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STUDIES IN AUSTRALIAN ARANEIDÆ.

No. 3.

By W. J. RAINBOW, F.L.S., F.E.S., Entomologist.

(Plate xlv. ; text figs. 40, 41 and 42).

Family HYPOCHILIDÆ.

Genus ECTATOSTICA, Simon.

The occurrence of this family and genus in the Australian region furnishes another interesting example in connection with our terrestrial fauna. The family is a very small one, comprising, so far as is known, only two genera, of which the above named is one, and *Hypochilus*, Marx, the other. Of these genera, the first contains two species, one of which (*E. davidi*, Simon) occurs in China, and the other (*E. troglodytes*, Higg. and Pett.) in Tasmania. Simon has briefly described an immature form, *E. australis*¹, also from Tasmania, but this is, I doubt not, synonymous with the species described by Higgins and Petterd as *Theridion troglodytes*². *Hypochilus* is a North American genus, and *H. thorelli*, Marx, the type.

The genus *Hypochilus* was founded by Marx³ in 1888, and was included by that author in the family Pholcidae; but in the following year Hypochilidæ was erected for its reception,⁴ Marx pointing out in two interesting papers, the importance of the structural characters of *Hypochilus* in the classification of the Araneidæ.

The interesting feature in connection with the Hypochilidæ is the presence of *four* pulmonary sacs similar to the Theraphosid group.

Simon had not, apparently, seen the "Proceedings of the Royal Society of Tasmania" for 1883, and even if he had it is questionable whether he would have detected in the form described by him in 1902, any affinity with that described by Higgins and Petterd in 1883. Indeed, it would have been surprising if he had, for the description of *Theridion troglodytes*

¹ Simon—Bull. Ent. Soc. France, 1902, p. 240.

² Higgins and Petterd—Proc. Roy. Soc. Tas., 1883, p. 191.

³ Marx—Entom. Amer., iv., 1888, No. 8.

⁴ Marx—Proc. Ent. Soc. Washington, i., 1889, pp. 166, 167 and 178, 179.

was, as was usual with old descriptions, so brief as to be little better than useless. The description contains no reference to the pulmonary sacs, the cribellum, chelicers, or eyes. Moreover, Higgins and Petterd's paper "Description of a New Cave-inhabiting Spider, together with Notes on Mammalian Remains from a Recently Discovered Cave in the Chudleigh District," was never listed in the "Zoological Record." In 1883 the Arachnid portion of that publication was vacant, and in 1884 the recorder had apparently overlooked it, or had, as is not unlikely, not seen the volume containing the description. In 1887 Morton published his "Register of Papers and Proceedings of the Royal Society of Tasmania from the year 1841 to 1885," and in that list on page 45 appears the record of Higgins and Petterd's paper, and this is apparently the only occasion on which it was referred to in print.

The armature of the chelicers in the Tasmanian form differs somewhat from the generic diagnosis laid down by Simon, which is as follows:—"Chelarum margo inferior dentibus minutissimus 5-6 remotis (spatio inter 2° et 3° lato), margo superior dentibus subcontiguus 9 (7-8 exceptis) validis."⁵ In the species under discussion the dentition on the inferior margin is very fine, and appears merely as though granulated, whilst the superior margin is armed with five strong teeth. In other respects, however, *E. troglodytes* agrees with Simon's generic definition, and I would therefore suggest that the diagnosis of *Ectatostica* be amended so as to include *E. troglodytes*, and with this object in view I would propose as follows:—

Inferior margin of falx granulated or armed with a series of minute teeth; superior margins armed with a series of from 5 to 9 strong teeth.

ECTATOSTICA TROGLODYTES, *Higg.* and *Pett.*

(Plate xlvi., fig. 1-4.)

Theridion troglodytes, Higgins and Petterd, Proc. Roy. Soc. Tas., 1883, p. 191.

Ectatostica australis, Simon, Bull. Ent. Soc. France, 1902, p. 240.

♀ Cephalothorax 8·8 mm. long, 5·4 mm. wide; abdomen, 11·3 mm. long, 8·7 mm. wide, 10 mm. high.

Cephalothorax.—Obovate, shining, moderately arched, fuscous. *Pars cephalica* arched, truncated in front, highest near the middle, sloping backwards towards junction of thoracic segment, normal

⁵ Simon—Hist. Nat. des Araignées, i., 1892, p. 204.

grooves distinct, a few hairs scattered over the surface. *Pars thoracica* arched, very deeply depressed at centre, radial grooves present but not strongly marked; sides declivous; surface moderately hairy.

Eyes.—Eight, disposed in two transverse rows, nearly parallel, and constituting three series of 2, 4, 2; of these the medium series form a trapezium, the front pair being the smallest, diurnal, and nearly contiguous; the posterior pair are nocturnal and are separated from each other by a space which is equal to rather more than their individual diameter; the lateral pairs are also nocturnal and are as large as the posterior median eyes, or nearly so; they are contiguous and seated upon tubercles; each lateral eye is separated from its median neighbour by a space equal to about twice its individual diameter.

Legs.—Long, tapering, concolorous with cephalothorax; trochanters sparingly clothed with fine hairs on the underside and armed with rather long, fine, lateral spines, patellæ smooth, those of the first and fourth pairs have a rather long and deep longitudinal groove near their apex; femurs similar in clothing to trochanters, but armed with longer and stronger spines; metatarsi more densely hairy than preceding joints, and armed with long, strong spines; tarsi hairy, superior claws long, strong, curved, and armed with several teeth; inferior claw shorter, and armed at base with two teeth. Measurements (in millimetres):—

Leg.	Coxa.	Trochanter and Femur.	Tibia and Patella.	Metatarsus and Tarsus.	Total.
1	3·2	22·5	25·4	26·2	77·3
2	3·1	21·7	19·0	23·5	67·3
3	2·6	15·0	14·3	16·2	50·8
4	2·7	17·3	18·9	20·0	58·9

Palpi.—Similar in colour and armature to legs. Measurements: Coxa, trochanter, and femur, 5·7 mm.; patella and tibia, 4·8 mm.; tarsus, 3·7 mm.; total, 14·2 mm.

Falces.—Dark brown, shining, strong, arched, apices divergent, inner margins densely hairy; superior margin of the furrow of each falx armed with five strong teeth; inferior margin granulated.

Maxillæ.—Long, arched, concolorous, margins of inner angles yellowish and densely hairy.

Labium.—Concolorous also, rather longer than broad, widest at the base, apex truncated and hairy.

Sternum.—Reddish-brown, arched, elliptical, truncated in front, obtusely pointed at rear, thinly clothed with short black hairs.

Abdomen.—Ovate, overhanging base of cephalothorax, pubescent, strongly arched, of a tawny-olive tint; inferior surface furnished with long hairs, concolorous, with the exception of the four pulmonary sacs which are yellowish. *Anal tubercle* large, obtusely triangular. *Cribellum* entire, transversely oval.

Spinnerets.—Inferior cylindrical, widely separated at their base, apices truncated and rounded; superior conical, two-jointed, about same length as inferior, but not so stout; intermediate pair much smaller than their neighbours, contiguous.

Hab.—Mole Creek Caves, Tasmania.

Higgins and Petterd added an interesting note to their description to the effect that a "male was found on a stalactite, and the female on her globular nest, which hung from the roof, by a comparatively slender thread. The nest, which was about the size of a pigeon's egg, and contained a large number of young, as well as many unhatched eggs, was found on a white crystalline web, which scintillated when the light was placed near it, producing a strikingly beautiful effect. The nest was tightly surrounded by the legs of the female."⁶

In a letter Mr. Petterd informs me that the type specimens are in the Tasmanian Museum, Hobart; also that the species is fairly common in shallow sandstone caves on the banks of the Pieman River, Tasmania. The female constructs an egg-shaped casing for the eggs, and this cocoon is suspended from the roof of the cave by a thin web, the mother hanging over it for the protection of eggs and young.

Family MIMETIDÆ.

The species hereunder described constitutes the first record of this family from Australia. In his work, "Histoire Naturelle des Araignées,"⁷ Simon has explained the affinities and characters of this small family, and to this work the student is referred. The genus *Mimetus*, Hentz, to which the species under discussion is attached, has a wide geographical range, Simon defining it

⁶ Higgins and Petterd—Proc. Roy. Soc. Tas., 1883, p. 198.

⁷ Simon—Hist. Nat. des Araignées, 2nd Ed., i., 1892, p. 940.

as:—"Regio mediterr.; Africa trop. et austr.; India; Nova Zealanda, Amer. sept. et austr.,"⁸ and to this distribution I now add Jenolan Caves District, New South Wales.

Genus *MIMETUS*, *Hentz.*

MIMETUS MACULOSUS,⁹ *sp. nov.*

(Plate xlvi., figs. 5 and 6; text figs. 40, 41, 42.)

♂ Cephalothorax, 3.5 mm. long, 2.6 mm. broad; abdomen, 3.6 mm. long, 2.9 mm. broad; falx, 2 mm. long.

Cephalothorax.—Obovate, arched, attenuated in front, pale yellow with a few dark brown spots. *Pars cephalica* arched, sloping forward, truncated in front, furnished with a few long, strong hairs, sides declivous, normal grooves distinct. *Pars thoracica* smooth, broad, strongly arched, medium depression deep; a few short hairs distributed over the surface.

Eyes.—Eight, arranged in three series of 2, 4, 2; of these the four comprising the median series form a trapezium, of which the anterior pair are diurnal and the largest of the group; the latter pair are separated from each other by a space scarcely equal to once their individual diameter; they are again separated from the posterior pair by a space which, whilst being still greater than that which separates them from each other is still not quite equal to their individual diameter; lateral eyes oblique, contiguous; anterior laterals separated from anterior medians by a space equal to rather more than the individual diameter of one of the latter, and the posterior laterals from the posterior medians by a space sensibly greater; anterior median eyes are elevated upon a rather large, tubercular eminence, and the laterals upon small tubercles.



Fig. 40. *Mimetus maculosus*, section of tibia of one of 1st pair.

Legs.—Long, tapering, sparingly hairy, armed with long, straight spines, yellow, with dark-brown spots; the lower half

⁸ Simon—*Loc. cit.*, p. 947.

⁹ *Maculosus*, spotted, speckled, stained,

of the tibiæ, and the whole of the metatarsi of the first and second pairs have, on the inner side, a special armature (Fig. 40) which consists of a series of small, strong curved spines situated between the longer ones; of the curved spines the upper one is always the smallest, and each succeeding one is larger than its predecessor. Measurements (in millimetres):—

Leg.	Coxa.	Trochanter and Femur.	Patella and Tibia.	Metatarsus and Tarsus.	Total.
1	1.0	9.1	11.1	13.6	34.8
2	1.0	7.5	8.5	10.2	27.2
3	0.7	4.9	4.4	5.4	15.4
4	0.7	6.3	5.2	6.2	18.4

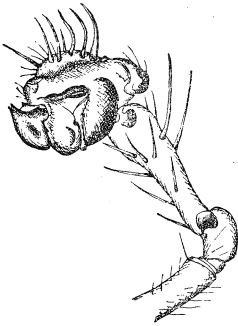


Fig. 41. *M. maculosus*.
Palpus of ♂.

Palpi.—Pale yellow, femur sparingly clothed with a few short hairs, and the tibia with long strong bristles; at the base and apex of the latter there is, on the outer side, a deep cavity; bulb dark brown, complicated and furnished with hairs and long, strong bristles (Fig. 41.) Measurements:—Coxa, 0.1 mm.; trochanter and femur, 2.4 mm.; patella, tibia, and bulb, 2.2 mm.; total, 4.7 mm.

Falces.—Dark brown, shining, long, cylindrical, apices divergent (Fig. 42.).

Maxillæ.—Long, reddish-brown, except at inner angles and tips where they are whitish; they are furnished with a few long hairs or bristles; scopulæ at inner angles short, black.

Labium.—Long, broad at base, coniform, arched, concolorous.

Sternum.—Cordate, arched, furnished with a few long hairs or bristles, shining, yellow, marginal depressions brownish.

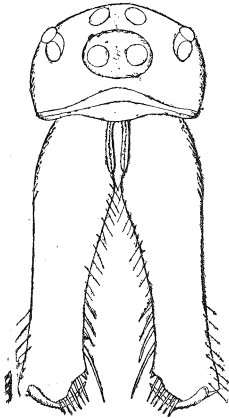


Fig. 42. *M. maculosus*.
Eyes and Falces; front
view.

Abdomen.—Ovate, strongly arched, overhanging base of cephalothorax, yellowish-grey with large dark brown markings and small yellowish spots, clothed with long coarse hairs.

One mature and two immature examples.

♀ Cephalothorax, 4.7 mm. long, 2.8 mm. wide; abdomen 4.7 mm. long, 3.5 mm. wide; falx 2.6 mm. long.

The female differs very immaterially from the male in general appearance; it is but very little larger than the latter, and the same scheme of colouration, clothing, and armature prevails. The *abdomen* is ovate, nearly globose, and the colouration is somewhat varied in the different examples. We have six specimens of this sex, all of which are mature, and each of these differ, some being much darker than others, so that the yellowish spots referred to in the description of the male stand out more prominently; the dark brown markings also differ both in number, size, and distribution. The *epigyne* is simple and seated on a tubercular eminence.

Legs.—These also vary in colouration in different individuals, some being more mottled than others. Measurements of largest specimen as follows:—

Leg.	Coxa.	Trochanter and Femur.	Patella and Tibia.	Metatarsus and Tarsus.	Total.
1	1.1	9.5	11.3	14.0	35.9
2	1.0	8.0	10.0	12.3	31.3
3	0.8	5.5	5.2	6.5	18.0
4	0.8	6.3	7.0	7.5	21.6

Palpi.—Yellow, clothed with long hairs. Measurements:—Coxa, 0.4 mm.; trochanter and femur, 1.6 mm.; patella and tibia, 2 mm.; tarsus, 2.2 mm.; total, 6.2 mm.

Hab.—Jenolan Caves District.

Family CLUBIONIDÆ.

Sub-family MICARIINÆ.

Two genera, namely *Pœcilipta* Simon, and *Corinnomma*, Karsch, are herein recorded from New South Wales for the first time. Of these, the former is, so far as is at present known, exclusively Australian, its recorded range being "Nova Hollandia septentrionalis;"¹⁰ *Corinnomma* is distributed according to Simon as follows:—"Africa orient. æthiop. (*olivaceum*, E. Sim.); ins. Taprobane; Asia trop. orient.; Malaisia et Papuasias; ins. Philippinæ; N. Hollandia sept. (*suaverubens*, E. Sim.)"¹¹. To these localities I now add: *Pœcilipta venusta*, mihi, and *Corinnomma formiciforme*, mihi, Enfield, near Sydney, New South Wales. The species of both these genera are remarkable from the fact that they have a prominent *scutum* on the superior surface of the abdomen and this casts bright metallic reflections. The *Corinnomma* mimic ants.

Genus PŒCILIPTA, Simon.

PŒCILIPTA VENUSTA¹², sp. nov.

(Plate xlvi., figs. 7, 8, 9.)

♀ Cephalothorax 2·7½ mm. long, 1·5 mm. wide; abdomen 4·3 mm. long, 2·3 mm. wide; petiole, 0·4 mm. long.

Cephalothorax.—Ovate, arched, smooth, ochraceous-rufus, caput with purple reflection; *marginal band* narrow, dark brown. *Pars cephalica* arched, truncated in front, sides declivous, retreating rearwards, normal grooves distinct. *Pars thoracica* strongly attenuated posteriorly, median and radial grooves distinct. *Petiole* ochraceous-rufus.

Eyes.—Eight, distributed over two rows, of which the anterior is straight or nearly so, and the posterior curved, the curvature directed backwards; anterior lateral eyes distinctly the smallest of the series, the others large and of equal size; the posterior median eyes are separated from their anterior neighbours by a space equal to one-and-a-half times their individual diameter, and from each other by a space equal to rather more than once their own individual diameter; the posterior lateral eyes are separated from the posterior medians by a space equal to once their own individual diameter; the anterior laterals are also separated from the anterior medians by a space equal to once

¹⁰ Simon—Hist. Nat. des Araignées, 2nd Ed. ii., 1897, p. 173.

¹¹ Simon—*Loc. cit.*, pp. 173 and 174.

¹² *Venusta*, charming, beautiful, graceful.

their own individual diameter, and the latter from each other by a space equal to rather more than one-half their own individual diameter.

Legs.—Long, tapering, each clothed with short hairs and armed with long, straight spines; the femurs have, in addition, two long straight spines on the upper surface; the first and second pairs have the femurs concolorous with cephalothorax, and the patellæ, tibiæ, metatarsi, and tarsi pale yellowish; the third and fourth pairs of legs have dark brown femurs, patellæ yellowish, tibiæ and metatarsi yellowish at junction of preceding joint, but otherwise dark brown; tarsi yellowish. Measurements (in millimetres):—

Leg.	Coxa, Trochanter and Femur.	Patella and Tibia.	Metatarsus and Tarsus.	Total.
1	2.1	1.8	2.7	6.6
2	2.0	1.7	2.6	6.3
3	1.9	1.6	2.5	6.0
4	3.1	3.0	4.1	10.2

Palpi.—Pale yellowish, similar in clothing and armature to legs. Measurements:—Coxa, trochanter and femur, 0.8 mm.; patella and tibia, 0.9 mm.; tarsus, 1.2 mm.; total, 2.9 mm.

Falces.—Concolorous, long, arched, robust, pubescent, inner angles thickly clothed with long dark hairs.

Maxille.—Yellowish, inner angles white; long, robust, arched; inner angles thickly clothed with dark hairs.

Labium.—Concolorous, broad, arched, apex truncated, and furnished with rather long dark hairs.

Sternum.—Cordate, arched, orange-red, sparingly hairy.

Abdomen.—Elongate-ovate, pubescent, yellowish with a dark-brown lateral patch in front on each side of the scuta; just beyond the middle there is on each side a large triangular patch of dark brown, the upper points of which unite. *Scuta* situated in front, black with steel-blue reflections. Inferior surface dark brown above the epigastric fold, thence yellowish-grey to near posterior extremity where it becomes black; laterally the colour is yellowish grey for rather more than half its length from whence it becomes suddenly black, the black patches gradually broadening until they unite above the spinnerets. *Epigyne* a

simple structure elevated upon a small tubercular eminence as depicted in figure.

Hab.—Enfield, near Sydney; collected by Dr. E. P. Ramsay, October, 1904.

Genus CORINNOMMA, *Karsch.*

CORINNOMMA FORMICIFORME¹³, *sp. nov.*

(Plate xlvii., figs. 10, 11, 12.)

♀ Cephalothorax, 2·1 mm. long, 1·1 mm. broad; abdomen, 2·3 mm. long, 1·1 mm. broad; petiole, 0·4 mm. long.

Cephalothorax.—Oblong-ovate, arched, yellowish, caput with purple reflection. *Pars cephalica* arched, truncated in front, normal grooves distinct, ocular area black, hairy. *Pars thoracica* arched, attenuated at rear, median and radial grooves distinct. *Petiole* long, yellowish.

Eyes.—Eight, seated upon a slightly raised almost quadrangular eminence, distributed over two widely separated transverse rows; lateral eyes slightly smaller than their median neighbours, the two anterior eyes are separated from each other by a space equal to one-half their individual diameter, and each from their posterior neighbour by two-and-a-half times their individual diameter; anterior laterals separated from the anterior medians by rather more than once their individual diameter; posterior laterals separated from posterior medians by a space equal to once their individual diameter.

Legs.—Yellowish, long, pubescent, and armed with long, straight spines; each femur has also two long straight spines on the upper side. Measurements (in millimetres):—

Leg.	Coxa, Trochanter and Femur.	Patella and Tibia.	Metatarsus and Tarsus.	Total.
1	2·0	2·2	2·6	6·8
2	1·9	1·7	2·5	6·1
3	1·5	1·6	1·8	4·9
4	2·2	2·5	2·8	7·5

¹³ So named in reference to its ant-like form.

Palpi.—Similar in colour and armature to legs. Measurements:—Coxa, trochanter and femur, 11· mm.; patella and tibia, 0·9 mm.; tarsus, 0·9 mm.; total, 2·9 mm.

Falces.—Robust, arched, hairy, apices divergent, pale yellowish.

Maxillae.—Concolorous, shining, long, arched, inner margins clothed with black hairs.

Labium.—Concolorous also, shining, broader than long, apex truncated.

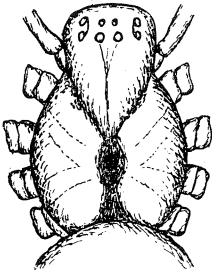
Sternum.—Concolorous also, shining, elliptical, obtusely pointed behind, arched, lateral depressions distinct, sparingly pubescent.

Abdomen.—Oblong, constricted just beyond the middle, black, with a narrow grey transverse bar intercepted by the scuta in front, and a broad grey transverse bar at the constricted zone; there is also a large grey patch at posterior extremity. *Scuta* large, smooth, with steel-blue reflections. *Epigyne* as in figure.

Hab.—Enfield, near Sydney; collected by Dr. E. P. Ramsay, October, 1904.

EXPLANATION OF PLATE XLVI.

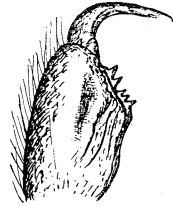
- Fig. 1. *Ectatostica troglodytes*, Higg. and Pett., cephalothorax.
 " 2. " " " " falx.
 " 3. " " " " sternum and maxillæ.
 " 4. " " " " abdomen, underside.
 " 5. *Mimetus maculosus*, Rainb., cephalothorax in profile.
 " 6. " " " " epigyne.
 " 7. *Pæcilipta venusta*, Rainb., female.
 " 8. " " " " eyes.
 " 9. " " " " epigyne.
 " 10. *Corinnomma formiciforme*, Rainb., female.
 " 11. " " " " eyes.
 " 12. " " " " epigyne.



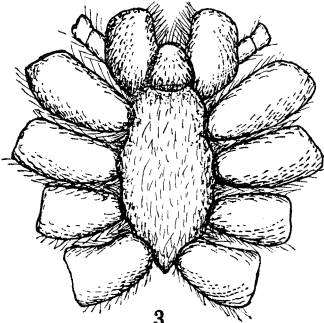
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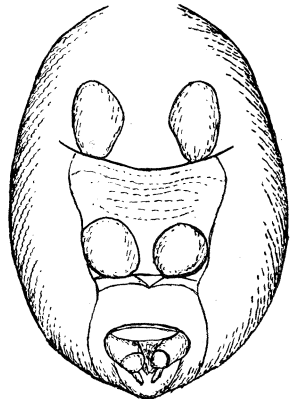
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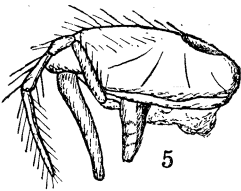
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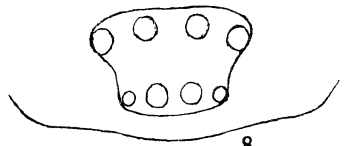
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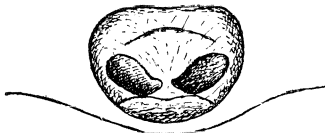
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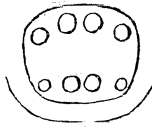
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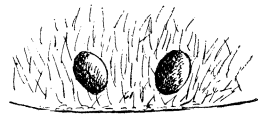
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