

While in the embryonal or cartilaginous stage, both "pleurapophysial" or iliac (ib. *il*) and "hæmapophysial" or pubic (ib. *pa*) sustainers of the developed, and in Fishes fin-like, "appendage" of such pelvic arch are continuous with the primitive "bar" or plate (*bp*, basipterygium). But if they are so evolved as secondary and subordinate members, their subsequent ossification exemplifies their claim as independent or distinct elements of their vertebral segment.

Lepidosiren and *Polypterus* retain the later segmentation of the "basipterygium," with feeble rudimentary indications of rays in the narrow skin-fold which it supports. The proximal piece of the fin-skeleton of *Ceratodus*, like that of *Lepidosiren*, answers to the basipterygium=metapterygium, not to the mesopterygium, which, as Balfour shows, is a secondary character, and is not developed in certain Fishes, e. g. *Scyllium*.

I cannot conclude without quoting the last letter with which I was favoured by my friend:—

"Trinity College, Cambridge,
Dec. 7th, 1881.

"DEAR PROFESSOR OWEN,

"I am much obliged to you for your kind note about my paper on the 'Development of the Paired Fins.' I accept the justice of your criticism on my use of the term 'girdle.' I used the term merely because it was a term in common use, and must plead guilty to never having troubled myself about its derivation'. I shall, however, in future use the expression 'arch' instead.

"Very sincerely yours,

"F. M. BALFOUR."

2. On some new Genera and Species of Spiders.

By the Rev. O. P. CAMBRIDGE, M.A., C.M.Z.S., &c.

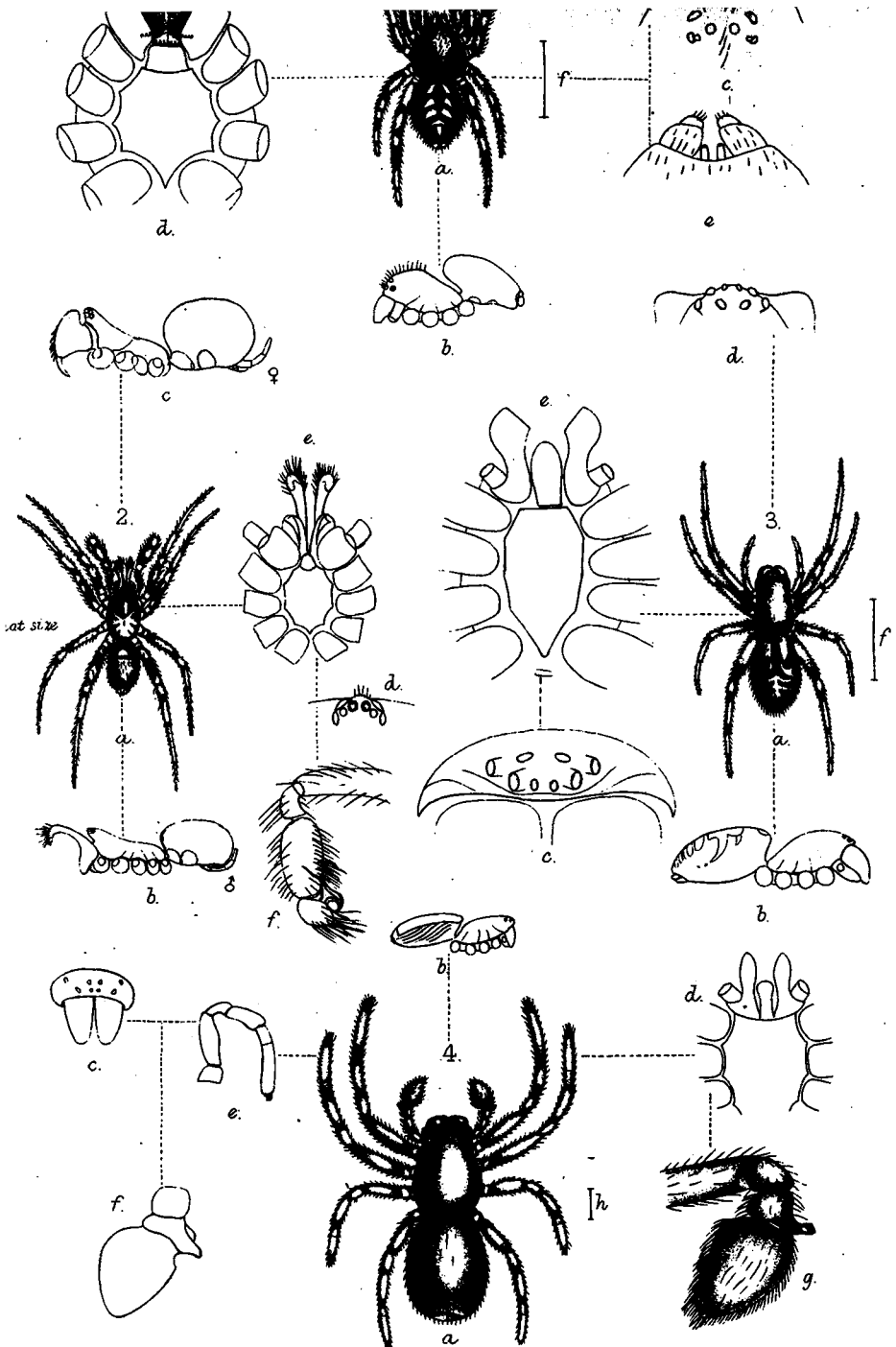
[Received April 23, 1883.]

(Plates XXXVI. & XXXVII.)

Eight Spiders, representing, as it appears to me, as many new genera, are described and figured in the present paper from examples in my own collection. Two of them belong to the family Theraphosidæ, one to the Drassidæ, and the remaining five to the Thomisidæ. Three species are from Ceylon, three from Caffraria, one from New Zealand, and one from California. For the Ceylon species I am indebted to the late Mr. G. H. K. Thwaites; for those from Caffraria to Mr. Mansel Weale; for the New-Zealand species to Captain F. W.

¹ "GIRDLE—Belt or Zone. Any thing drawn round the waist and tied or buckled."—*Johnson*.

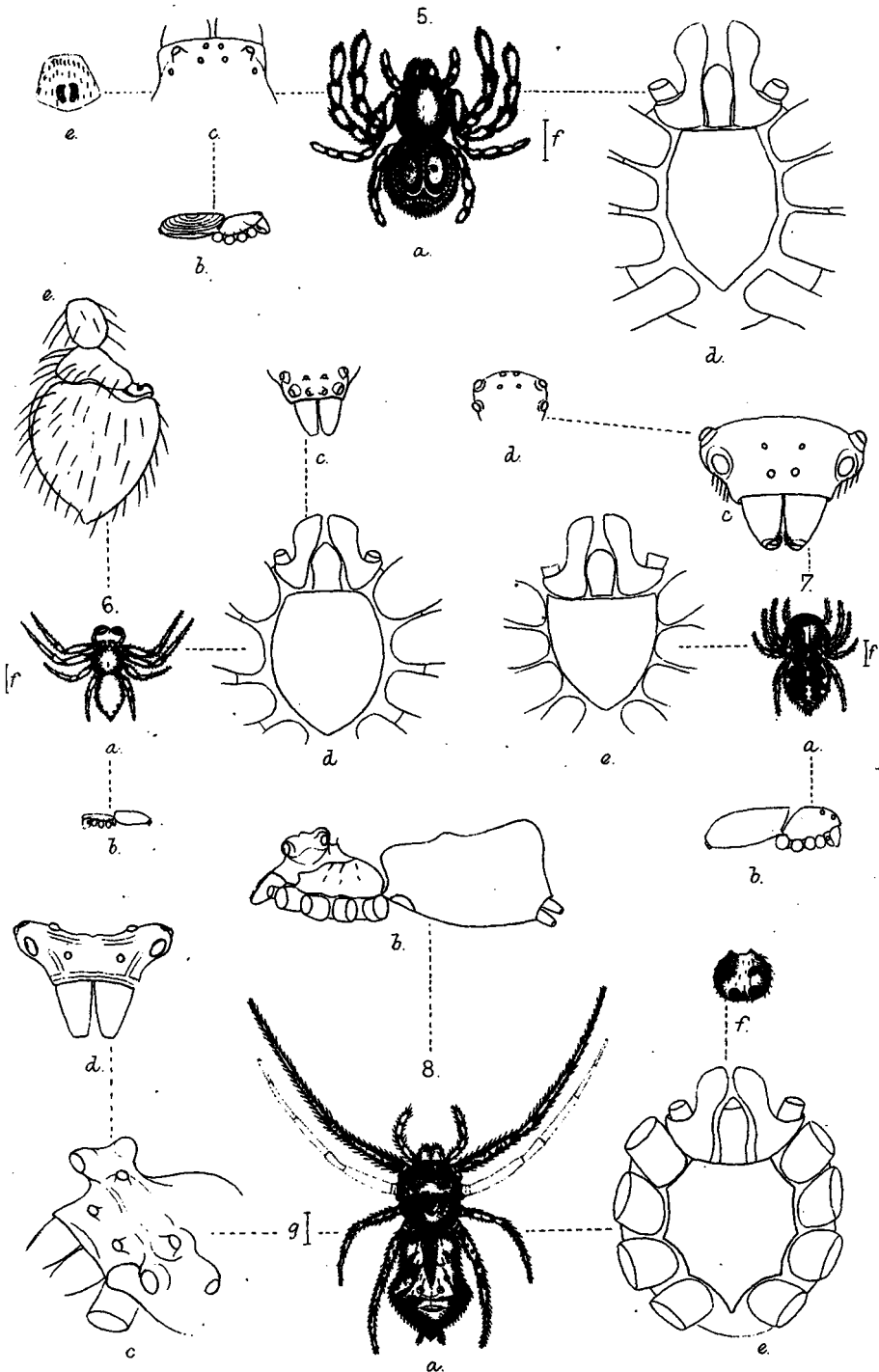
The "pelvic arch" is inverted; its piers, as a rule, are based on the sacrum: the "pectoral arch" is inverted, and its piers, save in most Fishes, are free.



O.P. Cambridge del.
E. Carter sc.

Mintern Bros imp

NEW GENERA & SPECIES OF SPIDERS.



Hutton ; and to Mr. J. J. Rivers of Berkeley, California, for the exceedingly remarkable species (allied to the European *Atypus*) from that region. Want of leisure alone has prevented my being able as yet to work out more of the valuable collections received from all of the above sources.

Theraphosidæ.

Theraphosina.

SARPEDON, g. n. (nom. propr.).

Cephalothorax as broad as long, tolerably convex above, rather higher a little in front of the thoracic indentation than at the eyes ; no lateral marginal indentation at caput ; that at the thoracic junction is long, deep, transverse, and very nearly straight, if any thing the slightest possible curve has its convexity directed forwards. The height of the clypeus is equal to about half that of the facial space.

The *eyes* are unequal in size and form a rather large transverse rectangular space as nearly as possible double as long as it is broad ; two of the largest form a transverse line in the middle of the space, separated from each other by somewhat more than a diameter's interval, and each with the other eyes on its side forms an equilateral triangle ; contiguous to each of the hind-lateral eyes is that one which corresponds to the hind-central in ordinary Spiders ; it is very minute and of a pearly white colour.

Legs short, strong ; not very unequal in length, 4, 1, 2, 3 ; they are furnished with hairs (but not densely), and a few fine, bristle-like spines beneath those of the first and second pairs ; a well-expanded dense scopula occupies the underside of the tarsi and metatarsi of the first and second pairs ; the tarsi end with two (apparently untoothed) claws, and beneath them is a dense claw-tuft.

The *palpi* are clothed like the legs, with a scopula beneath the digital joint, which ends with a single simple claw.

Maxillæ rather long, strong, cylindrical, with the slightest possible prominence at their extremity on the inner side ; towards their base on the same side is a short straight transverse row of (2-4) small black but distinct denticulations.

Labium of fair size, and quadrate in form, a little longer than broad ; the apical margin is straight and armed with a single row of sharp black denticulations.

Sternum longer than broad, and broader towards the hinder part than in front. The hinder extremity is drawn out into a point between the insertion of the basal joints of the fourth pair of legs.

Abdomen short, and projects well over the base of the cephalothorax.

Spinners 4, the superior pair short, 3-jointed, very strong, and upturned as is usual in this family ; those of the inferior pair very minute, cylindrical, and placed close beneath, in fact almost between, the superior ones.

SARPEDON ROBUSTUM, sp. n. (Plate XXXVI. fig. 1.)

Adult female, length $5\frac{1}{3}$ lines.

The *cephalothorax* is of a rich dark reddish-brown hue, clothed thinly with long bristles, chiefly on the caput.

The *legs* and *palpi* are yellowish, the basal joints tinged with brown and strongly suffused with deep reddish brown, chiefly on the anterior half of the joints.

The *sternum* and *labium* are similar in colour to the basal joints of the legs.

The *falces* are of moderate length and strength, and not quite so rich in colour as the cephalothorax.

The *abdomen* is of a deep blackish brown tinged with a purplish hue, and pretty thickly clothed with hairs, mostly short: it has on its upperside two longitudinal curved converging rows of yellowish maculæ, the anterior ones indicating the position of the heart, and the posterior ones forming the usual transverse angular lines or chevrons.

So distinct a pattern is not usual in this family, and bears much resemblance to that found in the genus *Amaurobius*.

On the underside the four spiracular plates are of a brownish-yellow colour, and behind them towards the spinners are four maculæ of the same hue, and forming nearly a square.

Two examples of the female of this very distinct and remarkable Spider (which appears to be allied to the S.-African genus *Moggridgea*, Cambr.) were received a few years ago from the late Mr. G. H. K. Thwaites from Ceylon. Nothing is known of its habits; but I should not be surprised to learn that it was one of those Spiders which form a trapdoor nest, though not excavating a hole for itself, to do which it has none of the requisite armature either on the falces, palpi, or legs.

ATYPINA.

ATYPOIDES, g. n.

Cephalothorax oblong-oval, rather truncate before the caput, rising gradually (but not to a great height) to the eyes from the thorax, which is rather depressed. Thoracic indentations strong; that at the junction of thorax and caput longitudinal.

Eyes of fair size for this family, and not greatly unequal, situated at the apex of the somewhat drawn-out fore extremity of the caput, two in a transverse line, less than half a diameter's distance from each other, in the centre, with three others close on the outerside of each, in a compact triangle, the anterior eye in each triangle being the largest of the eight. The central eyes are dark grey, the rest shining pearl-white.

Legs moderately long and strong; relative length apparently 4, 1, 2, 3, but their absolute length not greatly different; furnished with spines of varied length and strength, strongest and most numerous in the female; the metatarsi and tarsi, however, of the first pair are devoid of them in the male.

Palpi leg-like in the female, armed as the legs and ending with a single curved claw.

Falces strong, prominent and massive, considerably gibbous at the base on the upperside, the gibbosity greatly prolonged forwards in a curved form in the male.

Maxillæ short, broad, convex in front and prominent in an obtusely conical form at the base, with only a slight subconical prominence at the extremity on the inner side.

Labium short, somewhat subtriangular, its apex rounded, and its base inserted into a deep rounded indentation of the sternum, which is oval, with a round impressed spot on the margin opposite to the insertion of the basal joints of the first three pairs of legs.

Abdomen short, oval; very convex above, with a bare, subtriangular, or somewhat kidney-shaped patch on the upperside near the fore extremity. *Spinners* 6; an inferior transverse row of four, of which the outer ones are very small; the superior pair long, upturned, and three-jointed.

ATYPOIDES RIVERSII, sp. n. (Plate XXXVI. fig. 2.)

Adult male, length 6 lines.

Cephalothorax greenish brown; caput dark and of a reddish-brown tinge, marked on its surface with minute punctures.

Legs similar in colour to the thorax, those of the two foremost pairs being darkest; the terminal tarsal claws are three, the superior pair long and pectinated, the inferior claw small.

Falces darker than the caput; they have an extraordinary appearance from the two long, projecting, curved apophyses at their base; these are cylindrical, obtusely pointed, and densely clothed at and near their extremity, above and on the sides, with long coarse bristly black hairs; the extremity of the falces in this sex (σ) have no spines on the upperside.

Maxillæ similar in colour to the caput.

Palpi long, strong, similar to the fore legs in colour; the radial joint is double the length of the cubital, of an elongate-oval or tumid form, clothed underneath with strong hairs; digital joint short, broadest and truncate at its fore extremity, where it is also clothed with long bristly black hairs. The palpal organs are small, of a rather irregular pyriform shape, whose stem (directed backwards close by the side, rather underneath the fore part of the radial joint) is formed by a terminal sharpish-pointed spine.

The *abdomen* is of a dull purplish-brown hue, very like that of the European *Atypus piceus*, Sulz., freckled with small brownish-yellow points, and a transverse kidney-shaped bare yellow-brown patch at the fore extremity of the upperside. The general surface of the abdomen is thinly covered with fine hairs. The *spinners* are brown; the two terminal joints of the superior pair paler.

The *female* resembles the male in colour, but the hinder slope of the caput is more abrupt, and the fore extremity more obtuse.

Instead of the long projections of the falces, there is on each a simple strong subconical prominence directed a little backwards.

The whole falces are, however, more massive than in the male, and they are furnished with strong spines above at the extremities. The spines also on the legs are stronger, and are found on the metatarsi of the first pair as well as of the last. The palpi are also furnished with strong spines, and the legs themselves are shorter.

Examples of this most interesting Spider were kindly sent to me by Mr. J. J. Rivers from Berkeley, California, who tells me that it tunnels in banks mostly by streams, forming a tubular projection above ground of any material at hand, woven up with silk, making no trapdoor, but closing the aperture at times. It has a close general resemblance to *Atypus*; but the very different form of the maxillæ distinguishes it at a glance and necessitates the formation of a new genus for its reception. It is with much pleasure that I connect Mr. Rivers's name with this Spider.

DRASSIDÆ.

AMAUROBIOIDES, g. n.

Cephalothorax oblong, its length double its breadth; the lateral marginal constriction at the caput is slight but perceptible; the profile forms a continuous curve from the hinder slope to the fore extremity; normal indentations very slight.

Eyes of moderate size, placed on slight tubercles on somewhat of a prominence, in two transverse slightly curved rows at the middle of the fore part of the caput close to the margin, and forming a segment of a circle; the posterior pair is much the longest; their position is very like that of *Clubiona*, but they form a less laterally extended area.

Legs moderate both in length and strength, 1, 4, 2, 3, the difference between 1 and 4 being very slight; furnished with hairs and spines; the latter, chiefly beneath the tibiæ and metatarsi, few and fine; a not very dense scopula beneath the tarsi and metatarsi; tarsal claws 2, pectinated, and below them is a claw-tuft.

Falces long, powerful, prominent at their base in front and strongly arched in profile.

Maxillæ long, strong, enlarged and divergent at their anterior extremity, where they are rounded on the outer side, but obliquely truncated on the inner side.

Labium oblong-oval; more than half the length of the maxillæ.

Sternum elongate-oval, pointed behind and truncated in front.

Abdomen oval and of moderate convexity on the upperside.

Spinners compact, of uniform length, moderately long and strong; those of the inferior pair much the strongest.

AMAUROBIOIDES MARITIMA, sp. n. (Plate XXXVI. fig. 3.)

Adult female, length rather more than 5 lines.

Cephalothorax dark yellow-brown, deepening to red-brown and black on the caput; clothed thinly with short fine hairs; the height

of the clypeus is no more than equal to the diameter of one of the fore-central eyes.

Eyes of a dark yellowish-grey colour; those of the posterior row are about equally separated from each other, the hind-centrals being rather smaller than the hind-laterals; the fore-centrals are minute, much the smallest of the eight, difficult to be seen, and equally removed from each other and the fore-laterals; the four central eyes form a rectangular figure whose posterior side is the longest and its anterior the shortest.

Legs yellow-brown; the tibiæ, tarsi, and metatarsi of the first and second pairs dark reddish brown.

Palpi similar in colour to the first two pairs of legs, and ending with a small curved claw.

Falces nearly black, with some strong teeth on the inner margin near the fore extremity; their anterior surface is roughened or finely rugulose, and the fang strong.

Maxillæ and *labium* deep blackish red-brown.

Sternum yellowish brown, with prominences round the margins, opposite the insertions of the legs.

The *abdomen* projects fairly over the base of the cephalothorax; its upperside is yellow, with a strong central longitudinal bar on the fore half, strongly bifid in a fish-tail form at its hinder extremity, and with two or three prominent spots or blunt points on the sides; following this to the spinners are five transverse angular bars or chevrons divided or interrupted at the angles; all these markings are of a deep blackish chocolate-brown, the sides being of the same colour, softening off gradually into yellowish on the underside; a large obtuse patch of the dark colour obtrudes from the sides at the fore part into the upper yellow area, touching (on each side) the middle prominent point on the side of the central longitudinal bar; the sides are also traversed by a curved, more or less continuous, yellow tapering stripe, which breaks out from the middle of the upper surface and runs obliquely backwards; there are also a few more yellow spots behind these, sometimes forming curved lines, which also run obliquely backwards.

Genital aperture small and not very conspicuous.

An adult and three immature examples of the female of this Spider, found by the late Dr. Smith on rocks in the sea at Allday Bay, Otago, were sent to me by Captain F. W. Hutton. They came to me labelled "Marine Spiders;" but whether *marine* in the sense of passing any portion of their existence under water, like *Robsonia marina*, I do not know.

Independently of any peculiarity of habit, however, this Spider is of great interest as being undoubtedly a Drassid, but bearing a near resemblance to *Amaurobius* in general form, appearance, and pattern; while in its *eye-position*, *maxillæ*, and *falces* it is most like *Clubiona*, the *falces* especially being very similar to those of *Clubiona holo-sericea*, De Geer.

THOMISIDÆ.

CYRSILLUS, g. n. (nom. propr.).

Cephalothorax oblong, tolerably convex and evenly rounded above; lateral marginal indentation at caput slight; normal grooves and indentations imperceptible.

Eyes small, in two transverse rows, occupying the greater part (nearly the whole) of the width of the caput; the anterior row considerably the shortest, slightly, if at all, curved; the posterior row much more curved; the convexity of the latter curve is directed forwards; the four central eyes are the smallest, and form a small trapezoid whose anterior side is the shortest; the eyes of the hind-central pair are exceedingly minute and difficult to be seen; the fore-laterals are the largest of the eight.

Legs not very long, strong, 1, 2 (or 2, 1?), 3, 4; their length is not greatly different from each other, the difference between 1 and 2 is exceedingly slight. The articulation between the tarsi and metatarsi is almost obsolete, being (especially in those of the first and second pairs) almost imperceptible, the faintest possible transverse line alone being visible; as a joint, it can scarcely be of any use; the length of the tarsus is considerably more than that of the metatarsus. They are furnished with hairs only; each tarsus ends with two (apparently not dentated) curved claws, and some, somewhat claviform, hairs occupy the underside of the anterior portion of the tarsi, but scarcely to be called a scopula.

Maxillæ. These were not easy to be seen with perfect accuracy owing to some adventitious matter collected about them; but, so far as they could be observed, they are rather long, narrow, straight, and pointed at the extremities.

The *labium* appeared to be narrow-oblong, about half the length of the maxillæ, rather broadest and truncate at the apex.

The *sternum* is oblong-oval, truncate (in a slightly hollow line) at the fore extremity.

Abdomen roundish oval, flattish on its upperside, and projecting fairly over the base of the cephalothorax.

CYRSILLUS DRASSIFORMIS, sp. n. (Plate XXXVI. fig. 4.)

Adult male, length 2 lines.

The *cephalothorax* is black, thinly clothed with hairs and short bristles, and its surface has a roughened or somewhat pock-marked appearance.

The *eyes* of the hind-central pair are considerably nearer to each other than each is to the lateral on its side; and this is also the case in respect to the anterior row, which is, however, much shorter than the posterior. The height of the clypeus is less than half that of the facial space.

The *legs* are of a deep rich blackish mahogany colour, the femora and genua deeper than the rest.

The *falces* are moderately long, strong, conical, vertical; their

anterior surface is flattish, with an exterior angular margin or edge, and their colour is similar to that of the cephalothorax. The colour of the maxillæ and labium is like that of the legs, while that of the sternum resembles the cephalothorax.

The *palpi* are short and strong; the radial joint is a little shorter than the cubital, and its outer side has two strong obtuse apophyses; the anterior is the longest, prominent, and somewhat bent; from some points of view these apophyses look like one large bifid projection. The digital joint is large and oviform; the palpal organs are simple, with a strong corneous process, or spine, round the inner margin.

The *abdomen* has its flattened upperside covered with a kind of coriaceous shield, of a deep blackish hue; around the margins are some short dull golden hairs (possibly these may originally have been more numerous and more widely spread over the surface); the sides are of a warm purplish brown, deeply and longitudinally rugulose, and the colour of the underside is similar. The *spinners* are very short and counter-sunk in a sort of pit or depression, beyond the margin of which they scarcely appear.

An example of this Spider was given to me among those found in Caffraria by Mr. Mausel Weale. It is a very remarkable one, not only on account of its general form, which gives it some resemblance both to the Drassidæ and Palpimanidæ, but also in respect to the structure of the legs, especially the long tarsi, which are, as above noticed, scarcely divided from the metatarsi.

CASTUROPODA, g. n. (*κάστωρ*, a beaver, *οὐρά*, tail, *ποδά*, feet).

Cephalothorax broad, rather longer than broad, only slightly convex above, broadly truncate in front, and considerably constricted laterally on the margins of the caput, the other normal indentations being obsolete.

Eyes placed much as in *Xysticus*, but occupying a wider transverse area; they are small and seated on tubercles; the fore-laterals are largest, the four centrals very small, and form nearly a square, of which the posterior side is slightly longest; the hind-central eyes are the smallest.

Legs moderately long, 2, 1, 3, 4, the difference between 2 and 1 very slight. They are strong, especially those of the first and second pairs, whose anterior joints are of abnormal size. The form of the tarsi bears no small resemblance to a beaver's tail. The legs are furnished with short hairs only, those beneath the tarsi forming a scopula; the tarsi end with two curved (and apparently nonpectinated) claws.

Falces moderate in length, subconical, massive; but the fang is short and weak; on the inner side of the anterior extremity of each falx is a short row of small but distinct denticulations regularly diminishing from the fore extremity.

Palpi short, ending with a small curved claw.

Maxillæ long, straight, pointed at their extremity on the inner

side, and rounded on the outer extremity, showing a considerable constriction about the middle of the outer side.

Labium about half the length of the maxillæ, somewhat obtusely pointed at the apex, and narrower at the base than at the middle.

Sternum elongate-oval, pointed behind and hollow-truncate before.

Abdomen short, broad, round-oval, of a flattened form, rather truncate before, and fitting well up to the base of the cephalothorax.

CASTUROPODA SIGILLATA, sp. n. (Plate XXXVII. fig. 5.)

Adult female, length $2\frac{2}{3}$ lines.

The colour of the *cephalothorax*, *falces*, *legs*, and *palpi* is a rich dark mahogany-brown.

The surface of the *cephalothorax* and *falces* has a roughened appearance, being granulose or punctuose; the latter, as well as the sides and hinder part of the former, are furnished with short bristly hairs; the fore margin of the caput has also a single row of short strong prominent bristles. The height of the clypeus is only equal to the diameter of one of the fore-central eyes.

The *maxillæ*, *labium*, and *sternum*, as well as the basal joints of the legs, are yellowish brown.

The *eyes* of the hind-central and fore-central pairs are respectively nearer together than each is to the lateral eye of its row on the same side.

The *abdomen* is of a dark greenish olive-brown hue, deepest on the upperside, which is of a somewhat coriaceous nature, and where there are in a transverse line on the middle two large oval rusty-brown seal-like markings, near together, and each marked in the centre with one of the two posterior of the five normal Thomisid impressed spots or markings, and of a deeper red-brown colour; the other three of these normal spots form a triangle immediately in front of the sigilliform markings, the apex directed forwards and close to the fore extremity of the abdomen. A pale yellowish streak or line runs from the apex of this triangle to a little way beyond the posterior impressed spots, and is succeeded by several short transverse pale curved lines, from the ends of each of which similar lines run parallel to each other round the sides and outer portion of the upperside of the abdomen. In some parts these lines are formed by small pale dots. The spinners are short and of a pale dull yellowish hue. The abdomen is thinly clothed with short hairs.

The whole Spider has a very flattened form.

An adult and an immature female, as well as an immature male, were sent to me some years ago from Ceylon by the late Mr. G. H. K. Thwaites. The size and peculiar form of the anterior pair of legs make this Spider a very remarkable one. This character, together with its other structural features, have induced me to base a new genus upon it, though it has some strong points of affinity to the preceding species *Cyrsillus drassiformis* (p. 358, *anted*).

NESIS, g. n. (nom. propr.).

Allied to *Diæa*, Thor.

Cephalothorax as long as broad, truncated in front, constricted laterally at the margins of the caput; upper surface flat and level.

Eyes small and not greatly different in size (though the four centrals are distinctly smallest), seated on separate tubercles, of a greyish hue, and occupying the whole width of the fore part of the caput. Height of clypeus less than the diameter of one of the fore-central eyes. The position of the eyes is much the same as in *Xysticus*.

Legs moderate in length and strength; those of the first and second pairs much the longest; the second pair slightly exceed the first, and the third pair rather shorter than the fourth. They are armed with a few regularly disposed slender spines beneath the tibiæ and metatarsi of the first and second pairs; beneath the tarsal claws is a small claw-tuft.

Falces moderate in length and strength, subconical, and perpendicular.

Maxillæ long, enlarged at the extremities, where they are obliquely and slightly roundly truncated on the outer side, and inclined over the labium.

Labium rather more than half the length of the maxillæ, constricted laterally near the middle, and somewhat pointed at the apex.

Sternum oval, truncated before and pointed behind.

Abdomen of a somewhat oblong form, truncated before and pointed behind, and very flat.

NESIS NIGROPUNCTATUS, sp. n. (Plate XXXVII. fig. 6.)

Adult male, length 2 lines.

The *cephalothorax*, *legs*, and *palpi* are of a brownish orange-yellow hue; the former with a fine dark marginal line; the whole of the underside, including the abdomen both above and below, being paler and duller-coloured.

The *eyes* of the anterior row (which is the shortest and least curved) are almost equally separated from each other; the central pair of the posterior row are nearer together than each is to the lateral on its side; the four central eyes form a square, whose anterior side is slightly the shortest, and its posterior side distinctly the longest. The tubercles supporting the lateral eyes are strong and of a subconical form.

The *palpi* are short; the radial joint is shorter than the cubital, and has its extremity on the outer side produced into a strong apophysis, whose extremity is pointed, and of a bent or twisted and slightly corkscrew form; the digital joint is large, nearly round, with a rather abrupt point at its fore extremity. The palpal organs are simple, and encircled with a long, strong, black, fine-pointed spine.

The *abdomen* has on the margins of its upperside (chiefly on the hinder part) a single row of small but distinct black spots. Spinners small; those of the inferior pair strongest.

Two adult males of this Spider (remarkable for its flattened form) were contained in the collection made in Caffraria by Mr. Mansel Weale.

PALEPHATUS, g. n. (nom. propr.).

Cephalothorax. Length and breadth equal, broader in front than behind; upper convexity even and considerable; in profile, highest at the beginning of the posterior slope; there is no lateral marginal constriction at the caput, and all the normal indentations are obsolete. The height of the clypeus is equal to the length of the line formed by the fore-central pair of eyes.

Eyes considerably unequal in size, placed in three widely separated groups (although preserving the same general form of area as *Xysticus*, &c.), and occupying the whole width of the fore part of the caput. The eyes of the two lateral pairs (or groups) are seated on strong and distinct pale tubercles, and are the largest, the fore-laterals being larger than the hind-laterals; those of the central group form nearly a square, whose longitudinal is less than its transverse diameter, and the anterior side is shortest; the posterior eyes of this group are smallest, very minute, and difficult to be seen.

Legs short and almost equal in length; their relative length appeared to be 4, 2, 3, 1. They are furnished with coarse hairs only, and each tarsus ends with two curved, closely pectinated claws.

Palpi short, similar in armature to the legs, and ending with a curved pectinated claw.

Falces short, conical, vertical; fang small and weak.

Maxillæ moderately long, rounded on the outer and pointed on the inner extremity, constricted about the middle, and a little inclined over the labium, which is about half the length of the maxillæ, and of an oblong-oval form.

Sternum short, heart-shaped.

Abdomen oval, flattened on its upper surface, and projects well over the base of the cephalothorax.

PALEPHATUS SALTICIFORMIS, sp. n. (Plate XXXVII. fig. 7.)

Immature female, length $1\frac{1}{2}$ line.

The *cephalothorax* is of a mahogany red-brown colour, with a reddish yellow-brown, slightly tapering, longitudinal central stripe, reaching from the hind-central eyes to the posterior extremity. Its surface is thinly covered with impressed points or punctures, and there are a few strong hairs with some stiffer prominent bristles on the sides of the caput, near the lower margin.

Falces similar in colour to the cephalothorax, punctuose, and also furnished in front with bristly hairs.

Legs yellow-brown, darkest on the tibiæ and fore half of the femora.

Palpi similar to the legs in colour.

Maxillæ, *labium*, and *sternum* dark yellowish brown.

Abdomen deep rich maroon-brown, thinly furnished with hairs; the upperside has some irregular longitudinal (central and marginal)

yellowish-white markings, with a considerable well-defined patch of the same colour just above the spinners; on the underside is a broad central longitudinal dull yellowish band, with a short narrow bar of the same between its hinder end and the spinners; six small somewhat impressed circular spots, each surrounded by a halo of dark yellow-brown, form two parallel longitudinal lines of three spots in each towards the hinder part of the central yellowish band. The spinners are of a dark brown hue, short, closely grouped together, and similar in length, but the inferior pair much the strongest.

A single example of this little Spider (which, however, may possibly attain a much larger size at its maturity) was received from Ceylon in 1871 from the late Mr. G. H. K. Thwaites. At first sight it is very like a Salticid Spider; but its structure, though strongly allied to some other Thomisid genera, seems to require a new genus for its reception.

PHERECYDES, g. n. (nom. propr.).

Cephalothorax short, broad, and nearly round.

Eyes 8, not very large, but unequal in size, occupying the whole transverse diameter of the caput, those of each lateral pair seated upon an extensive tubercular prominence, extending laterally beyond the lower part of the caput. Their relative position is that common to many Thomisid genera belonging to the *Xysticus* group, forming two nearly parallel curved transverse lines, the convexity of the curve directed forwards; the external eyes of the anterior row are the largest.

Legs neither very long nor strong; those of the second pair were wanting in the only example seen; those of the fourth pair are considerably shorter than those of the first, the third being a little shorter than the fourth. The second pair would probably be slightly shorter than the first. They are furnished thinly with hairs and a few spines, besides which beneath the tibiae and metatarsi of the first and second pairs are some longer and stronger sessile spines arranged in successive pairs. Each tarsus ends with two curved pectinated claws.

Palpi short, and terminating with a small curved claw.

Maxillæ rather long, a little enlarged in a pointed-oval form at their extremity, and inclined over the *labium*, which appears to be of a rather narrow or oblong form, as if lanceolate, with the point of the lancet (at its apex) truncated; but this portion of structure, owing to some adventitious substance obscuring it, could not be satisfactorily determined.

Sternum heart-shaped.

Abdomen of a somewhat pentagonal form, broadest and highest behind. *Spinners* small; those of the inferior rather stronger than those of the superior pair.

PHERECYDES TUBERCULATUS, sp. n. (Plate XXXVII. fig. 8.)

Adult female, length 2 lines.

The colour of the *cephalothorax* is light whitish yellow tinged

with brown; the caput is strongly marked, mottled, and suffused with deep yellow-brown; the thorax has a fine submarginal line, as well as some converging lines and other markings, of the same hue. The height of the clypeus is equal to half that of the facial space. On the caput are a few shortish bristly hairs.

The *eyes* of the hind-central pair are much wider apart than each is from the lateral eye on its side; the same proportionate separation is observable, though not to the same degree, in the eyes of the anterior row. The fore-centrals are the smallest of the eight.

The *legs* are of a pale dull yellowish hue, with a few obscure blotches of white, and more or less marked and spotted with blackish brown.

The *falces* are similar in colour to the cephalothorax, thinly mottled and marked with dark yellow-brown.

The *maxillæ* and *labium* are pale whitish yellow-brown.

The *sternum* is similar to the falces in colour; its central portion deep yellow-brown.

The *abdomen* is thinly clothed with hairs and a few short bristles; its colour is a dull whitish yellow tinged with brownish, somewhat speckled and marked with yellow-brown and deep black-brown; some of the deeper markings are lineate and oblique, others, towards the hinder part, are transverse; a small elevation halfway between the fore extremity and the beginning of the hinder slope is marked with a somewhat curved, transverse, geminated spot, forming probably a characteristic central abdominal marking. The underside has a broad longitudinal central band suffused with sooty brown, deepest along its margins.

An example of this curiously formed Spider was received from Mr. Mansel Weale, by whom it was found in Caffraria. It is evidently allied to *Monastes*, Luc.; but a consideration of its abnormally formed caput and some other characters have induced me to found a new genus upon it.

List of Species described.

Theraphosidæ.

Sarpedon robustum, gen. et sp. nov., p. 354, Pl. XXXVI. fig. 1. Ceylon.

Atypoides riversii, gen. et sp. nov., p. 355, Pl. XXXVI. fig. 2. California.

Drassidæ.

Amaurobioides maritima, gen. et sp. nov., p. 356, Pl. XXXVI. fig. 3. New Zealand.

Thomisidæ.

Cyrsillus drassiformis, nov. et sp. nov., p. 358, Pl. XXXVI. fig. 4. Caffraria.

Castropoda sigillata, gen. et sp. nov., p. 360, Pl. XXXVII. fig. 5. Ceylon.

Nesis nigropunctatus, gen. et sp. nov., p. 361, Pl. XXXVII. fig. 6. Caffraria.

Palæphatus salticiformis, gen. et sp. nov., p. 362, Pl. XXXVII. fig. 7. Ceylon.

Pherecydes tuberculatus, gen. et sp. nov., p. 363, Pl. XXXVII. fig. 8. Caffraria.



A. H. Searle, del. et lith

W. H. P. 1883

EXPLANATION OF THE PLATES.

PLATE XXXVI.

Fig. 1. *Sarpedon robustum* ♀, p. 354.

a, Spider, magnified; *b*, ditto, in profile; *c*, eyes, from above and behind; *d*, underside of cephalothorax, showing maxillæ, sternum, and labium; *e*, spinners, from underneath; *f*, natural length of Spider.

2. *Atypoides riversii* ♂ & ♀, p. 355.

a, Spider, natural size; *b*, profile of ♂; *c*, profile of ♀; *d*, eyes, from above and behind; *e*, underside of cephalothorax, showing maxillæ, labium, sternum, and falces of ♂; *f*, left palpus of ♂, from outer side.

3. *Amurobioides maritima* ♀, p. 356.

a, Spider, magnified; *b*, ditto, in profile; *c*, eyes, from in front; *d*, eyes, from above and behind; *e*, underside of cephalothorax, showing maxillæ, labium, and sternum; *f*, natural length of Spider.

4. *Cyrsillus drassiformis* ♂, p. 358.

a, Spider, magnified; *b*, ditto, in profile; *c*, eyes, from in front; *d*, underside of cephalothorax, showing maxillæ, labium, and sternum; *e*, leg of first pair; *f*, *g*, left palpus in two positions; *h*, natural length of Spider.

PLATE XXXVII.

5. *Casturopoda sigillata* ♀, p. 360.

a, Spider, magnified; *b*, ditto, in profile; *c*, eyes, from above and behind; *d*, underside of cephalothorax, showing maxillæ, labium, and sternum; *e*, genital aperture; *f*, natural length of Spider.

6. *Nesis nigropunctatus* ♂, p. 361.

a, Spider, magnified; *b*, ditto, in profile; *c*, eyes and falces, from in front; *d*, underside of cephalothorax; *e*, left palpus, from in front; *f*, natural length of Spider.

7. *Palæphatus salticiformis* ♀, p. 362.

a, Spider, magnified; *b*, ditto, in profile; *c*, eyes, from in front; *d*, eyes, from above and behind; *e*, underside of cephalothorax, showing maxillæ, labium, and sternum; *f*, natural length of Spider.

8. *Pherecydes tuberculatus* ♀, p. 363.

a, Spider, magnified (legs of second pair wanting); *b*, Spider in profile; *c*, caput, in front and a little raised on one side; *d*, eyes and falces, from in front; *e*, underside of cephalothorax, showing maxillæ, labium, and sternum; *f*, genital aperture; *g*, natural length of Spider.

3. List of Lepidoptera collected by Mr. H. O. Forbes in the Islands of Timor Laut. By ARTHUR G. BUTLER, F.L.S., F.Z.S., &c.

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(Plate XXXVIII.)

Twenty-three species of Lepidoptera were obtained by Mr. Forbes in his recent expedition to Timor Laut; one of these, however, is apparently a Micro-Lepidopteron, so much rubbed and broken as to be unrecognizable; all the Moths, in fact, are in very poor condition, forming a marked contrast in this respect to the Butterflies, which are well preserved.