1-0-0-1-0, v2-2-2, p0-1-0-1-0, r0-1-0-1-0; metatarsus d2-1-2, v2-2-1, p0-1-0-1, r0-0-1; tarsus 0. Calamistrum short, less than $0.25 \times$ length of metatarsus, in 2nd proximal quarter of metatarsus IV. Epigynum (Figs. 39–41): epigynal fossa open, without a distinct septum but with a median seam or low ridge. Copulatory duct openings postero-lateral, ducts longer and wider than in *T. punctata* and curved around spermathecae. Spinning organs: (Figs. 24–30). PLS very slender



Figures 37–41.—*Taurongia ambigua* new species: 37, 38. Male palp, ventral and retrolateral; 39, 40, 41. Epigynum, ventral, lateral and dorsal. Scale bar: 0.25 mm.

and shorter than ALS. Cribellar plate bipartite, each field about a third as wide as long and separated by a wide seam (about $0.3 \times$ a field length); Spigots: ALS: 2 MAP spigots, mesal, adjacent, unequal; 50–60 piriform spigots; PMS: 1 mAP; 1 fused paracribellar base (5–7 spigots); 4 aciniform spigots (1 anterior); 4 cylindrical spigots; PLS: 12 aciniform spigots, distributed; 1 subapical “modified PLS” spigot; paracribellar spigots absent but at least 2 nubbins present flanking mPLS; 3 cylindrical spigots.

Distribution.—Recorded only from the type locality.

RELATIONSHIPS OF *TAURONGIA*

An analysis of the relationships of amaurobioid spiders with grate-shaped eye tapeta [exemplified by the genera *Borralla* Gray & Smith 2004 and *Pillara* Gray & Smith 2004 (Gray & Smith 2004)] suggests that *Taurongia* lies at the base of a group of genera including *Stiphidion* Simon 1902 and *Wabua*

Davies 2000, which in turn is basal to the “grate-shaped tapetum” genera. This data (in preparation) suggests that *Taurongia* may be associated with the Stiphidioidea of Griswold et al. (1999).

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