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CONTRIBUTION TO A KNOWLEDGE OF PAPUAN
ARACHNIDA.

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

THE present paper comprises a list of the species of Papuan Arachnida, in the possession of the Trustees. The collection, although numerous in point of specimens, can scarcely be considered *representative* as far as species are concerned. For the most part, the specimens enumerated hereunder have been collected from time to time by Missionaries, few of whom possess that special knowledge so necessary to a successful collector.

Some of the specimens recorded below were collected under the auspices of His Excellency Sir Wm. McGregor, M.D., K.C.M.G., at the St. Joseph's River; and some were collected by Mr. W. W. Froggatt, at the Fly River, in his capacity as Naturalist to the Geographical Society of Australasia's Expedition in 1885.* The species most common in all collections from New Guinea are those whose arboreal habits or size render them conspicuous, such as *Argyropeira grata*, Guérin, *A. celebesiana*, Walck., and the huge *Nephila maculata*, Fab.

It is to be regretted that a field so full of interest from a zoological point of view, should be left almost entirely to the enterprise of foreign collectors, and this notwithstanding the fact that it is so close to our doors. Although numerous collectors have at times visited New Guinea, the two principal expeditions from Sydney have been the "Chevert" Expedition in 1875, and the Geographical Society's Expedition, referred to above. The Araneidæ collected by the former were recorded by Mr. H. H. B. Bradley.†

The reader is also referred to a previous paper by me, entitled "Contributions to a Knowledge of the Arachnidan Fauna of British New Guinea."‡

Some of the specimens are vaguely labelled "British New Guinea," whilst others are distinctly located; thus in the localities recorded below as "British New Guinea, St. Joseph's River," the information intended to be conveyed is—that some specimens are known from the latter locality specifically, and others from British New Guinea generally; and where the words "British New Guinea" appear between parenthesis, the object is to localise the preceding name.

* See Proc. Geogr. Soc. Austr., special vol., 1885.

† Proc. Linn. Soc. N. S. Wales, i., 1876, pt. 2, pp. 137 - 150; pt. 3, pp. 220 - 224, and plates.

‡ *Ibid.*, xxiii., 1898, pt. 3, pp. 328 - 356, pl. vii.

Order ARACHNIDA.

Suborder ARANEÆ THERAPHOSÆ.

Family AVICULARIIDÆ.

Subfamily AVICULARIINÆ.

Genus Phlogius, *E. Simon.*

Phlogius crassipes, L. Koch.

Loc. Fly River (British New Guinea).

Phlogius strenuus, Thorell.

Hab. British New Guinea.

Suborder ARANEÆ VERÆ.

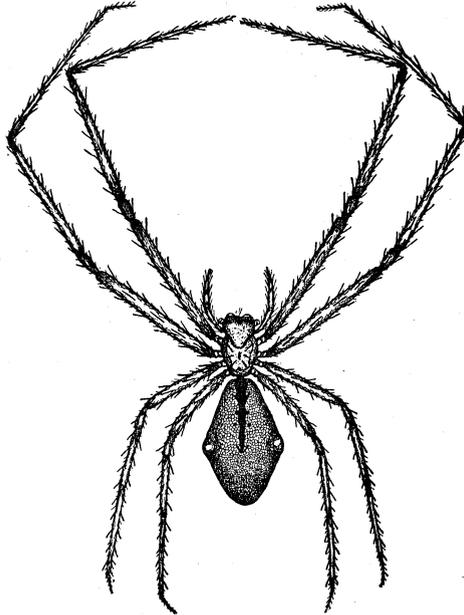
First section ARANEÆ VERÆ CRIBELLATÆ.

Family ULOBORIDÆ.

Subfamily DINOPINÆ.

Genus Menneus, *E. Simon.*

Menneus reticulatus, sp. nov.



MENNEUS RETICULATUS.

♀. Cephalothorax, 5.9 mm. long, 4.6 mm. broad; abdomen, 12 mm. long, 6.8 mm. broad.

Cephalothorax longer than broad, flat, dull yellowish-brown; sparingly clothed with short yellowish pubescence. *Caput* flat, and level with thoracic segment. *Clypeus* sparingly clothed with yellowish pubescence; broadest in front, retreating gradually to posterior extremity, surface uneven; the median depression is a very short, straight, shallow groove; radial grooves indistinct.

Eyes distributed over three transverse rows of 4, 2, 2; of these the first row is strongly procurved; the lateral eyes of this row are minute, and are seated at the extremity of cylindrical tubercles, springing from the corners of the clypeus; the median eyes are also minute, and are placed closely together, immediately below the two large eyes constituting the second row; those of the third or posterior row are seated well back, and are widely removed from each other.

Legs long, slender, brown, clothed with hoary pubescence, and armed with a few short spines. Relative lengths 1 = 2, 4, 3.

Palpi short, similar in colour and armature to legs.

Falces long, strong, perpendicular, divergent, dark brown, the inner margins fringed with long, yellowish hairs, the outer surface sparingly clothed with greyish pubescence.

Maxillæ dark brown, long, strong, constricted towards the insertion of the palpi, thence greatly divergent, and rounded off at the extremities.

Labium concolorous, rather broader at the base than the apex, which is truncated.

Sternum subtriangular, dark brown laterally, otherwise pale yellowish; the surface pubescent.

Abdomen moderately arched, much longer than broad, angular, narrow in front, but gradually broadening out towards its middle, where it is widest, and thence sharply tapering off to its ultimate extremity; the superior surface and sides are yellow-brown, and reticulated; commencing at its anterior extremity there is a dark brown, rather deep longitudinal median groove of varying width, the margins of which are rough and irregular; the groove terminates at a point a little below the centre; at a distance of rather more than one-third the length of this groove, there are two small, dark brown spots, seated on either side, but quite close to the outer margins; at the widest part of the abdomen there are two lateral obtuse tubercular projections, and these are moderately high; the inferior surface is also yellowish-brown, and reticulated. *Epigyne* a simple, dark brown tubercular eminence, the overhanging lip of which curves slightly upwards towards the centre. *Cribellum* transverse, undivided. *Spinnerets* long and cylindrical.

Obs. An exceedingly interesting species, and the only one obtained by Mr. Froggatt, when out with the Geographical Society's Expedition to New Guinea in 1885. Previously only six species were known, and of these, four were from Australia, one from New Caledonia, and one from Western Tropical Africa. The Australian species are:—*Menneus despiciens*, Camb., *M. unifasciata*, L. Koch, *M. angulata*, and *M. superciliosa*, Thorell, and of these only one, *M. unifasciata* has been found so far south as Sydney. All the Australian species have been described under the generic name of *Avella* (Camb.).

Loc. Fly River (British New Guinea).

Family PSECHRIDÆ.

Genus Psechrus, Thorell.

Psechrus argentatus, Dolesch.

Loc. Fly River (British New Guinea).

Second section ARANEÆ VERÆ ECRIBELLATÆ.

Family THERIDIIDÆ.

Genus Latrodectus, Walck.

Latrodectus scelio, Thorell., var. *indica*, E. Simon.

Loc. Fly River and St. Joseph's River (British New Guinea).

Family ARGIOPIDÆ.

Subfamily TETRAGNATHINÆ.

Genus Tetragnatha, Latr.

Tetragnatha rubriventris, Dolesch.

Loc. St. Joseph's River (British New Guinea).

Tetragnatha mandibulata, Walck.

Loc. Kiriwina Island (Trobriand), and Louisiade Archipelago.

Genus Argyropeira, Emer.

Argyropeira celebesiana, Walck.

Hab. British New Guinea, St. Joseph's River.

Argyropeira grata, Guér.

Hab. British New Guinea, St. Joseph's River.

Subfamily NEPHILINÆ.

Genus Nephila, Leach.

Nephila maculata, Fab.

Loc. St. Joseph's River, Kiriwina Island (Trobriand), Engineers' Group (N.E. Coast), and Samarai (Dinner Island), British New Guinea.

Nephila maculata, Fab., var. *pencilum*, Dolesch.

Loc. St. Joseph's River and Fly River (British New Guinea).

Subfamily ARGIOPINÆ.*Genus* Argiope, Aud. et Sav.*Argiope ætherea*, Walck.*Loc.* St. Joseph's River (British New Guinea).*Argiope ætherea*, Walck., var. *deusta*, Thorell.*Loc.* St. Joseph's River, and Kiriwina Island (Trobriand),
British New Guinea.*Argiope ætherea*, Walck., var. *annulipes*, Thorell.*Loc.* Kiriwina Island (Trobriand), and Teste Island (Louisiade
Archipelago), British New Guinea.*Argiope picta*, L. Koch.*Hab.* British New Guinea.*Genus* Cyrtophora, E. Simon.*Cyrtophora moluccensis*, Dolesch.*Hab.* British New Guinea.*Cyrtophora viridipes*, Dolesch.*Loc.* St. Joseph's River (British New Guinea).*Cyrtophora simoni*, Rainbow.*Loc.* St. Joseph's River (British New Guinea).*Genus* Araneus, Clerck.

(EPEIRA of Authors.)

Araneus trigonus, L. Koch.*Loc.* Fly River (British New Guinea).*Genus* Gasteracantha, Sund.*Gasteracantha tenuata*, Walck.*Loc.* Fly River, St. Joseph's River, and Kiriwina Island
(Trobriand), British New Guinea.*Gasteracantha crucigera*, Bradley.*Hab.* Samarai (Dinner Island), British New Guinea.*Gasteracantha hepatica*, L. Koch.*Loc.* Fly River and St. Joseph's River, British New Guinea.*Gasteracantha pentagona*, Walck.*Loc.* Fly River, British New Guinea.*Gasteracantha mollusca*, L. Koch.*Hab.* British New Guinea.

Family THOMISIDÆ.

Subfamily MISUMENINÆ.

Genus *Misumina*, Latr.

Misumina pustulosa, L. Koch.

Hab. British New Guinea.

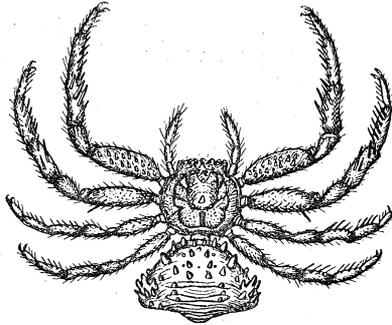
Misumina innonata, Thorell.

Loc. Fly River (British New Guinea).

Subfamily STEPHANOPSINÆ.

Genus *Phrynarachne*, Thorell.

Phrynarachne tuberculata, sp. nov.



PHRYNARACHNE TUBERCULATA.

♀. Cephalothorax, 4·8 mm. long, 4·8 mm. broad; abdomen, 5·2 mm. long, 7·2 mm. broad.

Cephalothorax almost round, arched, tuberculated, yellow-brown. *Caput* high, arched, uneven, sloping to the front, where it is somewhat obtusely truncated; near the base, which is its highest point, there are two large obtuse tubercles; in front of the latter, and at the sides of the cephalic segment, there are several smaller tubercles; the ocular area, which is of a creamy-white colour, has also a number of small tubercles distributed over its surface, and is moderately clothed with pale yellowish pubescence. *Clypeus* is arched and furnished with a few small tubercles, and the radial grooves are barely distinct; the thoracic segment is yellow-brown, although somewhat darker than the cephalic eminence. *Marginal band* rather broad.

Eyes small, widely separated, but equidistant; these are seated on small tubercles, and arranged in two strongly recurved rows of four each.

Legs yellowish, moderately long, sparingly clothed with yellowish hairs; the tibiæ and metatarsi are each armed with

moderately long, but strong yellow spines; all the legs are furnished with tubercles, chiefly of a creamy-white colour, but these are by far the largest and most numerous on the outer surface of the anterior pair; tarsal claws, black. Relative lengths 1 = 2, 3 = 4.

Palpi yellow-brown, aculate, densely clothed with coarse yellowish hairs.

Falces concolorous, densely clothed with long coarse hairs, cylindrical.

Maxillæ pale yellowish, long, cylindrical, inclining inwards.

Labium concolorous, rather longer than broad, truncated at apex.

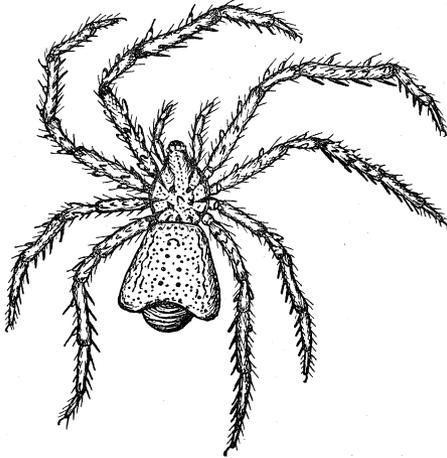
Sternum concolorous also, ovate, truncated in front, moderately convex, its surface granulated and sparingly clothed with pale yellowish hairs.

Abdomen sub-pentagonal, truncated in front, slightly projecting over base of cephalothorax, pale yellowish, moderately hairy; the superior surface furnished with tubercles, the largest of which are coniform; in front there is a curved series of eight, and of these the central pair are much the smallest; in an oblique line from the lateral tubercles of the series just described, and running inwards, there is on each side another tubercle, somewhat smaller and more obtuse, and below these again, but in a line directed outwards, there are on each side two smaller somewhat coniform tubercles; commencing at the centre, and running towards the anterior extremity, there is a series of six obtuse tubercles, disposed in three rows of two each; of these, those of the first and second rows are equidistant and small, whilst those of the third or anterior row are somewhat larger and wider apart; at the broadest part of the abdomen, there is on each side a series of seven coniform tubercles, and of these the lateral ones are much the longest; at the sides of and below these again, there are also one or two smaller ones; immediately between the two series referred to above, and close to their inner margins, there are two slightly curved longitudinal rows of three each, the individuals of which are rather small; from the centre, at its widest point, and to its posterior extremity, the abdomen is transversely furrowed, and these furrows are slightly procurved; the inferior surface is of a somewhat lighter colour, and moderately clothed with concolorous hairs. *Epigyne* is a small, black, tubercular eminence.

Loc. Fly River (British New Guinea).

Genus *Stephanopsis*, *Camb.*

Stephanopsis angulata, sp. nov.



STEPHANOPSIS ANGULATA.

♀. Cephalothorax, 3·9 mm. long, 3·5 mm. broad; abdomen, 4·6 mm. long, 4·2 mm. broad.

Cephalothorax dark brown, nearly as broad as long, arched, granulated. *Caput* granulated, sloping forward, and terminating in an obtuse tubercular eminence. *Clypeus* dark brown, broad, arched, granulated, radial grooves moderately distinct; at the centre there is a small but prominent obtuse tubercle. *Marginal band* broad, granulated.

Eyes arranged in two strongly procurved rows of four each; of those of the anterior row, the median eyes are much the smallest, whilst the lateral eyes, and those constituting the posterior row are of equal size.

Legs long, strong, dark brown, granulated; all are furnished with tubercles, short hairs and spines; but the spines on the underside of the tibiæ and metatarsi of the first and second pairs are much the longest and strongest, and are directed forwards. Relative lengths 1, 2, 4, 3.

Palpi short, strong, similar in colour to legs, and densely clothed with coarse hairs.

Falces yellow-brown, cylindrical, clothed with short coarse hairs.

Maxilla dark brown, moderately long, converging inwards.

Labium concolorous, short, broad, narrower at apex than base; apex fringed with coarse hairs.

Sternum yellow, moderately arched, elliptical in outline, and thickly clothed with short yellowish hairs.

Abdomen of a somewhat trapezoidal form, slightly projecting over base of cephalothorax; anterior extremity truncated, posterior extremity strongly indented; the superior surface is of a pale yellowish colour, somewhat uneven, granulated, and slightly arched; in the median line there is a series of six indentations or punctures, and of these the first pair situated at about one-third the distance from the anterior extremity, are the smallest of the series and the closest together; the second pair, situated at about the centre, are much wider apart; those of the third row are about one-third the length from the posterior extremity and rather wider apart than the preceding pair; the posterior angle is somewhat coniform, transversely furrowed and granulated, the furrows recurved; sides rather flat, retreating sharply downwards, pale yellowish, granulated, and furrowed; inferior surface, dull yellowish. *Epigyne* a small, transverse, procurved depression or groove, the inner margins of which are black.

Loc. Fly River (British New Guinea).

Family CLUBIONIDÆ.

Subfamily SPARASSINÆ.

Genus *Isopoda*, *L. Koch.*

Isopoda herculea, Thorell.

Hab. British New Guinea.

Genus *Heterapoda*, *Latr.*

Heterapoda venatoria, Linn.

Hab. British New Guinea, Teste Island (Louiadi Archipelago).

Heterapoda venatoria, Linn., var. *foveolata*, Thorell.

Hab. British New Guinea.

Heterapoda salacia, *L. Koch.*

Loc. Fly River (British New Guinea).

Heterapoda analis, Thorell.

Loc. Fly River (British New Guinea).

Genus *Palystes*, *L. Koch.*

Palystes pinnotherus, Walck.

Loc. Fly River (British New Guinea).

Family LYCOSIDÆ.

Genus *Anoteropsis*, *L. Koch.*

Anoteropsis papuana, Thorell.

Loc. Fly River (British New Guinea).

Family OXYOPIDÆ.

Genus Oxyopes.

Oxyopes macilentus, L. Koch.

Loc. Fly River and St. Joseph's River (British New Guinea).

Oxyopes brevis, Thor.

Loc. Teste Island, Louisiade Archipelago.

Family ATTIDÆ.

Genus Bavia, *E. Simon.*

Bavia cericeps, ? *E. Simon.*

Loc. St. Joseph's River (British New Guinea).

Genus Icius, *E. Simon.*

Icius albo-vittatus, L. Koch.

Loc. Fly River (British New Guinea).

Genus Mævia, *C. L. Koch.*

Mævia albo-cincta, Thorell.

Loc. Fly River (British New Guinea).

Mævia doreyana, Walck.

Hab. British New Guinea.

Mævia insultans? Thorell (immature).

Loc. Fly River (British New Guinea).

Genus Plexippus, *C. Koch.*

Plexippus dilanians, Thorell (immature, ♂).

Loc. Fly River (British New Guinea).

Genus Bathippus, *Thorell.*

Bathippus macrognathus, Thorell.

Loc. Fly River and St. Joseph's River (British New Guinea).

Bathippus macroprotopus, Pocock.

Loc. St. Joseph's River (British New Guinea).

Genus Menemerus, *E. Simon.*

Menemerus paykulli, Aud.

Loc. St. Joseph's River (British New Guinea).

Genus Ephippus, *Thorell.*

Ephippus durveilli, Walck.

Loc. Fly River and St. Joseph's River (British New Guinea).

Order SCORPIONIDÆ.

Family PANDINIDÆ.

Subfamily PANDININI.

Genus *Hormurus*, Thorell.*Hormurus karschii*, L. Koch.

Hab. British New Guinea.

Hormurus caudicula, L. Koch.

Loc. St. Joseph's River (British New Guinea).

Order OPILIONIDÆ.

Suborder OPILIONES PLAGIOSTETHI.

Genus *Gagrella*, Stol.*Gagrella hasselti*, Thor.

Hab. Fly River (British New Guinea).

A REVIEW OF THE SYSTEMATIC POSITION OF *ZEMIRA*,
ADAMS.

By CHARLES HEDLEY, Conchologist.

THE literary history of *Zemira australis* has chiefly consisted of a tossing from genus to genus without reason or explanation. The type species was originally described and figured by G. B. Sowerby, Junr.,* as *Eburna australis* from New South Wales. He adds that Dr. Gray considered it to be the *Cancellaria spirata* of Lamarck. This view was upheld by Kiener† who reviewing *Eburna*, states that *E. australis* should remain among the *Cancellaria*, where Lamarck had placed it. Deshayes‡ followed by accusing Sowerby of publishing two names, figures and descriptions for one shell, the first time by drawing it as a *Cancellaria* with three twists on the columella, the second time as an *Eburna* with none. Lamarck and his followers had however been deceived by a

* Sowerby—The Conchological Illustrations, 1841, Pt. xx., *Eburna*, fig. 5.

† Kiener—Coquilles vivantes, n.d. *Eburna*, p. 2.

‡ Deshayes—Lamarck's Nat. Hist. Anim. s. vert. (2nd ed.) x., 1844, p. 231.