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Annals and Magazine of Natural History: Series 6

Publication details, including instructions
for authors and subscription information:
<http://www.tandfonline.com/loi/tnah12>

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Published online: 06 Oct 2009.

To cite this article: R.I. Pocock (1895) XVII.—Description of two new spiders obtained by Messrs. J. J. Quelch and F. McConnell on the summit of Mount Roraima, in Demerara; with a note upon the systematic position of the genus *Desis*, *Annals and Magazine of Natural History: Series 6*, 16:92, 139-143, DOI: [10.1080/00222939508680241](https://doi.org/10.1080/00222939508680241)

To link to this article: <http://dx.doi.org/10.1080/00222939508680241>

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XVII.—Description of Two new Spiders obtained by Messrs. J. J. Quelch and F. McConnell on the Summit of Mount Roraima, in Demerara; with a Note upon the Systematic Position of the Genus *Desis*. By R. I. POCKOCK, of the British Museum.

MYGALOMORPHÆ, Poc.

Family Theraphosidæ, Thor.

Subfamily BARYCHELINÆ, Sim.

Genus CYRTOGRAMMOMMA, nov.

This genus is most nearly related to *Idiophthalma* of Cambridge. The characters of the two may be contrasted as follows:—

IDIOPHTHALMA.—Posterior row of *eyes* much wider than anterior row (nearly twice as wide), distance between anterior lateral eyes about twice a diameter.

Cephalothoracic fovea strongly procurved (*teste* Simon; the type in the British Museum of *I. suspectum*, Cambr., has been pinned through this spot).

Mandibular rake formed of a single transverse series of shortish spiniform teeth.

Labium without teeth; *maxillæ* with only two teeth.

Legs short and robust.

CYRTOGRAMMOMMA.—Posterior row of *eyes* only slightly wider than anterior; distance between anterior laterals about four times a diameter.

Cephalothoracic fovea strong and straight.

Mandibular rake merely represented by a few spiniform setæ, which are only a little stouter than the normal setæ which clothe the rest of the mandible.

Labium wider than long, almost unarmed, furnished with 3 spinules; *maxillæ* furnished with a small cluster of irregularly arranged spinules.

Sternum circular, with marginal impressions.

Legs longer and thinner.

Cyrtogrammomma monticola, sp. n.

Colour a uniform coffee-brown.

The entire *body* covered with a clothing of short hairs.

Carapace high, oval, much longer than wide, the length equal to the patella and tibia of the first leg, the width to the

tibia and half the patella; ocular tubercle spherical, ocular area a trifle wider than long; median eyes a little larger than the anterior lateral, and separated from them by a space which slightly exceeds their diameter; posterior lateral eye smaller than anterior lateral, but about twice as large as the posterior median, which are situated quite close to them, but about their diameter's distance from the anterior median.

Mandible with external surface naked below; the inferior margin armed internally with 8-9 strong teeth and a few minute granules behind; fang long, slender, and smooth.

Legs long and slender, 4, 1, 2, 3, the fourth exceeding the first by the length of its tarsus; protarsi of first and second scopulate nearly to the base, of third scopulate in its distal half, of fourth scopulate at the apex; tarsal scopulæ of first and second legs entire, of third and fourth intermixed with setæ and rather thin; unguis tufts large; legs 1 and 2 almost unspined, although some of the setæ are stout; a series of spiniform setæ on the upperside of the femur of the first and one on that of the second; two upon the lower surface of the tibiæ and one at the base of the scopula on the protarsi; tibiæ and protarsi of posterior legs copiously spined; patellæ of all the legs unspined, but furnished with a distinct posterior wart; claws with a single series of five strong teeth on their outer edges.

Tibia of *palp* with several long spines below.

Internal *spinners* short and contiguous; external with the basal segment the longest, stoutest, and geniculate, the apical small and rounded.

Measurements in millimetres.—Total length 14; length of carapace 6.5, width 5; length of first leg (from base of femur) 16, of second 15, of third 14, of fourth 20.

A single female example from the summit of Mount Roraima (8500 feet).

ARACHNOMORPHÆ, Poc.

Family *Anyphænidæ*.

Genus *AYSHA*, Keyserling.

(‘Die Spinnen Amerikas: Brasilianische Spinnen,’ 1891, p. 129.)

Aysha Quelchii, sp. n.

♂.—*Colour*. Carapace, palpi, coxæ, and femora of legs reddish yellow; mandibles, sternum, and distal extremities of the legs much darker; abdomen bluish black, without any very definite pattern.

Carapace high, heart-shaped, longer than broad, its length about equal to the length of the femur of the first leg; width equal to length of tibia of third leg.

Ocular area transversely elongate, much wider than long, anterior median eyes about half the size of the rest, which are subequal; *eyes* of anterior row viewed from above rather strongly recurved, when viewed from the front about straight, the distances between the individual eyes narrow and about equal to the radius of a median eye; eyes of the posterior row slightly procurved, the space between the median nearly equal to their diameter, space between median and lateral rather greater; all the eyes are round, the anterior median being dark-coloured, the rest pale. *Clypeus* about equal to twice the diameter of the anterior median eye.

Mandibles long and strong, narrowed, diverging a little distally; edges of the groove upon which the fang closes toothed, the posterior edge with 6 small teeth, the anterior with 5 much larger teeth; in front of the latter and extending to the base of the fang is a cluster of long setæ.

Labium more than twice as wide as long, a little narrowed distally, with lightly emarginate anterior border.

Maxillæ surpassing the labium by more than a third of their length, rectangularly pointed at the apex, the inner edge of the apex straight and strongly hairy, the outer convex and bearing a strong serrula.

Legs 1, 2 and 4, 3 with robust femora and very slender protarsi and tarsi; femora 1 and 2 armed above with 9 long filiform spines, 3 and 4 with 7; unarmed below; tibiæ with 12 long spines below and at the sides; patella armed with 1 posterior spine; protarsi with many spines, intermixed with hairs; tarsi not spined, thickly hairy below, the unguis tufts conspicuous; claws furnished with 5 (? more) very long and strong teeth.

Palpi with femur bowed, armed above with 4 spines; patella armed above with about 3 spines; tibia excelling the patella by about one third of its length, armed with 3 long spines above; its lower surface furnished distally with two processes—a smaller simple conical internal one and a large bifid laminate external one; on the proximal side of these a deep smooth depression or notch; tarsus oval, far surpassing the bulb, for structure of which see figure (p. 142).

Distance between the tracheal slit and the spinners more than three times as great as the distance between the tracheal slit and the generative orifice.

Anterior mammillæ much thicker and a little shorter than the posterior.

Measurements in millimetres.—Total length 11; length of carapace 5·5, width 4; length of first leg 21, of second 20, of third 16·5, of fourth about 20.



Loc. Summit of Mount Koraima, 8500 feet. An adult male and an immature female.

The genus *Aysha* is essentially Neotropical in its distribution. The known species have been recorded from St. Domingo, Bogota, and Rio Grande do Sul.

Note.—From a morphological point of view the genus *Aysha*, and, indeed, the entire group of the Anyphænidæ, is of considerable interest on account of the retention by the tracheal stigma of a more primitive position than is found in most dipneumonous spiders. In the genus *Anyphæna* the aperture in question is placed almost in the middle of the area that lies between the generative orifice and the spinning-mammillæ. In *Aysha*, however, it is even further forwards, and lies, as stated in the description given above, in the anterior fourth of this area, that is, only very slightly behind the position that the tracheal stigmata occupied when first formed in the embryo, although showing the specialization of union. In most families of Arachnomorphæ these stigmata have travelled the greatest possible distance over the abdominal ventral surface, and have been compelled to halt immediately in front of the spinning-mammillæ. Leaving aside the so-called Cribellatæ and Haplogynæ, and turning to the Ecribellate Entelegynæ *, we find that the tracheal stigmata are removed from the mammillæ in a few groups, namely in the Argyronetidæ, Anyphænidæ, and in two genera allied to *Pachygnatha*. In the case of the Anyphænidæ and the allies of *Pachygnatha* the abnormality is difficult to explain; but in *Argyroneta* it is probably connected with the aquatic life of the animal. There are, however, other spiders which are known to live in the water, namely *Desis* and *Robsonia*, which

* I here use these terms merely for convenience' sake, and without in any way wishing to pledge myself to a recognition of the groups they signify.

frequent the coral-reefs and rocky pools of the Austro-Malayan and New Zealand seas. To discover, if possible, whether their mode of life has affected their breathing-organs in any way comparable to what has occurred in *Argyroneta*, I examined specimens of *Desis Martensii* from Singapore and an example of *Robsonia marina* from New Zealand, with the immediate result of finding a conspicuous slit-like tracheal aperture in the posterior half of the abdominal region, but well in advance of the spinning-mammillæ. The shape of the aperture is slightly procurved; its anterior lip is smooth and at the sides has a thickened horny rim, which defines more clearly the position of the trachea inside. In one specimen in which the aperture was more agape than in others there appeared to be a distinct membranous partition passing from the anterior to the posterior wall of the cavity, apparently indicating that, although the two stigmata are sunk within a fold of the integument, no actual union between them has taken place.

Now these two genera, *Desis* and *Robsonia*, are usually referred to the family Agalenidæ; but it appears to me that this anterior position of the tracheal stigma, taken in conjunction with other well-established peculiarities of these spiders, justifies their elevation to the rank of a special family, which may be called Desidæ.

Another interesting fact, moreover, has been ascertained from looking into the literature of this group. This is the identity between the spider named *Dandridgia dysderoides* by White and *Robsonia marina* by Hector. The latter was described by its author as an *Argyroneta*, but it subsequently received the name *Robsonia* from the Rev. O. P. Cambridge. The last-named author considered this genus to be different from *Desis* of Walckenaer. The type of the latter genus I unfortunately do not know; but it appears to me to be very doubtful whether the New Zealand *marina* can be looked upon as generically distinct from the Singapore species *Martensii*. They seem to be nothing but well-marked species of the same genus, as Mr. Powell supposed. If this be so, the synonymy of the species will stand as follows:—

Desis marinus (Hector).

Dandridgia dysderoides, White, Proc. Zool. Soc. 1849, p. 5 (the specific name *dysderoides* being preoccupied by Walckenaer for the type species of *Desis* cannot be maintained for this one).

Argyroneta marina, Hector, Tr. N. Z. Inst. x. p. 399 &c. (1877).

Desis Robsoni, Powell, Tr. N. Z. Inst. xi. p. 263 (1879).

Robsonia marina, Cambr. Proc. Zool. Soc. 1879, p. 686.

If, however, this species is generically distinct from the type of *Desis*, it must be known by the names that White ascribed to it.