

New species and new records of genus *Tamopsis* Baehr & Baehr, (Arachnida, Araneae, Hersiliidae).

Third supplement to the revision of the Australian Hersiliidae.

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Abstract

Three new *Tamopsis* species from Western Australia and Victoria are described: *Tamopsis depressa* sp. nov., *T. distinguenda* sp. nov., and *T. transiens* sp. nov. and their relationships within the genus *Tamopsis* are discussed. New records of several other *Tamopsis* species are presented, and the ranges of some species are considerably extended.

Introduction

Soon after having finished the second supplement (Baehr & Baehr 1989) to our revision of the Australian Hersiliidae (Baehr & Baehr 1987) we received another sample of Hersiliidae from the Western Australian Museum (courtesy of Miss J. M. Waldock) that included a further three new species of *Tamopsis* from Western Australia, together with specimens of some other recently described species. While working on this material, we received additional Hersiliidae from the Museum of Victoria, Melbourne (courtesy of Dr. M. S. Harvey, Mr. G. Milledge), from the C.S.I.R.O., Canberra (courtesy of Dr. R. B. Halliday), and from Naturhistorisches Museum, Wien (courtesy of Dr. J. Gruber). These samples include an additional specimen of a new species described herein and some specimens which considerably extend the range of species described earlier by us. This material is recorded in the present paper which is regarded a third supplement to our revision. It is again evidence of the insufficient knowledge of taxonomy and distribution of the Australian Hersiliidae, especially in Western Australia.

The sequence of the species follows the systematic order of our revision. Descriptions and measurements were taken as indicated previously (Baehr & Baehr 1987, 1988, 1989). Eye ratio was taken in the following order: AME:ALE:PME:PLE. Maps are provided for the newly described species and for species in which the range has been significantly extended in the present paper.

The samples contain several juvenile specimens which could not positively identified and that are therefore not included in the present paper.

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Abbreviations

ACT	Australian Capital Territory
ALE	anterior lateral eye
AME	anterior median eye
ANIC	Australian National Insect Collection, Canberra
bS	basal segment of posterior lateral spinneret
CBM	Collection B. Baehr, München
LB	total length of body
LL	total length of legs
NHMW	Naturhistorisches Museum, Wien
NMV	Museum of Victoria, Melbourne
NSW	New South Wales
PLE	posterior lateral eye
PLS	posterior lateral spinneret
PME	posterior lateral eye
QLD	Queensland
tS	terminal segment of posterior lateral spinneret
VIC	Victoria
WA	Western Australia
WAM	Western Australian Museum, Perth
I	1st leg
II	2nd leg
III	3rd leg
IV	4th leg

Systematics

In our revision (Baehr & Baehr 1987) all known species of the former genera *Chalinura* or *Tama*, respectively, were transferred to a new genus *Tamopsis*. Except for the singular *Hersilia australiensis* Baehr & Baehr, all other Australian species of Hersiliidae are included in the genus *Tamopsis* (for the generic diagnosis, see revision). Most important characters for species differentiation in genus *Tamopsis* are the structure of the male palpus and of the female epigyne and vulva.

***Tamopsis depressa* sp. nov.**

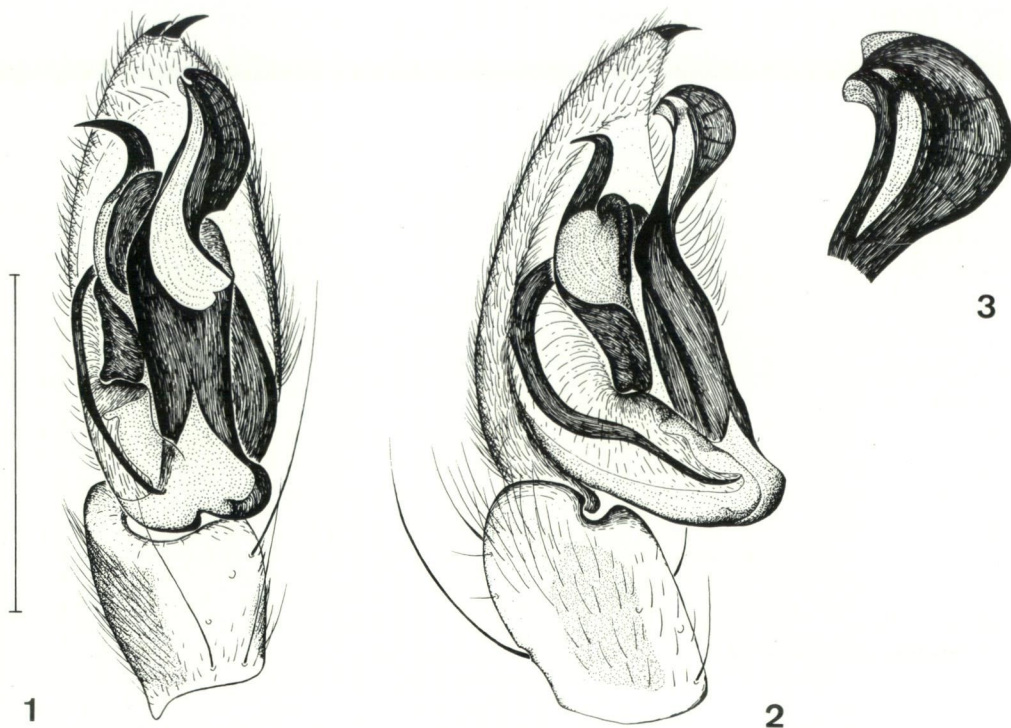
Figures 1-3, 12

Holotype

Male, W.A. 12 km E of Badja H.S., D. Mead-Hunter & G. Harold, 30.X.1988, Field No. 60 (WAM 890/91).

Diagnosis

Species of the *platycephala*-group, characterized by depressed eye area and



Figures 1-3 *Tamopsis depressa* sp. nov. Holotype. Male palpus. 1. ventral view, 2. lateral view, 3. apex of lateral apophysis. Scale for figs 1 and 2: 0.5 mm.

elongate, falciform dorsal muscular pits. Distinguished from related species by the markedly widened and strongly hollowed apex of lateral apophysis of male palpus.

Description

Measurements: Length: 4.3 mm; cephalothorax length: 1.8 mm; width: 1.6 mm; abdomen length: 2.6 mm; width: 1.56 mm. Legs: I: 11.24 mm, II: 10.32 mm, III: 3.56 mm, IV: 9.50 mm; ratio: 1:0.92:0.32:0.85. Ratio LB/LL: 0.38. PLS length: 2.24 mm; bS: 0.52 mm; tS: 1.72 mm. Eye ratio: 1:0.32:0.70:0.79.

Colour: Cephalothorax dark yellowish, eye area, clypeus, lateral border, and some radial spots blackish. Sternum dark piceous. Abdomen very dark, mottled, a lancet-shaped median stripe, the wide lateral border, and the areas around the dorsal muscular pits piceous. Ventral surface light. Legs light yellowish, outer and inner surface of femora black, apical parts of leg III and IV annulate. Palpus with dark spot on apical part of femur. PLS yellow, medially and laterally with dark stripe.

Cephalothorax: Approximately circular, slightly longer than wide, c. as wide as abdomen. Eye area not raised, clypeus c. 1/3 as high as eye area. AME by far largest,

PLE slightly larger than PME. Distances AME/AME and AME/ALE slightly less than diameter of AME. Distance PME/PME c. half of diameter of PME, distance PME/PLE almost twice the diameter of PME. Chelicerae almost twice as long as wide. Sternum pentagonal, hirsute.

Abdomen: Elongate, rather parallel, much longer than wide and c. as wide as cephalothorax. Dorsally with 3 pairs of elongate, falciform and one posterior pair of circular muscular pits. Ventral muscular pits in a narrow, slightly v-shaped arrangement. PLS but slightly shorter than abdomen, tS comparatively short.

Legs: Measurements see above. Rather short, III comparatively elongate.

Palpus: Median apophysis with very large, elongate, sharply bent, hook-like apex. Lateral apophysis basally rather wide, apex markedly widened and hollowed, though not cup-shaped, concealing the embolus completely.

Female: Unknown.

Variation: Variation of male genitalia unknown, of non-genitalic characters apparently feeble.

Additional material examined: The following juvenile is tentatively assigned to this species: 1 juvenile male, Western Australia, 21 km NE. of Denham, 23 July 1987, W. F. Humphreys (WAM 89/92).

Etymology

Derived from the markedly depressed eye area.

Distribution

Known so far from central western area of Western Australia.

Habits

According to label data holotype "active on ground (PM). Open *Acacia* over stony brown clay", the juvenile collected by "beating tray". This species lives perhaps not on bark of tree trunks, but on branches, like most low-eyed species of which observations have been made. The adult specimen caught in October, the juvenile in July.

Relationships

The very depressed eye area as well as the elongate, falciform dorsal muscular pits, and the structure of male palpus allude *T. depressa* to the *platycephala*-group of revision which includes so far only *T. platycephala* Baehr & Baehr from eastern Queensland and *T. amplithorax* Baehr & Baehr from southern Western Australia. In view of the rather similar male palpus of both species, *T. depressa* is certainly more closely related to the eastern *T. platycephala* than to the other Western Australian species.

Identification

For identification the key to species in our revision (Baehr & Baehr 1987) should be extended and altered as following:

- Couplet 3(2) delete "Eastern central Queensland" 3a
- 3a(3) Apex of lateral apophysis cup-shaped, convexly tapering.
Eastern central Queensland *platycephala*
Apex of lateral apophysis hollowed, apically widened.
Central western part of Western Australia *depressa* sp. nov.

***Tamopsis eucalypti* (Rainbow)**

Tama eucalypti Rainbow, 1900: 487.

Tamopsis eucalypti, Baehr & Baehr 1987: 364; 1988: 13.

New records: **ACT**: 2 females, 35° 16'S 149° 06'E, Black Mtn., 29 Dec 1984, M. S. Harvey, R. J. Moran, A. Hastings (ANIC). — **NSW**: 1 female, 35° 38'S 150° 18'E, Durras North, nr. Batemans Bay, 23.I.1980, D. C. F. & B. G. F. Rentz. Stop 6 (ANIC).

This is a widespread species in southeastern Australia, though few records on habits are available. The specimens are identified by the conspicuous shape of the female epigyne.

***Tamopsis centralis* Baehr & Baehr**

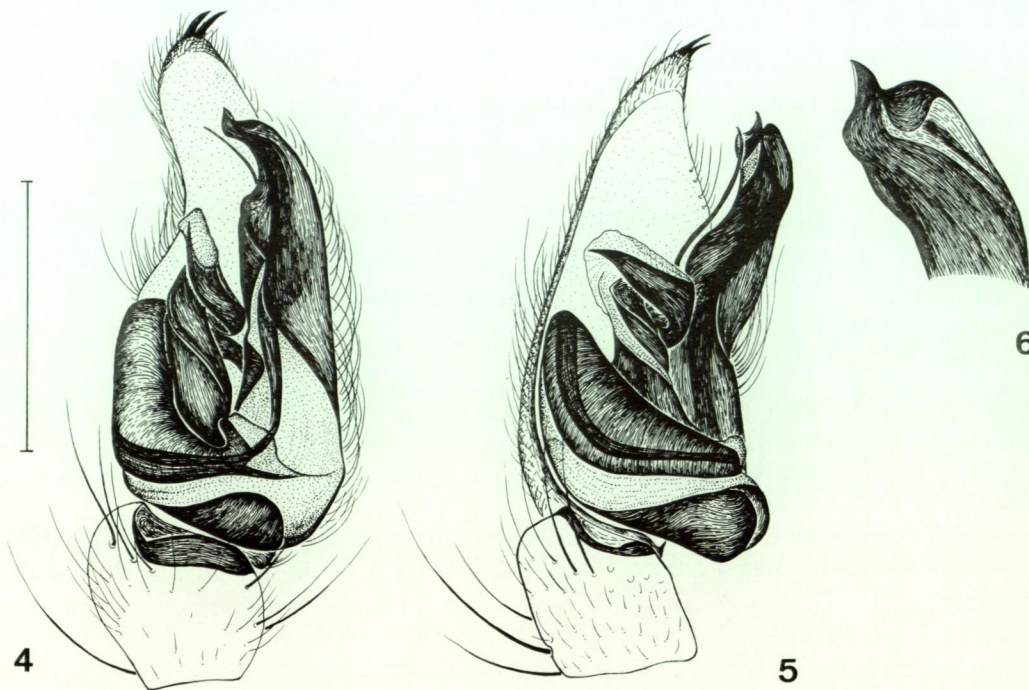
Figure 12

Tamopsis centralis Baehr & Baehr, 1987: 369

New records: **QLD**: 1 male, ? 3 juveniles, Peak Downs, A.D. 1884, 1882, A.N. I.275, II.154, leg. Steindachner, "*Tama novae-hollandiae* L. K.", Inv.No.466 (NHMW).

This species was described from a slightly damaged male from Winton, central Queensland (Baehr & Baehr 1987), and two juveniles from the Godeffroy collection, presumably from Peak Downs, were tentatively included in this species. We now assign to this species the three present juveniles. *T. centralis* is easily recognized by the deeply excised median apophysis of male palpus.

A note of J. Gruber and our own reexamination of the original description revealed that Fickert and not L. Koch is the author of *Chalinura novaehollandiae*. Although the single male mentioned above was determined by L. Koch, it is not a type of *Chalinura novaehollandiae* Fickert which should be located in the museum of Breslau (now Wroslav) and which has been probably lost during World War II (see Baehr & Baehr 1987). Although it seems reasonable to believe that *T. centralis* might be the original *T. novaehollandiae* Fickert, the description of the latter contains no argument for that supposition, the more, as only the female genitalia are figured, and several other species equally compete for that synonymization.



Figures 4-6 *Tamopsis distinguenda* sp. nov. Holotype. Male palpus. 4. ventral view, 5. lateral view, 6. apex of lateral apophysis. Scale for figs 4 and 5: 0.5 mm.

***Tamopsis distinguenda* sp. nov.**

Figures 4-8, 12

Holotype

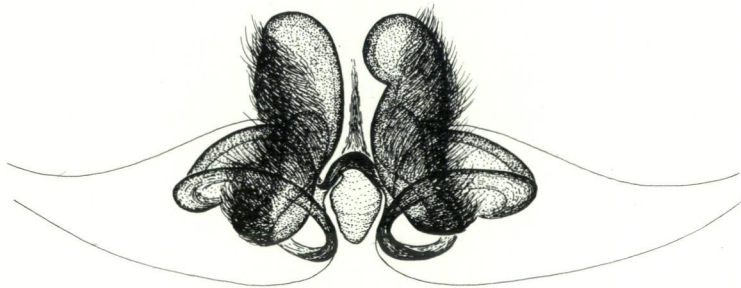
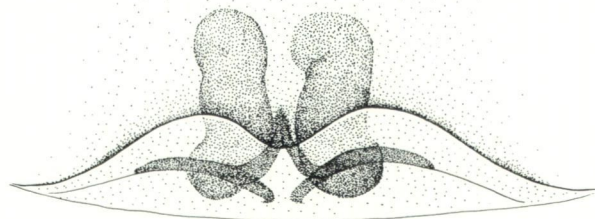
Male, Western Australia, Grass Patch, 33° 14'S 121° 43'E, 25 Nov. 1978, A. F. Longbottom, Fitz. Loc. 41, Under wooden plank. On beach (WAM 89/104).

Paratypes

1 female, W.A., Grass Patch, 33° 14'S 121° 44'E, 10.XII.1981, C. Longbottom, Fitz loc. 81, While harvesting (WAM 89/105); 1 male, W.A., Ludlow Tuart Forest, Ludlow, Day Trap No.1, 11.XI.1980, S. S. Curry, open canopy tuart forest (WAM 89/106); 1 male, W.A. Ludlow Tuart Forest, Ludlow, Malaise Trap No.2, 4.XII.1981, S. S. Curry, replanted tuart. No burning (CBM).

Diagnosis

Species of the *queenslandica*-group. Medium sized species with low eye area, distinguished from related species by male palpus with apical excision of median apophysis narrow, lateral apophysis channelled, barely sinuate and contorted, by female epigyne with dorsal receptaculum seminis markedly smaller than ventral and by introductory ducts coiled twice.



Figures 7 and 8 *Tamopsis distinguenda* sp. nov. Female genitalia. 7. epigyne, 8. vulva. Scale: 0.5 mm.

Description

MALE HOLOTYPE

Measurements: Length: 3.8 mm; cephalothorax length: 1.55 mm; width: 1.60 mm; abdomen length: 2.25 mm; width: 1.85 mm. Legs: I: 9.42 mm, II: 9 mm, III: 3.68 mm, IV: 9.24 mm; ratio: 1:0.96:0.39:0.98. Ratio LB/LL: 0.40. PLS length: 1.62; bS: 0.38; tS: 1.24. Eye ratio: 1:0.42:1.14:1.24.

Colour: Cephalothorax dark yellow, eye area, anterior surface of chelicerae, and lateral border dark. Almost no dark radial spots visible. Abdomen white, slightly mottled, a lancet-shaped median spot and the narrow lateral borders dark. Legs yellowish, almost without pattern. Terminal segment of palpus brown. PLS whitish, median border with dark stripe. Sternum yellowish, ventral surface of abdomen grey.

Cephalothorax: Circular, slightly wider than long, narrower than abdomen. Eye area rather low, clypeus c. half as high as eye area. PLE largest, PME larger than AME.

Distance AME/AME c. half of diameter of AME, distance AME/ALE distinctly larger than diameter of AME, distance PME/PME c. 1/3 of diameter of PME, distance PME/PLE slightly larger than diameter of PLE. Chelicerae c. twice as long as wide. Sternum pentagonal, hirsute.

Abdomen: Short, wide, widest in posterior third, clearly wider than cephalothorax. Dorsally with 5 pairs of circular muscular pits. Ventral muscular pits in a wide v-shaped arrangement. PLS rather short, considerably shorter than abdomen.

Legs: Measurements see above. Rather short, III comparatively elongate.

Palpus: Median apophysis oblique, strongly contorted, apex deeply excised, though narrow. Apical part of lateral apophysis channelled for reception of embolus, barely contorted nor sinuate.

FEMALE HOLOTYPE

Measurements: Length: 4.1 mm; cephalothorax length: 1.64 mm; width: 1.72 mm; abdomen length: 2.46 mm; width: 2.50 mm. Legs: I: 9.46 mm, II: 9.06 mm, III: 3.46 mm, IV: 8.96 mm; ratio: 1:0.96:0.37:0.95. Ratio LB/LL: 0.43. PLS length: 2.4 mm; bS: 0.48 mm; tS: 1.92 mm. Eye ratio: 1:0.52:1.35:1.46.

Colour: Cephalothorax dark yellow, eye area, lateral parts of clypeus, anterior surface of chelicerae, and lateral borders blackish, a triangular spot behind eye area and three spot above the leg bases white. Abdomen whitish, strongly mottled, a lancet-shaped median spot and the wide lateral borders dark. Legs and palpus conspicuously annulate, median surface of femora with dark stripe. PLS with two indistinct dark rings.

Cephalothorax: Circular, wider than long, much narrower than abdomen. Size of eyes and distances between them almost similar to male, but AME comparatively smaller.

Abdomen: Considerably wider than cephalothorax. Arrangement of dorsal and ventral muscular pits as in male. PLS slightly longer in relation to abdomen than in male.

Legs: Measurements see above. Shorter than in male, III relatively shorter.

Epigyne: Without lateral openings. Parts of vulva closely adjacent.

Vulva: With two receptacula seminis of different size, the dorsal one being much smaller. Ventral receptaculum glandular along whole lateral surface. Introductory ducts two times coiled, laterally sharply bent.

Variation: Some variation in colour and in relative length of legs noted.

Etymology

Alludes to the high similarity to some other species of same group.

Distribution

Known from southwestern corner of Western Australia.

Habits

According to label data holotype "under wooden plank on beach", paratypes on "tuart" and "while harvesting". These records are not very useful for fixing the habitat of *T. distinguenda*. However, this is perhaps another species living rather on branches than on tree trunks. Collected so far in November and December.

Relationships

The species belongs to the *queenslandica*-group of revision. Male and female genitalia are most similar to *T. queenslandica* Baehr & Baehr from central eastern Queensland and New South Wales, though differ in the less wide apex of median apophysis and the rather straight lateral apophysis of male palpus, and in the small dorsal receptaculum seminis of female vulva. Female genitalia of *T. distinguenda* are also fairly similar to those of *T. darlingtoniana* Baehr & Baehr from southwestern Australia, though differ in the more complicately coiled introductory ducts. With regard to systematic position, *T. distinguenda* is closely related to *T. queenslandica*, but is perhaps slightly more plesiomorphic.

Identification

For identification the key to species in our revision (Baehr & Baehr 1987) should be altered and extended as follows:

- Couplet 11(10) MA very deeply excised. LA deeply channelled at apex 11a
 (11) MA with wide excision. LA sinuate. Southeastern Queensland, eastern New South Wales
 *queenslandica*
 MA with narrow excision. LA barely sinuate. Southwestern Australia *distinguenda* sp. nov.
- Couplet 25(24) V with ID posteriorly sharply bent outwards and produced laterally 25a
 V with ID posteriorly not bent outwards, nor produced laterally 26
- 25a(25) AME almost as large as PME. Dorsal RS as large as ventral RS. Southeastern Queensland, eastern New South Wales *queenslandica*
 AME considerably larger than PME. Dorsal RS half as large as ventral RS. Southwestern Australia
 *distinguenda* sp. nov.

***Tamopsis circumvidens* Baehr & Baehr**

Figure 12

Tamopsis circumvidens Baehr & Baehr, 1987: 378

New records: VIC: 1 male, 13.3 km NW of Lascelles, 35°33'S 142°27'E, Site 43, A. L. Yen, Jan.1986 (NMV); 1 male, 15.2 km NW. of Lascelles, 33°33'S 142°26'E, Site 45, A. L. Yen, Jan.1986 (NMV); 1 male, 8.2 km N. of Culleraine, 34°12'S 141°36'E, Site 119, A. L. Yen, Feb.1986 (NMV); 1 male, 9.0 km ESE of Hattah, 34°48'S 142°22'E, Site 3, A. L. Yen, Jan.1986 (NMV); 1 female, 8.4 km SE of Hattah, 34°48'S 142°21'E, Site 6, A. L. Yen, Jan.1986 (NMV); 1 male, 18.9 km SW of Hattah, 34°54'S 142°09'E, Site 31, A. L. Yen, Jan.1987 (CBM); 1 male, 6.7 km SSW of jnct MV Hwy & Annuello Rd., 34°51'S 142°36'E, Site 14, A. L. Yen, Jan.1986 (NMV); 1 female, 8.3 km SE of confluence of Lindsay R. & Mullaroo Creek, 34°11'S 141°10'E, Site 103, A. L. Yen, Nov.1985 (NMV); 2 females, 16.8 km SSW of Murrayville, 35°25'S 141°10'E, Sites 67 and 68, A. L. Yen, 18-24 Feb.1986 (CBM, NMV). All specimens collected in "Drift fence pitfall trap".

T. circumvidens is a characteristic, easily recognized species known so far from central-southern Western Australia only. It is perhaps a typical species of the Mallee region. The new records extend the range considerably through arid southern Australia to northwestern Victoria, where *T. circumvidens* inhabits also semiarid areas.

***Tamopsis transiens* sp. nov.**

Figures 9-11, 13

Holotype

Male, W.A., WAM Goldfields Survey, MT Jackson, 30°15'00"S, 119°15'20"E. MJR6 Pit fall(s), 24.-30.XI.1981, W. F. Humphreys et al. (WAM 89/109).

Paratype

Male, Vict., 19.7 km NE of Patchewollock, 35°14'S 142°19'E, Site 54, Drift fence pitfall trap, Jan.1986, A. L. Yen, "*Tamopsis fickerti*, *Tamopsis* sp." (NMV).

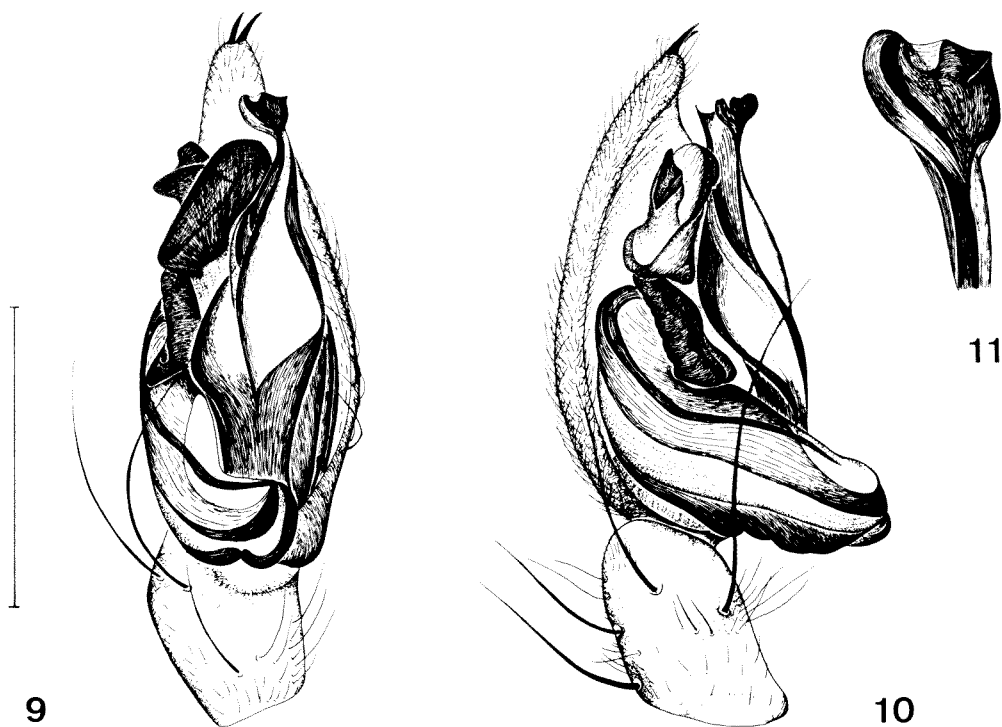
Diagnosis

Species of *nanutarrae*-group (Baehr & Baehr 1989) by means of high eye area, large AME, and structure of median apophysis of male palpus. Distinguished from *T. nanutarrae* Baehr & Baehr by median apical process of median apophysis of male palpus longer, and lateral part of apical excision of lateral apophysis widened and with deep excision.

Description

HOLOTYPE

Measurements: Length: 3.54 mm; cephalothorax length: 1.44 mm; width: 1.32 mm; abdomen length: 2.12 mm; width: 1.42 mm. Legs: I: 12.34 mm, II: 10.74 mm, III: 3.80



Figures 9-11 *Tamopsis transiens* sp. nov. Holotype. Male palpus. 9. ventral view, 10. lateral view, 11. apex of lateral apophysis. Scale for figs 9 and 10: 0.5 mm.

mm, IV: ?; ratio: 1:0.87:0.31:?. Ratio LB/LL: 0.29. PLS length: 1.56 mm; bS: 0.52 mm; tS: 1.04 mm. Eye ratio: 1:0.31:0.76:0.80.

Colour: Cephalothorax dark yellowish, eye area, middle of clypeus, anterior basal surface of chelicerae, lateral border, and some radial spots dark brown. Abdomen whitish, laterally and posteriorly slightly mottled, lateral borders and a lancet-shaped median stripe indistinctly dark. Ventral surface light. Legs whitish-yellowish, femora on outer and inner surface with dark stripe. PLS with a basal and a subapical dark spot on tS.

Cephalothorax: Circular, c. as wide as long, and almost as wide as abdomen. Eye area strongly raised, clypeus c. as high as eye area. AME largest, PME almost als large as PLE. Distances AME/AME and AME/ALE clearly less than diameter of AME. Distance PME/PME c. 1/3 of diameter of PME, distance PME/PLE slightly larger than diameter of PLE. Chelicerae almost twice as long as wide. Sternum pentagonal, hirsute.

Abdomen: Elongate, rather parallel, much longer than wide and c. as wide as cephalothorax. Dorsally with five pairs of circular muscular pits. Ventral muscular

pits in a narrow, v-shaped arrangement. PLS short, considerably shorter than abdomen.

Legs: Measurements see above. Rather elongate, III moderately elongate.

Palpus: Median apophysis contorted, apex widened, with wide, membranous area within. Lateral rim of apex simply bordered. Within membranous area with a thickly sclerotized, contorted, apically excised process directed outwards. Lateral apophysis slightly contorted, apex excised, lateral part of apex widened, with deep excision. Embolus hidden.

Female: Unknown.

Variation: Paratype slightly more vividly patterned, otherwise little variation noted.

Etymology

Derived from transient distribution from Western Australia to northwestern Victoria.

Distribution

Known so far from interior of southwestern Australia and from northwestern Victoria.

Habits

Both specimens collected in pitfall traps, the holotype in "shrubland". As the closely related species *T. nanutarrae* Baehr & Baehr and most other species with high eye area live on bark of tree trunks, this might be also the habit of *T. transiens*.

Relationships

In view of the very similar male palpus this species is certainly very closely related to *T. nanutarrae* Baehr & Baehr from northern Western Australia. In *T. transiens*, however, the palpus is slightly more complicately built, and therefore, this species is perhaps more evolved than the northern *T. nanutarrae*.

Identification

For identification the extended key to the species in Baehr & Baehr (1989) should be altered and extended once more as following:

- Couplet 13a(13) delete: "Northwestern Australia south of Great Sandy Desert" 13aa
- 13aa(13a) Apical process of median apophysis shorter. Lateral part of apex of lateral apophysis not widened nor excised. Northwestern Australia south of Great Sandy Desert *nanutarrae*
- Apical process of median apophysis longer. Lateral part of apex of lateral apophysis distinctly widened and excised. Southwestern Australia, northwestern Victoria *transiens* sp. nov.

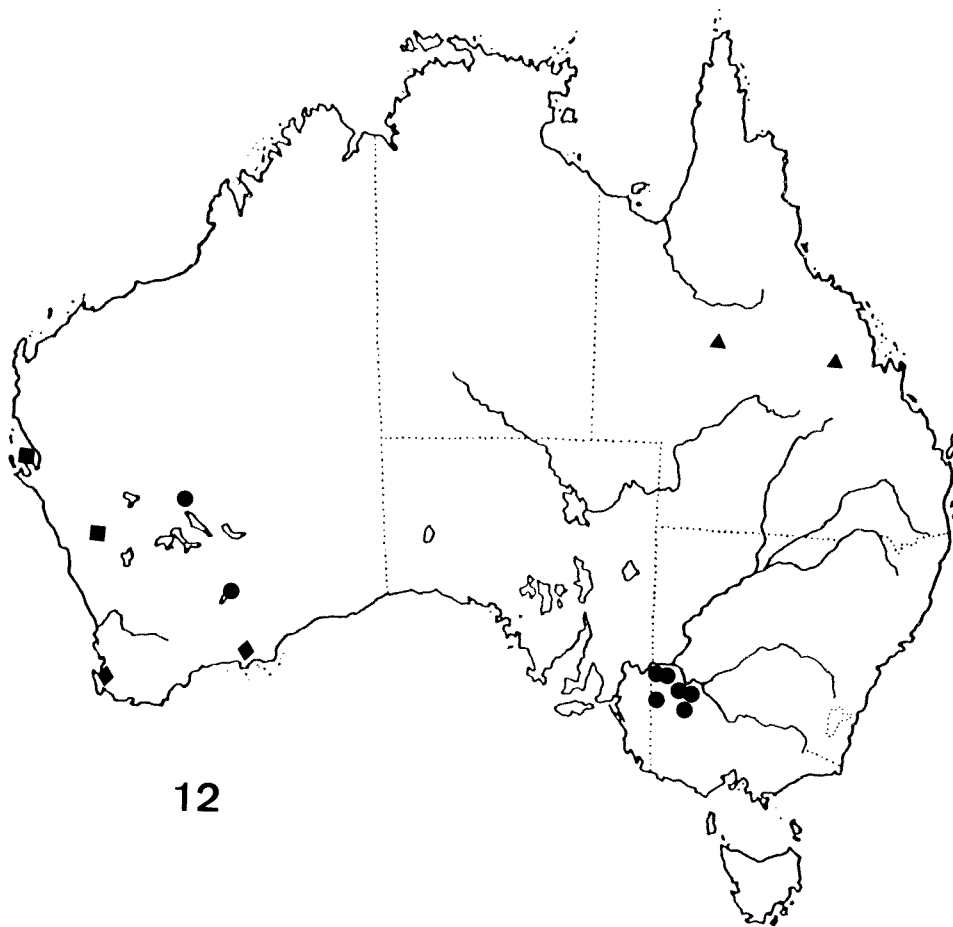


Figure 12 Distribution of *Tamopsis depressa* sp. nov.: ■, *T. distinguenda* sp. nov.: ◆, *T. circumvidens* Baehr & Baehr: ●, and *T. centralis* Baehr & Baehr: ▲.

***Tamopsis tropica* Baehr & Baehr**

Tamopsis tropica Baehr & Baehr, 1987: 379.

New record: **QLD**: 1 female, Pallarenda, 7 m N of Townsville, 7.VIII.1967, F. J. Day (ANIC).

A northeastern species, easily identified by the high eye area, simple lateral apophysis of male palpus, and median apophysis with scopula-like organ.

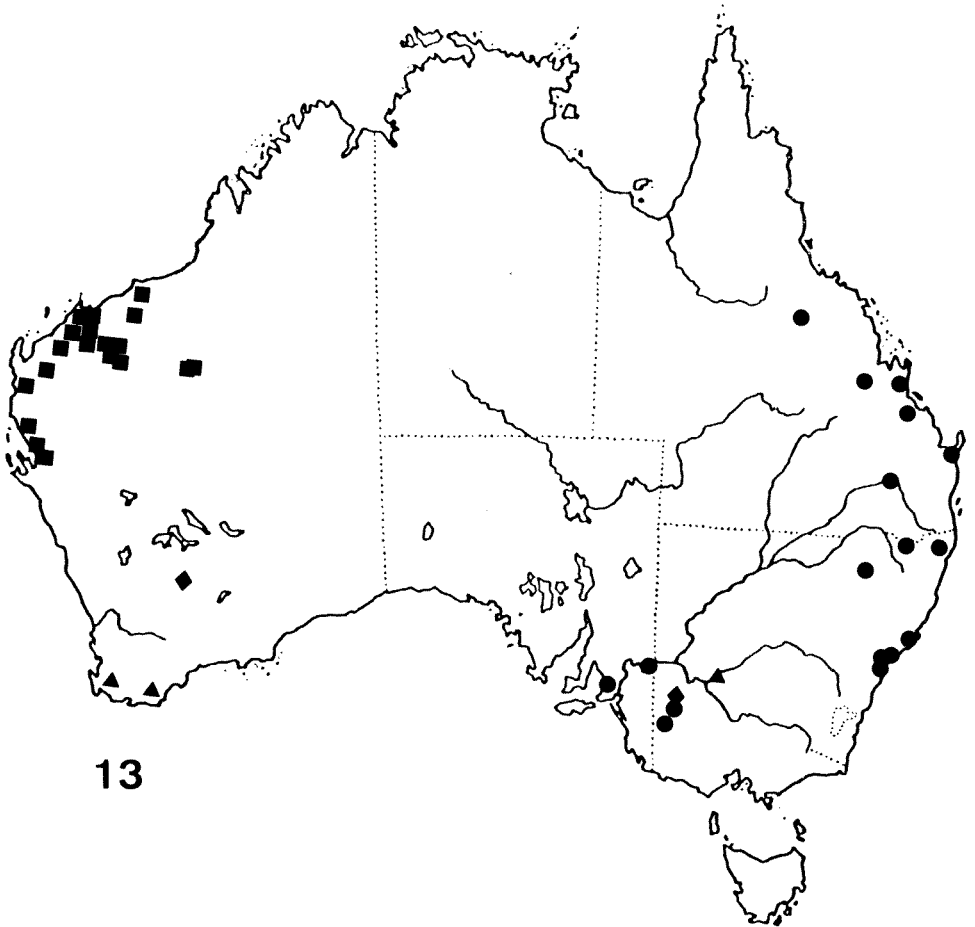


Figure 13 Distribution of *Tamopsis transiens* sp. nov.: ◆, *T. fickerti* (L. Koch): ●, *T. marri* Baehr & Baehr: ▲, and *T. occidentalis* Baehr & Baehr: ■.

***Tamopsis fickerti* (L. Koch)**

Figure 13

Chalinura fickerti L. Koch, 1876: 830.

Tamopsis fickerti, Baehr & Baehr 1987: 384; 1988: 16.

New records: VIC: 1 male, 2 juv., Horseshoe Bend, Little Desert Nat. Park, 6. July 1982, M. S. Harvey & B. E. Roberts (WAM 89/245-7); 1 male, 1 juv. female, near junction of Freeway Tk & Everard Tk, Wyperfeld Nat. Park, 4 July 1982, M. S. Harvey & B. E. Roberts (WAM 89/254-5); 1 male, 15 km WNW of Jaapet, Lake Albacutya Park, 3 July 1982, M. S. Harvey & B. E. Roberts (WAM 89/252). The

specimens were collected "under bark of *Eucalyptus largiflorens* and *Eucalyptus camaldulensis*". There are several additional juveniles from the same or nearby localities which are tentatively alluded to this species. — **NSW**: 1 female, 28.37 S 153.23 E, Mongaburra Lookout, nr. Minyon Falls, Whian, NNE of Lismore, 18 Nov. 1983, D. C. F. Rentz & M. S. Harvey, Stop 54 (ANIC). — **QLD**: 1 female, 29.00 S 151.05 E, 18 km SSW. of Texas, 24 Nov. 1983, D. C. F. Rentz & M. S. Harvey, Stop 66 (ANIC); 1 female, 28.56 S 151.08 E, 9 km SSW. of Texas, 24 Nov. 1983, D. C. F. Rentz & M. S. Harvey, Stop 68 (ANIC); 1 female, 20.44 S 145.11 E, Burra, 2. X. 1977, Rentz & White, Stop 24 (ANIC).

Tamopsis fickerti is common and widespread in southeastern Australia, but has not yet been reliably recorded from Victoria. The new records close the range of this species in Victoria and extend it into the semiarid region. The record from Burra in inland Queensland is also evidence of occurrence of *T. fickerti* in rather dry areas. *T. fickerti* is a typical bark-inhabiting species, living in crevices on tree trunks. Females of this species are easily recognized by the heart-shaped median plate in the epigyne.

***Tamopsis perthensis* Baehr & Baehr**

Tamopsis perthensis Baehr & Baehr, 1987: 386.

New records: **WA**: 1 female, 4 km S. of Nannup, 3 Dec. 1979, M. S. Harvey (WAM 89/257); 2 females, Mundaring Weir, 31°58'S 116°10'E, 16 Sept. 1988, J. M. Waldock, M. Zabka (WAM 89/96, 89/101); 1 male, Parmelia, nr. Kwinana, 32°14'S 115°48'E, 14 Dec. 1988, A. E. de Jong (WAM 89/103); 1 male, Ludlow Tuart Forest, J. Curr 4, 11.XII.1981 (WAM 89/108). The specimens were collected "on bark of *Eucalyptus*", "on smooth burnt (black) trunk of dead tree", "under bark", in "bush area, in jarrah tree", in "Malaise trap, replanted tuart. No burning".

This is perhaps the most common species in southwestern Australia which lives mainly on the bark of tree trunks, but has been found also on walls and fences.

***Tamopsis marri* Baehr & Baehr**

Figure 13

Tamopsis marri Baehr & Baehr, 1989: 312.

New records: **NSW**: 4 females, ca. 8 km WNW. of Balranald, N.S.W., 5.II.1978, D. C. F. Rentz. Stop 7 (ANIC, CBM).

This species was originally described from two localities in southwestern Australia, where it has been found on Marri eucalypts. The new record extends the range of this species across southern Australia into western Riverina country. The species is recognized by the conspicuous black and light face pattern and by the female vulva having two heavily sclerotized bridges in middle. These are rather larger in the eastern specimens than in the western females. Otherwise, however, the specimens are very similar, so that we do not hesitate to assign them to *T. marri*.

***Tamopsis occidentalis* Baehr & Baehr**

Figure 13

Tamopsis occidentalis Baehr & Baehr, 1987: 387; 1989: 319.

New records: WA: 2 males, 1 juvenile female, Rudall River Camp, 22.19S, 122.58E, 17 July 1988, A. E. de Jong (WAM 89/290-2); 1 female, Poonemerlarra Ck., 22.37S, 122.22E, 20 July 1988, A. E. de Jong (WAM 89/289).

This species was hitherto known from northwestern Australia south of Great Sandy Desert to about Shark Bay in the south. It is an arid country species that is collected almost exclusively on the trunks of river eucalypts. The present records are also from river gum, and they extend the range of this species considerably inland into the southern part of Great Sandy Desert.

Remarks

The three newly described species belong to three rather different groups, and altogether, they do not much help explain the phylogenetic relations and the difficult biogeographical questions within the Australian Hersiliidae, but they render them rather more difficult.

The evolution of the peculiar *platycephala*-group is still enigmatic, because this group is so far distributed in eastern Queensland and southwestern Australia only and the two Western Australian species are less closely related one to another than eastern *T. platycephala* and western *T. depressa*.

For the biogeographic problems raised by the occurrence of another species of the *queenslandica*-group in Western Australia (*T. distinguenda*) that is apparently more closely related to the eastern Australian *T. queenslandica* than to any western species, we have at present no conclusive explanation. We think, however, that the actual number and distribution of the low-eyed species of *Tamopsis* is even less known than those of the high-eyed species. The former live perhaps chiefly on smaller branches and are thus less easily and more randomly collected. We increasingly tend to believe that any conclusion on distribution in these species-groups is premature.

The *nanutarrae*-group which is perhaps the sister group of most other high-eyed species with exception of the northern *arnhemensis*-group is no longer restricted to Western Australia, but occurs also in western Victoria (*T. transiens*). This distribution suggests that the ancestor of this group immigrated into Western Australia from the southeast, right across the Nullarbour plain, in the same direction we assume for the other species-groups (Baehr & Baehr 1987).

The discovery of the formerly exclusive western species *T. circumvidens*, *T. marri* and of the new species *T. transiens* in western Victoria and adjacent southwestern New South Wales, respectively, is evidence of closer relations of the southeastern and western faunas, than we believed. In all three species, however, the eastern localities are in semiarid areas, and thus they are perhaps "mallee species" being restricted to the mallee zone that extends through most of southern Australia. This distribution

pattern could be evidence of a very young, presumably late glacial invasion of dry adapted southeastern species into similar southwestern habitats.

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