Zootaxa 1004: 15–28 (2005)
www.mapress.com/zootaxa/
Copyright © 2005 Magnolia Press

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)
1004

A new tarantula species from northern Australia (Araneae, Theraphosidae)

ROBERT J RAVEN
Queensland Museum, PO Box 3300, South Brisbane, Q. 4101. Australia; robertr@qm.qld.gov.au

Abstract

A new species of tarantula, *Coremiocnemis tropix* (Araneae, Mygalomorphae, Theraphosidae) is described from northern Australia; it is the first record of the genus outside of Malaysia. New hair types on legs of the Selenocosmiinae are figured.

Key words: *Coremiocnemis*, spiders, pet trade, conservation, Mygalomorphae, rainforest

Introduction

All Australian Theraphosidae belong to the subfamily Selenocosmiinae. Apart from a generic level treatment (Raven 1985), a review (Smith 1987), and two transfers (Schmidt 1995, 2002), the Selenocosmiinae have not been revised in Australia or elsewhere. To date, selenocosmiine genera formally recorded (Main 1985; Raven 1985) from Australia include *Selenocosmia* Ausserer 1871, *Selenotypus* Pocock 1895, and *Selenotholus* Hogg 1902. Raven et al. (2002) indicated that the genera *Coremiocnemis* Simon 1892 and *Phlogiellus* Pocock 1897 are also present in Australia. With the growing pressure of the pet trade in Australia, the need to document the diversity of Australian theraphosids presses. Unlike many Asian and South American theraphosids, Australian species are not brightly coloured but tend to be earth coloured brown, reddish brown and some darker brown. Recognition of the different Australian species from live animals will present a much greater problem unless the native geographic location is specified and that is usually withheld on the basis of commercial-in-confidence issues.

This paper describes the first species of *Coremiocnemis* from Australia.

Accepted by P. Jäger: 9 May 2005; published: 7 Jun. 2005

Material and Methods

These follow Raven (1994) except that measurements, here given in millimetres, were made with digital dial callipers with an error of 0.01mm, rounded up to one significant decimal where appropriate. Photographs of preserved material were taken with a Nikon Coolpix 880 mounted directly on the eye piece of a Zeiss Stemi V11 illuminated with a 150 watt light source directed through twin fibre-optic focussed lenses; only minor colour correction of the images has been used. Because females show more diagnostic characters than males, a female was chosen as the holotype.

Characters used here were found to be taxonomically informative in a pending revision of the Australian Theraphosidae (Raven in prep.). In the Theraphosinae, hair types on legs have been found useful in diagnosing genera and species (Raven, 1985). The diversity of hair types and trichobothrial conformation on the legs in the Selenocosmiinae required documentation (Figs 28–37) and provides comparative data for future studies.

Abbreviations: QM, Queensland Museum, Brisbane; WAM, Western Australian Museum, Perth.

Taxonomy

Selenocosmiinae Simon 1889

Selenocosmiinae Simon 1889: 204; Simon 1892: 147; Raven 1985: 118.
Poecilotherieae Simon 1889: 204; Simon 1892: 144.
Phlogieae Simon 1892: 144. First synonymised by Simon 1903: 953.

Diagnosis: With ovoid lyra on anterior face of maxillae which may be reduced or absent, legs weakly spinose, if at all; males lacking coupling spurs on tibia I.

Remarks: The placement of taxa which lack a maxillary lyra (e.g., *Yamia*; see Haupt and Schmidt 2004) within the Selenocosmiinae only presents a phylogenetic problem if the alyrate taxa are considered the sister group of **all** of the other lyrate species. However, if the lyra has been secondarily lost in *Yamia* then that species may be better placed in *Phlogiellus*. In either case, the monothetic definition of the subfamily remains an unresolved issue. No phylogenetic analysis has ever been presented which could resolve this question.

Curiously, Simon (1892) diagnosed the tribes Phlogieae (and others) as differing from Selenocosmieae in that at least the posterior tarsi had the scopula divided by setae but later (1903) rescinded the separation. Haupt and Schmidt (2004: 202) lept from that kind of distinction to a more generalised but unsupported conclusion about the value of the division of the tarsal scopula: “Certain characters do not seem to be very useful for classification: Simon (1892) followed by Raven (1985) used the division of metatarsal and tarsal scopulae to distinguish different genera.” In fact, Raven (1985) never used *the division* of the

 © 2005 Magnolia Press

metatarsal scopula but its extent and the tarsal division was not used to distinguish between genera (no diagnoses of theraphosid genera were provided) but in an identification key in which the differing states of the tarsal scopula were accommodated by having the genus appear twice in the overall key, e.g. *Ischnocolus* appeared in Group I and Group II. Furthermore, in a paper presented to the International Congress of Arachnology, Ghent, 2004, Guadanucci (in press) showed unequivocally that the division of the tarsal scopula is informative, provided it is not used to identify juveniles.

Coremiocnemis Simon 1892

Coremiocnemis Simon 1892: 146; Simon 1903: 956. Type species by original designation and monotypy, *Phlogius cunicularius* Simon 1892. Type in Museum National d'Histoire Naturelle, Paris, examined [N.B.: reviewers of this paper, von Wirth & Striffler have two specimens in the vial of the type species; when I examined the material in 1983 in Paris, there was only one and only one was mentioned by Simon (1892)].

Diagnosis: Differs from *Selenocosmia* in having the maxillary lyra consisting of long shafted paddles with long distal blades (Figs 14, 23). *Coremiocnemis* is a selenocosmiine theraphosid with intercheliceral peg spines (Figs 6, 37), maxillary lyra consisting of long paddles with long distal blades (Figs 14, 23), cracked fourth tarsi, and a third claw on the fourth leg.

Type species: *Phlogius cunicularius* Simon 1892.

Included species: *Phlogius cunicularius* Simon 1892; *Coremiocnemis valida* Pocock 1895; *Coremiocnemis tropix* sp. nov.

Distribution: Malaysia and tropical north-eastern Queensland, Australia.

Remarks: On the basis of 2 males and two adult females of *Yamia watasei* Kishida 1920, Haupt and Schmidt (2004: 202) concluded that the division of tarsal scopula (Figs 28–29) *per se* is not valid in the recognition of any theraphosid genera. However, the issue is by no means so clear and their denouncement is both oversimplified and insubstantial. Indeed, many theraphosids have the scopula of tarsi I integral and that of tarsi IV divided; Raven (1985) documented that anterior-posterior gradualism. However, a number of genera (e.g., *Ischnocolus*) also have the scopula of tarsi I–III also divided and that is consistent in adults. As noted by Raven (1994: 301), Raven (1985) incorrectly keyed only *Coremiocnemis* as having the intercheliceral peg spines and having tarsi IV integral; intercheliceral peg spines are also present in material presumed to be the type species of *Selenocosmia*, *S. javanensis* (Walckenaer 1837) (Schmidt and von Wirth 1995) but, in the absence of a holotype of the latter, Raven (2000) set the resurrection of *Phlogius* L. Koch (for the Australian species placed in *Selenocosmia*) aside pending a cladistic analysis of the group. Equally, a number of genera, including *Coremiocnemis* have the fourth tarsi cracked.

***Coremiocnemis tropix* sp. nov.**
(Figs 1–37)

Material examined.

Holotype: female, Atherton, 17°16'S, 145°29'E, north-eastern Queensland, Australia, 25 May 1988, M. Jeansson, QM S6325.

Paratypes: WAM 90/1959, 1 male, Freshwater Creek, at Crystal Cascades, 10 km S. of Freshwater, 12 Jul 1986, M. Harvey; WAM T57516, 1 male, 1 female, Atherton, June 1994, R. Elick. 1 female, Table Mt, 10km S Cape Tribulation, 16°09'S, 145°26'E, rainforest, 24 Apr 1983, G. Monteith, D. Cook, QM S10583; 1 female, Gordonvale, 27km SW, 17°01'S, 145°45'E, rainforest, 17 Mar 1980, N. Clyde Coleman, QM S10590; 1 female, Cape Tribulation, 16°05'S, 145°26'E, rainforest, 29 Dec 1982–8 Jan 1983, G. Monteith, QM S10598; 1 female, Freshwater Creek, Cairns, 16°58'S, 145°43'E, rainforest, under stones, Aug 1977, M.T. Bishop, QM S10633; 1 female, Mulgrave River, 27km SW Gordonvale, 16°23'S, 143°59'E, 19 Mar 1980, N. Clyde Coleman, QM S10793; 1 female, Crystal Cascades, 16°58'S, 145°42'E, rainforest, sheet web, 24 Aug 1980, M. Harvey, QM S20889; 1 male, Cairns, 16°55'S, 145°46'E, house, 5 Sep 1995, Stella Jeffery, QM S30136; 1 male, Kuranda, 16°49'S, 145°38'E, house, 1 Aug 1991, G. Monteith, QM S25471; 1 female, Cairns, 16°55'S, 145°46'E, 24 Apr 2001, A. Hunt, QM S55051; 1 female, Earlville, 16°57'S, 145°44'E, Nov 1986, Safeway Pest Control, QM S6685; 1 male, 1 female, Mission Beach, 17°56'S, 146°05'E, May 1981, E. Long, QM S10650; 1 male, Clifton beach, 16°46'S, 145°40'E, 28 May 1992, QM S20388; 1 male, Smithfield, Cairns, 16°51'S, 145°43'E, spider bite, 2 May 1996, P. Hawkins, QM S29732; 1 male, Kurrimine Beach, 30km S Innisfail, 17°47'S, 146°06'E, spider bite, July 1997, via R. Piper, QM S34638. All in north-eastern Queensland, Australia.

Other material examined: 1 juvenile, Noah Creek, Cape Tribulation, 16°08'S, 145°26'E, rainforest, 16 Oct 1980, G. Monteith, QM S10592; 1 penultimate male, Cape Tribulation, 2km WNW (Site 2), 16°05'S, 145°28'E, rainforest, 23 Sep–7 Oct 1982, G. Monteith, D. Yeates, G. Thompson, QM S10593; 1 penultimate male, Babinda, 17°21'S, 145°56'E, hospital, QM S10610; 1 penultimate male, Cape Tribulation, 16°05'S, 145°26'E, rainforest, 22 Sep–7 Oct 1982, Qld Naturalists Club, QM S10630; 1 juvenile, Mt Hartley, 15°46'S, 145°20'E, rainforest, 6 Nov 1974, V. Davies, J. Covacevich, D. Joffe, QM S10632; 4 penultimate males, Cape Tribulation, 16°05'S, 145°26'E, rainforest, under logs and rocks, 15–19 Aug 1975, W. and J. Nash, QM S10640; 3 penultimate males, Crystal Cascades, 16°58'S, 145°42'E, rainforest, Feb 1979, N. Clyde Coleman, QM S10792; 1 penultimate male, Cape Tribulation, 16°05'S, 145°26'E, rainforest, 26 Aug 1988, T. B. Churchill, QM S11216; 1 juvenile, Cairns, Brinsmead, 16°55'S, 145°46'E, 4 May 1989, P. Blackman, QM S15278. All in north-eastern Queensland, Australia.

Diagnosis: Differs from both *C. cunicularia* (Simon 1892) and *C. valida* Pocock 1895 in the absence of the very long brushes on metatarsi IV (Figs 1, 18) and in the less extensive maxillary lyra (Figs 14, 23).

 © 2005 Magnolia Press

FIGURE 1. *Coremiocnemis tropix* sp. nov., female, habitus., Cape Tribulation. Photo: B. Cowell

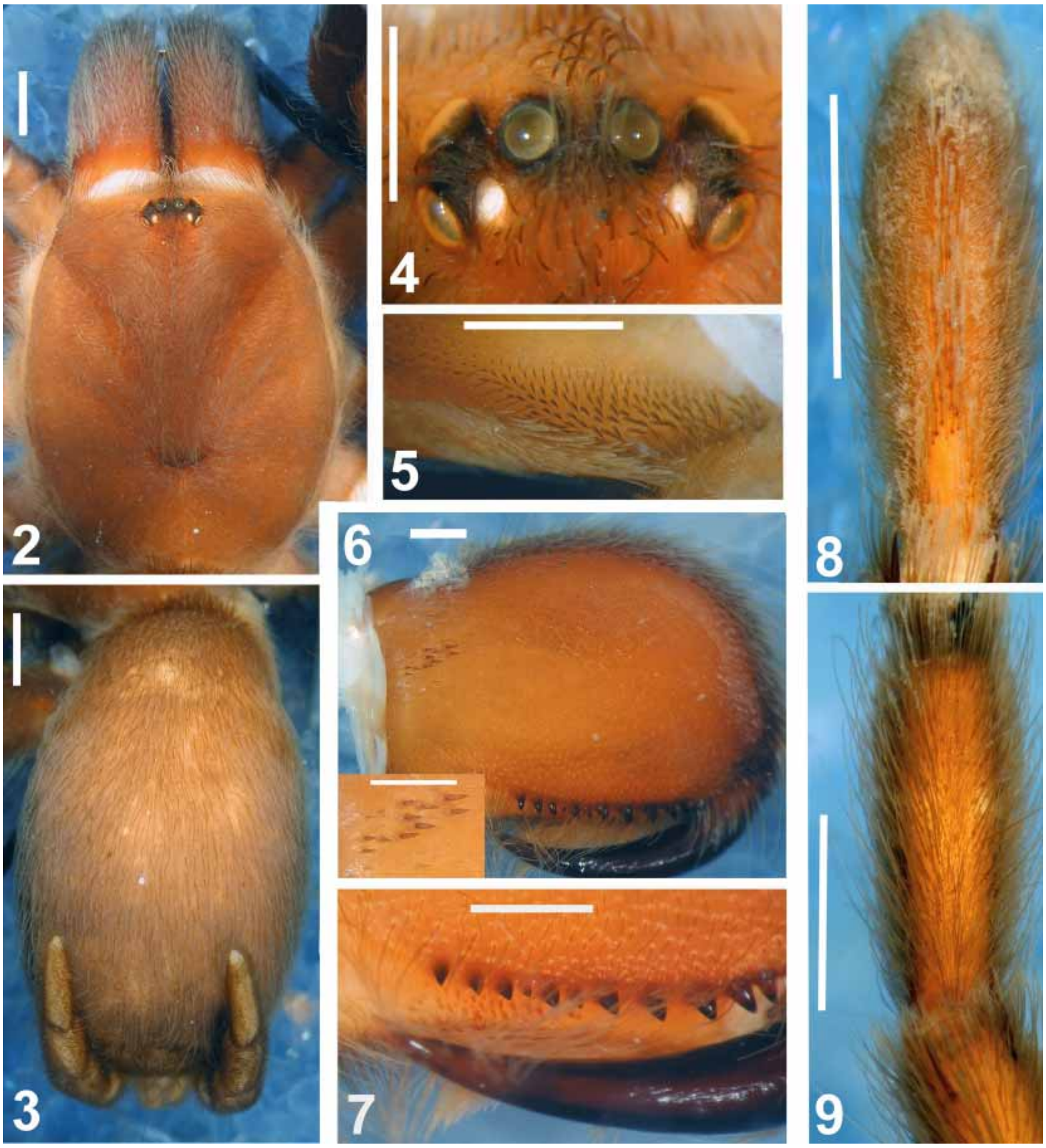
Etymology: An arbitrary combination of letters phonetically like tropics, the origin of the spider.

Common Name: Tropix.

Holotype Female QM S6325

Description (measurements in mm): Carapace 11.1 long, 8.7 wide, chelicerae 5.5. Legs (femur, patella, tibia, metatarsus, tarsus, total): I: 8.0, 5.0, 6.0, 4.3, 2.8, 26.1. II: 6.4, 4.2 4.5, 3.9, 2.6, 21.6. III: 5.8, 3.5, 3.5, 4.2, 2.5, 19.5. IV: 7.7, 4.0, 5.7, 6.6, 3.3, 27.0. Palp: 5.5, 3.3, 3.5,–, 3.5, 15.8. Midwidths: femora I, II, IV=1.65, III=1.90; tibia I–IV, 2.1, 1.75, 1.75, 1.65. Abdomen 12.7 long, 7.2 wide. Spinnerets: PMS, 3.50 long, 0.55 wide, 1.10 apart with sclerotised (but less hirsute than venter) cuticle to anal tubercle; PLS, 6.0 basal, 4.2 middle, 6.0, distal; midwidths 1.0, 1.0, 0.75, respectively.

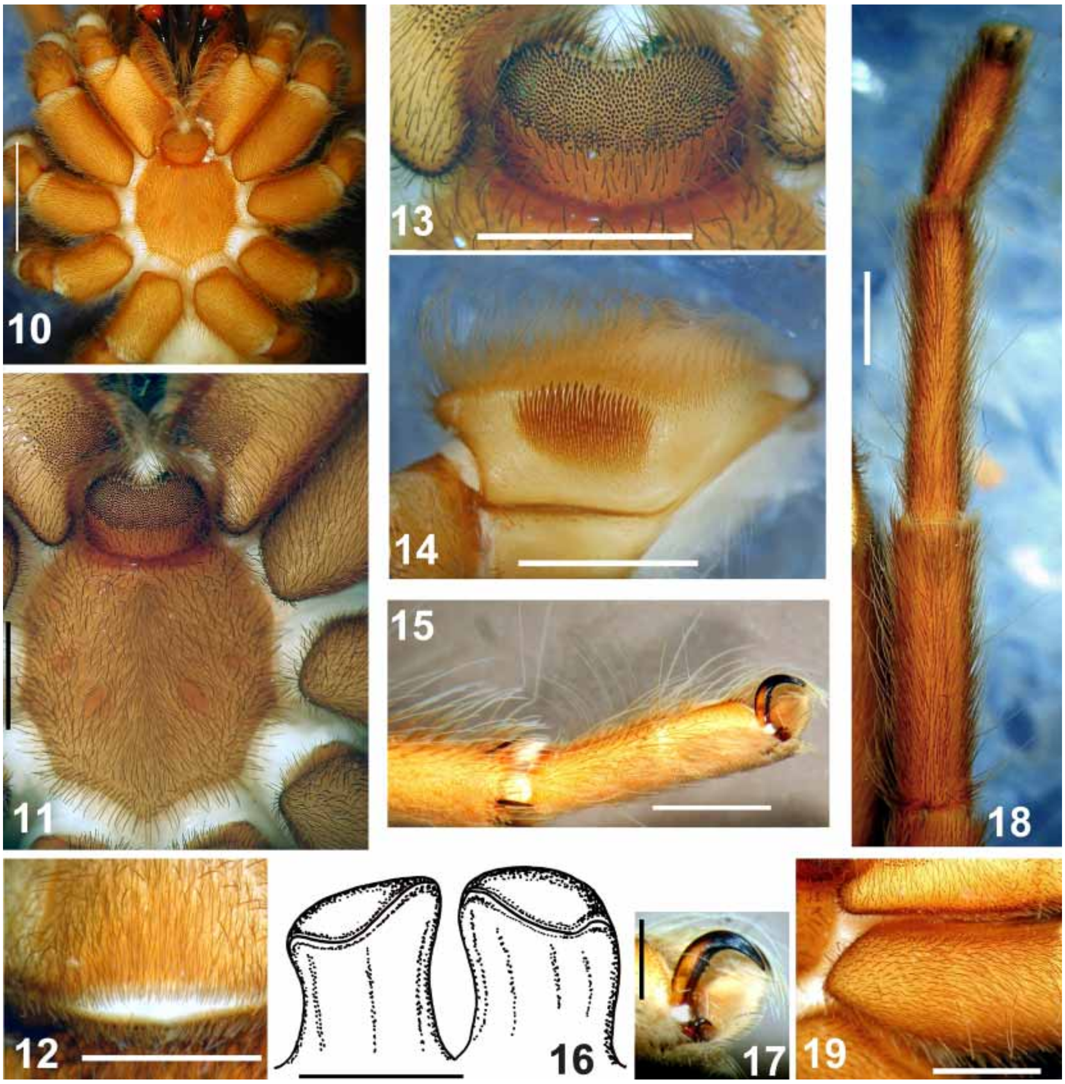
Carapace: length to width 1.28; uniform red brown; uniform cover of long white wavy hairs, no setae or thorns.



FIGURES 2–9. *Coremiocnemis tropix* sp. nov., holotype female (2–4, 8–9); QM S10650 (5–7). 2. Carapace, dorsal view. 3. abdomen, dorsal view. 4. eyes, dorsal view. 5. Ectal cheliceral face, ventral view showing pins. 6. prolateral cheliceral face showing peg setae (inset: detail). 7. cheliceral furrow, ventral view showing smaller basal teeth. 8. Tarsus IV, ventral view, with dividing setae. 9. Tarsus IV, dorsal view, showing tarsal weakness. Scale bar =2mm for 2, 3, 8–9, all others 1mm.

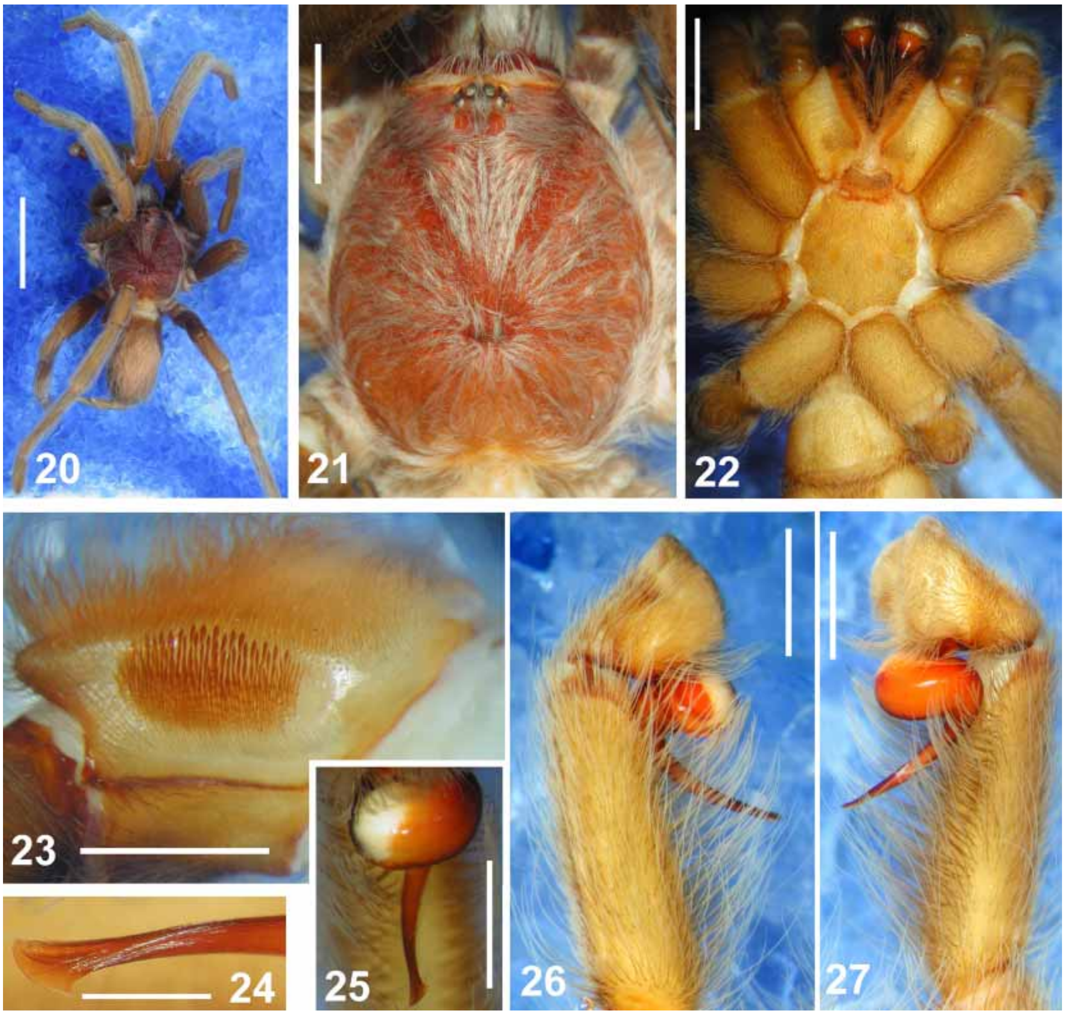
Eyes: ratio of group width to length 2.11. PLE clearly smaller than ALE but clearly bigger than PME, AME=ALE (Figs 2, 4).

Maxillae (Fig. 14): posterior ventral edge gently rounded for length; retro-face mostly pallid, smooth, glabrous. Cuspules: ca. 200 in anterior corner in square region (Figs 11, 22). Posterior edge near heel straight or slightly concave.



FIGURES 10–19. *Coremiocnemis tropix* sp. nov., female, holotype (10–13, 15–19); QM S10650 (14). 10. Sternum, maxillae, labium and coxae, ventral view. 11. Sternum, proximal maxillae and labium, ventral view. 12. female genital fold, ventral view. 13. labium, ventral view. 14. maxilla, prolateral view, showing lyra. 15. tarsus IV, lateral view. 16. spermathecae, ventral view. 17. claws on leg IV, lateral view. 18. tibia to tarsus IV, dorsal view. 19. coxa I, ventral view, showing weak setae prolaterally. Scale bar = 5mm for 10, 2mm for 11–15, 18–19;1mm for 16–17.

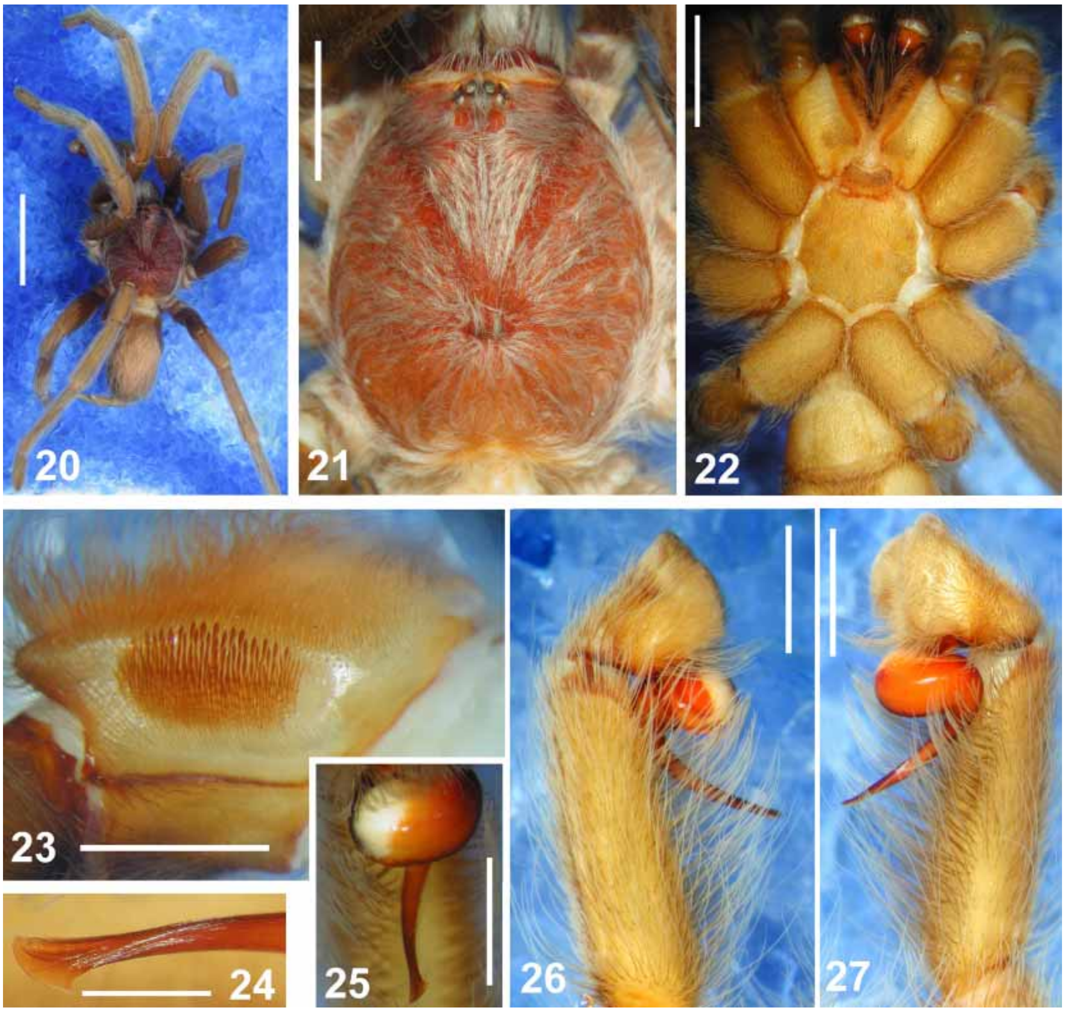
Maxillary lyra (Fig. 14): overall shape, small, ovoid, ca. 0.6 of mid-maxilla length; ventral edge more or less smoothly and gently convex; outer point asymmetrically rounded point; inner point bluntly truncated; large outer paddles in smoothly uniform curving line, gaps evenly spaced; overall size, central, about half length. No brush ventral of lyra. Thick paddle setae in 3 lines centrally then thick pointed start; lyra dorsal edge line relative to midgroove line divergent, ca. 10 basally diverging to 15 distally.



Labium (Fig. 13): over 200 cuspules in band for two-fifths of length anteriorly; cuspules ca. similar in size and number to maxillary. Basal groove shallow, distinct. Labiosternal groove (Fig. 13) not concave, flat with slight (anterior) rise, two separate large sigilla.

Chelicerae: intercheliceral spines basodorsally, ca. 13 larger and 2–4 smaller basally (Figs 6, 37). Ectal lyrate area (Fig. 5), groove glabrous; lyra setae, not apically convergent but parallel, in 3 straight lines of long thick setae, 2 lines of short coniform ectally with irregular band of thorns 2–4 deep outside that (Fig. 5).

Sternum (Figs 10–11): profile saddle-like, high at back and front. Posterior angle sharp but not separating coxae IV. Posterior edge easily seen, sloping gradually. Marginal thorns absent. Prostrate hair mat strong, dense, or of grey hairs. Pedicel and sternum edges form clear boundary in elevation and setation, pedicel edge pallid.



FIGURES 20–27. *Coremiocnemis tropix* sp. nov., allotype male. 20. Habitus, dorsal view. 21. carapace, dorsal view. 22. sternum, maxillae, labium and coxae, ventral view. 23. maxilla, prolateral view, showing lyra. 24. Tip of embolus, ventral view. 25. bulb, ventral view. 26. palp, tibia to tarsus, prolateral view. 27. palp, tibia to tarsus, retrolateral view. Scale bar=10mm for 20; 5mm for 21, 22; 2mm for 23, 25–27, 1mm for 24.

Sigilla (Figs 10–11): 3 pairs, posterior ca. 2 (1.6–3 across paratypes) lengths apart and only ca. 1 length from margin; middle ca. half size of posterior, within ca. 1 length of margin; anterior clearly present.

Legs: leg I clearly thicker than IV but II subequal to IV. Basifemoral thorns absent on all. Femora I–II prolaterally with long bushy fine hairs; III distinctly incrassate. Metatarsus I hardly longer than tarsus, less than twice.

Leg pilosity (number of long hairs extending well above base layer): tibia I p=10–15, d=5–10, r=10–15; metatarsus I p=d=5–10, r=1–3, v=1–3; tibia IV p=30–40, d=20–30, r=v=40–50; metatarsus IV p=30–40, d=30–40, r=v=50–60; tarsus IV ca. 20–40 dorsolaterally on each side. Tuft of blunt-tipped hairs, distoventral metatarsi present at least on IV (Fig. 34). Paired long sensory hairs pointing distad, long gently curved dorsolateral pair basally (0.2 from base) on metatarsi I–IV, long bent (at 0.5) pair at distal 0.8 on metatarsi I–IV (Fig. 15; possibly widespread); long curving dorsolateral pair at 0.5 (end of very long filiform trichobothria) on tarsi I–IV (Fig. 15). Long, downwardly curved hairs (Figs 15, 30) below claw tufts basally with transverse ribbing but apically with discontinuous partially spiralled ribbing (presumably thermosensory in function; viz., Den Otter, 1974). Upper tarsi IV (and presumably I–III) with two other hairs types: closed longitudinal fimbriae (Fig. 35) and differentially dorsoventrally fimbriated hairs (Fig. 36).

Trichobothria (Fig. 33): on tarsi basal filiform field hardly wider than clavate field and merges smoothly; clavates on tarsi I only in distal 2/3; long filiforms only in basal half, shorter filiforms intermixed with clavates distally. Clavate extent on II–IV cf. I, only in distal 2/3; long filiforms only in basal half, shorter filforms for length. Short epitrichobothrial hair field (Figs 31–33) on I shorter than clavates and uniform height for length.

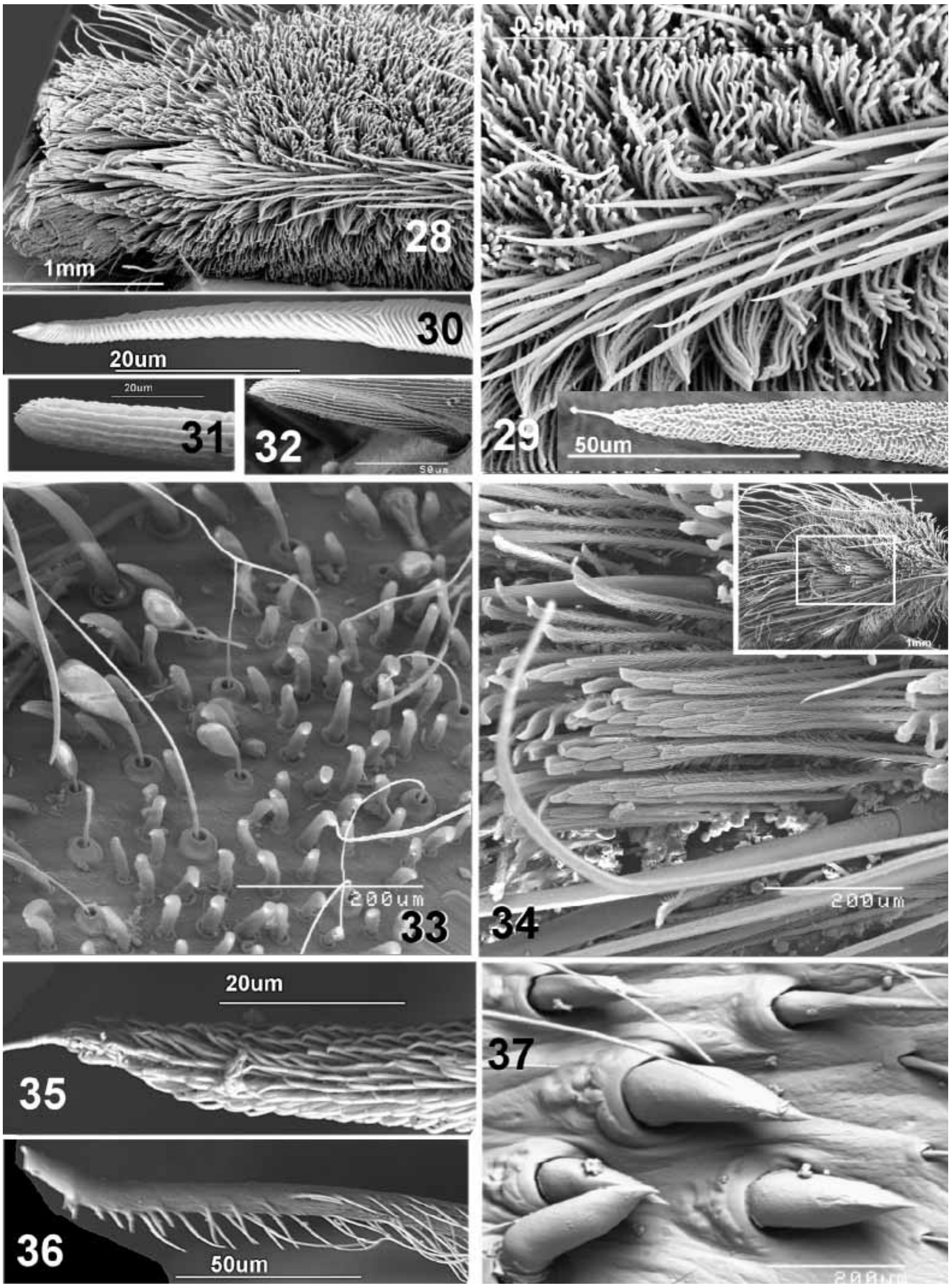
Leg coxae (Fig. 10): no thorns prolaterodorsally or retrodorsally. Coxal bases dorsally easily seen from above (Fig. 2). I clearly longest, about 1.8 times length of II; IV clearly widest and about as long as III and basally with anterior corner indistinct, edge curves dorsally, rounded at interface. III basally rectangular. Coxae ventrally with short, weak thorns only on prolateral faces of I–II (Fig. 19). I–IV ventrally with many long blunt setae but most short dark and fewer long pallid; ventral surface clearly curving or sloping forward. Retrolateral setation: I–III with median narrow light brush, IV glabrous; III–IV with setose mound up from inner corner low mound with few bristles. All retrolaterally lack ventral ledge and ventrally with uniform setation (Fig. 10).

Scopula: entire, dense on tarsi I and metatarsi I–II; on tarsi II entire but with long emergent hairs in central zone, not dividing scopula; on metatarsi III for ca. 0.8–9 of length, but with uniformly distributed (i.e., not a dividing line) long emergent hairs; on tarsi III entire but with long emergent hairs in central zone but not dividing scopula. For ca. 0.75 length of metatarsi IV, divided by setal band 3–4 wide; on tarsi IV divided by long fawn brown hairs in band 4–7 wide. Dividing hairs on tarsi composed of uniformly fimbriate brush with spine-like apex tipped with small sphere (Fig. 29, inset). No scopula on proventral tibiae I–II.

Spines, metatarsi: I, with 1 minute ventral or ventrolateral; II, with 3 distal ventral; III, with 3 distal ventral, and 2 distal dorsolateral; IV with 3 distoventral, and 2 distal dorsolateral. Elsewhere absent.

Tarsal weakness (Figs 9, 18): cracked tarsi dorsally evident as pale line, a distinct line laterally, only on tarsus IV.

Claws (Figs 15, 17): third claw only on IV, distinct hooked. 2–3 small distal teeth and few lower basally on paired claws on all legs, and also on palpal claw but teeth smaller.



FIGURES 28–37. *Coremiocnemis tropix* sp. nov., holotype female, leg IV, scanning electron micrographs. 28–29. Tarsus, ventral view, showing dividing setae (inset). 30. Sub-tuft with thermosensory setae. 31. Apex of blunt-tipped, epitrichobothrial setae. 32. Blunt-tipped, epitrichobothrial setae. 33. Dorsal tarsus with clavate and filiform trichobothria mixed with epitrichobothrial setae. 34. Distal metatarsus, ventral view (inset), showing truncated setae. 35. Tapered plumose setae. 36. Ventrally filiform setae from upper distal tarsus IV. 37. Intercheliceral peg spines, prolateral view.

Abdomen pilosity (Fig. 3): dorsally with fine layer of hair and bristles, cuticle not exposed; ventrally with fine layer of many long grey hairs and fewer brown bristles, cuticle obscured.

Genitalia: ventral lip ends anterior to dorsal lip, and with long parallel hairs (Fig. 12); internally consisting of a pair of weakly ribbed rectangular lobes and apically folded (Fig. 16).

Allotype male QM S10557

Description (measurements in mm): Carapace 10.7 long, 8.6 wide, chelicerae 3.20. Legs (femur, patella, tibia, metatarsus, tarsus, total): I: 9.8, 5.5, 8.3, 6.4, 3.7, 33.7. II: 8.6, 4.7, 6.7, 5.7, 4.7, 30.4. III:. 7.3, 4.0, 5.1, 6.1, 3.2, 25.7. IV:. 9.5, 4.5, 8.0, 9.1, 4.2, 35.3. Palp: 6.6, 3.6, 4.9, –, 2.7, 17.8. Midwidths: femora I–II, IV=1.85, III=2.30; tibia I–IV, 2.3, 1.92, 1.60, 1.70. Abdomen 10.4 long, 6.0 wide. Spinnerets: PMS, 1.65 long, 0.40 wide, 0.6 apart; PLS, 2.6 basal, 2.7 middle, 3.3 distal; mid-widths 1.0, 1.5, 0.6 respectively.

Like female but:

Carapace (Figs 20–21): length to width 1.24, carapace uniform dark red brown, caput anteriorly dark, becoming lighter red posteriorly. Uniform cover of long white wavy hairs; no setae or thorns.

Eyes: PLE clearly smaller than ALE but clearly bigger than PME, AME=ALE.

Maxillae (Fig. 23): as for female.

Labium: cuspules over 200 in band for two-fifths length anteriorly. Basal groove distinct; labiosternal groove not concave, flat with slight (anterior) rise, two separate, large sigilla.

Chelicerae: ectal lyrate area large, semicircular; intercheliceral spines basodorsally 4 thick and ca. 15 smaller.

Sternum (Fig. 22): profile saddle-like, high at back and front; posterior angle sharp, separates coxae IV but posterior edge easily seen, sloping gradually. Marginal thorns absent. Prostrate hair mat between bristles strong, dense. Pedicel and sternum edges form clear boundary in elevation and setation, pedicel edge pallid.

Sigilla (Fig. 22): 3 pairs, posterior 1.6–3 lengths apart; ca. 0.7–0.8 of length from margin; middle pair about half size of posterior; within 1 length of margin; anterior pair distinct.

Legs (Fig. 20): leg I clearly thicker than IV but II subequal. Basifemoral thorns absent on all. Femora I, II prolaterally with long bushy fine hairs. Femur III distinctly incrassate.

Coxae: no thorns prolaterodorsally on IV, basally anterior corner indistinct, edge curves dorsally, or rounded at interface. III, basally rectangular. Ventrally with weak thorns on prolateral face of I–II. Ventral surface of I–IV clearly curving or sloping forward; retrolaterally I–III with median narrow light brush, IV glabrous. III–IV with setose mound up from inner corner low mound with few bristles on III–IV. All retrolaterally without ventral ledge; ventral pilosity uniform.

Scopula: entire, dense on tarsi I–II; on metatarsi III ca. 0.8–0.9 of length, but with uniformly distributed (i.e., not a dividing line) long emergent hairs, but thin with long hairs; on tarsi III entire without emergents; on metatarsi IV for about three-quarters of distal length, divided by setal band 3–4 wide; on tarsi IV divided by long fawn brown hairs in band 4–7 wide. No scopula on proventral tibiae I–II.

Spines, metatarsi: I, 1 minute ventral or ventrolateral; II, 3 ventral; III, 3 ventral and 2 dorsolateral; IV, 3 ventral and 2 dorsolateral. Elsewhere absent.

Tarsal weakness: cracked tarsi dorsally evident on III–IV, to venter only on III–IV, pallid zone also on II.

Claws: third claw only on IV, paired claws on I–IV with 3–4 small teeth.

Male palp (Figs 24–27): embolus tip widely flared, flare only one-sided; twisted through 90° at tip. Relative length of palpal tibia about double length of bulb.

Distribution and Habitat. Known only from lowland rainforests in the Cairns region, Wet Tropics, Queensland, Australia.

Remarks. The inclusion of this new species in the otherwise Malaysian genus only reflects the unrevised status of many theraphosids from Australasia. Correct recognition of *C. tropix* sp. nov. using live material is only possible by the examination of the chelicerae of its exuviae.

Acknowledgements

This project was given major impetus through contracts from the Australian Heritage Commission, Environment Australia, to document mygalomorph diversity in Australian museums and from Kaufmann Productions. As part of that project, I was kindly provided with access to the collections of the Western Australian Museum, South Australian Museum, Museum Victoria, Australian Museum, Museums and Art Galleries of the Northern Territory, and the Museum of Tropical Queensland by Dr Mark Harvey, Mr David Hirst, Dr Ken Walker, Mr Graham Milledge, Mr Gavin Dally, and Dr Barbara Done, respectively. Access to the collections of Zoologisches Institut und Zoologisches Museum, Hamburg, Natural History Museum, London, Museum National d'Histoire Naturelle, Paris, Museo Civico di Storia Naturale "Giacomo Doria", Genova, Naturhistorisches Museum, Wien, was also kindly provided by Dr Hieronymus Dastych, Mr Paul Hillyard and Ms Janet Beccaloni, Drs Christine Rollard, Mark Judson, Michel Hubert and the late Jacqueline Heurtault, Dr Giuliano Doria, and Dr Jürgen Gruber, respectively. Dr Barbara Baehr kindly assisted the transport of non-type material of *Selenocosmia javanensis* (Walckenaer) from Dr Michael Apel, Museum Wiesbaden.

References

Den Otter, C.J. (1974) Setiform sensilla and prey detection in the Bird-spider *Sericopelma rubronitens* Ausserer (Araneae, Theraphosidae). *Netherlands Journal of Zoology*, 24, 219–235.

Haupt, J. & Schmidt, G.E.W. (2004) Description of the male and illustration of the female receptacula of *Yamia watasei* Kishida, 1920 (Arachnida, Araneae, Theraphosidae, Selenocosmiinae). *Spixiana*, 27(3), 199–204.

Main, B.Y. (1985) Mygalomorphae. *In*: Walton, D. W. (Ed.), *Zoological Catalogue of Australia, 3. Arachnida: Mygalomorphae, Araneomorphae in part, Pseudoscorpionida, Amblypygi, and Palpigradi*. Australian Government Publishing Service, Canberra, pp. 1–48.

Raven, R.J. (1985) The spider infraorder Mygalomorphae (Araneae): cladistics and systematics. *Bulletin of the American Museum of Natural History,* 182, 1–180.

Raven, R.J. (2000) Taxonomica Araneae I: Barychelidae, Theraphosidae, Nemesiidae and Dipluridae (Araneae). *Memoirs of the Queensland Museum,* 45(2), 569–575.

Raven, R.J., Baehr, B. C. & Harvey, M. S. (2002) *An interactive key to Australian spider subfamilies*. Australian Biological Resources Study: CSIRO Publishing, Melbourne.

Schmidt, G.E.W. (1995) Gehören "*Selenocosmia" crassipes* (L. Koch, 1873) und "*Selenocosmia" stirlingi* Hogg, 1901 (Araneida: Theraphosidae: Selenocosmiinae) wirklich zu *Selenocosmia* Ausserer, 1871? *Arachnologisches Magazin,* 3(11), 1–12.

Schmidt, G.E.W. (2002) Neues *Phlogius*–Material (Araneae: Theraphosidae: Selenocosmiinae) aus Papua-Neuguinea und Beschreibung des Männchens von *Phlogius papuanus* (Kulczynski, 1908). *Tarantulas of the World,* 70, 3–9.

Schmidt, G.E.W. & Krause, R.H. (1995) Eine neue Art der Theraphosidae aus Vietnam *Selenopelma kovariki* gen. et sp. n. (Araneida: Theraphosidae: Selenocosmiinae). *Arthropoda*, 3(2), 21–24.

Schmidt, G.E.W. & von Wirth, V. (1992) Beschreibung des Weibchens von *Chilocosmia dichromata* gen. n. sp. n. und des Männchens von *Chilocosmia arndsti* (Schmidt and von Wirth, 1991) (Araneida: Theraphosidae: Selenocosmiinae). *Arachnologischer Anzeiger,* 3(11), 9–16.

Simon, E. (1889) Voyage de M.E. Simon au Venezuela (decémbre 1887–avril 1888). 4^{e} Mémoire, Arachnides. *Annales de la Société entomologique de France,* (6) 9, 169–220.

Simon, E. (1892) *Histoire naturelle des araignées.* Paris, vol. 1, part 1, pp. 1–256.

Simon, E. (1903) *Histoire naturelle des araignées.* Paris, vol. 2, part 4, pp. 669–1080.

Smith, A. M. (1987) *The tarantula: classification and identification guide* (second ed.). Fitzgerald Publishing, London, 178 pp.

 © 2005 Magnolia Press