BIOLOGIA
CENTRALI-AMERICANA.

ARACHNIDA-ARANEIDEA.

Vol. I.

BY


1889-1902.
INTRODUCTION.

In dealing with the Central-American Araneidea, the subject was divided (see footnote to page 1) into two parts: I. to include descriptions and figures of those species considered to be new to science, taken according to my own convenience and other circumstances; and II. a Systematic List of all the species known to occur within the region, with their geographical distribution. So far as this arrangement has been carried out, the present volume contains the species worked out by myself, according to the two appended Lists: (i.) a Systematic List of the new Species described and figured, numbering 417; and (ii.) a List of those Species identified by myself as already known, numbering 139. The volume contains 309 pages of letterpress and thirty-nine coloured plates, the drawings for which have been prepared by Mr. A. T. Hollick, and transferred to stone by Mr. E. Wilson.

OACTAVIUS PICKARD-CAMBRIDGE.

August, 1902.
BIOLÓGIA CENTRALI-AMERICANA.

ZOÓLOGIA.

Class ARACHNIDA.

Order ARANEIDEA.

DESCRIPTORS OF NEW SPECIES*.

META, Keyserling.

Meta brevipes, sp. n.

Adult female, length 2 lines.
The cephalothorax, legs, and falcis are brownish-yellow; the legs short, 1, 2, 4, 3, moderately strong, once apparently furnished with a few slender spines, which have, however, been mostly rubbed off.

Eyes on black spots. The interval between those of the hind central pair less than that between each and the hind lateral eye next to it. The four centrals form a square whose anterior side is slightly shorter than the posterior. Height of clypeus less than the diameter of one of the fore central eyes.

Falcis rather long, strong, and a little prominent at their base in front.

Maxillae not more than half the length of the labium, very slightly divergent, and rounded on the outer side at their extremity. They are yellow-brown; the labium and sternum darker.

Abdomen large, short, very much elevated, almost globular above, of a subtriangular form, broad at the fore part across the shoulders, and projecting greatly over the thorax. The ground-colour is a rather golden yellow-brown, and it is closely spotted with small silvery and silvery-gilt spots, leaving a central longitudinal line on the upperside, emitting two or three oblique lines on each side; a somewhat curvilinear triangular area on the upperside is of rather darker yellow-brown than the rest, and has on each of its two curved sides several marginal blackish spots; the apex of this triangle is just above the spinners, and its base, which is defined by the anterior oblique lines, is in front, across the shoulders. On the underside is an oblong dark yellow-brown space defined by a silvery-gilt line just between the spinners and the genital aperture, which is darkish yellow-brown and inconspicuous, though of characteristic form.

Hab. Guatemala, Chimalco (Sarg). A single specimen.

This Spider is very Epetriform, especially in the shape of the abdomen, which on the upperside reminds one strongly of the common British and European Epeira agalena, Walck.

* [In treating of the "Araneidea" we propose to pursue a somewhat different course of arrangement from that adopted in other portions of this work, where a systematic sequence has been followed in most cases. We divide this subject, with the author's approval, into two parts: the first to contain descriptions of the many new species contained in our collections and also the Plates accompanying them; the second to include a systematic arrangement of all the species known to occur within the region under investigation, together with what is known of their geographical distribution. As a full explanation of the figures is issued on a separate page accompanying each Plate, it is not repeated in this portion of the work.—End.]
**Meta globosa**, sp. n.

*Adult female*, length scarcely $\frac{1}{2}$ line.

The colour of the cephalothorax, falcas, legs, palpi, maxillae, labium, and sternum is a dull pale yellow, the legs tinged with greenish, and the maxillae, labrum, and sternum with brown.

The *eyes* are closely grouped together on black spots, and form an area not differing much in the length of its longitudinal and transverse diameter—the latter, if anything, being a little the longest; those of the anterior row are very near together, the height of the cyphus being less than the diameter of a fore central eye.

The *legs* are long, very slender, 1, 2, 4, 3, furnished with hairs and a few very fine spines.

The *falcas* are of moderate length and strength, and prominent at their base in front.

The *maxillae* are less in length than in *Argyropeira*, nearly or quite straight (not divergent, or very slightly so) and scarcely widened at their extremities. The labium appears to exceed, slightly, half the length of the maxillae, and the sternum is of a more heart-shape, i.e. the sides are more curved and its form therefore less rigidly triangular.

The *abdomen* is rather large, nearly globular, but when looked at sideways the hinder part is more elevated and convex than the fore part, and falls vertically to the spinners; it is of a dull yellowish drab-brown colour, the sides and upperside covered more or less thickly with silvery spots and small blotches—in some examples those on the upperside roughly form some oblique stripes diverging backwards from the median line, along which is a tapering stripe free from spots. On each side of the posterior declivity is a large conspicuous round silvery blotch, and a strong curved silvery bar across the middle of the underside, the convexity of the curve directed forwards; behind this curved bar the surface is tinged with brown.

The genital aperture is small and inconspicuous, but characteristic in its form.

**Hab.** Guatemala, Panzos, Senahu (Sary).

This pretty and delicate little Spider decidedly approaches, if it be not identical with, the typical *Meta*, though its colours and markings bring it very close to *Argyropeira*, and especially to *A. curta*, from which, however, the globular form of the abdomen will at once distinguish it. In this character it comes near to *Theridion*, and, particularly, to some species of *Argyrodes*.

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**Meta alboguttata**, sp. n.

*Adult female*, length slightly over 2 lines; *male*, $\frac{1}{2}$ line.

The cephalothorax of the female is of a dull yellowish colour marked with dark yellow-brown longitudinal stripes on the caput, which converge into a blunt point backwards about the thoracic junction. The occipital region is a little gibbose.

The *eyes* are tolerably closely grouped together, and on black spots; the interval between those of the hind-central pair is a little less than that between each and the hind lateral next to it. The four central eyes describe a rectangular figure whose longitudinal is greater than its transverse diameter. The height of the cyphus is equal to the diameter of one of the fore central eyes.

The *legs* are moderate in length and strength, 1, 2, 4, 3; they are similar to the cephalothorax in colour, and marked in front of the femora of the first and second pairs with more or less obscure, broken, longitudinal brownish lines; this character, however, is probably not constant. The anterior extremities of the tibiae and metatarsi of the first two pairs are reddish-brown; they are furnished with hairs and a few fine spines.

The *falcas* are strong, rather long, prominent at their base in front, similar in colour to the cephalothorax, and marked with a transverse brownish spot in front, not far from the cephalothorax.

The *maxillae, labrum, and sternum* are rather suffused with yellowish-brown, less so in some examples than in others. The maxillae are like those of *M. curta* and *M. globosa*, though, if anything, slightly longer.

The *abdomen* is short, stout, somewhat globular above and in front, and pointed at the spinners; its ground-colour is dull drab, thickly speckled with small silvery spots on the sides and above—in some examples disposed somewhat in curved, transverse, and oblique lines; in some specimens there are traces of broken
brownish lines and markings. The underside has a few silvery spots disposed transversely on each side, a little way in front of the genital aperture, which is simple but a little prominent, characteristic in form and of a red-brown colour.

The male has the occiput more fulvous than the female, and the three groups of eyes more separated from each other. The cephalothorax is tinged with yellow-brown, and the tarsi and sternum strongly so.

The palp are short, pale yellowish; the radial joint is somewhat clavate, and longer than the cubital, and furnished in front with several longish curved tapering hairs, the cubital having a single one, and the legs a strong straight one. The digital joint is of moderate size at its posterior extremity; it ends with a curved, red-brown, sharp, horn-like apophysis, whose point is directed outwards. The palp organs are well developed, not very complex, but with a distinct black tapering spine coiled round their anterior extremity, and a strong, curved, obtusely-ended process on the outer side of the hinder extremity close to the point of the digital horn.

The abdomen is less globose in form, and more thickly mottled with silvery spots above, where also the brown lines are more distinct, forming a tolerably regular pattern of a series; transverse parallel or looped transverse lines on each side of the median line.

The falcès are also longer than in the female.

Hab. Guatemala, San Marcos, Tamahu, Panzos, and Sakiyac (Sarg); Panama, Bugaba (Champion).

**Meta decorolata**, sp. n.

*Adult female*, length 3 inches.

The whole of the fore part is pale yellow, the anterior extremities of the tibiae, metatarsi, and tarsi of the legs strongly suffused with red-brown.

*Legs* moderate; in length and strength, 1, 2, 4, 3; spines few and slender.

*Maxillæ* rather long, double the length of the labium, straight, not greatly enlarged at the extremities, where they are rather rounded on the outer side. Labrum and maxillæ suffused with brownish.

*Eyes* in the ordinary position of the genus. Height of clypeus equal to diameter of an eye of the fore central pair. The four central eyes, which are nearly equal in size, form a rectangular figure whose longitudinal diameter is distinctly longer than its transverse diameter; and the interval between the eyes of the hind central pair is distinctly less than that between each and the hind lateral eye next to it.

The abdomen is rather large, subglobular. The ground-colour is pale dull drab, pretty closely but not densely covered with brownish silvery spots; no pattern is traceable, but near the lower part of the sides the spots increase rather in size; on each side, just behind the genital aperture, are also a few similar spots. The genital process is reddish-brown, prominent and conspicuous, the aperture small and characteristic.

Hab. Guatemala, between Dolores and Chapallal (Sarg).

Count Keyserling (who has kindly examined this and other Spiders for me) has labelled it a *Zilla*, but evidently this is an accidental error. As it is, it appears to me undoubtedly a *Meta*, with which all its generic characters exactly agree.

**ARGYROEPEIRA**, Emerton.

*Meta*, auctt. ad partem.

*Tetragonatha*, Bl., ad partem.

The genus *Argyropeira* includes a number of Spiders intermediate between the typical *Meta* and *Tetragonatha*. The legs are long and slender, 1, 2, 4, 3; the first two much the longest, and not greatly different in length. The maxillæ are longer than those of *Meta*, but less in length than those of *Tetragonatha*, broad at the
extremities, and divergent. The sternum is subtriangular. The falces are powerful, but not developing to the remarkable extent usual in *Tetragnatha*. The abdomen is usually subcylindric; stouter, but shorter than in *Tetragnatha*; it is often rather humped before, and its hinder extremity is sometimes prolonged in a quasi-caudal form. All the known species are more or less ornamented with patches, streaks, stripes, lines, or sprinklings of brilliant silver, sometimes varied with black and reddish on a whitish or yellowish, or (I believe) often in life a greenish, coloured ground; occasionally the abdomen is short, very stout, or subglobular.

Considering the typical species of this group to be quite distinct generically from *Meta*, Koch, I had some years ago separated them in MS. under another generic appellation; but no opportunity having occurred for its publication, I was glad to find my views subsequently shared by Mr. Emerton, who, in his able paper on the North-American (or rather New England) Epeiride (Trans. Connecticut Academy, vi. 1884, p. 331), has shortly characterized the genus under the name *Argyropeirina*, giving the widely spread and abundant species *A. hortorum*, Hentz, as its type. The true *Meta* has the legs usually stronger and more spiny, and the abdomen of a more subtriangular form than in *Argyropeirina*, approaching more nearly the larger spiders of the subfamily Linyphiinae, in the family Theridiidae. (The palpi of the male in *Argyropeirina* approach those of *Tetragnatha* very nearly in structure, as well as those of *Pachygnatha*, which, until recently, has always been placed in the Linyphiinae.)

*Argyropeirina idonea*, sp. n.

Adult female, average length nearly 3½ lines.
The cephalothorax and other anterior parts are yellow, the extremities of the joints of the legs and of the falces as well as the sternum, maxilla, and labium more or less tinged with brown or reddish yellow-brown.
The normal indentations between the capitulum and thorax and the thoracic indentation are strong.
The eyes are small, in the usual position; the four centrals form a square, whose anterior side is the shortest; the hinder pair are separated from each other by an eye’s diameter, and from the hind laterals by at least two diameters. Those of each of the lateral pairs are placed a little obliquely, and contiguous to each other on a slight tubercle. The height of the clypeus is equal to the diameter of one of the fore central eyes.
The falces are long and powerful, very much rounded, and prominent towards their base in front.
The legs are moderately long and strong, furnished with hairs and a few fine spines, relative length, 1, 2, 4, 3.
The maxilla are rather long, broad, and divergent at their extremities.
The labium is rather less than half the length of the maxilla, rounded at its apex, and has a strong transverse impression about the middle.
The sternum is of a subtriangular heart-shape.
The abdomen is of a subcylindric form, and projects well over the base of the cephalothorax, but its hinder extremity is vertical, and does not project at all over the spinners. It is covered more or less with coalescing silvery spots or patches, showing a pattern of a dull greyish-black hue consisting of three longitudinal stripes on the upperside, the central stripe throwing off three oblique lines on each side. The sides also have a broad grey-black longitudinal stripe on each side, and on the underside the silvery markings merely indicate a nearly obsolete transverse curved bar. The genital process and aperture is small and inconspicuous, but characteristic in form.

*Hab.* PANAMA, Bugaba (Champion).
ARGYROPEIRA.

This spider is closely allied to *A. hortorium*, Hentz, but may be distinguished by the form of hinder part of the abdomen, this part in *A. hortorium* when looked at in profile always projecting perceptibly over the spinners, while in *A. idonea* it is simply vertical, the markings in *A. hortorium* being also more vivid; there is a good deal of a greenish-yellow tinge on the silvery parts, and the darker portions are much intensified in hue at the hinder extremity, being quite black in some examples. The underside also has a very distinct V-shaped silvery marking towards the spinners, the space enclosed being quite black. There is also a difference in the form of the genital aperture in the two species. In other respects, both in colours and in the general character of the markings, they are very similar.

Seven examples were captured by Mr. Champion in Chiriqui.

**Argyropeira acuminata**, sp. n.

*Adult female*, length 4$\frac{1}{2}$ lines.

In general appearance, colours, and markings this spider closely resembles *A. idonea* and *A. hortorium*. It may be easily distinguished from the former by the more protuberant form of the anterior portion of the abdomen, and the rather considerable prolongation of the slightly tapering posterior extremity over the spinners; the oblique dashes of sooty-grey, which divide the two longitudinal central silvery stripes on the upperside of the abdomen, are in the present species mere slender lines, and the silvery stripes on the sides are more distinctly defined; the silvery markings also, generally, are often much suffused with reddish-golden and greenish-yellow hues, and the underside has simply a narrow silvery edging or line. Most of these characters will also serve to distinguish *A. acuminata* from *A. hortorium*, in which the hinder part of the abdomen is much less prolonged, but more distinctly marked with black. The genital process and aperture are of characteristic form.

*Hab. Panama*, Bugaba, Tolé (*Champion*).

Several examples. These are on an average rather larger than the usual run of the specimens I have of *A. hortorium*, Hentz; but a difference of size can scarcely be relied upon as a specific character, except as the result of a comparison of a large series of specimens.

**Argyropeira debilis**, sp. n.

*Adult female*, length 2 lines.

*Cephalothorax* short, but otherwise of ordinary form, and together with the falkes, maxillae, labium, and palpi of a pale yellowish hue. The colour of the legs is yellow-brown, and the sternum is of a deeper hue. The eyes are on black spots, and in the usual position, but more closely grouped than in some other species, the interval between those of the hind central pair being a little greater than that between each and the hind lateral eye next to it; in another example, however (not adult), the interval seems less, but as the example appears to have been when captured just about to moult, it is possible that the apparent position of the eyes is not the correct one, otherwise it would point to a specific difference in the two spiders. The height of the clypeus is less than the diameter of one of the fore central eyes.

*Falces* moderate in length, prominent towards their base in front, and a little divergent towards the extremities.

*Legs*. These appear to have been moderately long, but as they were greatly damaged, their actual length could not be ascertained; relative length, 1, 2, 4, 3.

*Maxillae* long, enlarged and rounded and divergent at their extremity.

*Labium* somewhat rounded at the apex, half the length of the maxillae, and strongly impressed transversely a little below the apex.
ARANEIDEA.

Abdomen short, greatly elevated above, nearly globular, and greatly projecting over the base of the cephalothorax. It is of a dull leaden-blackish hue, thickly spotted above and on the sides with small silvery spots, and along the middle of the hinder half is a double series of darker blackish spots arranged in five pairs, the two lines which they compose converging together a little as they approach the spinners. The underside is dark leaden-blackish, with a transverse band of similar spots to those on the upperside. The genital aperture is small and inconspicuous, but characteristic, but less thickly spotted.

Hab. Panama, Bugaba (Champion).

Two examples of this spider were contained in Mr. Champion's collection from Chiriqui. In its short form A. debilis comes near the typical Meta, Koch.

Argyropeira curta, sp. n.

Adult female, length slightly over 1½ line. The whole of the fore part of this small species (including the cephalothorax, legs, palpi, falcæ, maxillæ, labium, and sternum) is of a yellowish hue, the region of the leg-joints rather suffused with brownish. The eyes are rather compactly grouped together, and seated on black spots. The interval (in an adult example) between the central pair of the posterior row is slightly greater than that between each and the lateral eye of the same row next to it, while in an immature, but rather larger, example it is smaller. The height of the cephalus is less than the diameter of one of the fore central pair of eyes. The legs are furnished with a few very fine spines; their relative length appears to be 1, 2, 4, 3, but they are much damaged in the only adult example examined. The form and structure of the maxillæ, labium, and sternum are normal, and the falcæ are tolerably long and strong, and prominent near their base in front.

The abdomen is rather short and stout, but of a subcylindrical form, a little elevated or prominent above at the posterior extremity, which falls vertically to the spinners. The ground-colour is a dull yellowish-drab, marked with the ordinary silvery markings of this group, and after very much the same pattern; or it might be described as silvery on the sides and upperside, marked along the middle of the upperside with a broadish, somewhat tapering, yellow-drab band emitting several short oblique bars directed backwards on either side, two or three of these being near the hinder extremity. On each side of the almost vertical extremity is a conspicuous, nearly round, silvery patch. On the middle of the underside are three conspicuous silvery spots or blotches forming a transverse, somewhat curved or open-square stripe, the open side directed backwards. The genital aperture is characteristic in form, but small, reddish-brown, and inconspicuous.

Hab. Panama, Bugaba (Champion).

Argyropeira fragilis, sp. n.

Adult female, length slightly over 1½ line. In form and general characters this spider is very like A. hortorum, Hentz, and some other closely allied species. It is, however, much smaller than A. hortorum, and (unless the only example I have seen is an abnormally coloured one) much paler and less distinctively marked, though resembling it in pattern. The sides and upperside of the abdomen are densely silvery with a dull drab-yellow longitudinal central tapering stripe on the upperside, emitting three oblique lines of the same on either side, and a curved horizontal line of a similar colour on each side. The underside is dull drab-yellow, margined with a distinct silvery line which encloses the greater part of the space between the spinners and the genital aperture. This portion of structure is reddish-brown, tolerably conspicuous, and of characteristic form.

The abdomen is subcylindrical in form, the hinder extremity vertical. The colour of the whole of the fore part, including the cephalothorax, falcæ, legs, palpi, maxillæ, labium, and sternum, is a pale yellowish.

The falcæ are strong and prominent at their base in front.
ARGYROEPEIRA.—TETRAGNATHA.

The maxillae are long, nearly squarish truncate at their extremities, divergent, and more than double the length of the labium, which with the maxillae and sternum are somewhat suffused with brown.

The legs, 1, 2, 4, 3, are not very long, but moderately strong, and furnished with a few slender spines.

_Hab. Costa Rica (Rogers)._ A single example, in bad condition, but quite recognizable.

_Argyropeira lepida_, sp. n.

_Adult female_, length 5 lines; length of cephalothorax rather over 1½ line, of abdomen 3½ lines.

The _cephalothorax_ of this fine and distinct species is yellow, with a broad longitudinal central band, and a narrower marginal border of rich bistre brown; the central band continues quite through the ocular area, and meets the marginal border round the Clypeus.

The eyes are in three groups, unusually separated for this genus; the central group form a small quadrangle, whose longitudinal is greater than its transverse diameter. Those of each lateral pair are rather widely removed from the central group, and are contiguous to each other.

The legs are long, 1, 2, 4, 3, moderately strong, yellow, broadly annulated with dark yellowish-brown, armed with spines, apparently rather stronger than usual, though most of them are broken off near their base.

The metatarsi and tarsi of the first two pairs are furnished with two or more longitudinal rows of numerous strong, rather spur-like, divergent bristles.

The _falces_ are shorter than the cephalothorax, very strong and massive, rather divergent, connexed, convex in front; the profile regularly curved, dark yellow-brown, softening into yellow in front and on the underside.

_Maxillae_ two thirds the length of the falces, divergent, and of the usual form, dark yellow-brown with reddish-yellow inner margin.

_Labium_ less than half, but more than one third, the length of the maxilla, oblong, rounded at its apex, dark yellowish-brown; the apex paler.

_Sternum_ reddish yellow-brown, paler along the middle.

_Abdomen_ long, tolerably stout, subcylindric, the upper part of the posterior extremity projecting a little in a subcaudiform manner over the spinnerets. It is of a dull drab ground-colour, thinly spotted with minute silvery dots; at each corner of the fore extremity is a slight subcylindrical prominence, from the inner side of each of which a jet-black rather irregularly angulated stripe runs backwards to the posterior extremity, the band enclosed by these stripes being rather darker than the rest of the ground-colour; the sides are also broadly, but irregularly, marked with black; and the underside has a longitudinal central yellow-brownish band margined with an indistinct darker line on which, near the middle (on each margin), is an elongate black patch or large spot; on each side of this central band is a stripe of a paler hue spotted with small silvery spots. The genital aperture is small, not very conspicuous, but characteristic.

_Hab. Panama, Bugaba (Champion)._ Two examples.

_TETRAGNATHA_, Latreille.

_Tetragnatha cognata_, sp. n.

_Adult female_, length 4 lines; _adult male_, slightly over 2 lines.

This spider is nearly allied to the common European and British form _T. extensa_ (Linnaeus), which it resembles very closely in general appearance, size, colours, and markings, as well as in the position of the eyes; but it may be readily distinguished by the much shorter and proportionally stronger falces in both sexes, which are also differently armed in the male, and in the form of the pulpi and pulpal organs of the latter sex.

_Falces_ of the male less in length than the cephalothorax, rather strongly bent and divergent, a little gibbous on the outer side towards the fore extremity, parallel to which on the undersipe a short, moderately strong, curved, obtusely pointed tooth is directed forwards. The fang is about three fourths the length of the falx, evenly curved, and lies along between two rows of denticulations, of which the two terminal ones on the undersipe forwards are much stronger than the rest; near behind the point of the fang, as it lies at rest, is a blunt tubercular prominence.

The _palpi_ of the male are not very long; the cubital is slightly shorter than the radial joint, and is a little
nodiform. The digital joint is long. The palpal organs very much of the ordinary form common to this
genius, with a twisted prolongation at their extremity, which reaches quite to the end of the digital joint.
In the female the falcæ want the curved tooth towards the fore extremity of the upperside.

Hab. GUATEMALA, Volcan de Fuego, Cunen, Santa Ana, Cahabon (Sarg).

Several females and a single male were contained in Mr. Sarg's Guatemalan collection.

Tetragnatha guatemalensis, sp. n.
Adult female, length 34 5 lines; adult male, 3 4 lines.
This species is also very nearly allied to T. extensa (Linn.), but may be distinguished by the greater length of
the abdomen. The curved denticulation near the upper fore extremity of the falcæ of the male is
less distinctly bifid at its point. The fang also is shorter, and near, a little way behind, its point, when
at rest, is a large obtuse tubercular prominence. The palpi and palpal organs of the male are also very
nearly alike in the two species, but in the present one the radial joint appears to be proportionally rather
longer, being at least double the length of the cubital joint. The legs are also longer, especially those of
the first pair, and the abdomen of the female is of a more regular cylindrical form.

Hab. GUATEMALA, Cahabon, Laguna de los Coheteros near Coban (Sarg, Champion).

Both sexes were contained in the collections of Mr. Sarg and Mr. Champion.

Tetragnatha tenuis, sp. n.
Adult female, length 4 lines; adult male, 2 1/2 to a little over 3 1/2 lines.
The whole of the fore part of this spider is a dull pale yellowish-brown; the abdomen is long, slender, cylin-
drical, at least, or over, three times the length of the cephalothorax in the male and four times in the
female; it is of a uniform dull yellowish-drab, tolerably thickly spotted above and on the sides with
minute silvery spots; in one example there are traces of a longitudinal, rather darker band along the
upperside, with some deeper linear spots along its margins.
The legs, which are of great length and tenuity, 1, 2, 4, 3, have at the articulation of the joints a slight brown
suffusion. The spines are few and exceedingly fine.
The eyes are in the ordinary position; those of each lateral pair are distinctly separated by at least a diameter
of the anterior eye.
The falcæ are much shorter than the cephalothorax, bent, divergent, a very little gibbous on the outer side
towards the anterior extremity, near which, on the upperside, is a moderate-sized denticulation, slightly
bent near its obtuse or very slightly notched extremity; below this, on the inner side, is another
(belonging, in fact, to one of the two rows within which the fang lies at rest) as long and strong, but
straight and sharp-pointed. The fang is simply curved, and about three fourths the length of the falcæ; a
little way from its point is a small protuberance.
The palpæ (male) are rather short, the cubital and radial joints of equal length. The digital joint is moderately
long; and the main lobe of the palpal organs is rather large and prominent and extends halfway to the
extremity of the digital joint, and the process issuing from the lobe is very nearly straight and reaches to
the end of the joint.
The sexes are very nearly alike, though, as is usually the case, the legs of the female are not so long, and the
falcæ of that sex are shorter and have no denticulation on the upperside of the fore extremity.

Hab. GUATEMALA, Cahabon, upper road to Chichococh near Coban (Sarg); PANAMA,
Bugaba (Champion).

Both sexes were contained in Mr. Champion's collection from Bugaba, Chiriqui, and
females in that of Mr. Sarg. It is probable that in the living examples green would be
the preponderating colour in this, as well as in some other species, whose colours in
spirit of wine are dull yellowish, or drab, or dull yellow-brown.
Tetragnatha longa, sp. n.

_Adult female_, length 4 to over 5 lines; of cephalothorax 1-1\(\frac{1}{2}\), of abdomen 3-3\(\frac{1}{2}\) lines. Length of an _adult male_, 4 lines; of abdomen 3 lines.

This spider is allied to _T. tenennis_, but may be easily distinguished by the cephalothorax being marked with four longitudinal brown stripes (a submarginal one on each and two near together along the middle; these last are rather irregular, and tend to run together into one). The eyes also of the lateral pairs are separated from each other by nearly as wide an interval as that which divides the four and hind central eyes; the interval appears to be greater in the female than in the male. The eyes of the hind central pair are wider apart than each is from the hind lateral on its side, the fore centrals being nearer together than each is from its fore lateral eye.

The _legs_ are very long and slender, 1, 4, 2, 3; their colour is greenish-yellow, the spines short and weak, and issuing from small obscure dusky spots.

The _falcæ_ less in length than the cephalothorax, moderately strong, divergent, but not excessively so, those of the male having a not very large, curved, tapering, not very sharply, but simply pointed denticulation directed forwards near the fore extremity on the upperside; besides this there are no other denticulations, excepting the two rows of much smaller ones between which the fang lies when at rest.

The _palpi_ of the male differ from those of _T. tenennis_. They are short; the cubital joint is shorter, though more than half the length of the radial. The _palpal_ organs are of the usual general structure; the main lobe extends to half the length of the digital joint, and the terminal process is strongly twisted and its point projects just beyond the end of the digital joint. There is also a circularly curved, black, tapering spine at the fore part of the main lobe, the filiform ends of the spine threading as it were the twist of the terminal process.

The _abdomen_ is long, slender, and cylindrical; it is of an obscure greenish-yellow hue, thickly stippled above and on the sides with small silvery spots, and the upperside has an indistinct, dark, irregular marginal line on each side. The underside is blackish-brown. The _sterna_ is also darkish yellow-brown, the _maxillæ_ and _labium_ only tinged with that hue.

_Hab._ Guatemala, Polochic valley between Tucuru and Chamiquin, and Salinas de Nueve Cerros (Sarg).

Tetragnatha tenennisima, sp. n.

_Adult female_, average length 5 lines; of abdomen 4 lines. _Adult male_, average length a little over 3\(\frac{1}{2}\) lines; of abdomen slightly over 1 line.

The _cephalothorax_ of this very slender and attenuated species is marked with some dusky-brown lines on the normal indentations, the ground-colour being yellowish with a brown tinge.

The eyes of the lateral pairs are near together but not contiguous; in other respects their position resembles that of _T. longa_.

The _legs_ are excessively long, 1, 4, 2, 3; those of the first pair are, in the male, at least three and a half times its own length. The spines are very short and slender; they are like the cephalothorax in colour.

The _palpi_ (of the male) are moderately long, very slender, similar in colour to the legs; the cubital is a little longer than the radial joint; the digital joint is long, longer than the radial and cubital joints together; the main lobe of the palpal organs does not reach halfway towards the end of the digital joint. The terminal process, twisted at its base, extends, in conjunction with a black spine, quite to the end, if not slightly beyond, the extremity of the digital joint.

The _falcæ_ are long, equaling in the female, exceeding in the male, the length of the cephalothorax; they are rather slender, very divergent, strongly bent, enlarging towards their extremities, near which, on the upperside, is a long, strongly bent (almost hooked at its end) tooth, directed forwards, and with a prominent point near its extremity on the upperside, giving the end of the tooth a more or less strongly bifid appearance; on the inner side of this tooth is a simple, straight, and not half so long a denticulation, and some little way behind it, rather on the inner side, is another, the latter strong, straight, or only very slightly curved, and sharp, directed inwards. These two articulations, in fact, belong to the normal two rows between which the fang is disposed when at rest; but they are here (as in many other allied

species of this genus) misplaced and exaggerated in strength. The fang is curved, as usual, but it is a little bent also in the middle.

The maxillary, labium, and sternum are yellow-brown.

The abdomen is long, slender, cylindrical; in colours, ornamentation, and markings it appears to differ little (at least in the preserved examples) from that of T. longa, from which, however, this spider may easily be distinguished by the narrower interval between the lateral eyes, and especially by the far longer and differently armed falcels, as well as by the length of the radial and cubital and digital joints of the palpi, and the structure of the palp organs.

_Hab._ Guatemala, upper road to Chichachoc near Coban, Tamahu (Sary); Costa Rica (Rogers); Panama, Bugaba (Champion).

**Tetragnatha pallida**, sp. n.

_Adult female_, length 4½ lines; length of abdomen over 3½ lines. _Adult male_, 3½ lines; length of abdomen 2½ lines.

The whole of this spider is of a straw-yellow, the abdomen, which is rather duller in its hue, thickly stippled over the upperside and sides with small distinct silvery spots, with no trace (in the adults) of any darker markings whatever; in two immature specimens (if, indeed, they belong to this species) there are some detached linear dusky spots, forming two longitudinal lines along the upperside, between which the colour is darker than the rest.

This species is even of a more attenuated and delicate form than either _T. tennis_, _T. longa_, or _T. tennizima_, from all which it may easily be distinguished by the great length of the digital joints of the male palp, and the armature and length of the falcels.

The eyes of the lateral pairs are divided by very nearly an equal interval from each other as those of the fore and hind central pairs of eyes, so that the eight eyes form almost two concentrically curved rows. The eyes of the hind central pair are separated by an interval rather less than that which divides each from the hind lateral on its side, and the four cubitals form an almost exact square.

The legs are of great length and tenuity, 1, 4, 2, 3, and armed with (some of them) rather longish black slender spines.

The falcels are, in the female, equal to or longer than the cephalothorax; in the male, considerably longer. They are bent, but not very strongly, slender (but shorter in the female), strongly divergent, cylindrical, enlarging, but not greatly, towards their extremity, on the upperside of which, close to the end and directed forwards, is a strong curved denticulation, whose basal half is stronger than the other half, which is sharp and unguiform. The normal two rows, along which the fang lies at rest, are rather close together and none of its denticulations near the anterior end are out of place or much longer than the rest. The fang is simply curved.

The palpi are moderately long, very slender; the cubital is not quite so long as the radial joint; the digital joint is of great length, distinctly longer than the radial and cubital joints together; the main lobe of the palpal organs (which is rather large and prominent) does not extend more than one third from the base towards the extremity of the digital joint, and the process issuing from the lobe is very long, slightly twisted but straight, and in connection with a long pale spine reaches very nearly to the end of the digital joint. The radial joint is furnished with some long, prominent, slender, pale hairs.

The abdomen is attenuated and cylindrical, but a little tapering from in front backwards in the female; it is in the adult entirely devoid of markings, excepting a blackish suffusion at the spinners. It is over three times the length of the cephalothorax.

It is very possible that in this, as in some other instances, the colour of the spider may in life be of some tint or other of green, but I have no information on this point.

_Hab._ Panama, Bugaba (Champion).

Several examples.
1. a-d  META ALBOGUTTATA
2. a, b, c  BREVIPES
3. a, b, c  DECOLORATA
4. a, c  META GLOBOSA
5. a, c  ARGYROPEIRA ACUMINATA
6. a, b  ARGYROPEIRA CUPTA
7. a, b  ARGYROPEIRA FRAGILIS
8. a  IDONEA
9. a, b  LEPIDA
10. a, b  DEBILIS
11. a, b  TETRAGNATHA TENUES