

STUDIES IN TASMANIAN SPIDERS.

PART IV.

By

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Plates XIX.-XXVI., and Nineteen Text Figures.

(Read 11th November, 1929.)

The present paper deals with five new species of spiders, one of which forms the type of a new genus in the *Oonopidae*. I have adopted the scheme of classification proposed by Professor A. Petrunkevitch of Yale University in his *Systema Araneorum*, (1) and have also made use of his helpful terminology and notation of spines, a full explanation of which is given in his paper on the *Arachnida* from Panama. (2) The term "Tibial Index" has been introduced by him and is explained in his paper on the spiders of Porto Rico. (3) I am very much indebted to him for copies of the above papers. My thanks are also due to Mr. A. Musgrave of the Australian Museum for a copy of Walckenaer's description of *Miturga necatrix*, and to Mr. S. Butler of Melbourne for other papers not obtainable in Tasmania.

Unless otherwise indicated all descriptions have been made from specimens preserved in alcohol.

Family DIPLURIDÆ.

Sub-Family DIPLURINÆ.

Genus *Aname*, L. Koch.*Aname pexa*, sp. nov.

Plate XIX.

Male. Measurements in millimetres.

| | |
|--|------|
| Total Length (excluding falcis and spin- | |
| nerets) | 13.0 |
| Length of Cephalothorax | 7.0 |
| Breadth of Cephalothorax | 5.2 |
| Length of Abdomen | 6.5 |
| Breadth of Abdomen | 4.5 |

| Leg. | Femur. | Patella. | Tibia. | Metatarsus. | Tarsus. | Total. |
|-------|--------|----------|--------|-------------|---------|--------|
| 1 | 5.5 | 3.1 | 4.0 | 4.5 | 3.0 | 20.1 |
| 2 | 5.2 | 3.0 | 3.8 | 4.5 | 3.0 | 19.5 |
| 3 | 4.5 | 2.5 | 3.0 | 4.0 | 3.0 | 17.0 |
| 4 | 6.0 | 3.0 | 5.0 | 5.3 | 3.5 | 22.8 |
| Palpi | 3.0 | 1.7 | 2.3 | — | 1.1 | 8.1 |

Width of first patella at "knee" 1.044 mm. Tibial Index 14.

Width of fourth patella at "knee" 1.160 mm. Tibial Index 14.

Cephalothorax: Brown, clothed with fine recumbent grey hairs, and a few short erect black hairs. Front narrow (2.9 mm) and truncate, sides well rounded and fringed with black bristles which increase in size and number towards the rear. Posterior very slightly emarginate. The head part slightly raised, thoracic part somewhat flat, the slope from front to rear being gradual. Radial grooves distinct but not deep.

Thoracic fovea: Deep and recurved. This is remarkable since in the female the fovea is almost straight or very slightly procurved. Procurvature is the normal condition in this genus.

Eyes: The eye tubercle is close to the front margin. Its transverse axis is longer than its longitudinal axis in ratio 4 : 3. It is black in colour and provided with a few black bristles in front of AME and between PME. Eyes in two rows, the front row being strongly procurved, the rear row slightly recurved. Ratio of eyes AME : ALE : PME : PLE = 5 : 6 : 4 : 5. The eyes are golden yellow in colour in specimens preserved in alcohol. The diameter of the pupil of AME is four-fifths of the diameter of the latter. The space between the pupils of the AME is equal to half the diameter of the pupil. ALE separated from PLE by a space equal to that between the pupils of AME. The distance separating the ALE from the AME is equal to three-fifths of the diameter of the latter. The PME almost touch the PLE. The space between the PME is equal to four times that between the pupils of AME. The eyes are elliptical in shape except the AME which are circular. (Text Figure 1.)

Legs: 4, 1, 2, 3. Dark brown, clothed with fine recumbent grey hairs, coarse black hairs and black bristles. There is no apophysis on the first pair of tibiae. All tarsi are lightly scopulate to base. The first and second metatarsi also lightly scopulate to base. A very slight scopula at the apex of the third metatarsi, none on the fourth pair. The superior tarsal claws long and curved with a double row of pectinations, there being about twelve long teeth in each row. The inferior claw is small and bare. A single longitudinal row of trichobothria on each tarsus and metatarsus. Two rows of trichobothria on each tibia.

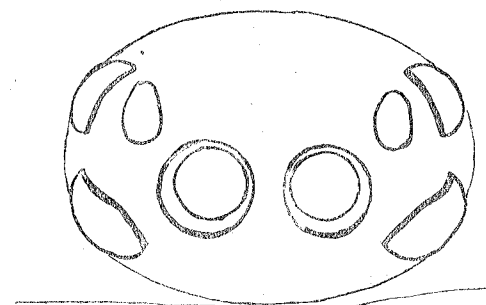


Fig. 1. *Aname peza*, sp. nov.
Eyes in the male.

Palpi: Colour and clothing like that of the legs. Bulb pyriform, ending in a short blunt flat twisted style. (Text Figure 2.)

Spines: *First leg*. Femur—dorsal 1-1-1-1p, elsewhere 0. Patella—dorsal 0, prolateral 1-2-1, retrolateral 0, ventral 1 near apex. Tibia—dorsal 0, prolateral 2-1-1, retrolateral 1-1-1, ventral 2-1-2-3, the three at apex. Metatarsus—ventral 1 at apex, elsewhere 0. *Second leg*. Femur—dorsal 1-1p-1p, elsewhere 0. Patella—dorsal 0, prolateral 1-1-1, retrolateral 0, ventral 0. Tibia—dorsal 0, prolateral 1-1-1, retrolateral 0, ventral 2-3-3. Metatarsus—dorsal 0, prolateral 1-1, retrolateral 0, ventral 1-2-1. *Third leg*. Femur—dorsal 2-2-1, prolateral 1-1-1, retrolateral 0, ventral 0. Patella—dorsal 1, prolateral 1-1-1-1, retrolateral 1-1, ventral 0. Tibia—dorsal 1, prolateral 1-1-1, retrolateral 1-1, ventral 2-3-3. Metatarsus—dorsal 1 in the middle, prolateral 1-1-1, retrolateral 1-1-1, ventral 2-2-3. *Fourth leg*. Femur—dorsal 1-1-2-1, elsewhere 0. Patella—retrolateral 1, elsewhere 0. Tibia—dorsal 0, prolateral 1

near the base and 1 at the apex, retrolateral 1-1-1, ventral 2-1-2-2. Metatarsus—dorsal 2 apical, prolateral 1v-1-1, retrolateral 1-1, ventral 2-2-3. There are no spines on any of the tarsi. *Palpi*. Femur—dorsal 1 near apex, elsewhere 0. Patella 0. Tibia—prolateral 2 near middle, elsewhere 0.



Fig. 2. *Aname peza*, sp. nov. ♂
Left palpus of male viewed from below.

Falces: Dark brown, not very powerful, 1.9 mm. long. Clothed with black bristles and fine recumbent grey hair, except on the middle of the dorsal surface, where there is a longitudinal bare patch. No rastellum is present. Fang moderately long and well curved, reinforced by four narrow longitudinal ridges. Promargin of furrow armed with eight strong teeth, while thirteen minute teeth form a group at the base of the furrow. Retromargin provided with a scopula of long red hairs but no teeth.

Maxilla: Brown except the promargin which is very light brown. Clothed with black hairs and provided with a reddish scopula along the whole length of the promargin except the uppermost end of the upper angle. Near the base is a group of twenty three small cuspsules.

Labium: Brown, subconical, truncate in front, broader than long in ratio 17 : 10. Clothed with long bristles in front and a few black hairs over the surface. Only two small cuspsules present near the front.

Sternum: Long oval in shape, light brown, procurved round base of labium in front, clothed with black bristles which are fine in the central area but become coarse round the margin. The edge of the margin is slightly reflexed and fringed with short fine grey hairs. Sigilla small, anterior pair marginal and not very distinct, middle pair marginal, the rear pair largest and removed from the margin by a space equal to their long diameter. The fourth pair of coxae are contiguous in rear of the sternum.

Abdomen: Ovate, the dorsal surface dark brown blotched with patches of fawn on each side of middle line. Clothed with fine recumbent grey hair and long coarse black bristles. Ventral surface fawn blotched with brown, clothed with fine grey hair and short thin bristles.

Spinnerets: Fawn in colour, clothed with dark grey hairs. Superior pair 2.37 mm. long. Ratio of joints, basal : middle : apical = 19 : 11 : 11. Separated by a space equal to twice their individual diameter at the base. Inferior pair small and club shaped, 0.58 mm. long, separated by a little more than once their individual diameter at the base.

Locality: Prince of Wales Bay, Derwent Park. 21st May, 1923.

Field Notes: This spider was found in a silken tube under a stone. The site was only a few yards away from the spot where the females were found some years later.

The Female. Measurements in millimetres.

| | |
|---|------|
| Total length (excluding falces and spinnerets) | 22.0 |
| Length of Cephalothorax | 9.5 |
| Breadth of Cephalothorax | 7.0 |
| Length of Abdomen | 12.5 |
| Breadth of Abdomen | 8.5 |

| Leg. | Femur. | Patella. | Tibia. | Metatarsus. | Tarsus. | Total. |
|-------|--------|----------|--------|-------------|---------|--------|
| 1 | 7.0 | 4.0 | 5.0 | 5.0 | 3.5 | 24.5 |
| 2 | 6.0 | 4.0 | 4.5 | 4.5 | 3.0 | 22.0 |
| 3 | 5.0 | 3.5 | 3.0 | 4.0 | 3.0 | 18.5 |
| 4 | 7.0 | 4.0 | 5.5 | 5.5 | 3.5 | 25.5 |
| Palpi | 4.0 | 3.0 | 3.0 | — | 3.5 | 13.5 |

- Width of first patella at the "knee" 1.3. Tibial Index 14.
 Width of fourth patella at the "knee" 1.5. Tibial Index 16.

Cephalothorax: Truncate in front, sides slightly rounded, emarginate in rear, arched from side to side and sloping gently from front to rear. Light brown in colour, clothed with soft fine recumbent grey hairs and a few coarse black hairs. The sides and rear margin are fringed with black hairs.

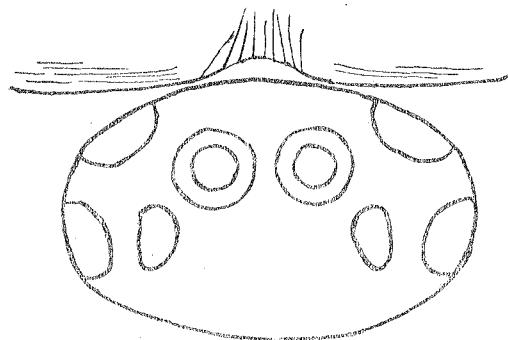


Fig. 3. *Aname pexa*, sp. nov.
 Eyes in female.

Clypeus: Narrow, fringed with nine black bristles in front of eye-tubercle.

Thoracic Fovea: Deep, slightly procurved, situated one third from posterior margin.

Eyes: The eye-tubercle is high, oval, black in colour except behind the rear row of eyes and between the PME where it is brown. Its transverse axis is longer than its longitudinal axis in the ratio 28:17. The eyes are arranged in two rows. The front row is procurved and the rear row recurved. (Text Figure 3.) Ratio of eyes AME : ALE :

PME : PLE = 7 : 7 : 5 : 5.5. The pupil of AME has a diameter four-sevenths that of the latter. PME irregular in outline, angular, white. The ocular quadrangle is wider in rear than in front and much wider than long in ratio 28 : 13. The laterals are separated by three-sevenths of the diameter of ALE. The pupils of AME are separated from each other by five-sevenths of the diameter of ALE and the PME are separated from each other by one and five-sevenths of the diameter of ALE. Bristles are present on the eye-tubercle in front of and behind the AME.

Legs: 4, 1, 2, 3. Brown, clothed with black bristles and fine recumbent grey hairs. All the tarsi are scopulate to base, the scopulae on the first two pairs being very dense, somewhat thinner on the third pair, whilst in the case of the fourth pair only the prolateral and retrolateral surfaces are scopulate, the ventral surface being clothed with bristles. The first and second metatarsi scopulate to base, the others devoid of a scopula. Three tarsal claws. The inferior claw is very small and bare, the two superior claws large, well curved and possessing a double row of teeth. The double row in the case of the first leg of the right side is made up of an outer row of six teeth and an inner row of five teeth on each of the two superior claws, but this number shows considerable variation in other claws. Trichobothria are present in two rows on all tibiae, in a straight row on all metatarsi and in a zig-zag row on all tarsi. (Text Figure 4.)

Palpi: Brown, clothed like the legs with black bristles and fine hairs. Tarsus densely scopulate. Claw with a double row of teeth. Trichobothria in a double row on the tibial segment and in a zig-zag row on tarsus.

Spines: *First leg*. Femur—prolateral 1 at apex, elsewhere 0. Patella 0. Tibia—dorsal 0, prolateral 1-1, retrolateral 0, ventral 1-1-3, the three apical. Metatarsus—ventral 1 near middle, 1 apical, elsewhere 0. *Second leg*. Femur—prolateral 1 at apex, elsewhere 0. Patella 0. Tibia—dorsal 0, prolateral 1-1, retrolateral 0, ventral 1-1-2. Metatarsus—ventral 1-2-1, elsewhere 0. *Third leg*. Femur 0. Patella—prolateral 2, elsewhere 0. Tibia—dorsal 1 near middle, prolateral 1-1, retrolateral 1-1, ventral 1-1-3, the three apical. Metatarsus—dorsal 1 near middle, prolateral 1d-1v-1v-1d, retrolateral 1-1-2, ventral 2-2-2. *Fourth leg*. Femur 0. Patella 0. Tibia—dorsal 0, prolateral 0,

retrolateral 1-1, ventral 2-2-2. Metatarsus—dorsal 3 apical, prolateral 1-1, retrolateral 1 in middle, ventral 2-2-3. There are no spines on any of the tarsi.

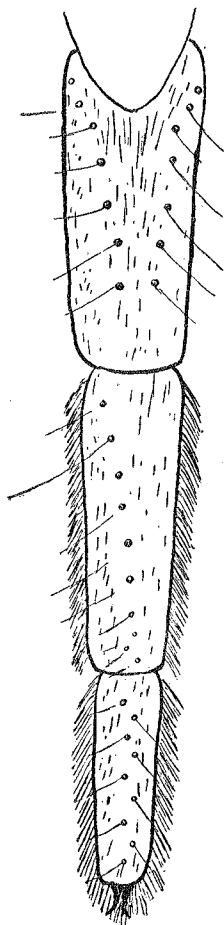


Fig. 4. *Aname peza*, sp. nov.

Leg I. of female, showing trichobothria on tibia, metatarsus, and tarsus.

Falces: Black, powerful, 4.0 mm. long, clothed with black bristles on the dorsal surface except near the base. No rastellum present and no stridulating organ. Fang dark brown, long and well curved; promargin of furrow armed

with ten strong teeth, retromargin with a red scopula but without teeth. At posterior end of furrow there is a group of sixteen small teeth. (Text Figure 5.)



Fig. 5. *Aname peza*, sp. nov.

Underside of left fang, showing arrangement of teeth, and base of the fang in female.

Labium: Oval, dark brown in rear, yellowish brown in front. Broader than long in ratio 3 : 2. Clothed with long black bristles. Four cuspules in a transverse row along the front of the dark brown area.

Maxillæ: Outer two-thirds dark brown, inner third light yellowish brown, clothed with black bristles, a group of

forty-two cuspules near the base, promargin clothed with a thick red scopula along the whole length except the uppermost end of the upper angle.

Sternum: Light brown, becoming darker brown round the margin; oval in shape, being longer than broad in the ratio 17 : 13, clothed with black bristles. Anterior edge emarginate, sides angular between all coxæ. Three pairs of sigilla, oval in shape, placed opposite the first, second, and third coxæ respectively. The rear pair of sigilla are the largest and half their long diameter from the margin of the sternum. The other two pairs are nearer the margin. Coxæ of the same colour and clothing as the sternum.

Abdomen: Ovate, fawn in colour blotched with patches of dark brown which are largest in the middle of the dorsal surface, small and less numerous on the ventral surface. Clothed with grey hairs and fine black bristles.

Spinnerets: Four; the inferior pair single jointed, club shaped, clothed with short black hairs, well rounded at apex and about 1.25 mm. long, separated from each other at the base by a distance equal to one and a quarter times their individual diameter. The superior pair 4.5 mm. long, three jointed, tapering, clothed with black hairs, the lengths of basal, middle, and apical joints in the ratio 30 : 25 : 22. Separated at base by a space one and a third times wider than their diameter. Anal tubercle large and prominent.

Locality: Prince of Wales Bay, Derwent Park. 27th May, 1929.

Field Notes: The burrows were made in a bank about ten yards from the shore in a small patch of scrub. There were about thirty nests in an area of seven or eight square yards. The gradual clearing of the land round the shore of the bay has no doubt driven the spiders to seek the shelter of the few patches of scrub still remaining. The burrows were about 150 mm. deep and at the opening had a diameter of 15 mm. The mouth of the burrow was not provided with a lid but was surrounded by a collar of grass stalks and leaves. Near the bottom the diameter of the burrow increased forming a chamber in which the spider could easily turn round. Below this chamber the burrow ended in a small cavity just large enough to accommodate the spider's body. Here the spider took refuge when disturbed and drew its body into the cavity so that only its formidable falcies projected. The walls of the nest had practically no silk lining. (Text Figure 6.)

Observations: *Aname tasmanica*, Hogg, (4) is the only other spider belonging to this genus recorded from Tasmania. It was found by Mr. Dove at Table Cape. It differs from *Aname pexa* in the scopulation on the tarsi, in possessing no spines on the labium, in the number and arrangement of the teeth on the furrow of the falcies and in the arrangement of the eyes.

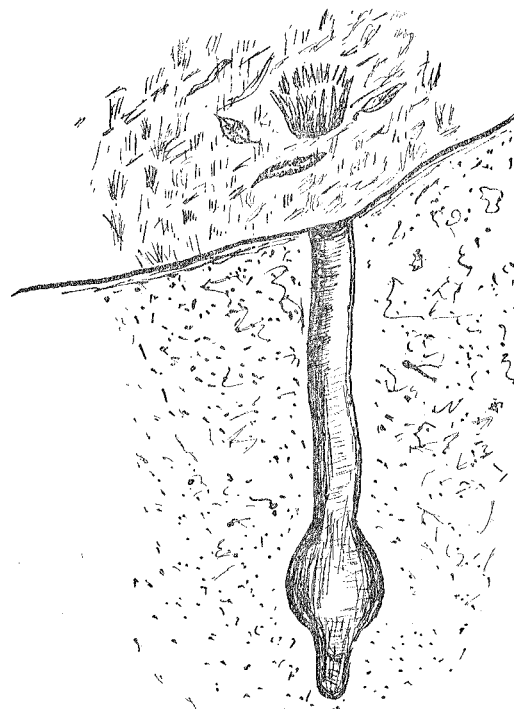


Fig. 6. *Aname pexa*, sp. nov.
Burrow showing collar round opening.

Family OONOPIDÆ.

Sub-Family OONOPINÆ.

Tasmanoonops, gen. nov.

Definition of Genus: Cephalothorax as in the genus *Oonopinus*. No medium depression. Eyes six. When viewed from above the median eyes are in line with the ALE.

Falces without a condyle, one tooth on each side of furrow. Maxillæ slightly converging and with a scopula. The palpi of female without a claw. Posterior coxæ separated by end of sternum. Legs 4, 1, 2, 3, without a scopula but armed with spines. Tarsi end in an onychium furnished with spatulate hairs. Three tarsal claws present, the superior pair large and expanded into wing-like projections on the outer side. Inferior claw small, flat, with a bifid tip and serrated edge. Trichobothria on metatarsi and tibiæ but not on tarsi. Abdomen with two pairs of spiracles. Spinnerets six, anterior pair furnished on ventral surface with groups of short curved spines.

Type of Genus: Tasmanoonops alipes.

Tasmanoonops alipes, sp. nov.

Plate XX.

Female. Measurements in millimetres.

| | |
|-----------------------------------|-----|
| Total Length | 6.2 |
| Length of Cephalothorax | 2.2 |
| Width of Cephalothorax | 1.8 |
| Length of Abdomen | 4.1 |
| Width of Abdomen | 2.4 |

| Leg. | Femur. | Patella. | Tibia. | Metatarsus. | Tarsus. | Total. |
|-------|--------|----------|--------|-------------|---------|--------|
| 1 | 2.14 | 0.87 | 1.85 | 1.85 | 0.64 | 7.35 |
| 2 | 2.14 | 0.92 | 1.80 | 1.74 | 0.64 | 7.24 |
| 3 | 1.85 | 0.69 | 1.39 | 1.62 | 0.64 | 6.19 |
| 4 | 2.55 | 0.98 | 1.91 | 2.32 | 0.64 | 8.40 |
| Palpi | 0.75 | 0.35 | 0.46 | — | 0.81 | 2.37 |

Leg 1. Width of patella at "knee" 0.232 mm. Tibial Index 8.

Leg 4. Width of patella at "knee" 0.290 mm. Tibial Index 10.

Cephalothorax: Uniform yellowish brown, clothed with short recumbent hair. Sides well rounded, front narrow, rear slightly emarginate. No median furrow. (Text Figure 7.)

Eyes: Six in number, oval in shape, mounted on black rims. The eye group is compact and arranged as shown in Text Figure 7. It occupies almost the whole width of the head. When viewed from above the median eyes form a straight line with the ALE. Ratio of eyes Median:ALE:PLE=7 : 5 : 6. The median eyes are contiguous and

separated from the ALE by a space equal to one-third of the long diameter of the former. The ALE and PLE are contiguous. One or two bristles are situated behind the eyes.

Clypeus: Narrow, the distance from its front edge to the median eyes being equal to four-sevenths of the diameter of the latter. It is furnished with a few bristles which project forward.

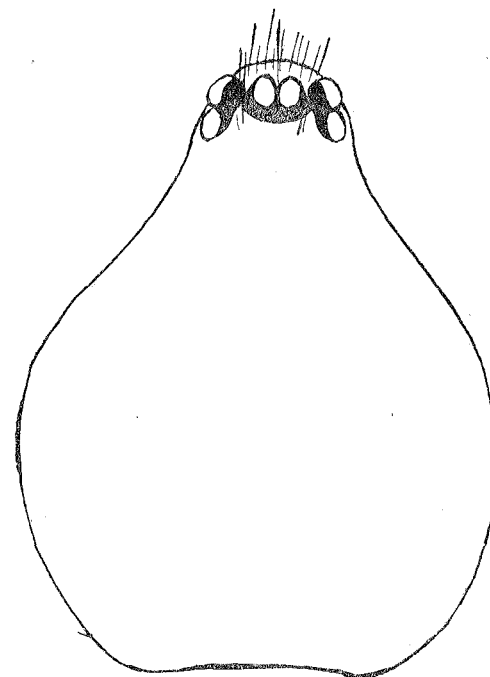


Fig. 7. *Tasmanoonops alipes, gen. et sp. nov.*
Cephalothorax and eyes of female viewed from above.

Legs: 4, 1, 2, 3. Yellowish brown. Clothed with hairs which under high magnification are seen to be barbed. A single trichobothrium is present on the dorsal side of each metatarsus near the apex, and a pair of trichobothria on the dorsal side of each tibia near the middle, elsewhere none. The tarsal claws are carried on a well-developed onychium, which has a length equal to one-quarter that of the tarsus, the length of the onychium being taken from the end of the

tarsus to the base of the claws. The ventral side of the onychium is furnished with spatulate hairs, and rising from its dorsal side near the base of the claws is a pair of very long barbed hairs, whilst three similar barbed hairs occur near the base of the onychium. The tarsal claws are three in number and have a remarkable shape. (See Text Figures 8 and 9.) The superior claws are large and well curved,

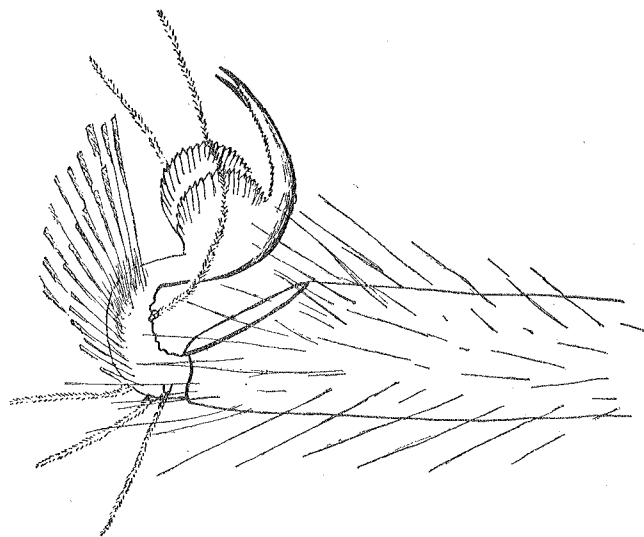


Fig. 8. *Tasmanoonops alipes*, gen. et sp. nov. ♀
Tarsal claws and onychium viewed from the side. The small third claw hidden by the spatulate hairs.

the outer side of each being expanded into a wing-like projection of translucent chitin, the outer margin of which is serrated. The inner side of the claw is normal and serrated in the usual manner. At the base of the two large claws the small third claw is situated. It has the shape shown in Text Figure 9 (b) and (c). Owing to the spatulate hairs it is difficult to see the third claw from the side, but if the end of the onychium is examined with the claws bent back over the tarsus the third claw is easily seen. The end of the tarsus slopes gently downwards so as to accommodate the claws when bent back, and the spider often walks with them in this position.

Spines: First leg. Femur—prolateral 2 near the middle, elsewhere none. Patella 0. Tibia—ventral 1-1,

elsewhere 0. Metatarsus—ventral 1 near middle, elsewhere 0. *Second leg.* Femur—prolateral 1 near apex, elsewhere 0. Patella 0. Tibia—ventral 1-1, elsewhere 0. Metatarsus—ventral 1 near middle, elsewhere 0. *Third leg.*

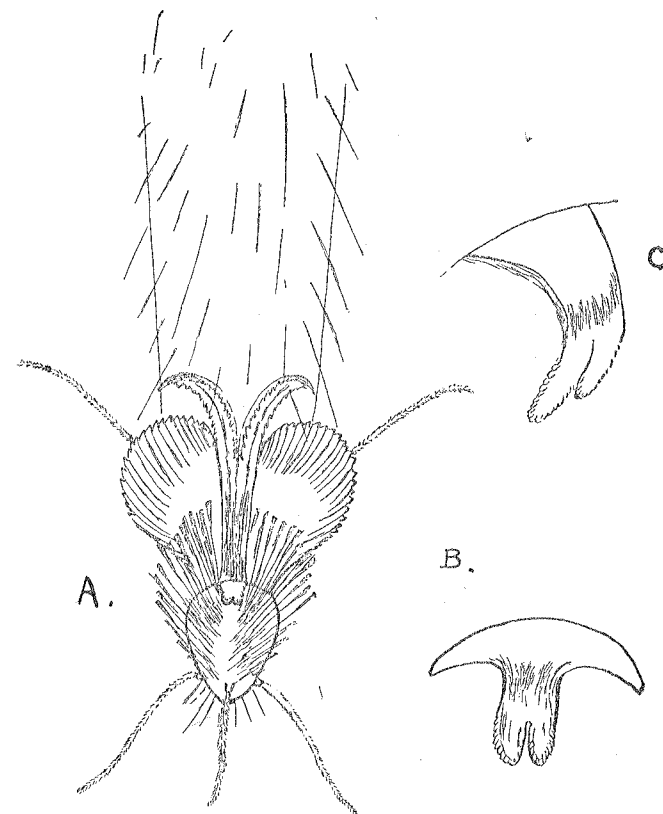


Fig. 9. *Tasmanoonops alipes*, gen. et sp. nov. ♀
(A) End view of tarsal claws and onychium folded back on tarsus.
(B) End view of third claw.
(C) Side view of third claw.

Femur 0. Patella 0. Tibia—dorsal 0, prolateral 2-2-2, retrolateral 1-1-1, ventral 1-1 and 2 apical. Metatarsus—dorsal 0, prolateral 2-1-2, retrolateral 1d-1v-1d, ventral 1 basal and 2 apical. *Fourth leg.* Femur 0. Patella 0. Tibia—dorsal 0, prolateral 1-1-1, retrolateral 1-1-1, ventral

1-1 and 2 apical. Metatarsus—dorsal 0, prolateral 2-1-2-2, retrolateral 2-1-2, ventral 1 and 2 apical. There are no spines on any of the tarsi.

Palpi: Light yellowish brown, clothed with long barbed hairs especially on the tarsus. No tarsal claw present.

Falces: Brown, conical, lightly clothed in front with a few black bristles. Fang moderately long, well curved, basal half light brown, tip dark brown. The furrow is armed with one tooth on the retromargin and one on the promargin in the position shown in Text Figure 10. The

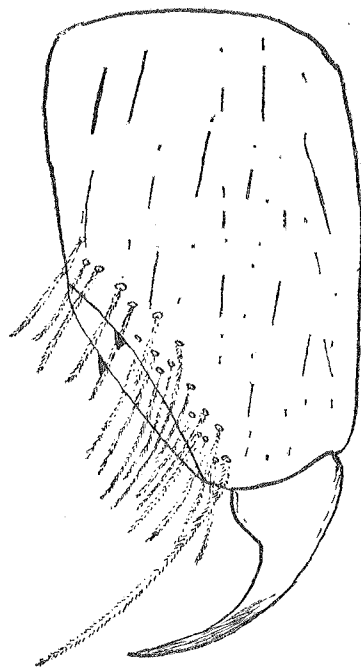


Fig. 10. *Tasmanoonops alipes*, gen. et sp. nov. ♀
Left falx viewed from front, showing position of teeth and the barbed hairs along promargin of furrow.

promargin is also furnished with a few long barbed hairs, one of which near the base of the fang is much longer than the others.

Labium: Brown, subconical, free, width at base equal to length, truncate in front, and furnished with a tuft of barbed hairs at the apex.

Maxillæ: Yellowish brown, very slightly converging, about twice as long as the labium, the front outer margin provided with a well-developed serrula, the front inner margin with a thick scopula of long barbed hairs. (Text Figure 11.)

Sternum: Yellowish brown, cordiform, convex, clothed with a few black hairs. The margin is edged with a darker shade of brown and is produced into a point opposite the base of each coxa. The fourth coxæ are separated by the end of the sternum. (Text Figure 11.)

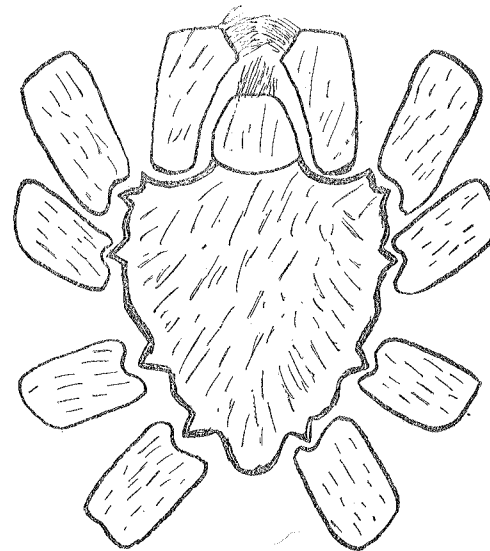


Fig. 11. *Tasmanoonops alipes*, gen. et sp. nov. ♀
Sternum, labium, maxillæ, and coxæ.

Abdomen: Ovate, slightly overhanging the rear of the cephalothorax anteriorly. Grey in colour and marked with numerous faint polygonal spots. Clothed with fine hairs which under high magnification are seen to be barbed. Two pairs of spiracles are present in the normal position near the epigastric furrow on the ventral surface, the rear pair being slightly nearer the middle line than the anterior pair.

Spinnerets: Six; the anterior pair close together and slightly longer than the posterior pair. The middle pair small and hidden by the others. Colour and clothing like that of abdomen. On the ventral surface of the anterior

pair are a number of short curved spines. Thirteen of these form a transverse row at the apex of the segment, and about fifteen slightly larger spines are grouped in the centre of the segment. On the ventral side near the base of the anterior pair is a tuft of long hairs, among which twelve spines similar to those on the spinnerets are present. (Text Figure 12.) When viewed from the side all the spines are seen to point downwards with their tips curved towards the front.

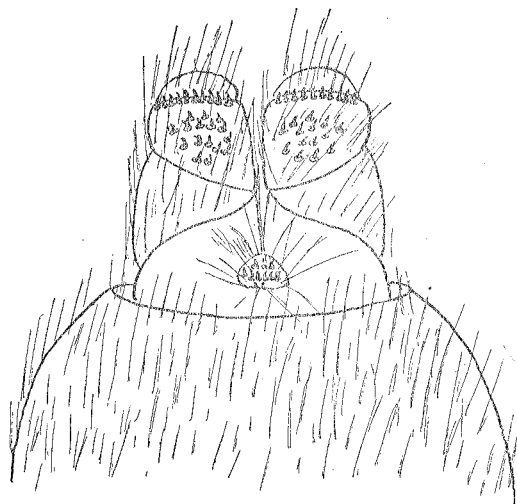


Fig. 12. *Tasmanoonops alipes*, gen. et sp. nov.
Anterior spinnerets of female viewed from underneath and showing the spines on their ventral surface and also the spines on the tuft of bristles.

Locality: Mount Hobbs, Woodsdale. 13th May, 1928.

Field Notes: The specimen described above is the only adult specimen I have found. It was taken under a log in a cleared tract of land on the western slopes of Mount Hobbs. A second very immature specimen was found in moss at Lilydale on 23rd May, 1928, and a third specimen about three-quarters fully grown was captured under a piece of rotten wood in a gully at the Cascades, Hobart, 29th May, 1929. The last specimen was enclosed in a small cocoon-like nest of white silk.

Observations: This spider shows a close relationship with the *Oonopidae* in the number and arrangement of the eyes, and in possessing four spiracles, an onychium on the

tarsi, barbed hairs on the legs and body and clawless palpi. It differs, however, from the known *Oonopids* in its larger size, in having spines on the spinnerets, in possessing a third tarsal claw, and in the remarkable shape of the superior tarsal claws. I have therefore placed it in the new genus, *Tasmanoonops*, which has been defined above.

Family CLUBIONIDÆ.

Sub-Family LIOCRANINÆ.

Genus *Miturga*, Thorell.

Habits and Nest of *Miturga agelenina*, Simon.

Plates XXI and XXII.

Simon has already recorded this spider as occurring in Tasmania and given a description of it, (5) but as far as I am aware there is no published figure of it or any account of its habits.

The spider is one of our most common species. It is found widely distributed throughout the State, being very common at South Arm, Hobart, Woodsdale, Forth Falls, Launceston, Bridport, and Burnie. It favours open, sunny situations, which are lightly wooded, and avoids the dense forest and shady gullies. Young specimens construct a tubular web, but in the case of the fully grown spider the web is generally expanded into a flat hollow structure. The silk is snow white and very fine. There is an opening at both ends of the nest. The web is generally found on the under surface of stones and logs, but sometimes it is built in a tussock of grass or in a thick shrub, especially the common gorse. In the latter case it is often two or three feet from the ground. The spider is sedentary in habits and lurks in the web waiting for its prey.

Mating takes place during November and December, when the males are to be found in the webs of the females. The egg sacs are plano-convex in shape, made of strong white silk and built into the nest. Three or four sacs are generally made.

Miturga albopunctata, sp. nov.

Plate XXIII.

Female. Measurements in millimetres.

| | |
|-----------------------------------|------|
| Total Length | 16.0 |
| Length of Cephalothorax | 7.5 |
| Width of Cephalothorax | 5.7 |
| Length of Abdomen | 9.5 |
| Width of Abdomen | 6.0 |

| Leg. | Femur. | Patella. | Tibia. | Metatarsus. | Tarsus. | Total. |
|-------|--------|----------|--------|-------------|---------|--------|
| 1 | 4.93 | 2.90 | 3.94 | 3.30 | 2.14 | 17.21 |
| 2 | 4.75 | 2.90 | 3.71 | 3.07 | 2.14 | 16.57 |
| 3 | 4.60 | 2.49 | 3.19 | 3.01 | 2.03 | 15.32 |
| 4 | 5.80 | 2.90 | 4.98 | 4.87 | 2.30 | 20.85 |
| Palpi | 2.30 | 1.16 | 1.27 | — | 2.14 | 6.87 |

Width of first patella at the "knee" 1.102 mm. Tibial Index 16.

Width of fourth patella at the "knee" 1.102 mm. Tibial Index 14.

Cephalothorax: Ovate, narrowed in front, the rear and front margins truncate, sides rounded. A broad longitudinal stripe of reddish brown extends from front to rear along the mid-dorsal line. On each side of this is a broad longitudinal stripe of dark brown, and outside this another stripe of reddish brown, while a dark-brown stripe runs round the margin. The dark-brown areas are clothed with short black hairs, and the red-brown areas with short grey hairs intermingled with a few short black hairs. Behind and between the eyes and on the sides of the head region the clothing consists of long silvery grey hairs. The median depression long, deep, and dark brown. In front of it is a faint transverse patch of brown across the reddish brown mid-dorsal stripe.

Eyes: In two rows; the front row slightly recurved, the rear row distinctly recurved. The rear row is longer than the front row in ratio 34 : 25. The eye space occupies a little more than half the width of the cephalothorax in the region of the eyes. It is broader than long in ratio 34 : 16. The median ocular area is longer than broad in ratio 15 : 14 and is wider behind than in front in ratio 7 : 6. The AME are separated from each other by a space equal to three-fifths of their individual diameter and from the ALE by two-fifths of their individual diameter. The distance between the PME is slightly greater than that between AME. The PLE are separated from the PME and from the ALE by a space equal to eight-fifths of the diameter of AME. All the eyes are about equal in size.

Chypeus: Moderately deep, the distance from its front edge to the AME is equal to seven-fifths of the diameter of the latter. It is clothed with black bristles along the front edge.

Legs: 4, 1, 2, 3. Dark-brown except the patellæ and distal half of the femora, which are reddish brown. They are clothed with black hairs, silvery grey hairs and black bristles. All the tarsi and metatarsi are scopulate to base. The first pair of tibiæ also show a slight scopula on the ventral surface near the apex. Trichobothria are present on all tarsi, metatarsi, and tibiæ. Tarsal claws two, short, well curved, and armed with three or four teeth. Trochanters notched.

Palpi: Colour and clothing as on the legs. Tarsal segment very hairy. The single tarsal claw has four teeth.

Spines: Those on the ventral surface of the legs very strong. *First leg*. Femur—dorsal 1-1, prolateral 1-1 near apex, elsewhere 0. Patella 0. Tibia—ventral 2-2-2, elsewhere 0. Metatarsus—ventral 2 near base, elsewhere 0. *Second leg*. Femur—dorsal 1-1, prolateral 1-1-1-1, elsewhere 0. Patella 0. Tibia—prolateral 1 very small spine, ventral 2-2-2, elsewhere 0. Metatarsus—ventral 2 large spines near base, elsewhere 0. *Third leg*. Femur—dorsal 1-1-1, prolateral 1-1-1-1, retrolateral 1-1-1-1, ventral 0. Patella 0. Tibia—dorsal 1-1, prolateral 1-1d-1, retrolateral 1-1, ventral 2-2-2. Metatarsus—dorsal 0, prolateral 1-1-1, retrolateral 1-1, ventral 2 large spines near base and 1 small spine at apex. *Fourth leg*. Femur—dorsal 1-1-1, prolateral 1-1-1, retrolateral 1-1, ventral 0. Patella 0. Tibia—dorsal 1-1, prolateral 1-1d-1, retrolateral 1-1, ventral 2-2-2. Metatarsus—dorsal 0, prolateral 2-2-2, retrolateral 2-2-2, ventral 2-2-1. *Palpi*. Femur—dorsal 1-1 and 2 close together near apex, prolateral 1 near apex, retrolateral 1 near apex, ventral 0. Patella—dorsal 1-1 bristles, prolateral 1 near apex, elsewhere 0. Tibia—dorsal 0, prolateral 2-2, retrolateral 1-1, ventral 0. Tarsus—dorsal 2 near base, prolateral 1-1, retrolateral 1-1, ventral 0.

Falces: Black, short, subconical, geniculate, clothed with black bristles, and provided with a reddish brown condyle at the base on the side. Fang moderately long and well curved. Promargin of furrow armed with three strong teeth and fringed with long barbed grey hairs. Retro-margin armed with two teeth. A single long barbed grey hair near the base of the fang on the retroside.

Maxillæ: Black, shiny, convex, short, and wide, the ratio of length to width being 33 : 20. Front edge rounded, sides slightly rounded, inner edge convex. Clothed with a few

black bristles. A scopula of dark-grey hairs on the upper half of the inner margin. (Text Figure 13.)

Labium: Black, shiny, wider than long in ratio 17 : 15, sides excavated in basal third, front truncated and clothed with a few coarse black hairs. (Text Figure 13.)

Sternum: Broadly oval, convex, truncate in front, shiny, dark red, longer than wide in ratio 9 : 8. Coxæ black; the fourth pair are contiguous in rear of the sternum.

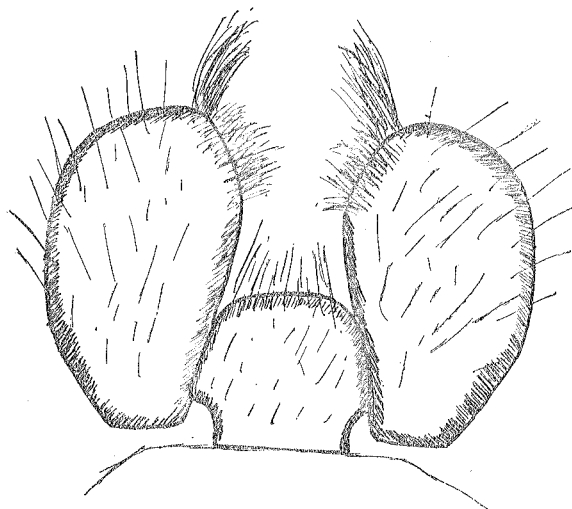


Fig. 13. *Miturga albopunctata*, sp. nov.
Maxillae and labium of female.

Abdomen: Ovate; dorsal surface light brown, clothed with black hairs intermingled with white hairs. A pair of fawn-coloured stripes, clothed with white hairs, extend from the front to about half way along the dorsum. They are followed by four pairs of white spots which are wider apart than the stripes. On the outer side of the rear end of each stripe is a large spot clothed with black hair, while each stripe has along the front half of its inner edge a thin line of black hairs. The sides of the abdomen are clothed with black hair and speckled with small white spots. The ventral surface is brown and thickly clothed with black hairs. It is decorated with four longitudinal rows of widely separated white spots composed of white hairs. Each of the two inner rows has a large spot at each end and three very small spots between the two large spots. Each of the two outer rows

has two large posterior spots and three small anterior spots. The large spots on the abdomen seem to be a constant characteristic, but the small spots vary. (Plate XXIII.) There is a tuft of white hairs on each side of the spinnerets. The epigynum is light brown and has the form shown in Text Figure 14.

Spinnerets: Thickly clothed with black hairs. Anterior pair contiguous, subconical, apical joint very small and dome shaped. Posterior pair longer than the anterior pair, their apical joint conical and a little more than half the length of the basal joint. Middle pair small and cylindrical.

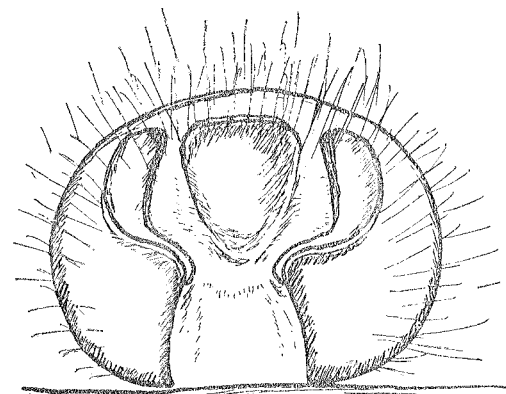


Fig. 14. *Miturga albopunctata*, sp. nov.
Epigynum of female.

Locality: Daisy Dell (2,000 feet), on the road to the Cradle Mountain. December, 1927.

Field Notes: The spider was found under logs. Some specimens were enclosed in oval nests of white silk made between the side of the log and the grass. In one nest the spider was guarding its egg sac which is spheroidal in shape and made of white silk.

Miturga splendens, sp. nov.

Plate XXIV.

Female. Measurements in millimetres.

| | |
|-----------------------------------|------|
| Total Length | 25.0 |
| Length of Cephalothorax | 9.0 |
| Width of Cephalothorax | 7.0 |
| Length of Abdomen | 15.5 |
| Width of Abdomen | 10.0 |

| Leg. | Femur. | Patella. | Tibia. | Metatarsus. | Tarsus. | Total. |
|-------|--------|----------|--------|-------------|---------|--------|
| 1 | 7.00 | 3.77 | 5.51 | 4.46 | 3.07 | 23.81 |
| 2 | 7.00 | 3.77 | 5.28 | 4.35 | 2.95 | 23.35 |
| 3 | 6.00 | 3.53 | 4.81 | 4.40 | 2.72 | 21.46 |
| 4 | 8.00 | 3.77 | 6.78 | 6.20 | 2.95 | 27.70 |
| Palpi | 2.90 | 1.56 | 1.85 | — | 2.90 | 9.21 |

Width of first patella at the "knee" 1.276 mm. Tibial Index 13.

Width of fourth patella at the "knee" 1.276 mm. Tibial Index 12.

Cephalothorax: Black in the eye region and at the sides of the cephalic part; elsewhere reddish brown except the median depression, the radial grooves, and the margin, which are dark brown. Clothed with short black hairs intermingled with silvery grey hairs, the latter being moderately thick on each side of the head region. Three longitudinal stripes composed of silvery grey hair extend from between the eyes half way to the median depression. The anterior end of the median depression is 5 mm. from the front. There are a few black bristles in front of and immediately behind the eyes, as well as on the sides of the head region. Margin is fringed with silvery grey hairs.

Eyes: In two rows; front row slightly recurved, rear row distinctly recurved and longer than the front row. The eye space is twice as wide as it is long and occupies three-fifths of the width of the cephalothorax in the region of the eyes. Eye ratio AME : ALE : PME : PLE = 6 : 7 : 7 : 7. The AME are separated from each other by five-sixths of their individual diameter and from the ALE by one-third of their individual diameter. The PME are separated from each other by a space equal to the diameter of AME. The PLE are separated from the PME by a space equal to one and a half times the diameter of AME, and from the ALE by one and a third times the diameter of the AME. The median ocular area is longer than wide in ratio 17 : 16, and slightly wider in rear than in front in ratio 17 : 14. There is a tuft of black bristles in the middle of the area. Silvery grey hairs clothe the spaces between the eyes of the rear row and between the lateral eyes.

Clypeus: Black clothed with thin black bristles. The distance from the edge to the AME is equal to the diameter of ALE.

Legs: 4, 1, 2, 3. Tarsi, metatarsi, and tibiae nearly black in colour. The tibiae have a longitudinal reddish brown stripe on the dorsal side. Patellae and femora reddish brown. The clothing consists of short black hairs and fine recumbent silvery grey hairs. On the dorsal side of trochanters and coxae the silvery grey hairs are long and dense. Ventral surfaces of trochanters and coxae very dark brown, with a longitudinal stripe of lighter brown on the coxae. Trochanters notched. All tarsi and metatarsi scopulate to base, the scopula extending onto the apex of the tibia in the case of the first two pairs of legs. Trichobothria on all tarsi, metatarsi, and tibiae. Tarsal claws two, armed with three or four teeth.

Palpi: Dark brown nearly black, clothed like the legs, the single tarsal claw has three teeth.

Spines: *First leg*. Femur—dorsal 1-1, prolateral 1-1-1-1, retrolateral 1-1, ventral 0. Patella 0. Tibia—dorsal 0, prolateral 1 small spine near base, retrolateral 0, ventral 2-2-2. Metatarsi—ventral 2 long spines near base, elsewhere 0. *Second leg*. Femur—dorsal 1-1, prolateral 1-1-1-1, retrolateral 1-1, ventral 0. Patella 0. Tibia—dorsal 0, prolateral 1 small spine near base, retrolateral 0, ventral 2-2-2. Metatarsi—ventral 2 long spines near base, elsewhere 0. *Third leg*. Femur—dorsal 1-1-1, prolateral 1-1-1-1, retrolateral 1-1-1-1, ventral 0. Patella 0. Tibia—dorsal 1-1, prolateral 1-1d-1d, retrolateral 1-1, ventral 2-2-2. Metatarsi—dorsal 0, prolateral 1-1-1, retrolateral 1-1, ventral 2 long spines near base and 1 small spine near apex, elsewhere 0. *Fourth leg*. Femur—dorsal 1-1-1, prolateral 1-1-1-1-1, retrolateral 1 small and 1 large spine, ventral 0. Patella 0. Tibia—dorsal 1-1, prolateral 1-1d-1d, retrolateral 1-1, ventral 2-2-2. Metatarsi—dorsal 0, prolateral 1-2-2, retrolateral 2-2-2, ventral 2-2-1. *Palpi*. Femur—dorsal 1-1 and 2 close together near the apex, prolateral 1 near the apex, retrolateral 1 near the apex, ventral 0. Patella—dorsal 1-1, prolateral 1, elsewhere 0. Tibia—dorsal 1-1, prolateral 2-1, retrolateral 2, ventral 0. Tarsus—dorsal 2 near base, prolateral 1-1, retrolateral 1-1, ventral 0.

Falces: Black, clothed in front with black bristles, geniculate, provided with a brown condyle on the side at the base. Fang moderately long, well curved. Promargin of furrow armed with three large teeth and fringed with long barbed grey hairs. Retromargin armed with two large teeth, and provided with a single long barbed grey hair near the base of fang.

Maxillae: Short and wide, the ratio of length to width being 9 : 5. Front rounded, inner edge convex, outer edge convex with a slight inward curve opposite the trochanters of the palpi. (Text Figure 15.) Colour shiny black marked with three longitudinal brown patches as in *Miturga velox*. The black areas clothed with black bristles, the brown patches glabrous. A thick grey scopula on front $\frac{1}{2}$ lf of inner margin.

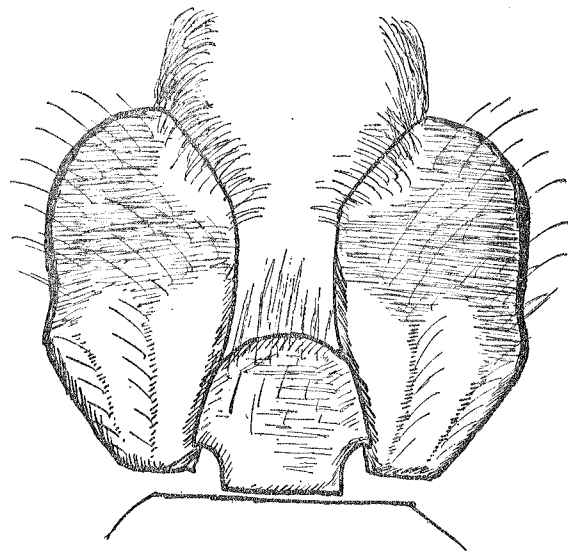


Fig. 15. *Miturga splendens*, sp. nov.
Maxillae and labium of female.

Labium: Shiny black, wider than long in ratio 8 : 7. Sides excavated in basal third; front gently curved, brown, and clothed with a few black bristles.

Sternum: Shiny black, clothed with black bristles, oval, longer than wide in ratio 7 : 6. Surface raised into a slight elevation opposite the base of each coxa. Margin truncate in front and angulate between the coxae. Rear coxae contiguous behind sternum.

Abdomen: Egg-shaped; dorsal surface fawn, clothed with black hairs and speckled with white spots. Intermingled with the black hairs there are fine recumbent silvery grey hairs. Seven pairs of conspicuous white spots down

the middle of the dorsum, and between each of the five rear pairs of spots are two short oblique white lines. Sides somewhat darker in colour and speckled with white spots. Ventral surface black marked with white spots, which show no definite arrangement. Epigynum is brown and has the form shown in Text Figure 16. Two large whitish spots in front of epigynum.

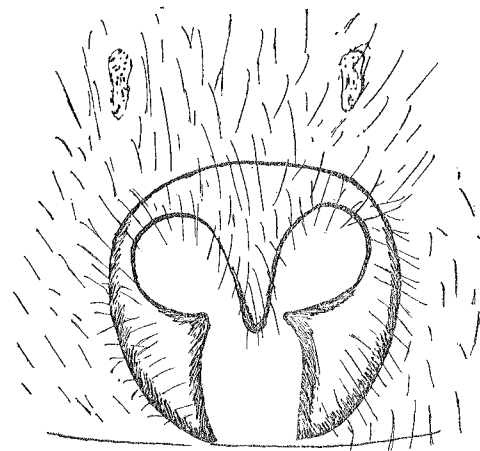


Fig. 16. *Miturga splendens*, sp. nov.
Epigynum of female.

Spinnerets: Clothed with black hairs; posterior pair two jointed, the apical joint conical and about two-thirds the length of the basal joint. Anterior pair subconical and shorter than the posterior pair; apical joint very small, dome shaped, and sunk in the apex of the basal joint. Middle pair about equal in length to the anterior pair, apex rounded.

Locality: The Quoin (1,500 feet), Ross. 6th November, 1927.

Field Notes: This spider was collected from under a stone by Mr. A. L. Meston, M.A. When alive it is a most beautiful species. The fine silvery grey hair with which the spider is covered produces a wonderful iridescent effect among the darker colours on the body, when the spider is in the sunlight.

Miturga velox, sp. nov.

Plates XXV. and XXVI.

Male. Measurements in millimetres.

| | |
|------------------------------------|------|
| Total Length | 11.0 |
| Length of Cephalothorax | 5.5 |
| Breadth of Cephalothorax | 4.5 |
| Length of Abdomen | 6.0 |
| Breadth of Abdomen | 3.9 |

| Leg. | Femur. | Patella. | Tibia. | Metatarsus. | Tarsus. | Total. |
|-------|--------|----------|--------|-------------|---------|--------|
| 1 | 4.64 | 2.32 | 4.17 | 4.35 | 2.49 | 17.97 |
| 2 | 4.64 | 2.03 | 4.06 | 3.77 | 2.32 | 16.82 |
| 3 | 4.35 | 2.03 | 3.36 | 3.19 | 1.97 | 14.90 |
| 4 | 5.22 | 2.32 | 4.75 | 5.51 | 2.14 | 19.94 |
| Palpi | 2.32 | 0.92 | 1.04 | — | 3.77 | 8.05 |

Width of first patella at the "knee" 0.696 mm. Tibial Index 10.

Width of fourth patella at the "knee" 0.754 mm. Tibial Index 10.

Cephalothorax: Ovate, narrow in front, sides well rounded, marked with a radiating pattern of light brown and dark brown patches. Median depression long, narrow, deep, and clothed with black hairs. The hairs on the light brown areas are silvery grey, those on the dark brown areas are black. Immediately behind the eyes the clothing of silvery grey hairs is very thick, and from it project a few short black bristles. The radial grooves distinct, their outer ends being coloured dark brown. The margin is fringed with silvery grey hairs.

Eyes: In two rows, the front row slightly recurved, the rear row distinctly recurved. The front row is a little shorter than the rear row. Ratio of eyes AME : ALE : PME : PLE = 4 : 4 : 5 : 5. The AME are separated from each other by half their individual diameter and from ALE by the same distance. The PME are separated from each other by half their individual diameter and from PLE by a space equal to four-fifths of the diameter of PME. The lateral eyes are separated from each other by a space equal to the diameter of PME. The eye space is wider than long in ratio 23 : 12, and occupies a little more than half the width of the front of the cephalothorax. The median ocular area is slightly longer than wide in ratio 12 : 11, and wider behind than in front in ratio 11 : 9. The space between

the eyes and immediately in rear of them is thickly clothed with soft recumbent silky grey hair directed towards the front and slightly overhanging the ALE. Projecting from among the hairs are a few short black bristles.

Clypeus: Moderately deep, the distance from its front edge to the AME is equal to one and a quarter times the diameter of the latter. It is clothed with grey silky hairs and a row of about eighteen black bristles along the front edge.

Legs: 4, 1, 2, 3. Brown, clothed with silky grey recumbent hairs intermingled with small black hairs and bristles. A few erect white hairs project from the legs. The first, second, and third metatarsi scopulate to base, the fourth scopulate near the apex, the scopula gradually becoming thinner towards the base. All tarsi scopulate to base. Trichobothria are present on all tarsi, metatarsi, and tibiae. There is a chitinous rim at the apex of the metatarsi. Tarsal claws two, each armed with a row of six or seven teeth. The trochanters are strongly notched as in the *Lycosidae*.

Spines: *First leg.* Femur—dorsal 1-1-1, prolateral 1-1-1, retrolateral 1-1-1-1, ventral 0. Patella 0. Tibia—dorsal 0, prolateral 1-1, retrolateral 1-1, ventral 2-2-2. Metatarsus—2 long spines on ventral surface near the base, elsewhere 0. *Second leg.* Femur—dorsal 1-1-1, prolateral 1-1-1-1, retrolateral 1-1-1-1, ventral 0. Patella 0. Tibia—dorsal 0, prolateral 1-1, retrolateral 1-1, ventral 2-2-2. Metatarsus—ventral 2 long spines near base, elsewhere 0. *Third leg.* Femur—dorsal 1-1-1, prolateral 1-1-1-1, retrolateral 1-1-1-1, ventral 0. Patella 0. Tibia—dorsal 1 in middle, prolateral 1-1, retrolateral 1-1, ventral 2-2-2. Metatarsus—dorsal 1 small spine near base, prolateral 1-1, retrolateral 1-1-1, ventral 2 near base 1 small spine at apex. *Fourth leg.* Femur—dorsal 1-1-1, prolateral 1-1-1 close together near base and 1 small spine near apex, retrolateral 1-1 near apex, ventral 0. Patella 0. Tibia—dorsal 2-1-2, prolateral 1-1, retrolateral 1-1, ventral 2-2-2. Metatarsus—dorsal 1-1-1-2, prolateral 1-1-1-1, retrolateral 1-1-1, ventral 2-2-2. *Palpi.* Femur—dorsal 1-1 and 2 close together near apex, prolateral 1 near apex, retrolateral 1 near apex, ventral 0. Patella—dorsal 1 at apex, prolateral 1, retrolateral 0, ventral 0. Tibia—dorsal 0, prolateral 3, retrolateral 0, ventral 0. Tarsus 0.

Palpi: Femur, patella, and tibia light brown, clothed with grey silky hairs and a few black bristles. Tarsus very large and nearly black; its retrolateral edge is reflexed

producing a longitudinal groove on the dorsal surface. On the retrolateral side the tibia is armed with a large flat apophysis, which ends in a point. The apophysis projects almost at right angles to the tibia and is nearly equal to it in length. The copulatory apparatus is shown in Text Figure 17. The embolus is very long and in the unexpanded

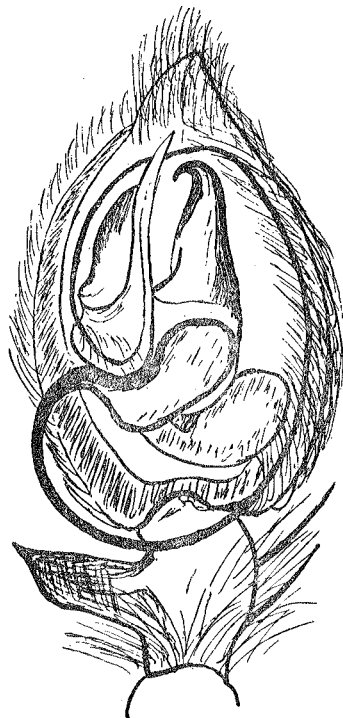


Fig 17. *Miturga velox*, sp. nov.
Right palpus of male. Ventral view.

condition it originates on the retrolateral side of the alveolus, curves round past the apex of the tibia, makes an almost complete turn round the margin of the alveolus, and then bends sharply towards the apex of the segment. Its extremity lies along a white membranous conductor.

Falces: Black in front, clothed with white silky hairs and coarse black hairs. A light brown condyle on the side at the base. The fang moderately long and well curved. The retromargin of the furrow is armed with two teeth, while the promargin is provided with three teeth and a fringe

of long grey barbed hairs. There is also a single hair of the same nature near the base of the fang on the retroside.

Maxillæ: Apical half black, clothed with a few black bristles. The basal half is marked with three longitudinal light brown patches separated by two black stripes which extend into the black apical half. There are a few short black bristles along the black stripes but elsewhere the light brown patches are bare. The outer and inner margins are strongly convex. A light scopula clothes the upper half of the inner margin and forms a tuft at the uppermost angle. (Text Figure 18.)

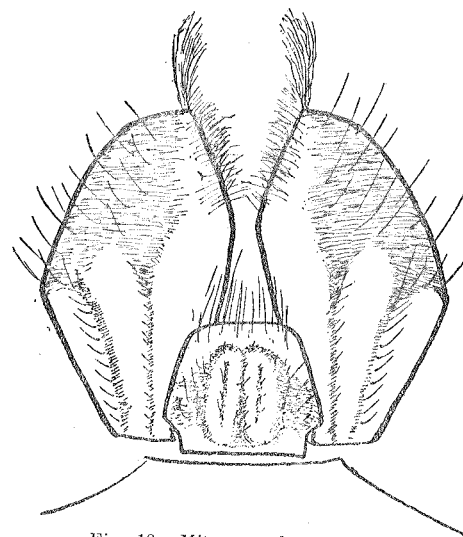


Fig. 18. *Miturga velox*, sp. nov.
Labium and maxillæ in the male.

Labium: As wide as it is long and a little more than one-third of the length of the maxillæ. It is truncate in front and narrower than in rear. Colour light brown marked with a dark brown pattern as shown in Text Figure 18. Clothed with long black bristles in front and a few small bristles on the surface.

Sternum: Shield shape, slightly longer than broad in ratio 14 : 13. Light brown, clothed with coarse black bristle-like hairs and short fine black hairs. Coxæ concolorous with the sternum. The fourth pair of coxæ are contiguous in rear of the sternum.

Abdomen: Ovate; the dorsal surface is a light brownish colour, speckled with small black spots and marked with four pairs of dirty white spots down the mid-dorsal line. The clothing consists of black hairs intermingled with grey hairs. The ventral surface is clothed with black hairs and marked with four longitudinal lines composed of irregular nearly contiguous white spots. A dark shield-shaped area in front of the epigastric furrow is marked with a pair of large and a pair of small white spots. The lung covers are brown. Sides are black speckled with white. Tracheal spiracle near spinnerets.

Spinnerets: Brown, clothed with black hairs. Anterior pair subconical and shorter than the posterior pair; apical joint small and dome shaped. The posterior pair two jointed, the basal point being slightly longer than the apical joint in ratio 7 : 5. Middle pair small and cylindrical.

Locality: Trevallyn, Launceston. 4th September, 1929.

Field Notes: During September the males are found lurking in pieces of rolled bark on the ground, and under stones.

Female. Measurements in millimetres.

| | |
|-----------------------------------|------|
| Total Length | 13.0 |
| Length of Cephalothorax | 6.0 |
| Width of Cephalothorax | 4.6 |
| Length of Abdomen | 8.0 |
| Width of Abdomen | 4.7 |

| Leg. | Femur. | Patella. | Tibia. | Metatarsus. | Tarsus. | Total. |
|-------|--------|----------|--------|-------------|---------|--------|
| 1 | 4.35 | 2.43 | 3.48 | 2.90 | 1.85 | 15.01 |
| 2 | 4.11 | 2.37 | 3.19 | 2.84 | 1.74 | 14.25 |
| 3 | 3.77 | 2.20 | 2.90 | 2.72 | 1.62 | 13.21 |
| 4 | 5.51 | 2.37 | 4.06 | 4.75 | 2.03 | 18.72 |
| Palpi | 2.03 | 1.16 | 1.16 | — | 2.14 | 6.49 |

Width of first patella at the "knee" 0.812 mm. Tibial Index 14.

Width of fourth patella at the "knee" 0.870 mm. Tibial Index 13.

Cephalothorax: Marked with patches of dark brown and light brown; clothed with black hairs intermingled with

grey hairs. Median depression long and deep, its anterior end is about three-fifths of the length of the cephalothorax from the front. It is marked by a Y-shaped patch of dark brown. In rear of the depression there is a patch of light brown sloping under the front of the abdomen. Between and behind the eyes and at the sides of the head region there is a thick clothing of grey hairs, from which project several black bristles. Margin marked with patches of dark brown and fringed with short grey hairs.

Eyes: In two rows; front row slightly recurved, rear row distinctly recurved and longer than the front row. The eye-space occupies three-fifths of the width of the cephalothorax in the region of the eyes and is broader than long in ratio 31 : 15. The eyes are equal in size. The AME are separated from each other by a space equal to three-quarters of their individual diameter and from the ALE by half their individual diameter. The PME are separated from each other by a space equal to three-quarters of their individual diameter. The PLE are separated from the PME by a space equal to one and a half times their diameter and from the ALE by the same distance. The median ocular area is longer than wide in ratio 13 : 12 and wider in rear than in front in ratio 12 : 11.

Clypeus: Narrow, the distance from its front edge to AME being equal to the diameter of the latter. Clothed with a few black bristles and grey hairs.

Legs: 4, 1, 2, 3. Dark brown, clothed with black hairs and recumbent grey hairs. Coxæ reddish brown. All tarsi and metatarsi scopulate to base, and a slight scopula on the prolateral side of the first and second tibiae near the apex. Trichobothria on all tarsi, metatarsi, and tibiae. Trochanters notched. Tarsal claws two, short, curved, and provided with three or four teeth.

Palpi: Colour and clothing like that of the legs. Spines on tarsus long. Single tarsal claw armed with three or four teeth.

Spines: *First leg*. Femur—dorsal 1-1, prolateral 1-1, retrolateral 1-1, ventral 0. Patella 0. Tibia—ventral 2-2-2, elsewhere 0. Metatarsus—ventral 2 near base, elsewhere 0. *Second leg*. Femur—dorsal 1-1, prolateral 1-1-1-1, retrolateral 1-1, ventral 0. Patella 0. Tibia—ventral 2-2-2, elsewhere 0. Metatarsus—ventral 2 near base, elsewhere 0. *Third leg*. Femur—dorsal 1-1-1, prolateral 1-1-1-1, retro-

lateral 1-1-1-1, ventral 0. Tibia—dorsal 1, prolateral 1-1, retrolateral 1-1, ventral 2-2-2. Metatarsus—dorsal 0, prolateral 1-1-1, retrolateral 1-1, ventral 2 near base and 1 small spine near apex. *Fourth leg.* Femur—dorsal 1-1-1, prolateral 1-1-1, retrolateral 1 near apex, ventral 0. Patella 0. Tibia—dorsal 1-1, prolateral 1-1, retrolateral 1-1, ventral 2-2-2. Metatarsus—dorsal 0, prolateral 1-2-2, retrolateral 2-2-2, ventral 2-2-1. *Palpi.* Femur—dorsal 1-1 and 2 close together near apex, prolateral 1 near apex, retrolateral 1 near apex, ventral 0. Patella—dorsal 1-1 bristles, prolateral 1, elsewhere 0. Tibia—dorsal 0, prolateral 2-1, retrolateral 1-1, ventral 0. Tarsus—dorsal 2 near base, prolateral 1-1, retrolateral 1-1, ventral 0.

Falces: Black, clothed in front with black bristles and grey hairs near the base, geniculate, provided with a brown condyle at the base on the side. Fang moderately long. Promargin of furrow armed with three teeth and fringed with long barbed grey hairs. Retromargin armed with two teeth, and furnished with a single long barbed grey hair near base of fang.

Maxillae: Rounded in front, convex on inner and outer sides, and like those of the male short and wide, the ratio of length to width being 5 : 3. Colour black marked on the basal half with three longitudinal brown patches as in male. (See Text Figure 18.) Clothed with black bristles on the black areas, the brown patches glabrous. Inner edge furnished with a dark grey scopula on the upper half.

Labium: Oval, truncate in front, longer than wide in ratio 15 : 13, shaped as in the male. Clothed with a few long black bristles in front. Sides excavated in basal third.

Sternum: Oval, truncate in front, longer than broad in ratio 8 : 7. Dark brown in centre, lighter brown round the margin. Clothed with black bristles. Margin angulate between coxae. The fourth pair of coxae contiguous in rear of sternum.

Abdomen: Black marked with fawn spots. Clothed with black hairs and grey hairs. Seven pairs of whitish spots, clothed with white hairs, on the rear two-thirds of the dorsum. The spots decrease in size towards the rear. Sides clothed with black hairs and marked with rows of small white spots. Ventral surface black, clothed with black hairs

and marked with four longitudinal white lines composed of nearly contiguous white spots clothed with white hairs; the lines converge towards the spinnerets. Epigynum brown and shaped as shown in Text Figure 19.

Spinnerets: Resemble those of the male.

Locality: Punch Bowl, Launceston. 19th November, 1927.

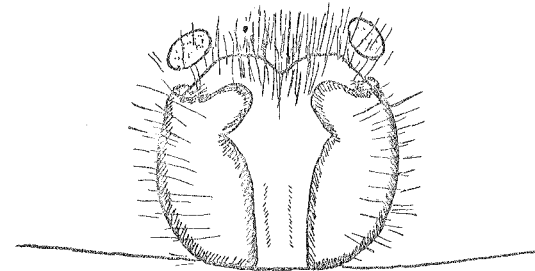


Fig. 19. *Miturga velox*, sp. nov.
Epigynum of female.

Field Notes: During November the female is found guarding her egg sac in an oval nest built on the under surface of a stone. The nest is made of strong pale yellow silk, which is so thinly woven that the walls of the nest present a lace-like appearance. The outside of the nest is sometimes decorated with dry leaves, twigs, bits of earth, etc. Its long diameter is about 35 mm. and its short diameter 25 mm. in length. The egg sac is 12 mm. in diameter, plano-convex almost hemispherical in shape. It is made of white silk and attached to the top of the nest by ten little silken points placed at regular intervals round the edge of the flat side of the sac. (See Plate XXV., Figure 13.)

This spider is fairly common, and like *Miturga agelenina*, Simon, it favours sunny situations which are lightly timbered. Besides occurring round Launceston it is found at Fingal, Woodsdale, and Forth Falls.

Observations: The only spiders belonging to the genus *Miturga* previously recorded from Tasmania are *Miturga agelenina*, Simon, and the doubtful *Miturga necatrix*, Walck. (6) The latter species was originally placed in the genus *Clubiona*, but Simon (7) thinks that it is probably a species of *Miturga*. Walckenaer's description is so brief that it is difficult to recognise the spider from it. The species

described in the present paper are easily distinguished by the shape of the epigynum in the females and by the general appearance of the spiders as shown in the several Plates.

Type specimens of spiders described in this paper will be placed in the Queen Victoria Museum, Launceston.

REFERENCES TO LITERATURE.

- (1) A. Petrunkevitch. Transactions of the Connecticut Academy of Arts and Sciences. Vol. 29, 1928, pp. 1-270.
- (2) A. Petrunkevitch. *Op. cit.* Vol. 27, 1925, pp. 56-59.
- (3) A. Petrunkevitch. *Op. cit.* Vol. 30, 1929, p. 11.
- (4) H. Hogg. P.Z.S., Vol. II., 1902, p. 140.
- (5) E. Simon. *Die Fauna Südwest-Australiens*, Bd II., 1909, p. 172.
- (6) C. Walckenaer. *Hist. Nat. des Ins.*, Apt. I., 1837, p. 597.
- (7) E. Simon. *Histoire Naturelle des Araignées*, T. II., 1897, p. 129.

Plate XIX.

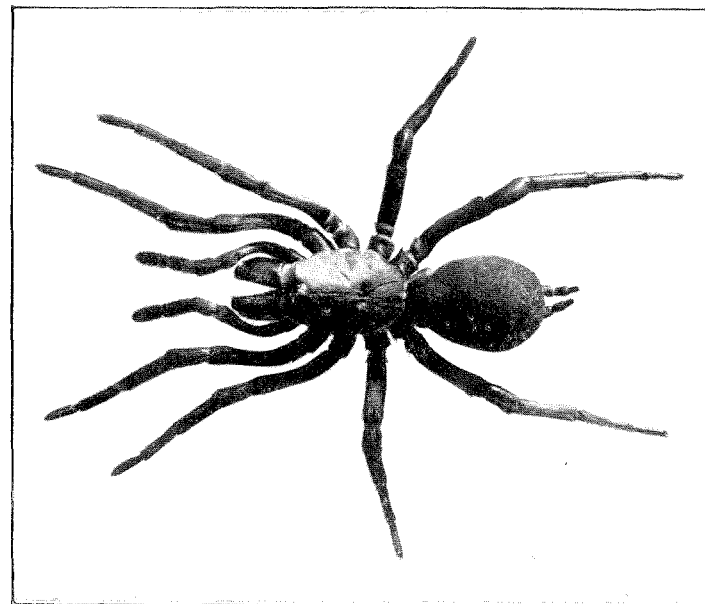


Fig. 2. *Aneme pexa*, sp. nov.
Female.

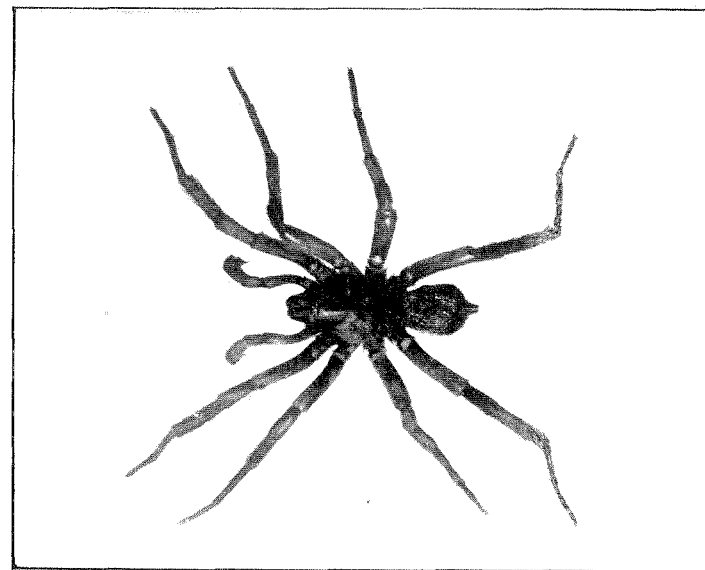


Fig. 1. *Aneme pexa*, sp. nov.
Male.

P. and P. Roy. Soc. Tas., 1929.

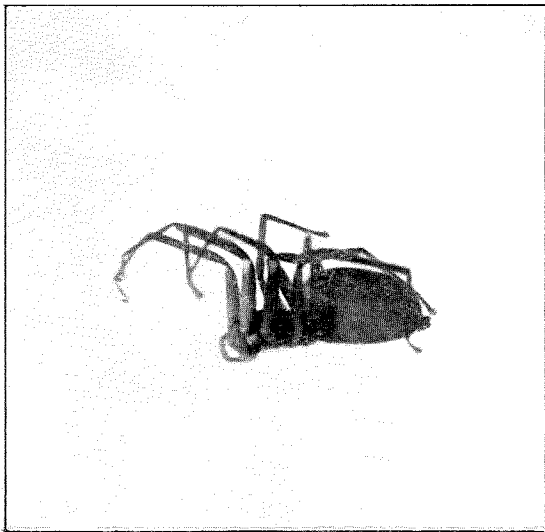


Fig. 3. *Tasmanoonops alipes*, gen. et sp. nov.
Female.



Fig 4. *Tasmanoonops alipes*, gen. et sp. nov.
Photomicrograph of tarsal claws and onychium.

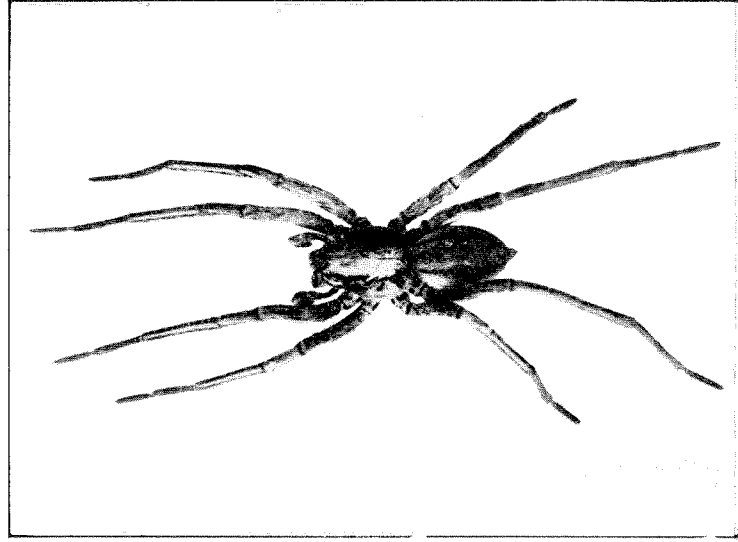


Fig. 5. *Miturga agelenina*, Simon.
Male.

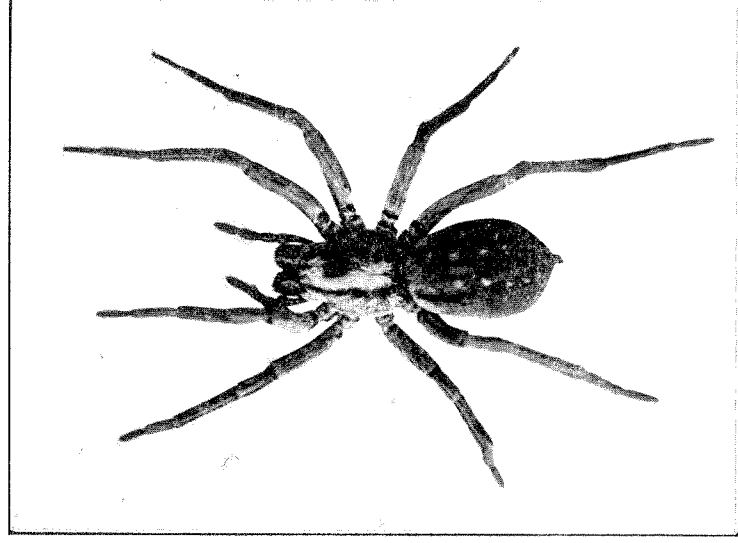


Fig. 6. *Miturga agelenina*, Simon.
Female.

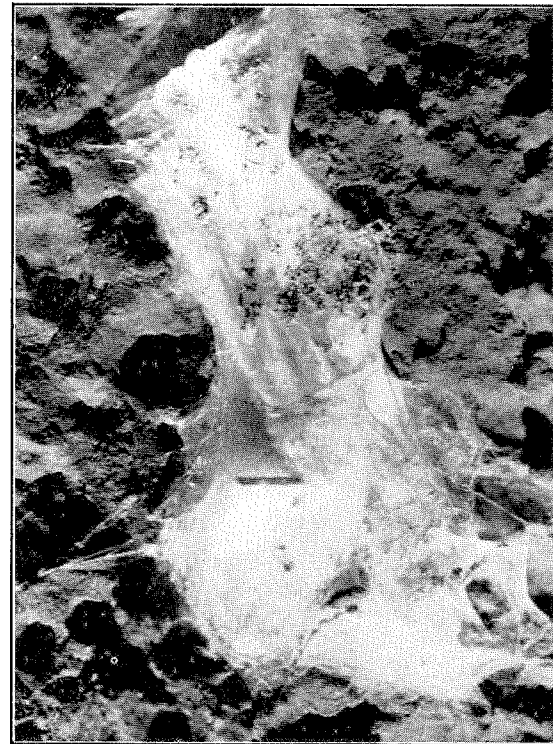


Fig. 7. *Miturga agelenina*, Simon.
Nest on underside of a stone.

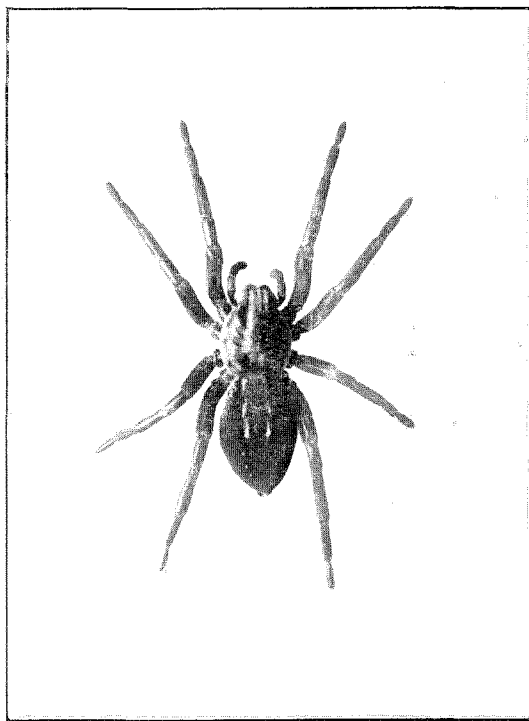


Fig. 8. *Miturga albopunctata*, sp. nov.
Dorsal view of female.

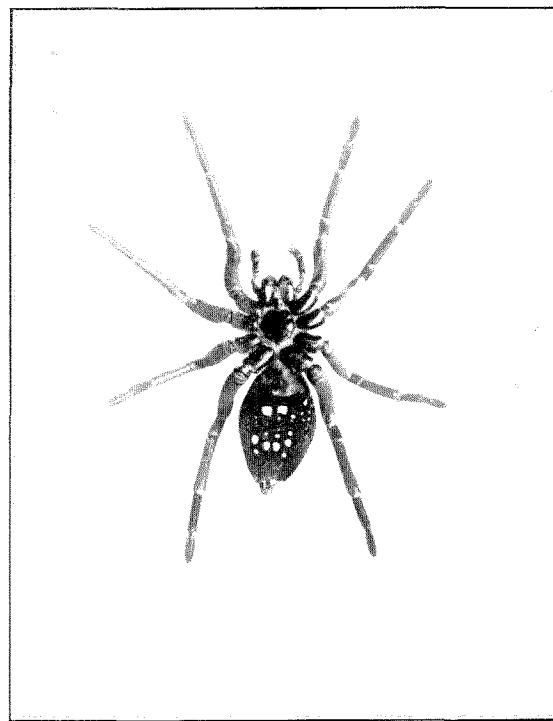


Fig. 9. *Miturga albopunctata*, sp. nov.
Ventral view of female.

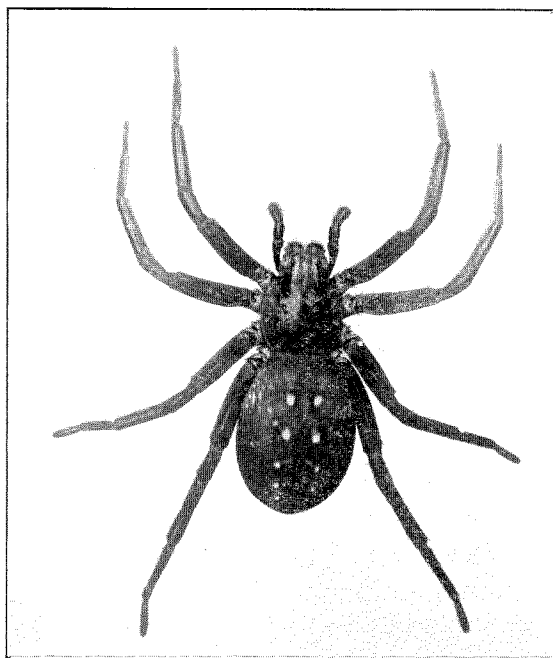


Fig. 10. *Miturga splendens*, sp. nov.
Dorsal view of female.

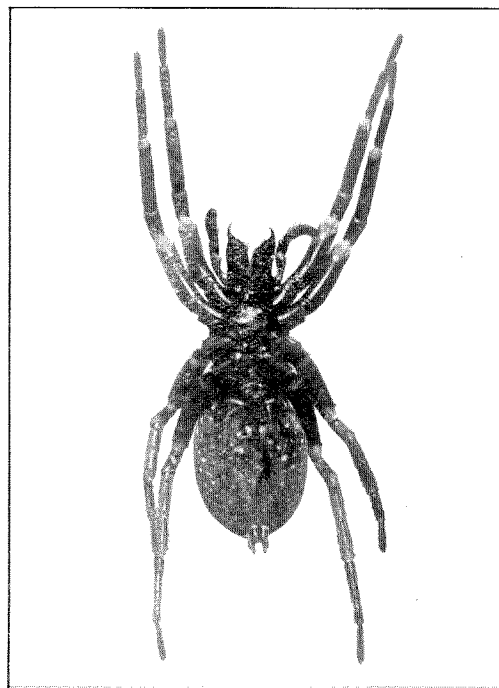


Fig. 11. *Miturga splendens*, sp. nov.
Ventral view of female.



Fig. 12. *Miturga velox*, sp. nov.
Male.

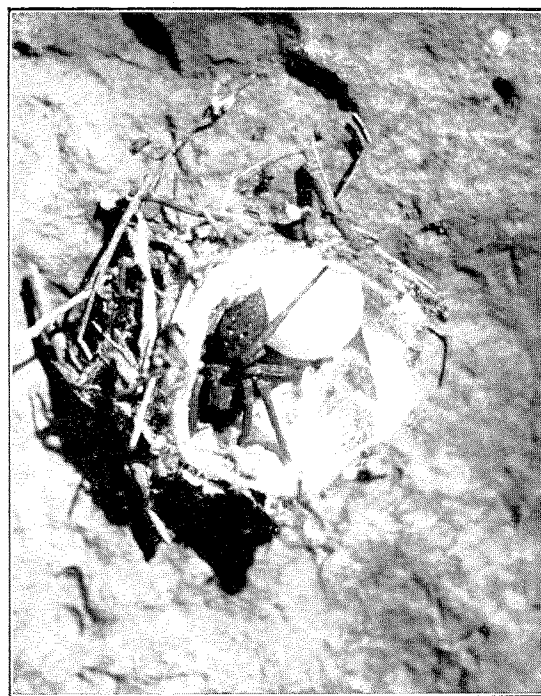


Fig. 13. *Miturga velox*, sp. nov.
Female in nest guarding egg sac. Side of nest cut open.

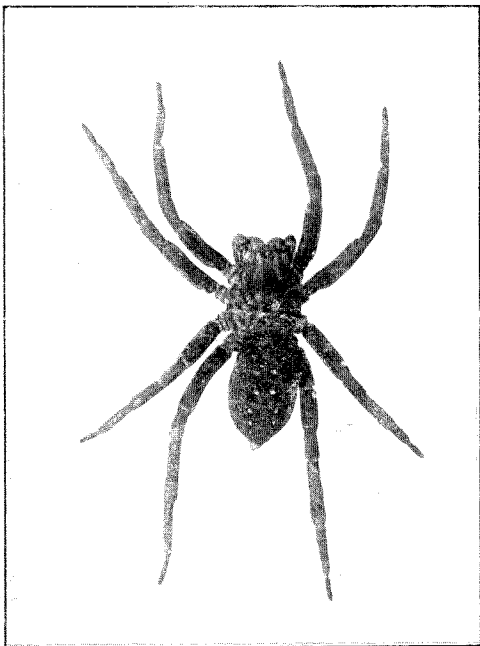


Fig. 14. *Miturga velox*, sp. nov.
Dorsal view of female.

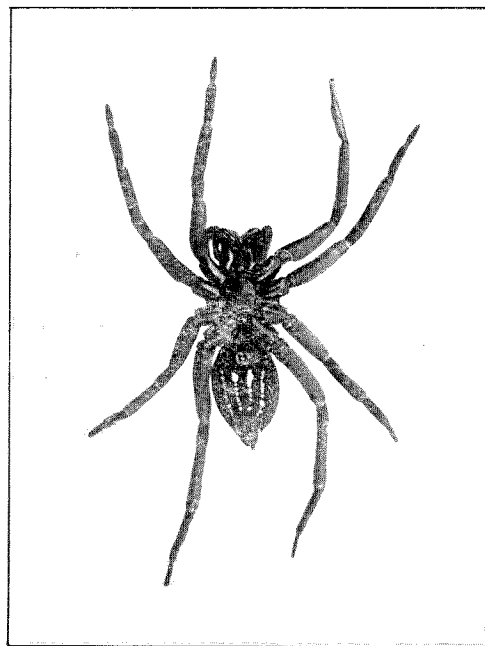


Fig. 15. *Miturga velox*, sp. nov.
Ventral view of female.