

Order ARANEÆ.

Integument usually covered with a protective layer of simple or feathery (*plumose*), rarely scale-like (*squamiform*) hairs, interspersed with long erect tactile bristles or *setæ*. Short and thick bristles form *spines* or *spinules*. A mat of close-set hairs of uniform length is termed a pad or *scopula*, and the bunch of hairs that frequently projects on each side of the claws is called the *ungual tuft*. On the protarsus of the 4th leg there is frequently a single or double row of short hairs, forming an organ called the *calamistrum*, which always accompanies the *cribellum* (p. 154). In some cases there is a cluster of spines (*rastellum*) overhanging the base of the fang on the mandible, and in connection with the jaws there are sometimes spines or bristles variously modified to form stridulating-organs.

The *carapace* is marked with a groove or pit, the *thoracic fovea*, from which shallow grooves usually radiate to the margins, the anterior pair defining the head-region. The *eyes*, normally 8 in number, are typically arranged in an anterior and posterior row, and are termed *anterior median*, *posterior median*, *anterior lateral*, and *posterior lateral* on each side. The eye-line, or line passing through the centres of the four eyes of a row, may be *straight*, *procurved* (*i. e.*, curved with the convexity backwards), or *recurved* (*i. e.*, curved with the convexity forwards). The four median eyes are termed the *ocular quadrangle*. The area, if any, between the anterior row of eyes and the edge of the carapace is called the *chypeus*.

The *mandibles* consist of two segments, the basal containing a poison-gland; the apical or *fang* is spiniform and closes against the lower side of the basal segment, fitting into a groove, the *fang-groove*, which is often toothed. The *palpi* resemble dwarfed limbs, and consist of six segments, named *coxa*, *trochanter*, *femur*, *patella*, *tibia*, *tarsus*. The *coxa* is usually furnished with a large process or *maxilla*, which projects forwards on each side of the *labium*. The tarsus is unmodified in the female. In the male it is modified to subserve copulation, and is furnished with an intromittent or *palpal organ*, which is often retractile and exceedingly complicated. At its simplest it is not retractile, and consists of a swollen basal portion or *bulb*, and of a terminal portion or spine. The *legs* resemble the palp of the female, but are longer, have simple coxæ, an extra segment, the *protarsus*, between the tibia and tarsus, and two or three claws at the end of the tarsus. The third or inferior claw is usually present when the unguinal tufts are absent, absent when they are present. The *sternum* is usually oval, and supports in front the lower lip or *labium* (= *prosternum*). Sometimes the sternum is marked with muscular scars or *sigilla*.

The cephalothorax is connected with the abdomen by a narrow stalk or *pedicel*.

Typically the *abdomen* is soft-skinned and oval in form. Not infrequently it is horny, and occasionally it is segmented. The *generative organs* and anterior pair of breathing-organs open ventrally along a curved groove, the *genital fold*, which marks off the fore part of the abdomen as the *epigastric area*. These breathing-organs or pulmonary sacs are covered by plates or *opercula*, and the integument in front of the genital aperture is in many females horny and variously modified to form an organ, the *vulva* or *epigyne*. The breathing-organs of the posterior pair are either operculate pulmonary sacs or tracheal tubes with simple apertures, which rarely open separately behind the genital fold, but more commonly unite to form a single aperture situated just in front of the spinning-mamillæ. There are usually three pairs of *spinning-mamillæ* attached to the hinder end of the lower surface of the abdomen—an *anterior*, a *posterior*, and an *intermediate pair*. Each of the latter consists of a single segment, the others of two or three segments. In one instance (*Liphistius*) there is an additional intermediate pair. In other cases the mamillæ may be reduced to four or two pairs. In some species there is a spinning-plate, the *cribellum*, situated in front of the anterior mamillæ. This organ occurs only in those spiders which possess the *calamistrum* (p. 153). In other species there is a mamilliform process, the *colulus*, lodged between the anterior mamillæ, and behind the posterior mamillæ there is a small prominence, the *anal papilla*.

Sexual characters, etc. Males are almost invariably smaller, sometimes very much smaller, than females, and may be always recognized by the modification of the tarsus of the palp to act as an intromittent organ. This organ appears only at maturity. Similarly in the female the genital aperture is opened and the vulva fully formed only at the last moult, when maturity is reached.

All Spiders are oviparous. The eggs are enveloped in a silky cocoon, and are disposed of in various ways by the mother.

Distribution. Spiders are cosmopolitan, occurring in all oceanic islands, and as far north as Greenland and Spitzbergen.

Measurements, etc. In the following descriptions the total length is taken from the anterior end of the carapace to the posterior end of the abdomen; that of the legs from the base of the femur to the tip of the claws. Normally the anterior two pairs of legs project forwards, and the posterior two pairs backwards. Hence the surface nearest the body is regarded as inner, and the opposite surface as outer. Sometimes, however, the legs are considered as extending at right angles to the long axis of the body. In this case they have an anterior and a posterior side. In many species the legs are normally depressed backwards in such a way that the posterior surface rests upon the ground. These spiders are capable of moving sideways, and are hence termed "laterigrade."

The Araneæ are divisible into two groups, which may be tabulated as follows:—

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|---|--|
| <p>a. Abdomen furnished with 9 distinct terga like those of the Amblypygi; spinning-mamillæ 8 in number, and situated in the middle of the lower surface of the abdomen</p> <p>b. Abdomen without terga; spinning-mamillæ never more than 6, and situated at the posterior end of the abdomen</p> | <p>MESOTHELÆ.</p> <p>OPISTHOTHELÆ.</p> |
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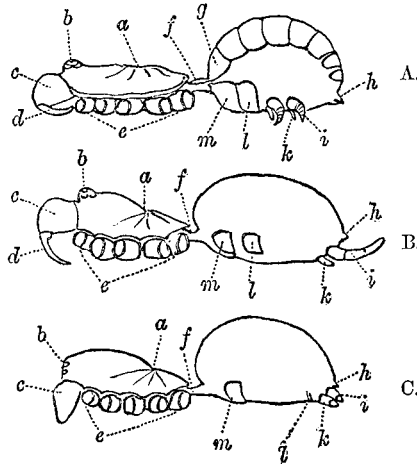


Fig. 52.

- A. Cephalothorax and abdomen of *Liphistius*, to show structure of the Mesothelæ.
 B. Ditto of one of the Mygalomorphæ, to show structure of this group.
 C. Ditto of one of the Arachnomorphæ, to show structure of this group.

a, thoracic fovea; b, ocular area; c, basal segment of mandible; d, fang of mandible; e, coxæ of palpus and legs; f, pedicel; g, 1st tergal plate of abdomen; h, anal papilla; i, external, k, internal branch of posterior spinning-organ in A, and anterior and posterior spinner in B and C; l, posterior, and m, anterior breathing-organ.

MESOTHELÆ.

Abdomen segmented, its dorsal surface furnished with distinct *terga*, its ventral surface with two distinct *sterna* in front, the anterior covering the generative aperture and the pulmonary organs of the 1st pair, the 2nd covering the pulmonary organs of the 2nd pair. *Spinning-mamillæ* 8 in number, 4 external segmented and 4 internal unsegmented, forming a cluster in the middle of the lower surface of the abdomen immediately behind the second sternum.

The Mesothelæ are represented at the present day by a single family and genus.

Family LIPHISTIIDÆ.

Mandible jointed to the cephalothorax in a vertical plane; the fang, when closed, directed obliquely backwards and inwards. No *maxillary process* on coxa of palp. *Sternum* very narrow, much longer than wide, without distinct sigilla. *Legs* with distal segments strongly spined, not scopulate, furnished with 3 claws. *Carapace* flat, lightly elevated in the cephalic region; fovea transversely oval; radiating grooves strongly defined. *Eyes* aggregated on a distinct tubercle; anterior medians minute, posterior medians large and circular, anterior and posterior laterals long and reniform.

Distribution. Oriental Region, from Burma and the Malay Peninsula to Sumatra.

Genus LIPHISTIUS, Schiödte.

Liphistius, Schiödte, *Nat. Tijdschr.* (2) ii, p. 621, 1849; *Simon*, *Hist. Nat. Araign.* i, p. 64, 1892.

Characters and distribution as above.

Type, *L. desultor*, Schiödte; Penang.

128. *Liphistius birmanicus*, Thorell, *Ann. Mus. Genova*, xxxvii, p. 162, 1897.

♀. *Colour* blackish, sometimes varied with greyish yellow. *Carapace* as long as patella and tibia of the 4th leg. *Legs* 4, 3, 2, 1 in length; 1st, 2nd, and 3rd subequal; 4th about three times, 1st a little more than twice, as long as the carapace. Claw of palp and inferior claw of legs armed with 2-3 small teeth; superior claws of legs with 3-4 larger teeth.

Measurements in mm.—Total length 24, carapace 11, palp 18, 1st leg 23, 2nd 23-25, 3rd 24, 4th 32-50.

Loc. Burma: Yado, in the mountains of Karennee, 3600-3900 feet; Biapó, 3000-3200 feet (*Foa*).

OPISTHOTHELÆ.

Dorsal surface of *abdomen* without segmentally arranged tergal plates, and without distinct sternal plates beneath, the sterna of the Mesothelæ being at most represented by the pulmonary opercula. *Spinning-mamille* never more than six in number, and, at least in all the Indian species, forming a compact or tolerably compact group at the posterior end of the abdomen, close to the anal papilla.

The Opisthothelæ are divisible into two Suborders, which may be diagnosed as follows:—

- a. Basal segment of mandible projecting forwards from the fore extremity of the cephalothorax, its articulation lying in a vertical plane; fang closing backwards. MYGALOMORPHÆ.
- b. Basal segment of mandible projecting downwards beneath the extremity of the cephalothorax, its articulation lying in a horizontal plane; fang closing more inwards. ARACHNOMORPHÆ.

Suborder MYGALOMORPHÆ.

Basal segment of *mandible* large, projecting forwards, articulated to the cephalothorax in a vertical plane; fang closing obliquely backwards. *Respiratory organs* represented by four operculate pulmonary sacs. *Spinning-mamillæ* normally four in number—a posterior longer three-jointed, and an anterior shorter one-jointed on each side; rarely the latter is absent, and occasionally an additional small anterior mamilla is present, making a total of 6. *Sternum* marked with 4, rarely 3, pairs of sigilla. *Palpal organ* in male non-retractile, simple, usually without accessory process. *Genital aperture* of female without horny plate (vulva).

Distribution. Temperate and tropical countries.

Habits. Mostly ground-spiders, living in burrows, and frequently closing the aperture with a movable lid.

The Indian Mygalomorphæ are referable to the following families:—

- a. Coxa of palp with large maxillary process; spinning-mamillæ 6 **Atypidæ.**
- b. Coxa of palp without large maxillary process; spinning-mamillæ not more than 4.
 - a¹. Tarsi without unguis; armed with 3 claws, the superior of which are strongly toothed.
 - a². Posterior mamillæ short or moderately long; anterior mamillæ close together at base; a rastellum present on mandible. **Ctenizidæ.**
 - b². Posterior mamillæ very long; anterior mamillæ widely separated at base; no rastellum **Dipluridæ.**
 - b¹. Tarsi with unguis; inferior claw almost always absent; superior claws at most weakly toothed.
 - a³. Distal segment of posterior mamillæ very short, rastellum almost always present **Barychelidæ.**
 - b³. Distal segment of posterior mamillæ long and slender, rastellum never present **Theraphosidæ.**

Family ATYPIDÆ.

Coxa of palp furnished with large maxillary process. *Spinning-mamillæ* 6 in number. *Carapace* very broad in front, with median conical ocular tubercle. *Mandible* very large, without rastellum. *Sternum* with anterior sigilla not forming a groove at the base of the labium. *Legs* weakly spined, furnished with 3 claws. Spine of *palpal organ* in male protected by a secondary outgrowth from the bulb.

Distribution. Palæarctic Region from Ireland to Japan; Oriental Region from Burma to Java; Sonoran Region of North America.

Synopsis of Indian Genera.

Maxillæ short, eyes close together ATYPUS, p. 158.
Maxillæ long, eyes scattered CALOMMATA, p. 159.

Genus ATYPUS, Latreille.

Atypus, *Latr. Nouv. Dict. d'Hist. Nat.* xxiv, p. 133, 1804; *Simon, Hist. Nat. Araign.* i, p. 198, 1892.

Ocular area tolerably compact; the *tubercle* low; *clypeus* narrow. *Maxillæ* relatively short and stout, with inner edge straight. *Labium* not separated by a groove from the sternum, narrower at apex than at base. Posterior *mamillæ* three- or four-jointed.

Type, *A. piceus*, Sulzer; Central and Western Europe.

Distribution. Central and Southern countries of the Palæarctic Region from Ireland to Japan; North America; Burma and Java.

Habits. The spiders of this genus dig burrows, line them with silk, and continue the silk above the surface of the ground in the form of a long tube, with a small aperture at its extremity.

129. *Atypus dorsualis*, Thorell, *Ann. Mus. Genova*, xxxvii, p. 186, 1897.

♀. *Colour* yellowish black; sides of abdomen darker. *Carapace* as long as patella, tibia, and protarsus of 1st and 4th legs; *eyes* of anterior line subequal, posterior laterals almost as large as the anterior laterals; anterior medians separated by a space, which is greater than their diameter, nearer to the anterior laterals; lateral eyes in contact. *Legs* without spines.

Measurements in mm.—Total length 17·5, carapace 6·5, palpus 5·5, 1st leg 13, 2nd 11·5, 3rd 10·5, 4th 13·5.

Loc. Burma: Yado, in the mountains of Karennee (Fea).

Genus **CALOMMATA**.

Calommata, Lucas, *Ann. Soc. Ent. Fr.* vi, p. 378, 1837.

Pelecodon, Dolesch. *Verh. Nat. Vereen. Nederland Indië*, v, no. 5, p. 5, 1859.

Camptotarsus, Thorell, *Ann. Mus. Genova*, (2) v, p. 23, 1887.

Eyes much less compact than in *Atypus*, the anterior medians situated on a high prominence, the rest forming a cluster on each

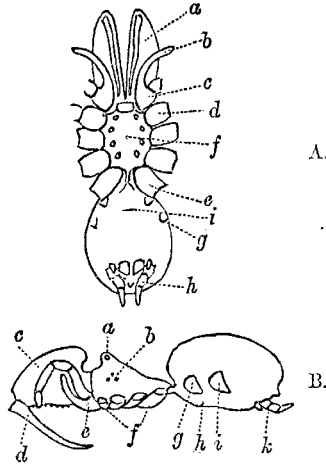


Fig. 53.—A. Ventral view of cephalothorax and abdomen of *Calommata fulvipes*, ♀.

a, basal segment of mandible; *b*, maxillary process; *c*, coxa of palp; *d*, coxa of 1st, *e*, of 4th leg; *f*, sternum with four pairs of muscular scars (*sigilla*); *g*, posterior respiratory stigma; *i*, genital aperture; *h*, posterior spinner with the two anterior pairs immediately in front of it.

B. Lateral view of the same.

a, median, *b*, lateral eyes; *c*, basal segment of mandible; *d*, fang; *e*, coxa of palp; *f*, coxae of legs; *g*, anterior, *i*, posterior respiratory operculum; *h*, genital aperture; *k*, posterior spinner.

side, remote from the anterior medians. *Clypeus* long and nearly horizontal. *Maxillae* very long, slender, arched outwards from the base. *Labium* transversely oblong, impressed at the base. Posterior *spinners* three-jointed. Posterior *legs* stouter than anterior; tarsi in the male slender and flexible.

Type, *C. fulvipes*, Lucas.

Distribution. Japan, Burma, Sunda Islands.

130. *Calommata truculentum*, Thorell, *Ann. Mus. Genova*, (2) v, p. 24, 1887 (*Camptotarsus*); Simon, *Hist. Nat. Araign.* i, p. 199, 1892 (*Calommata*).

♂. *Colour* blackish; legs, mandible, and ventral surface paler than body. *Carapace* but little longer than patella and tibia of

4th leg. Anterior median *eyes* much larger than the rest, almost in contact. *Palpi* long; tibia much thicker than patella; tarsus elongate, apically truncate; spines of palpal organ sinuous, broad at base, then abruptly bent backwards, one rising from the extremity of the bulb, the other near its middle. *Legs* of posterior pairs furnished distally with a few spinules; superior claws armed with about 5 teeth.

Measurements in mm.—Total length 6, carapace 2·5, palp 4·25, 1st leg 9·5, 2nd 8·8, 3rd 8·2, 4th 10·75.

Loc. Burma: Bharno (*Fea*).

Family CTENIZIDÆ.

Mandibles furnished with *rastellum*, sometimes supported on a strong prominence. *Coxa* of *palpus* without large maxillary process. *Sternum* with anterior sigilla large and encircling base of labium; posterior pair large and remote from margin; rarely absent. *Tarsi* without unguis; with 3 claws. *Spinning-mamillæ* 4 in number; the anterior pair contiguous; posterior pair short or of moderate length.

Distribution. Temperate and tropical parts of the world, lying in general between 45° N. lat. and 45° S. lat.

To this family belong a great majority of the species commonly spoken of as Trap-door Spiders.

The characters of the Indian genera may be briefly tabulated as follows:—

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| a. Anterior lateral eyes in middle of anterior edge of carapace well in advance of remaining eyes. | [p. 161 |
| a ¹ . Tibia of 3rd leg not excavated above | ACANTHODON, |
| b ¹ . Tibia of 3rd leg excavated above at base . . | HELIGMOMERUS, |
| b. Anterior lateral eyes widely separated, at most only a short distance in advance of anterior medians. | [p. 164. |
| a ² . Thoracic fovea strongly procurved. | |
| a ³ . Tarsi and protarsi of legs scarcely or not scopulate, and strongly spined laterally; apical segment of posterior mamillæ short. | |
| a ⁴ . Tibia of 3rd leg excavated above; spines of rastellum set on prominence . . | CONOTHELE, p. 165. |
| b ⁴ . Tibia of 3rd leg not excavated above; spines of rastellum not set on prominence | ACATTYMA, p. 166. |
| b ⁵ . Tarsi and protarsi scopulate, weakly spined, apical segment of posterior spinners long. | [p. 168. |
| a ⁵ . Sternum with central depression | ATMETOCHILUS, |
| b ⁵ . Sternum without central depression . . | DAMARCHUS, p. 169. |
| b ⁶ . Thoracic fovea recurved. | [p. 166. |
| a ⁶ . Lateral eyes narrowly separated | SCALIDOGNATHUS, |
| b ⁶ . Lateral eyes widely separated | NEMESIUS, |
| | [p. 167. |

Genus **ACANTHODON**, Guérin.

Acanthodon, Guérin, *Rev. Zool.* 1838, p. 10; *Simon, Hist. Nat. Araign.* i. p. 91, 1892.
Idiops of recent authors up to 1892 (not of Perty).

Carapace polished, scantily hairy; fovea large, strongly pro-curved; head high; anterior lateral *eyes* situated in the middle of the anterior border of the carapace; the remaining eyes forming a group far behind the anterior edge of the carapace. *Mandible* powerful; *rastellum* consisting of stout spines borne upon a distinct prominence. *Sternum* with posterior sigilla obsolete. *Legs* in female short and stout, claws armed with 1 or 2 large basal teeth; distal segments of legs not scopulate, those of the anterior pairs and of palpi thickly spined laterally; tibia of 3rd not depressed above at base. Apical segment of posterior *spinning-mamille* short.

♂. Carapace lower, rugose; legs long and slender.

Type, *A. petiti*, Guérin.

Distribution. S. America; Tropical Africa; Syria, Arabia, India and Burma.

*Synopsis of Indian Species.**Females.*

- a. Coxa of 4th leg without band of spinules; tibia of 3rd longer than wide.
 - a¹. Ocular tubercle elevated in front *A. crassus*, p. 161.
 - b¹. Ocular tubercle not elevated in front *A. opifex*, p. 162.
- b. Coxa of 4th leg with band of spinules below; tibia of 3rd as wide as long.
 - a². Eyes of posterior line subequally spaced *A. fortis*, p. 163.
 - b². Eyes of posterior line unequally spaced *A. constructor*, [p. 163.]

Males.

- a. Tibia of 1st leg armed with a stout, pointed, and bent spur, and a tubercle behind it *A. constructor*, [p. 163.]
- b. Tibia of 1st leg armed with a low prominence tipped with a long spine, and a small tubercle above it.
 - a'. 4th leg only a little longer than the 1st; protarsus of 1st strongly concave in its basal half on inner side *A. fossor*, p. 164.
 - b'. 4th leg considerably longer than 1st; protarsus of 1st weakly concave in its basal half on inner side *A. designatus*, p. 164.

131. **Acanthodon crassus**, *Simon, Ann. Mus. Genova*, xx, p. 357, 1884 (*Idiops*): colletti, *O. P. Cambr. P. Z. S.* 1889, p. 37, pl. ii, fig. 2 (*Idiops*).

♀. *Colour*: carapace, etc. mahogany-red, legs paler; abdomen

blackish. *Carapace* a little shorter than patella, tibia, and pro-tarsus of 1st leg; ocular tubercle elevated in front; *eyes* of posterior row very unequally spaced, their posterior edges in a straight line; medians about four diameters apart, and less than

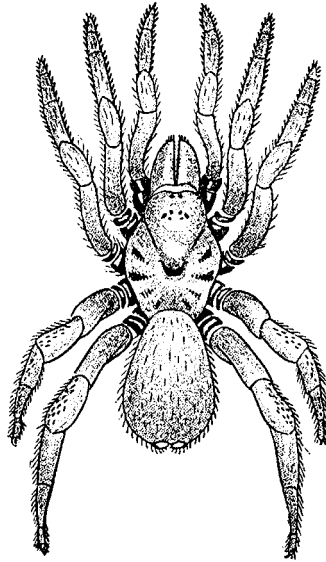


Fig. 54.—*Acanthodon crassus*, Sim., ♀, $\times 1\frac{1}{2}$.

two from the laterals; anterior medians about a diameter apart. *Labium* with three teeth. *Legs*: coxa of 4th not spinulose below; tibia of 3rd longer than wide.

Measurements in mm.—Total length 26, carapace 13, palp 21; 1st leg 24, 2nd 22, 3rd 23, 4th 30; patella and tibia of 1st 10, of 4th 11.5.

Loc. Burma: Minbla (*Comotto*); Tharrawaddy (*Oates*); Palon (*Fea*); Meiktila (*Collett*).

Simon doubtfully refers to this species some immature specimens of *Acanthodon* procured at Wagra-Karur, near Guntakal, Bellary (Bull. Soc. Zool. Fr. x, p. 23, 1885).

132. *Acanthodon opifex*, Pocock, *Journ. Bom. N. H. Soc.* xii, p. 750, 1899.

Allied to the preceding, but darker in colour. *Postocular area* more strongly elevated than in *A. crassus*; ocular tubercle flat above; posterior median *eyes* less than three diameters apart, and more than one diameter from the posterior laterals; anterior medians more than a diameter apart, and nearly two diameters

from the posterior laterals; anterior laterals more prominent than in *A. crassus*.

Measurements in mm.—Total length 20, length of carapace 10, of 1st leg 19, of 4th leg 23.

Loc. Bombay (*Phipson*).

133. *Acanthodon constructor*, sp. n.

♀. *Colour* as in *A. opifex*. *Carapace* with ocular tubercle elevated in front as in *A. crassus*; *eyes* of posterior line unequally spaced, the medians a little more than two diameters apart, and about one diameter from the laterals, about the same distance from the anterior medians to which they are subequal in size; the anterior medians about a diameter apart, their posterior edges on a level with the anterior edges of the posterior laterals. *Labium* with a marginal row of 4-5 teeth, and some smaller ones behind them. Coxa of 4th leg furnished beneath with a median longitudinal band of short spinules; tibia of 3rd leg short and thick, as wide as long.

♂. *Colour* as in ♀, but tarsi and protarsi of legs clear yellow. *Eyes* more compact; posterior medians about two diameters apart. First leg with tibia incrassate, armed externally with 8-10 spines, internally in its basal half with 3 spines, and at the apex with 2 spurs, the proximal conical, the distal stout, but with the apex pointed and directed forwards and upwards; protarsus slender, concave in its basal half, armed with many spines below, and with a submedian conical spur. Tibia of *palp* inflated, furnished distally on the outer side with a cavity bordered above by a complete semicircle of short spines; tarsus with a conical external process; spine of palpal organ broad at base, slender and bent distally with blunt tip.

Measurements in mm.—♀. Total length 19, carapace 8, 1st leg 14, 4th leg 17. ♂. Total length 12, carapace 6, 1st and 4th legs 20.

Loc. S. India: Chingleput (*Jambunathan*); Yercaud in Shevaro Hills (*Henderson*).

134. *Acanthodon fortis*, sp. n.

♀. Resembling *A. constructor*, but much larger; and with the *eyes* of the posterior line widely and subequally spaced, the medians nearly three diameters from each other and from the laterals; anterior medians large, less than a diameter apart; posterior medians about their own diameter from the anterior medians; posterior laterals large, elliptical, set far forwards, so that their anterior rims are on a level with the centres of the anterior medians.

Measurements in mm.—Total length 32, carapace 14, 1st leg 26, 4th leg 32.

Loc. India (*Godfrey*, type; *Hardwicke*).

135. *Acanthodon fossor*, sp. n.

♂. Carapace smoother than in *A. constructor*, with posterior median eyes more than three times their transverse diameter apart. Tibial apophysis of 1st leg consisting of a low process bearing a slender, distally pointed and bent spine, behind the process there is a small tubercle; protarsus with very few spines, the process much shorter, tuberculiform. *Pulp* with protarsus less inflated, hollow, shallower, and bordered above by a thick cluster of spines; spine of palpal organ evenly arched, with an outward apical bend and a slight subapical thickening, when curled back at rest the concavity of the spine faces forward and the point forward and outward.

Measurements in mm.—Total length 12, carapace 6, 1st leg 21, 4th leg 21.

Loc. India: the Deccan.

136. *Acanthodon designatus*, Cambridge, *Araneidea*, *Second Yarkand Exped.* p. 3, pl. i, fig. 1, 1885 (Idiops).

Judging from the description and figures, this species is most nearly allied to *A. fossor*, but has the anterior legs much shorter, the 1st pair being much shorter than the 4th and only two and a half times the length of the carapace. Moreover, the protarsus of the 1st leg is thicker and much less concave in its basal half; the tibial apophysis is directed upwards from its base; and the palpal organ rests with the convexity of the spine looking forwards. Length of carapace about 6 mm.

Loc. Murree (*Stoliczka*).

Genus **HELIGMOMERUS**, Simon.

Heligmomerus, Simon, *Hist. Nat. Araign.* i, p. 90, 1892.

Differs from the genus *Acanthodon* in having the upper side of the tibia of the 3rd leg excavated and smooth in its basal half.

Type, *H. taprobanicus*, Simon.

Distribution. India, Ceylon; Tropical Africa.

Synopsis of Indian Species.

- a. Only the internal (anterior) claw of 1st and 2nd legs armed with a bifid tooth *H. taprobanicus*, p. 164.
- b. All the claws armed with a bifid tooth *H. prostans*, p. 165.

137. *Heligmomerus taprobanicus*, Simon, *Hist. Nat. Araign.* i, p. 91, 1892.

Colour: carapace blackish; abdomen violet-black, paler beneath; sternum, mouth-parts, and appendages olive-yellow. Anterior

median and posterior lateral *eyes* subequal, equidistant, and separated by spaces not or scarcely exceeding the diameter of an eye. *Labium* armed with a row of three larger and also with a few smaller teeth. *Legs* with claws of anterior pairs strong, the exterior armed with a simple basal tooth, the interior with a double tooth; claws of posterior legs armed with a single tooth.

Length 14 mm. (young female).

Loc. Ceylon: Kandy (*Simon*).

138. *Heligmomerus prostans*, *Simon, Hist. Nat. Araign.* i, p. 91, 1892.

Differs from the foregoing in having the anterior median and posterior lateral eyes farther apart from each other, and the medians evidently smaller than the laterals. Tarsal claws thicker, all of them armed at the base with an unequally bifid tooth. *Labium* armed with only three teeth.

Length 21 mm. (adult ♀).

Loc. S. India: Kodaikanal, Palni Hills (*Simon*).

Genus **CONOTHELE**, Thorell.

Conothele, *Thorell, Ann. Mus. Genova*, xiii, p. 303, 1878; *Simon, Hist. Nat. Araign.* i. p. 88, 1892.

Resembling *Acanthodon*, but with the *eyes* normally arranged near the anterior border of the carapace; the anterior laterals close to the posterior laterals; eyes of anterior line procurved. *Mandibles* not so prominent, depressed. *Sternum* with posterior sigilla distinct and remote from the margin. *Legs* as in *Heligmomerus*. Carapace of male rugose; labium and maxillæ less strongly toothed than in female; legs longer, less strongly spined, with anterior tarsi scopulate; palpi long, the tarsus short and truncate.

Type, *C. malayana*, Doleschall.

Distribution. Burma to the Solomon Islands.

Habits. So far as is known, the species of this genus build their trap-door nests on the trunks of trees, spinning a silken tube in a depression of the bark and covering the white silk with bits of lichen and moss.

139. *Conothele birmanica*, *Thorell, Ann. Mus. Genov.* (2) v, p. 19, 1887.

♀ (young). *Colour*: carapace and abdomen blackish, legs and sternum paler. *Carapace* considerably longer than patella and tibia of 1st and of 4th legs; ocular area twice as wide as long; eyes of posterior line straight, diameter of anterior medians much less than long diameter of anterior laterals. *Labium* with 5 teeth. Tibiæ of anterior legs without external apical area of spinules such as occurs in other species of the genus.

Measurements in mm.—Total length 11, carapace 5·5, 1st leg 11·25, 4th leg 12·75.

Loc. Burma : Shwegoo-Myo (*N'ea*).

Genus ACATTYMA, L. Koch.

Acattyma, L. Koch, *Verh. z.-b. Ges. Wien*, xxvii, 1877, p. 760 ;
Simon, *Hist. Nat. Araign.* i. p. 96, 1892.

Differing from *Conothele* in having the mandibles strong and prominent ; the rastellum consisting of many irregularly-arranged teeth not borne upon a conical process overhanging the base of the fang, and the tibia of the 3rd leg without superior basal depression.

Type, *A. roretzi*, Koch.

Distribution. Japan ; India.

140. *Acattyma cryptica*, Simon, *Mém. Soc. Zool. Fr.* x, p. 253, 1897.

♂. Colour blackish, lower side and extremity of legs paler. *Carapace* rugose ; *eyes* of anterior line nearly equidistant, medians half as large as laterals. *Labium* with 4–5 teeth. *Mandibles* armed with two rows of large granules ; rastellum composed of a single row of 7–8 teeth. *Legs* with femora coriaceous beneath, copiously spined, the anterior more so than the posterior ; claws with a few subbasal teeth ; tibia of 1st without spurs. *Palpi* slender, long, unarmed ; the tibia inflated beneath at base, apically attenuate ; tarsus truncate ; palpal organ with spine arcuate, thick at base, filiform at apex.

Length 15 mm.

Loc. India : Deccan * (*Smythies*).

Genus SCALIDOGNATHUS, Karsch.

Scalidognathus, Karsch, *Berl. ent. Zeits.* xxxvi, p. 269, 1892 ; *Simon*,
Hist. Nat. Araign. i, p. 116, 1892.

♀. *Carapace* with fovea large, recurved ; ocular area twice as wide as long ; *eyes* of anterior line slightly procurved, the laterals on each side narrowly separated. *Mandibles* armed below with a single row of teeth ; *rastellum* consisting of simple stout spines. *Labium* and *maxillæ* unarmed ; posterior sternal sigilla small, remote from the margin. *Legs* short, spiny ; tarsi and protarsi of 1st and 2nd scantily scopulate ; tarsi of all legs armed with spines ; claws armed with a single long tooth.

♂. *Legs* much longer ; claws armed with many teeth, forming a single series.

Type, *S. radialis*, O. P. Camb.

Distribution. S. India and Ceylon.

* Probably an error for Dehra.

Synopsis of Species (males).

- a. Superior claws of anterior two pairs of legs
armed with 7 teeth *S. radialis*, p. 167.
b. Superior claws of anterior two pairs of legs
armed with 11 teeth *S. oreophilus*, p. 167.

141. *Scalidognathus radialis*, O. P. *Cambr. Jour. Linn. Soc., Zool.* x, p. 373, pl. xi, fig. 1, 1870, ♂ (Mygale): seticeps, *Karsch, Berl. ent. Zeits.* xxxvi, p. 269, t. x, fig. 1, ♀ (1892).

♂. Colour reddish yellow; abdomen blackish above. *Carapace* as long as patella and tibia of 2nd leg. *Legs* long and slender; 1st with protarsus lightly arched, weakly spined; tibia without apophysis, with one of the apical spines beneath stronger than the rest. *Palp* with tibia long, inflated, furnished at the apex externally with a deep spine-bordered notch; spine of palpal organ broad at base, filiform and strongly curved distally.

♀. *Carapace* as long as tibia and protarsus of 4th leg. *Legs* 4, 1, 2, 3 in length, slender; tarsi and protarsi of 1st and 2nd scopulate internally, spined externally.

Measurements in mm.—♂. Total length 10, carapace 5, 1st leg 16, 2nd 15, 3rd 13, 4th 18.5. ♀. Total length 16.22.

Loc. Ceylon: Peradeniya (*Sarasin*), Panduloya (*Green*).

142. *Scalidognathus oreophilus*, *Simon, Hist. Nat. Araign.* i, p. 116, 1892 (in note).

♂. Described as differing from *S. radialis* in having the superior tarsal claws of the anterior legs furnished with 11 instead of with 7 teeth.

Loc. Ceylon (*Simon*).

Genus NEMESIELLUS, nov

Differing from *Scalidognathus* and approaching the Australian genus *Arbanitis* in having the eyes of the anterior line strongly procurved, the anterior edge of the medians on a level with the posterior edge of the laterals, the laterals on each side being widely separated by a space which exceeds the long diameter of the anterior lateral. Differing from *Arbanitis* and resembling *Scalidognathus* in having the tarsi of the anterior legs spined.

Type, *N. montanus*, sp. n.

Distribution. S. India.

143. *Nemesiellus montanus*, sp. n.

♀. Colour: carapace, mandibles, and upper side of femora deep brown, the remaining part of the appendages reddish yellow. *Carapace* as long as patella, tibia, and protarsus of 1st, longer than patella and tibia of 4th; eyes of anterior line subequal. *Legs* with

tarsus and protarsus of anterior pairs, as well as tarsus of palp, scopulate at sides; patella of 3rd leg thickly hairy above, longer than the tibia.

Measurements in mm.—Total length 14, carapace 5, 1st leg 9·5, 2nd 8·5, 3rd 7·5, 4th 13.

Loc. S. India: Yercaud in Shevaroy Hills (*Henderson*).

Genus **ATMETOCHILUS**, Simon.

Atmetochilus, Simon, *J. A. S. B.* lvi, p. 109, 1887; *id. Hist. Nat. Araign.* i. p. 109, 1892.

Carapace with deep lateral cephalic impressions and deep strongly procurved fovea; ocular area three times as wide as long; eyes of anterior line very slightly procurved. *Mandibles* with single row of teeth below; rastellum consisting of simple slender spines. *Legs* and *palpi* weakly spined; tarsi and protarsi of anterior pairs spined: claws basally toothed. *Labium* scarcely as long as wide, unarmed, coxæ of palp with a few basal teeth. *Sternum* with a transverse depression behind the labium; the three pairs of sigilla remote from the margin, their inner ends continuous with a smooth central depression. Posterior *mamillæ* long, apical segment as long as the 2nd, or longer.

Type, *A. fossor*, Simon.

Distribution. Southern Burma.

Synopsis of Species.

- a. Protarsus of 1st leg scopulate to base, of 2nd scopulate in its distal half; length about 40 mm. *A. fossor*, p. 168.
- b. Protarsus of 1st leg not scopulate to base, of 2nd without scopula; length about 20 mm. *A. atriceps*, p. 169.

144. *Atmetochilus fossor*, Simon, *J. A. S. B.* lvi, p. 109, 1887.

Colour: carapace reddish brown; legs paler, with clear red naked dorsal bands; abdomen blackish. *Carapace* narrowed in front, width of head less than length of area between eyes and fovea, as long as patella, tibia, and one third of protarsus of 1st and 4th legs; anterior median *eyes* half a diameter apart and twice as far from the laterals. *Sternum* longer than wide. *Palp* with tarsus scopulate distally. *Legs* of 1st and 2nd pairs with patella and tibia spined internally, protarsus of 1st scopulate to base, of 2nd not scopulate to base. Apical segment of posterior *mamillæ* nearly twice as long as 2nd segment.

Measurements in mm.—Total length 43, carapace 20, 1st leg 46, 2nd 42, 3rd 36, 4th 49.

Loc. Tavoy in Tenasserim (*Moti Ram*).

145. *Atmetochilus atriceps*, sp. n.

Damarchus oatesii, Thorell, *Spiders of Burma*, p. 2, 1895, in part.

Resembling *A. fossor*, but much smaller, the head higher and wider, its width equal to length of area between fovea and eyes. *Sternum* as broad as long. First leg without spines on inner side of patella and tibia; the inferior tibial spines long, setiform, not stout as in *A. fossor*; protarsus not scopulate to base; tarsus and protarsus of 2nd leg not scopulate. Apical segment of posterior *mamillæ* a little longer than 2nd segment.

Measurements in mm.—Total length 21, carapace 11.5, 1st leg 24, 4th leg 29.

Loc. Tenasserim (*Oates*).

Genus **DAMARCHUS**, Thorell.

Damarchus, Thorell, *Sv. Vet.-Akad. Handl.* xxiv, no. 2, p. 14, 1891 : *Simon, Hist. Nat. Araign.* i, p. 107, 1892.

Allied to *Atmetochilus*, but with the posterior sternal sigilla large and about equally distant from each other and from the lateral margin; the remaining sigilla marginal; no central depression in the anterior half of the sternum. Male with anterior tibia tipped with a single short spur armed with a long curved spine. Tarsus of palp short and truncate.

Type, *D. workmanni*, Thorell.

Distribution. Burma, Malacca, Sumatra.

146. *Damarchus oatesii*, Thorell, *Spiders of Burma*, p. 2, 1895.

♀. *Colour*: carapace and legs reddish brown above, paler below; abdomen blackish, ornamented above with oblique rows of pale spots. *Carapace* one-third longer than wide, scarcely longer than protarsus and tarsus of 4th leg, exceeding patella and tibia of 4th or of 1st; *eyes* of anterior line straight, medians large, less than half a diameter apart and less than a diameter from the laterals. Tibiæ of legs armed with setiform spines; protarsi with stouter spines.

♂. *Carapace* wider and lower than in ♀; legs longer. Tibial apophysis of 1st leg consisting of a process tipped with a long curved spine. *Palpal organ* with bulb piriform; spine short, slender, filiform, and lightly curved.

Measurements in mm.—♀. Total length 22, carapace 8, 1st leg 18, 4th leg 21. ♂. Total length 15, carapace 7.5, 1st leg 20, 4th leg 26.

Loc. Burma: Rangoon, and Double Island in the Moulmein River (*Oates*).

Family DIPLURIDÆ.

Resembling the Ctenizidæ in having 3 claws, of which the superior are strongly toothed, and in having no unguis tufts* on the tarsi; but distinguished by the absence of the *rastellum*, by having the posterior *spinners* very long and the anterior widely separated, and by the small size and marginal position of the *sternal sigilla*.

Distribution. Tropical and temperate parts of the world to the south of about the 45th parallel of N. lat.

Habits. The species of Dipluridæ live in tubes lined with silk, which is produced beyond the mouth of the tube in the form of an extended sheet of web constituting a snare.

Synopsis of Indian Genera.

- a. Terminal segment of posterior mamillæ flexible and as long as the preceding two; labium unarmed ISCHNOTHELE, p. 170.
- b. Terminal segment of posterior mamillæ shorter than preceding two, straight, not flexible; labium spinulose MACROTHELE, p. 171.

Genus ISCHNOTHELE, Ausserer.

Ischnothele, *Ausserer, Verh. z.-b. Ges. Wien*, xxv, p. 162, 1875.

Thelechoris, *Karsch, Abh. Ver. Bremen*, vii, p. 196, 1881.

Entomothele, *Simon, Ann. Soc. Ent. Fr.* 1888, p. 235.

Carapace low; fovea deep, procurved; ocular tubercle large; lateral eyes large, elliptical. *Mandible* armed below with two rows of teeth; *maxillæ* studded basally with spicules; *labium* unarmed. *Legs* spined, not scopulate; *tarsi* not spined. *Abdomen* broad, posteriorly truncate: space between anterior mamillæ exceeding their length, and about six times their diameter; posterior mamillæ very long, their distal segment as long as the others, slender and flexible.

♂ with single spur on the tibia of the 1st leg; tarsus of palp slender, as long as the tibia.

Type, *I. caudata*, Auss.

Distribution. Central and South America; Tropical Africa; Madagascar; India.

* Except in the tropical African genus *Heterothele*.

147. *Ischnothele dumicola*, sp. n.

♀. *Colour*: integument yellowish brown, clouded with black and covered with greyish hairs; sternum dark; abdomen ornamented above on each side with a row of six pale, obliquely set spots or short stripes.

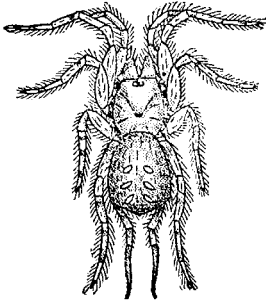


Fig. 55.

Ischnothele dumicola, ♀, $\times 2$.

Carapace as long as patella and tibia of 4th leg; and as patella, tibia, and half the protarsus of 1st leg.

♂. Smaller than ♀; spur on tibia of 1st leg external, stout, nearly straight, pointed; protarsus arcuate in its basal half. *Palp* with tibia a little inflated; spine of palpal organ stout, straight at base, filiform and curved apically.

Measurements in mm.—♀. Total length 9, carapace 4, 1st leg 8, 4th leg 11. ♂. Total length 6, carapace 3.5, 1st leg 7.5, 4th leg 10.5.

Loc. Western India: Poona (*Wroughton*).

Genus **MACROTHELE**, Ausserer.

Macrothele, *Ausserer*, *Verh. z.-b. Ges. Wien*, xxi, p. 181, 1871; *Simon*, *Hist. Nat. Araign.* i, p. 184, 1892.

Differs from the preceding genus in having the thoracic fovea straight or recurved, the labium studded with spicules, the tarsi of the legs armed with spines, and the terminal segment of the posterior spinners shorter than the 1st and 2nd taken together, straight, and not flexible and sinuous.

Type, *Macrothele calpetana* (Walck.).

Distribution. Mediterranean Region; Eastern Oriental Region and New Zealand.

148. *Macrothele maculata*, *Thorell*, *Ann. Mus. Genova*, xxviii, p. 409, 1890 (*Diplura*); *id. op. cit.* xxxvii, p. 184, 1897 (*Macrothele*).

♀. *Colour* blackish; abdomen spotted below and banded above as in the foregoing species. *Carapace* as long as patella and tibia of 4th or of 1st leg.

Measurements in mm.—Total length 15, carapace 7.25, 1st leg 21, 4th leg 23.

Loc. Burma: Yado and Plapoo in Tenasserim (*Fea*).

Family BARYCHELIDÆ.

Medium-sized Mygalomorphæ which, except in the aberrant genus *Sason*, resemble the Ctenizidæ in being furnished with a rastellum, but differ from them and from the Dipluridæ in having distinct unguis tufts and only two untoothed or weakly toothed claws on the tarsi. As in the Dipluridæ, the sternal sigilla are small and marginal. The spinning-mamillæ resemble those of the typical Ctenizidæ in forming a compact cluster, the apical segment of the posterior pair being small and shorter than the segments that precede it.

Distribution. S. Europe; Africa; Mauritius; India and Ceylon, thence eastwards as far as Australia and the Fiji Islands; S. America.

Habits. Mostly ground-living burrowing Spiders, which generally, but by no means always, close the burrow with a trap-door.

Synopsis of Indian Genera.

- a.* Eyes scattered, not aggregated on a tubercle; no rastellum SASON, p. 172.
- b.* Eyes aggregated on a tubercle; rastellum always present in the female.
 - a*¹. A single pair of spinners DIPLOTHELE, p. 174.
 - b*¹. Two pairs of spinners.
 - a*². Thoracic fovea lightly recurved SASONICHUS, p. 177.
 - b*². Thoracic fovea lightly or strongly procurved.
 - a*³. Ocular area distinctly wider behind than in front; fovea strongly procurved PLAGIOBOTHRUS, p. 175.
 - b*³. Ocular area as wide in front as behind; fovea lightly procurved. SIPALOLASMA, p. 176.

Genus SASON, Simon.

- Sarpedon, *O. P. Cambr. P. Z. S.* 1883, p. 353 (nom. præocc.).
Sason, Simon, *Bull. Soc. ent. Fr.* 1887, p. cxcv; *id. Hist. Nat. Araign.* i, p. 130, 1892.
 Satzicus, Simon, *J. A. S. B.* lvi, pt. 2, p. 286, 1888.
 Œcophlæus, Pocock, *A. M. N. H.* (6) ix, p. 49, 1892.

Carapace with fovea recurved or nearly straight; no ocular tubercle; ocular area nearly twice as wide as long; *eyes* of anterior line strongly procurved; anterior laterals not far from edge of carapace, widely separated from posterior laterals. *Mandibles* small, depressed, without rastellum. *Labium* in female quadrate, armed with row of teeth; maxillæ with a few teeth. *Legs* weakly spined, the anterior pairs scopulate.

♂. Tibia of 1st leg with a single spur on inner side; tarsus of palp short.

Type, *S. robustum*, O. P. Cambr.

Distribution. S. India, Ceylon, Andaman Islands; Celebes.

Habits. These Spiders construct on walls and tree-trunks a shallow domicile furnished with two doors opening back to back, and consisting of small coherent particles of leaves or other material.

Synopsis of Indian Species.

Males.

- a. Labium armed with a complete row of teeth *S. armatoris*, p. 174.
- b. Labium unarmed.
 - a¹. Legs banded *S. robustum*, p. 173.
 - b¹. Legs not banded *S. andamanicum*, p. 174.

Females.

- a. Carapace high, as long as patella, tibia, and protarsus of 1st leg *S. robustum*, p. 173.
- b. Carapace low, as long as patella, tibia, and half protarsus of 1st leg *S. cinctipes*, p. 173.

149. *Sason robustum*, O. P. Cambr. *P. Z. S.* 1883, p. 354, pl. 36, fig. 11 (Sarpedon).

♀. *Colour* yellowish red; carapace varied with black; legs and palpi strongly banded; abdomen blackish above and ornamented with two posteriorly converging rows of pale spots. *Carapace* high, strongly elevated in front of the fovea, which is situated on its posterior slope; lightly convex or sloped downwards anteriorly; as long as patella, tibia, and protarsus of 1st leg, and as patella and tibia or tibia and protarsus of 4th.

♂. Differing from ♀ (according to Simon) in having the labium and maxillæ unarmed. Tibial spur of anterior leg curved and spiniform.

Measurements in mm.—♀. Total length 10, carapace 5, 1st, 2nd, and 3rd legs 9, 4th 12.5.

Loc. Ceylon: Punduloya (*Green*).

150. *Sason cinctipes*, Pocock, *A. M. N. H.* (6) ix, p. 49, pl. iii A, fig. 1, 1892 (*Ecophloeus*).

Like the preceding species, but with the *carapace* much lower, being scarcely elevated posteriorly in front of the fovea, so that the latter is situated almost on a level with the upper surface of the carapace, the area between the fovea and the eye being almost horizontal. *Legs* longer; carapace as long as patella, tibia, and half the protarsus of the 1st, distinctly less than patella and tibia or than tibia and protarsus of 4th.

Measurements in mm.—Total length 15·5, carapace 6, 1st leg 14, 4th 17·5.

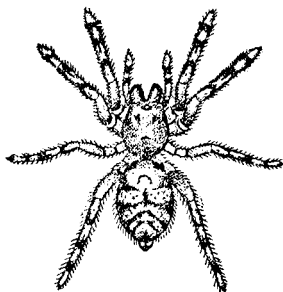


Fig. 56.—*Sason cinctipes*, ♀, $\times 1\frac{1}{2}$.

Loc. Ceylon: Punduloya (*Green*); Kanthalai (*Yerbury*); also young specimens of this or of a nearly allied species from the Madras Presidency (*Jambunathan*).

151. *Sason armatoris*, sp. n.

Like the preceding in colour, and differing from the male of *S. robustum* in having a complete row of teeth on the labium. Carapace nearly flat above, shorter than patella and tibia of all the legs, about as long as tibia of 4th; fovea scarcely recurved; space between lateral eyes equalling diameter of anterior lateral. Tibial spur of 1st leg conical, tipped with a long curved spine. Spine of palpal organ straight pointed, rising at the extremity of the bulb.

Measurements in mm.—Total length 10, carapace 5, 1st leg 16, 4th leg 20.

Loc. Travancore: Trivandrum and Ponmudi (*Ferguson*).

152. *Sason andamanicum*, *Simon*, *J. A. S. B.* lvi, pt. 2, p. 286, 1888 (*Satzicus*); *id. Hist. Nat. Araign.* i, p. 130, 1892 (*Sason*).

♂. Colour apparently as in the preceding species, but the legs darker towards the extremities, not annulate. Carapace with fovea strongly recurved; ocular area about one-third wider than long. Labium and maxillæ unarmed.

Measurements in mm.—Carapace 5, 1st leg 15·7, 4th 17·3.

Loc. Andaman Islands: Port Blair (*Oldham*).

Genus **DIPLOTHELE**, O. P. Cambr.

Diplothele, O. P. Cambr. *P. Z. S.* 1890, p. 621; *Simon*, *Hist. Nat. Araign.* i, p. 122, 1892.

♀. Carapace with head convex; fovea procurved; ocular area a little longer than wide, parallel-sided; anterior lateral eyes on

the frontal margin, oval, separated by a space which is a little less than their diameter: median eyes close together. *Mandibles* with rastellum consisting of long, hooked, irregularly arranged teeth. *Labium* wider than long, unarmed; maxillæ with a few basal spinules. *Legs* strong and short, anterior pair unarmed, with scopulate tarsi and protarsi; posterior pairs with subsetiform spines, scarcely scopulate. *Anterior spinners* absent.

♂. Ocular area wider behind; mandibles small, subvertical; without rastellum; all the legs with many spines; tibia of anterior leg incrassate, furnished with a very short spine-tipped spur; tarsus of palp long, attenuate, apically obtuse.

Type, *D. walshi*, O. P. Cambr.

Distribution. India and Ceylon.

Synopsis of Species.

- a. Protarsi of anterior legs longer than tarsi *D. walshi*, p. 175.
- b. Protarsi of anterior legs not longer than tarsi *D. halyi*, p. 175.

153. *Diplothele walshi*, O. P. Cambr. P. Z. S. 1890, p. 621, pl. xliii, fig. 1.

Colour: carapace pale yellow-brown, with darker radiating lines; legs, palpi, sternum, and mouth-parts yellowish; abdomen of dull clay-yellow colour, marked on the upper side with broken transverse black bands of varied width and clearness of definition, those on the anterior half being the strongest and best defined. *Legs* with protarsi longer than tarsi; tarsi of anterior pairs and of palpus furnished above with a few clavate bristles.

Length 8.5 mm.

Loc. Bengal: Orissa (*Walsh.*).

154. *Diplothele halyi*, Simon, *Hist. Nat. Araign.* i, p. 123, 1892.

♀. Differing (according to Simon) from the female of *D. walshi* in having the abdominal pattern less distinct, the fovea larger, and the protarsi of the anterior legs not longer than the tarsi.

♂. More thickly hairy than the female. *Carapace* lower. *Legs* longer; tibial spur of 1st tipped with a slender curved and slightly elevated spine; protarsus with a single spine below; protarsus of 2nd with two spines. *Palpi* strong, unarmed; spine of organ straight, but with apex twisted and acutely bifid.

Total length of ♀ 10 mm.; ♂, 9 mm.

Loc. Ceylon: Nuwara Eliya (*Simon*).

Genus **PLAGIOBOTHRUS**, Karsch.

Plagiobothrus, Karsch, *Berl. ent. Zeits.* xxxvi, p. 272, 1892.

Carapace with head high, fovea procurved; ocular area about one-third wider than long, narrowed in front; *eyes* of anterior line strongly procurved, posterior ends of laterals in advance of anterior edge of medians, space between the two anterior laterals

almost twice the long diameter of the eye. *Rastellum* consisting of cluster of strong spines. *Labium* and maxillæ toothed; *legs* and palpi scantily scopulate, spined; claws toothed. *Mamillæ* normal.

Type, *P. semilunaris*, Karsch.

Distribution. Ceylon.

155. *Plagiobothrus semilunaris*, Karsch, *Berl. ent. Zeits.* xxxvi, p. 273, t. x, fig. 3, 1892.

Colour: carapace and limbs deep brown, ocular tubercle yellow; abdomen black above, brown beneath, with epigastric area and opercula pale. *Carapace* nearly one fourth longer than wide, as long as patella and tibia, and one third of the protarsus of 1st leg, a little longer than patella and tibia of 4th. Tibia of *palpus* armed with 1 basal inferior and about 4 apical spines; 1st leg unarmed; 2nd with 2 spines on inner and 2 on underside of tibia and protarsus; tibia and protarsus of 3rd and 4th with many spines.

Measurements in mm.—Total length 24, carapace 11, 1st leg 26, 2nd leg 23, 3rd leg 21·5, 4th leg 30·5.

Loc. Ceylon: Peradeniya (*Sarasin*); Kandy (*Yerbury*).

Genus *SIPALOLASMA*, Simon.

Sipalolasma, Simon, *Hist. Nat. Araign.* i. p. 123, 1892.

Differs from *Plagiobothrus* in having the thoracic fovea transverse, with only a slight procurvature, the ocular area not or scarcely wider behind than in front, and the protarsi and tarsi of the anterior two pairs of legs thickly scopulate to the base, that of the tarsus of the 2nd leg being at most narrowly divided.

♂ with legs much longer and thinner; tibia of 1st pair with a low spine-tipped spur; tarsus of palp short, bifid.

Type, *S. ellioti*, Simon.

Distribution. Ceylon.

Synopsis of Species (females).

- a. Length 11 mm.; claws unarmed. *S. ellioti*, p. 176.
b. Length 22 mm.; claws toothed *S. greeni*, p. 177.

156. *Sipalolasma greeni*, sp. n.

♀. *Colour:* carapace and legs deep brown, femora clearer red, coxæ and sternum darker than femora; abdomen blackish. *Carapace* a little longer than broad, its length equal to patella and tibia of 4th leg. *Labium* with 3 teeth; tibia of *palp* and tibia and protarsus of 3rd and 4th *legs* armed with many spines, tibia of 1st with about 8, of 2nd with about 5 spines; scopulæ of 1st and 2nd legs forming a thick fringe; tarsal scopula of 2nd narrowly divided, of 3rd and 4th broadly divided; claws toothed.

Measurements in mm.—Total length 22, carapace 10, 1st leg 23, 4th 27.

Loc. Ceylon: Panduloya (*Green*).

157. *Sipalolasma ellioti*, Simon, *Hist. Nat. Araign.* i, p. 124, fig. 114, 1892.

♀. Smaller than the preceding; the sternum, mouth-parts, palpi, and legs uniformly coloured. *Labium* with 6-7 teeth. *Tarsi* of both 1st and 2nd legs undivided; *claws* of legs unarmed.

♂. Carapace and legs covered with long yellowish pubescence. *Mandibles* much smaller than in female. *Tibia* of 1st leg armed with spines, and at the apex on the inner side with a robust and curved tooth, and beneath with a medium-sized blunt spur tipped with four teeth (spines). *Tibia* of *palp* armed on the inner side and at apex with five spines; *tarsus* small, deeply bifid at apex; spine of palpal organ longer than bulb, with the apex slender and lightly curved.

Length of ♀ 11 mm., of ♂ 10.

Loc. Ceylon: Cottawa (Simon).

Genus **SASONICHUS**, gen. nov.

Allied to *Plagiobothrus* and *Sipalolasma*; but with the thoracic fovea recurved. *Tibia* of 1st leg in male without apical spur; *tarsus* of palp much longer than wide, with a large rounded internal lobe. *Tarsal scopulæ* scanty; *protarsal scopulæ* present only at apex of 1st and 2nd legs.

Type, *S. sullivanii*, sp. n.

Distribution. Southern India.

158. *Sasonichus sullivanii*, sp. n.

Colour a uniform ashy black, with *tarsi* reddish yellow. *Carapace* low, about as long as *patella* and *tibia*, and a little longer than *protarsus* and *tarsus* of 1st leg, as long as *protarsus* of 4th. *Pulp* with *tibia* armed with 5 spines; bulb of palpal organ sub-spherical, deeply grooved, spine slender, lightly sinuous. *Legs* bristly; *tibia* of 1st cylindrical, armed with 8 spines, the one at the apex on the inner side long and curved; the rest of the legs strongly spined.

Measurements in mm.—Total length 12, *carapace* 6, 1st leg 15.5, 4th leg 21.

Loc. Travancore: Trivandrum (Sullivan).

Family THERAPHOSIDÆ.

Medium-sized or very large Mygalomorphæ, differing from the Barychelidæ in having the apical segment of the posterior spinners cylindrical and at least as long as the 2nd segment, and in the absence of the rastellum. Eyes always aggregated on a distinct tubercle.

Distribution. Temperate and tropical countries to the south of the 45th parallel of north latitude, but apparently absent from New Zealand.

Habits. Most of the species are fossorial, but they never close the aperture of the burrow with a movable lid. Other species are met with under stones, in hollow trees, or sheltering in any natural crevice.

The Indian genera of this family are referable to the following four subfamilies:—

- | | |
|--|------------------------------------|
| a. No stridulating organ between the outer surface of the mandible and the inner surface of the coxa of the palp | <i>Theraphosinæ,</i>
[p. 178. |
| b. A stridulating organ between the mandible and coxa of palp. | |
| a ¹ . Outer surface of mandible covered with scopula or pad of feathery hairs | <i>Ornithoctoninæ,</i>
[p. 203. |
| b ¹ . No scopula of feathery hairs on outer side of mandible. | |
| a ² . Inner surface of coxa of palp (maxilla) furnished with simple scattered needle-like bristles | <i>Thrigmopœinæ,</i>
[p. 184. |
| b ² . Inner surface of maxilla furnished with cluster or series of claviform or bacilli-form bristles | <i>Selenocosminæ.</i>
[p. 187. |

Subfamily THERAPHOSINÆ.

No stridulating-organ between the outer surface of the mandible and the adjacent surface of the coxa of the palp, these two surfaces being smooth and at most scantily hairy. There is also no stridulating-organ between the basal segments of the palp and 1st leg, such as is found in the tropical African genera constituting the subfamily *Eumenophorinæ*.

Distribution. Mediterranean area of Palearctic region; tropical West Africa; India and Burma; America from the Southern States of the Union to Patagonia.

Synopsis of Indian Genera.

- | | |
|---|---------------------------------|
| a. Thoracic fovea straight, transverse, at most slightly procurved. | [p. 181. |
| a ¹ . Anterior leg of male with strong tibial spur. | <i>Plesiophrictus,</i> |
| b ¹ . Anterior leg of male without tibial spur . . | <i>Iscunocolus,</i>
[p. 183. |

- b. Thoracic fovea with distinct crescentic procurvature.
- a². Fovea shallow, sublinear; posterior sigilla wide apart and small HETEROPHRICTUS, [p. 180.
- b². Fovea very strong and strongly curved; posterior sigilla large, submedian PHLOGIODES, p. 179.

Genus **PHLOGIODES**, Pocock.

Phlogiodes, *Pocock, Jour. Bom. N. H. Soc.* xii, p. 748, 1899.

Thoracic fovea deep, strongly procurved. *Eyes* of anterior line slightly procurved. *Legs* strong, weakly spined, strongly scopulate, at least in male; claws unarmed. *Sternum* with posterior sigilla very large and remote from the margin. First leg without tibial spur in male.

Type, *P. validus*, Pocock.

Distribution. Western India.

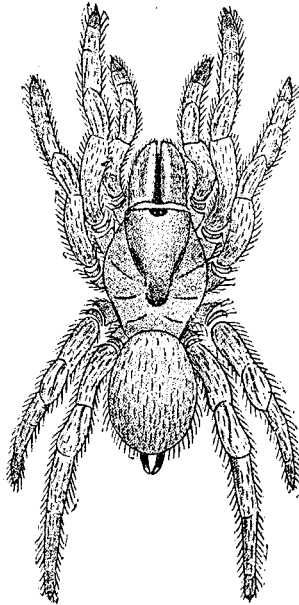


Fig. 57.—*Phlogiodes robustus*, ♀. $\times \frac{1}{2}$.

Synopsis of Species.

- | | |
|--|------------------------------|
| a. Femora of legs reddish, the rest of the segments
greyish white (♂) | <i>P. validus</i> , p. 179. |
| b. Legs uniformly coloured (♀) | <i>P. robustus</i> , p. 180. |

159. *Phlogiodes validus*, *Pocock, Jour. Bom. N. II. Soc.* xii, p. 748, 1899.

♂. *Colour*: carapace with coating of silky yellow hair, femora of legs with golden brown hairs, the rest of the segments with

greyish-white hairs; abdomen covered above with long golden brown hairs. *Carapace* a little longer than broad, low and narrow in the head-region, shorter than patella and tibia of 1st and 4th legs. *Legs* long and strong; protarsus of 1st scopulate to base, of 2nd almost to base, of 3rd only at apex; tarsal scopula of 4th divided; protarsus of 1st with one inferior apical spine, of 2nd, 3rd, and 4th with many apical spines; two pairs of superior spines on 3rd protarsus, one pair of anterior spines on 4th protarsus. *Palpus* unspined; bulb of organ but little inflated; spine triangular, broad and subspatulate at base, pointed distally.

Measurements in mm.—Total length 25, carapace 12.2, 1st leg 41, 4th 46.

Loc. Matheran (*Phipson*).

160. *Phlogiodes robustus*, *Pocock, Jour. Bom. N. H. Soc.* xii, p. 748, 1899.

♀. *Colour*: carapace and limbs reddish brown; abdomen blackish above; hairy clothing greyish red. *Carapace* long; head high, much longer than patella and tibia of 1st and of 4th leg. *Legs* short, very strong, spined as in *P. validus*, the anterior thicker than the posterior: patella of 1st as long as tibia, tarsus almost as long as protarsus; protarsus of 1st with entire scopula, of 2nd scopulate at sides, of 3rd and 4th not scopulate; tarsal scopula of 1st entire, of 2nd basally divided, of 3rd and 4th present only at tip and sides of the segments.

Measurements in mm.—Total length 27, carapace 13, 1st leg 29, 4th 33.

Loc. Matheran (*Phipson*); Jauli in Satara (*Master*).

Genus **HETEROPHRICTUS**, nov.

Carapace with head narrow; fovea small, procurved; eyes of anterior line slightly procurved. *Legs* slender, spined; protarsi of 1st and 2nd scopulate only in the distal half, of 3rd and 4th scopulate at apex; tarsal scopulæ of all legs divided: claws unarmed. *Sternum* with posterior sigilla deep, separated from the margin by a space equal to their own length and from each other by about three times that distance.

Type, *H. milleti*, sp. n.

Distribution. Western India.

161. *Heterophrictus milleti*, sp. n.

Colour: integument reddish brown, covered with rusty-red hairs; some white hairs at extremity of 1st leg. *Carapace* with head elevated, as long as patella and tibia of 4th leg, a little longer than those of 1st. *Legs* of 1st and 2nd pairs with a few spines on tibiæ and protarsi, of 3rd and 4th pairs with many spines on these segments; protarsus of 1st short, barely as long as patella. *Abdomen* long, parallel-sided, subtruncate posteriorly.

Measurements in mm.—Total length 29, carapace 13, 1st leg 30, 4th leg 36.

Loc. Násik (*Millet*); also immature specimens of a nearly allied form from Eastern Poona (*Irani*) and Jauli in Satara (*Master*).

Genus **PLESIOPHRICTUS**, Pocock.

Plesiophrictus, Pocock, *Journ. Bom. N. H. Soc.* xii, p. 749, 1899.

Thoracic fovea straight, transverse; *eyes* of anterior line slightly procurved. *Labium* and *maxille* spinulose. *Sternum* with marginal sigilla. *Legs* spined; a few spines only on the anterior tibiae and protarsi, many more upon these segments of the 3rd and 4th legs; tarsal scopulae of 1st and 2nd entire or scarcely divided, of 3rd and 4th divided by band of setae.

Tibia of anterior leg in male with a strong spur.

Type, *P. millardi*, Pocock.

Distribution. South and West India; Ceylon.

Synopsis of Species.

- a. Protarsus of 1st leg covered above with white hair; rest of the body and limbs brown *P. millardi*, p. 181.
- b. Protarsus of 1st leg brown or blackish like rest of limbs.
 - a¹. Anterior lateral eyes not larger than medians; anterior leg shorter than posterior.
 - a². 3rd leg less than twice as long as carapace.
 - a¹. Posterior ends of anterior eyes in a straight line *P. sericeus*, p. 182.
 - b³. Posterior ends of anterior lateral eyes on a level with centres of medians *P. collinus*, p. 182.
 - b². 3rd leg more than twice as long as carapace *P. fabrei*, p. 182.
 - b¹. Anterior lateral eyes much larger than medians; anterior leg not shorter than posterior *P. tenuipes*, p. 182.

162. **Plesiophrictus millardi**, Pocock, *Jour. Bom. N. H. Soc.* xii, p. 749, 1899.

♂. *Colour* a uniform mouse-brown, except that the upper side of the protarsus of the 1st leg is white. *Carapace* as long as patella and tibia of 1st and 4th legs. *Legs* with protarsal scopulae scanty on anterior, absent on posterior pairs; tibia of 1st slightly incrassate; spur slightly curved, directed forwards, a tuberculiform spur accompanied by a long black spine above it on the inner side; many spinules between the two. *Palp.* unspined; spine of palpal organ broad at base, filiform, and spirally twisted distally.

Measurements in mm.—Total length 12, carapace 6, 1st leg 15, 4th leg 16.

Loc. Bombay: Matheran (*Millard*), Uran (*Aitken*).

163. *Plesiophrictus sericeus*, sp. n.

♀. *Colour*: integument blackish brown; hairs yellowish brown, long on the lower side of the femora and patellæ. *Carapace* as long as patella, tibia, and one-third of protarsus of 1st and 4th legs; *eyes* of anterior line nearly straight, the posterior rim of the eyes almost on a level; the laterals on each side scarcely separated. *Mandible* armed below with a row of 11-13 larger teeth and several smaller teeth posteriorly. Tibiæ of 1st and 2nd legs unspined; protarsus with one inferior spine; tibiæ and protarsi of 3rd and 4th legs with many spines.

Measurements in mm.—Total length 22, carapace 10, 1st leg 23, 4th leg 26.

Loc. Eastern part of Poona district (*Irani*).

164. *Plesiophrictus collinus*, Pocock, Jour. Bom. N. H. Soc. xii, p. 749, 1899.

Allied to *P. sericeus* but smaller, and with the lateral eyes of the anterior row set more forwards, so that their posterior ends are in a line with the centres of the medians; the two laterals separated by a space which is about equal to half the diameter of the anterior lateral. *Mandible* armed below with a single row of 8-9 teeth, without posterior supplementary teeth. *Legs* a little shorter as compared with carapace than in *P. sericeus*; the carapace being equal to the tibia + protarsus of the 4th leg.

Measurements in mm.—Total length 18, carapace 8.5, 1st leg 19, 4th 20.

Loc. Yercaud in the Shevaroy Hills (*Henderson*); Madras Presidency (*Jambunathan*).

165. *Plesiophrictus tenuipes*, Pocock, Jour. Bom. N. H. Soc. xii, p. 749, 1899.

Differing from *P. collinus* and *P. sericeus* in having the anterior lateral eye much larger than the median, and distinctly elliptical instead of subspherical, its posterior edge almost on a level with that of the median, its anterior edge far in advance of that of the median. *Mandible* armed below as in *P. collinus*. *Legs* much longer; carapace as long as patella and tibia of 1st or 4th; anterior legs not stouter than posterior; all the tarsal scopulæ divided.

Measurements in mm.—Total length 16, carapace 7, 1st leg 16, 4th leg 20.

Loc. Ceylon: Kandy (*Yerbury*).

The following species is probably referable to *Plesiophrictus* rather than to *Stichoplastus*, a typically Neotropical genus.

166. *Plesiophrictus fabrei*, Simon, Ann. Soc. Ent. Fr. lxi, p. 278, 1892 (*Stichoplastus*).

♀. *Colour* much as in the preceding species. *Carapace* as long as

patella and tibia of 4th leg, fovea lightly procurved; eyes of anterior line subequal. *Legs* longer than in the preceding species (cf. measurements); tarsal scopulæ of 3rd and 4th divided.

Measurements in mm.—Total length 10·2, 1st leg 26·2, 4th 29·5.

Loc. S. India: Madura (*Fabre*).

Genus **ISCHNOCOLUS**, Ausserer.

Ischnocolus, *Ausserer*, *Verh. z.-b. Ges. Wien*, xxi, p. 184, 1871;
Simon, *Hist. Nat. Araign.* i, p. 135, 1892.

Carapace low; fovea straight, slightly curved; eyes of anterior line subequal, slightly procurved. *Legs*, in the typical form, spiny, especially on the tibiæ and protarsi of the 2nd and 3rd pairs; tarsal scopulæ of all the legs divided by a band of setæ in the adult. No tibial spurs on anterior leg of male. In the typical form the tarsus of the palp is long and subcylindrical, and overlaps the palpal organ.

Type, *I. holosericeus*, *Auss.* S. Europe.

Distribution. Mediterranean district of Palearctic Region, and possibly the Oriental Region.

The Indian species here referred to this genus may be diagnosed as follows* :—

- a.* Legs without spines *I. brevipes*, p. 183.
- b.* Legs, especially on tibiæ and protarsi of 3rd and 4th pairs, with many spines.
 - a*¹. Abdomen ornamented above with oblique pale spots *I. ornatus*, p. 184.
 - b*¹. Abdomen not spotted above *I. linteatus*, p. 183.

167. *Ischnocolus linteatus*, *Simon*, *Ann. Soc. Ent. Fr.* ix, p. 308 1891.

♀. *Colour*: integument blackish, hairy clothing yellowish.

Carapace with fovea small and transverse; eyes of anterior line subequal, the medians scarcely larger than the laterals. *Labium* not much wider than long; the spinules arranged in three transverse series. Anterior *legs* with protarsi scarcely longer than the tarsi, armed with a single apical spine below; tibiæ unarmed; posterior legs strongly spined.

Measurements in mm.—Total length 13, carapace 6, width of carapace 4·5.

Loc. S. India: Pondicherry.

This species probably belongs to the genus *Plesiophrictus*.

168. *Ischnocolus brevipes*, *Thorell*, *Ann. Mus. Genova*, xxxvii, p. 170, 1897.

♀. *Colour* of integument blackish, of hairy coating pale ferruginous. *Carapace* low; fovea slightly procurved, scarcely longer than patella and tibia of 1st, distinctly longer than those of

* It is doubtful if any of these species really belong to *Ischnocolus*.

4th leg. *Legs* short, without spines, except two at the tip of each of the posterior protarsi below.

♂. *Carapace* a little shorter than patella and tibia of 1st, a little longer than those of 4th leg. *Palpal organ* with spine very long and almost semicircularly curved.

Measurements in mm.—♀. Total length 18·5, carapace 7, 1st leg and 4th leg 18. ♂. Total length 15, carapace 7, 1st leg 21·5, 4th 19.

Loc. Burma: Mooleyit in Tenasserim and Yadò in Karennee (*Fea*).

169. *Ischnocolus ornatus*, *Thorell, Ann. Mus. Genova*, xxxvii p. 173, 1897.

♀. *Colour* much as in the preceding species, but the abdomen ornamented above with small, sub-oblique pale spots, arranged in two longitudinal rows. *Carapace* with straight thoracic fovea, longer than patella and tibia of 1st and of 4th legs. Patella and tibia of 1st leg a little longer than those of 4th; anterior legs with a single inferior apical protarsal spine; tibiæ and protarsi of 3rd and 4th legs spined.

Measurements in mm.—Total length 12, carapace 6, 1st leg 14, 4th 15·5.

Loc. Burma: Prome (*Fea*).

Subfamily THRIGMOPŒINÆ, nov.

A stridulating-organ present between the mandible and the basal segment of the palp (maxilla). On the mandible some of the hairs which form the posterior portion of the oral fringe are



Fig. 58.—External surface of mandible of *Thrigmopæus insignis*. a. Cluster of bristles.

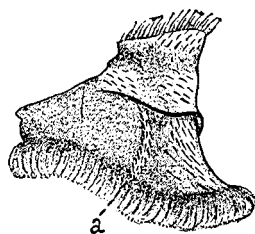


Fig. 59.—Inner surface of maxilla of *Thrigmopæus insignis*. a. Crest bearing spinules.

modified to form a small cluster of vibratile bristles (fig. 58, a), and on the adjacent surface of the maxilla there are regularly or irregularly arranged stiff aciculate bristles (fig. 59, a) which scrape against those on the mandible when the maxilla is moved up and down.

Distribution. S. India.

Synopsis of Indian Genera.

- a.* Stridulating bristles on maxilla irregularly scattered HAPLOCLASTUS, p. 185.
b. Stridulating bristles on maxilla arranged in a definite curved series THRIGMOPÆUS, p. 186.

Genus **HAPLOCLASTUS**, Simon.

Haploclastus, *Simon, Hist. Nat. Araign.* i, p. 152, 1892; *Pocock, A. M. N. II.* (6) xv, p. 169, 1895.

Carapace low; fovea straight; ocular tubercle wider than long; eyes of anterior line subequal, a little procurved. *Mandible* furnished below externally with a few irregularly arranged, long, stout, but apically filiform bristles mixed up with the hairs of the oral fringe. *Maxilla* furnished on its inner side with scattered, irregularly arranged, longer and shorter spines and spiniform bristles. *Legs* without spines; protarsus of 1st and 2nd scopulate to the base, of 3rd scopulate in its distal half, of 4th scopulate apically, the scopula divided; tarsal scopulæ entire, except that of 4th leg which is divided in its basal half.

Type, *H. cervinus*, Simon.

Distribution. S. India.

Synopsis of Species.

- a.* 4th leg as long as 1st and longer than 2nd *H. cervinus*, p. 185.
b. 4th leg shorter than 1st and 2nd *H. nilgirinus*, p. 185.

170. **Haploclastus nilgirinus**, *Pocock, Jour. Bom. N. II. Soc.* xii, p. 747, 1899.

Colour: carapace black, clothed like the limbs and abdomen with brownish-yellow hairs; sternum, coxæ, and lower side of femora at least of 1st and 2nd legs velvety black. *Carapace* about one-fourth longer than wide, moderately high and convex; fovea large, slightly procurved; length of carapace almost equal to patella and tibia of 1st leg, slightly greater than those of 2nd and of 4th, longer also than protarsus and tarsus of 4th. Patella and tibia of 2nd leg slightly longer than of 4th.

Measurements in mm.—Total length 52, carapace 24, length of 1st leg 64, 2nd 60, 3rd 48, 4th 58.

Loc. Nilgiri Hills (*Daly*).

171. **Haploclastus cervinus**, *Simon, Hist. Nat. Araign.* i, p. 152, 1892.

Colour: integument blackish, hairs ferruginous. *Carapace* low. *Legs* moderately long, the 1st pair scarcely longer than the 4th.

Measurements in mm.—Total length about 30, length of carapace 15, width 11; length of 1st leg 39, 2nd 27, 3rd 31.2, 4th 38.8.

Loc. Palni Hills in S. India.

This species is probably based upon a young specimen.

Genus **THRIGMOPEUS**, Pocock.

Thrigmopæus, Pocock, *Jour. Bom. N. H. Soc.* xii, p. 747, 1899.

Closely allied to *Haploclostus*, but with the *stridulating area* on mandible consisting of a large semicircular cluster of many curved, thickened, but pointed bristles; on the maxilla the aciculate bristles above the suture are arranged without definite order, but below the suture there is a definite curved vertical row of these bristles near the middle of the segment, the area behind this row being smooth and in front of it furnished with many bristles arranged without order. Protarsi of 3rd and 4th legs armed apically with marginal spines both above and below.

Type, *T. insignis*, Pocock.

Distribution. Western India.

Synopsis of Species.

- a. Fovea as wide as ocular tubercle; carapace longer than patella and tibia of 2nd leg, equal to those of 4th *T. insignis*, p. 186.
- b. Fovea less than width of tubercle; carapace shorter than patella and tibia of 2nd leg and than those of 4th *T. truculentus*, p. 186.

172. *Thrigmopæus insignis*, Pocock, *Jour. Bom. N. H. Soc.* xii, p. 747, 1899.

♀. *Colour*: integument blackish, hairs on carapace yellowish brown, darker on upper side of legs; velvety black on sternum, coxæ, and lower side of femora and abdomen. *Carapace* nearly one-third longer than broad, moderately high; fovea as wide as ocular tubercle, lightly procurved; length of carapace equal to that of patella and tibia of 4th leg, slightly shorter than those of 1st, a little longer than patella and tibia of 2nd and than protarsus and tarsus of 4th. *First leg* less than three times the length of the carapace, 3rd a little more than twice the length; patella and tibia of 3rd as long as width of carapace.

Measurements in mm.—Total length 55, length of carapace 27; length of 1st leg 76, of 2nd 68, of 3rd 56, of 4th 73.

Loc. Kanara Ghats (*Bell*).

173. *Thrigmopæus truculentus*, Pocock, *Jour. Bom. N. H. Soc.* xii, p. 748, 1899.

Smaller and paler in *colour* than the preceding species; *carapace* lower; fovea less than width of ocular tubercle; length of carapace less than that of patella and tibia and than protarsus and tarsus of 4th leg, less also than patella and tibia of 2nd and than protarsus and tarsus of 4th. *Legs* longer, 1st leg nearly three and a half times as long as carapace.

Measurements in mm.—Total length 40, length of carapace 19; length of 1st leg 65, 2nd 57, 3rd 44, 4th 62.

Loc. India: Karwar (*Bombay N. H. Soc.*).

Subfamily SELENOCOSMIINÆ.

A stridulating organ present between the mandible and maxilla, and consisting of a row or cluster of vibratile bacilliform bristles on the maxilla (fig. 61) and of spines or spiniform bristles upon

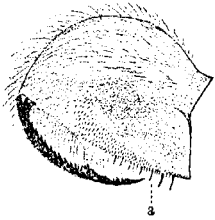


Fig. 60.—Outer surface of mandible of *Chilobrachys masoni*.
a, stridulating spikes.

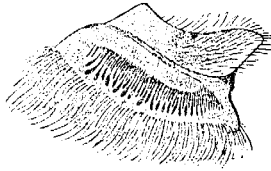


Fig. 61.—Inner surface of maxilla of *Chilobrachys masoni*, showing series of bacilliform spines.

the lower portion of the outer surface of the mandible (fig. 60, *a*). Legs without spines or with a few only at the extremity of the protarsi. Tibia of anterior leg in male not spurred. Posterior sternal sigilla remote from the margin.

Distribution. Ranging from India and Ceylon to Australia.

Synopsis of Indian Genera.

- | | |
|---|-----------------------|
| <i>a</i> . Legs of 4th pair much thicker than those of 1st, with the protarsal scopula entire and extending to base of segment | LYROGNATHUS, p. 202. |
| <i>b</i> . Legs of 4th pair weaker than those of 1st pair, with the protarsal scopula divided and apical. | |
| <i>a</i> ¹ . Thoracic fovea transversely linear; one or more tubercles intermixed with the bacilliform bristles on maxilla | PŒCILOTHERIA, p. 188. |
| <i>b</i> ¹ . Thoracic fovea crescentically procurved; no tubercles amongst bacilli on maxilla. | |
| <i>a</i> ² . Stridulating organ consisting of short spines on mandible and of a single or double row of bacilli overlapped by a fringe of hairs on maxilla | CHILOBRACHYS, p. 192. |
| <i>b</i> ² . Stridulating organ consisting of spiniform setæ on mandible and of an oval cluster of bacilli without fringe of hairs on maxilla. | |
| <i>a</i> ³ . Tarsal scopulæ of 1st, 2nd, and 3rd legs undivided; no inferior claw | SELENOCOSMIA, p. 200. |
| <i>b</i> ³ . Tarsal scopulæ of all legs divided; inferior claw retained on posterior leg | PHLOGIELLUS, p. 202. |

Genus **PŒCILOTHERIA**, Simon.

Pœcilotheria, Simon, *Bull. Soc. Zool. France*, x, p. 38, 1885; *Pocock*, *A. M. N. H.* (6) xv, p. 170, 1895.

Scurria, C. Koch, *Uebersicht Arachn.* v, p. 74, 1850 (nom. præocc.).

Very large, variegated Spiders with the *carapace* flattish; fovea small, straight; ocular tubercle low; ocular area more than twice as long as wide; *eyes* of anterior line nearly equidistant, procurved, centres of the laterals slightly in front of the anterior edge of the medians. *Mandible* furnished externally in its lower half with many short spines. *Maxilla* with its bacilliform spines few in number, arranged in a single row, and accompanied by one or more black tooth-like tubercles; between the row of bacilli and the suture there is a thick fringe of hairs. *Legs* without spines; scopulæ of the anterior pairs very thick. *Palpal organ* of ♂ piri-form, the spine thick, short, and strongly and spirally crested.

Type, *P. fasciata*, Latr.

Distribution. India and Ceylon.

Habits. Live in trees or in the thatch of houses.

Synopsis of Species.

- a. Femora of legs black below, or marked with a single basal or apical pale patch.
 - a¹. Femora of 1st and 2nd legs with a large yellow patch at base *P. rufilata*, p. 189.
 - b¹. No pale patch at base of femora.
 - a². Appendages not conspicuously banded above, dark below, with yellow basal patch on tibiæ *P. metallica*, p. 189.
 - b². Appendages strongly banded above, femora and tibiæ pale at apex above and tibiæ pale at base below.
 - a³. Palp black below; patellæ of legs white above and below *P. miranda*, p. 190.
 - b³. Palp with yellow patch at apex of femur, base of patella, and base and apex of tibia beneath; patellæ of legs black in basal half *P. subfusca*, p. 190.
- b. Femora of legs whitish or sulphur-yellow below and inside, those of 1st and 2nd legs with black stripe in distal half.
 - a⁴. Lower side of abdomen with large transverse reddish band behind epigastric fold. *P. regalis*, p. 190.
 - a⁴. No pale band on lower side of abdomen.
 - a⁵. Tibia of palp blackish beneath; 1st leg less than twice as long as carapace, which equals its patella and tibia. *P. formosa*, p. 191.
 - b⁵. Tibia of palp pale beneath: 1st leg more than three times as long as carapace, which is less than its patella and tibia.
 - a⁶. Ground-colour of anterior legs whitish, femora of 3rd and 4th uniformly greyish brown, not banded *P. vittata*, p. 192.

- b⁶. Ground-colour of anterior legs sulphur-yellow; femora of 3rd and 4th bluish grey.
- a⁷. Anterior femora without distinct basal black patch beneath; the distal black stripe nearly as wide as the yellow basal area. *P. striata*, p. 191.
- b⁷. Anterior femora with distinct basal black patch; distal black stripe much narrower than yellow basal area.
- a⁸. Black bands on femora very narrow, often absent on femur of 4th leg *P. fasciata*, p. 192.
- b⁸. Black bands on femora broad, very broad on femur of 3rd and 4th legs *P. ornata*, p. 192.

174. *Pœcilotheria ruflata*, Pocock, *Jour. Bom. N. H. Soc.* xii, p. 746, 1899.

♂. *Colour* a tolerably uniform greyish red above, only obscurely mottled; lower side of abdomen, sternum, coxæ, and trochanters velvety black; femur of palp metallic black, with paler distal end; patella and tibia yellowish grey, furnished with long red bristles beneath; 1st and 2nd legs with femora and tibiæ black with metallic reflections below, but ornamented at the base in front with a large yellow patch, patellæ yellowish brown; 3rd and 4th legs a tolerably uniform yellowish brown, clothed like the anterior legs with long greyish or reddish bristles. 1st and 4th *legs* subequal in length and about four times the length of the carapace. Spine of palpal organ very strongly carinate.

♀. 1st leg much longer than 4th and a little more than three times as long as carapace, which slightly exceeds the patella and tibia of the 4th.

Measurements in mm.—♀. Total length 60, carapace 30, 1st leg 92, 4th leg 81.

♂. Total length 32, carapace 17, 1st leg 70, 4th 70.

Loc. Trivandrum in Travancore (*Ferguson*).

175. *Pœcilotheria metallica*, Pocock, *A. M. N. H.* (7) iii, p. 93, pl. vii, fig. 3, 1899.

♀. *Colour* of upper side of body much as in *P. subfusca* (p. 190), but the central pale area on the carapace broader, pale band on abdomen less clearly defined; upper side of legs and palpi not transversely banded; under side of limbs entirely dark brown, with metallic blue reflections on the anterior pair, and an orange-yellow spot on the base of the tibiæ of the legs. 1st and 4th *legs* about twice and a fourth as long as carapace, which is a little longer than patella and tibia of 2nd and of 4th legs.

Measurements in mm.—Total length 52, carapace 23.5, 1st leg 65, 2nd 59, 3rd 52, 4th 64.

Loc. S. India: Gooty (*Carter*).

176. *Pœcilotheria miranda*, sp. n.

♀. *Colour*: carapace greyish, with a pair of ill-defined brownish bands on each side of the middle line; the pale abdominal stripe broken up by a row of four large brown spots; legs variegated above, patellæ entirely white above and below except for a small dark spot on those of the 3rd and 4th legs; femora entirely velvety black below; tibiæ white with median black stripe; protarsi dark below, with pale basal patch; palpi uniformly dark below. First leg about three times, 4th about two and three quarter times as long as carapace, which is as long as patella and tibia of 2nd or of 4th leg. Femora of palp and anterior legs fringed.

Measurements in mm.—Total length 46, carapace 22, 1st leg 64, 2nd 58, 3rd 51, 4th 62.

Loc. Bengal: Chota Nagpur (*Logsdail*).

177. *Pœcilotheria subfusca*, *Pocock*, *A. M. N. H.* (6) xv, p. 171, 1895; *id. op. cit.* (7) iii, p. 88, 1899.

♀. *Colour*: carapace brown, paler laterally, with narrow white lines radiating from the fovea; pale abdominal band broken up partially or completely into two rows of spots; legs coloured above much as in *P. miranda*, but patellæ dark, each with broad pale basal band and apical pale spot and a much narrower pale area on base of protarsus; palp with patella and base of tibia pale below; legs mostly black below, femora with narrow pale distal stripe, patellæ with basal white patch, tibiæ with small pale patch at base and at distal end, protarsus also with pale patch in front. Carapace about equal to the patella and tibia of 4th and a little less than those segments of 2nd leg.

♂. Like female in colour; 1st and 4th legs only slightly unequal and about four times as long as carapace.

Measurements in mm.—♀. Total length 50, carapace 23, 1st leg 68, 2nd 63, 3rd 54, 4th 64.

♂. Total length 31, carapace 15, 1st leg 62, 2nd 56, 3rd 48, 4th 60.

Loc. Ceylon: Punduloya and Kandy (*Green*); Peradeniya (*Freeman*).

178. *Pœcilotheria regalis*, *Pocock*, *A. M. N. H.* (7) iii, p. 89, t. vii, figs. 1-1 b, 1899.

♀. *Colour*: carapace greyish, marked in the middle with a pair of longitudinal dark stripes; abdomen with a broad whitish, marginally sinuous band, edged with black, whence black stripes pass laterally on to the sides of the abdomen; coxæ, sternum, and lower side of abdomen deep chocolate-brown, a broad transverse yellowish-red band behind the epigastric fold; upper side of legs and palpi variegated with grey and black, femora black, patellæ and tibiæ whitish below; lower and under sides of femora, patellæ, and tibiæ of 1st and 2nd legs bright sulphur-yellow, of 3rd and 4th bluish white; femora and tibiæ each ornamented with a broad blackish stripe, which on

the femora is narrower than the pale basal area, but much broader than the pale distal area; a very narrow basal stripe on inner side of femora. *Carapace* almost equal to patella and tibia of 2nd leg. Femora of palp and of 1st and 2nd legs fringed externally and internally at apex. Male smaller than female and much more uniformly coloured above.

Measurements in mm.—♀. Total length 53, carapace 25, 1st leg 75, 2nd 65, 3rd 55, 4th 67.

♂. Total length 32, carapace 17.5, 1st leg 73, 2nd 63, 3rd 52.5, 4th 65.

Loc. Southern and Western India: Nilgiri Hills (*Oates*); Coorg; Arkonam in the north Arcot District (*Carter*); Matheran (*Phipson*); Dáhnú in Thana District (*Ellie*).

179. *Pæcilotheria striata*, *Pocock*, *A. M. N. H.* (6) xv, p. 172, 1895; *id. op. cit.* (7) iii, p. 89, 1899.

♀. Closely resembling *P. regalis* in colours &c., but with no band on lower side of abdomen and the yellow on the femora more orange in tint. *Legs* longer than in *P. regalis* (*cf.* measurements); carapace much shorter than patella and tibia of 1st leg, shorter also than those of 4th.

Measurements in mm.—Total length 45, carapace 25; 1st leg 85, 2nd 72, 3rd 59, 4th 74; patella and tibia of 1st leg 31, of 4th 26, protarsus of 4th 19.

Distribution. S. India: Mysore; Trivandrum in Travancore (*Ferguson*)*.

180. *Pæcilotheria formosa*, *Pocock*, *A. M. N. H.* (7) iii, p. 91, 1899.

♀. *Colour* of upper side much like that of *P. regalis*, but the brown bands on the carapace broader; the pale band on the abdomen less lobate posteriorly; pale band at extremity of tibiæ and protarsi broader; no distinct spots on upper side of tarsi; lower side of the tibia of the palp brown, and the basal segments of the legs much more uniformly dirty white; a large basal black patch on the anterior femora; femora of the 3rd and 4th pairs not or hardly banded distally; no pale band on lower side of abdomen. *Legs* shorter than in *P. regalis* (*cf.* measurements). *Carapace* longer than patella and tibia of 2nd leg. Femora of palpi and of anterior legs scarcely fringed.

Measurements in mm.—Total length 54, carapace 26, 1st leg 69, 2nd leg 61, 3rd leg 54, 4th leg 65.

Loc. S. India: Kadiampatti and Mallápuram in the Salem District (*Carter & West*).

* The type of the species is ticketed "Penang (*Hardwicke*)."
No doubt, however, the locality is erroneous, since the species has of late years been discovered in S. India, but has not been obtained in Penang.

181. *Pœcilotheria vittata*, Pocock, *A. M. N. H.* (6) xv, p. 172, 1895
id. op. cit. (7) iii, p. 89, 1899.

♂. *Colour* a tolerably uniform yellowish olive above; femora of 1st and 2nd legs dirty white below without basal black patch, the black band twice as broad as the pale distal area, patellæ pale below, tibiæ with pale extremities; femora of 3rd and 4th legs uniformly dark, with greyish-pink bristles, tibiæ paler at base. *Legs* practically as in *P. regalis* as regards length &c.

Measurements in mm.—Total length 34, carapace 17, 1st leg 72, 2nd 63, 3rd 57, 4th 66.

Loc. India or Ceylon (exact place unknown).

182. *Pœcilotheria fasciata*, Latreille, *Nouv. Dict. d'Hist. Nat.* xv, p. 304, 1803; *C. Koch, Arachn.* ix, p. 41, p. 717, 1842 (Mygale).

♀. *Colour* as in *P. regalis* and *formosa*, but with a black basal patch in front on anterior femora, the black stripe only one-third as wide as the pale basal area and not or scarcely wider than the pale distal area; stripe on femur of 3rd leg also narrow and on 4th very narrow or incomplete. *Legs* without or with weak femoral fringes, shorter than in *P. striata* (cf. measurements); carapace slightly exceeding patella and tibia of 4th.

♂. Like female in colour, but with pattern of upper side indistinct.

Measurements in mm.—♀. Total length 46, carapace 24, 1st leg 77, 4th 67.

♂. Total length 35, carapace 16.5, 1st leg 66, 4th 60.

Loc. Ceylon: Trincomali (*Bassett-Smith*); Kandy (*Yerbury & Green*); Punduloya (*Green*).

Simon (*Bull. Soc. Zool. Fr.* 1885, p. 38) records *P. fasciata* from Madura, S. India. The specimen so named is perhaps referable to *P. regalis* or *P. formosa*.

183. *Pœcilotheria ornata*, Pocock, *A. M. N. H.* (7) iii, p. 93, 1899.

♀. *Colour* like that of *P. fasciata*, but the femoral stripes much broader, that on 4th leg complete and as broad as the pale basal area; on 3rd broader than the pale basal area, on 1st and 2nd much broader than pale distal area and half as broad as pale basal area. *Legs* with thick femoral fringe. *Carapace* shorter than patella and tibia of 1st or of 4th leg.

Measurements in mm.—Total length 46, carapace 19, 1st leg 64, 2nd 58, 3rd 49, 4th 61.

Loc. S. Ceylon: Ratnapura (*Burrows*).

Genus CHILOBRACHYS, Karsch.

Chilobrachys, Karsch, *Berl. ent. Zeits.* xxxvi, p. 270, 1892; Pocock, *A. M. N. H.* (6) xv, p. 171, 1895.

Musagates, Pocock, *A. M. N. H.* (6) xv, p. 171, 1895.

Large or small, mostly dull-coloured, Spiders, differing from *Pœcilotheria* in having the *carapace* less flat, the *fovea* crescentically procurved, the *eyes* of the anterior line practically straight, the spines on the mandible and the bacilli on the maxilla more numerous, and in the series of bacilli not being accompanied by tubercles. *Legs* with scopulæ narrower and with spines at the tip of protarsi. *Palpal organ* of the male ending in a long and slender or in a shorter blade-like spine.

Type, *C. nitelinus*, Karsch.

Distribution. India, Ceylon, and Burma.

Habits. Live on the ground in burrows or in natural crevices.

Synopsis of Indian Species.

Males.

- a. Carapace shorter than protarsus of 4th and not exceeding patella and tibia of 3rd leg *C. andersoni*, p. 197.
- b. Carapace longer than protarsus of 4th and than patella and tibia of 3rd leg.
 - a¹. Carapace as long as patella and tibia of 1st or of 4th leg *C. femoralis*, p. 195.
 - b¹. Carapace shorter than patella and tibia of 1st or of 4th leg.
 - a². Palpus twice as long as carapace *C. nitelinus*, p. 197.
 - b². Palpus much less than twice as long as carapace.
 - a³. Spine of palpal organ stout, blade-like, abruptly narrowed at the point.
 - a⁴. Femora of palpi and of 1st and 2nd legs sooty black below and externally fringed *C. fimbriatus*, p. 195.
 - b⁴. Femora of palpi and of 1st and 2nd legs particoloured below; not fringed.
 - a⁵. Width of carapace exceeding tibia of 1st or protarsus of 4th leg *C. bicolor*, p. 196.
 - b⁵. Width of carapace equal to tibia of 1st and less than protarsus of 4th leg *C. flavo-pilosus*, [p. 196.
 - b³. Spine of palpal organ slender, attenuate.
 - a⁶. Area of palpal bulb remote from base of spine, produced into an anguliform prominence *C. thorellii*, p. 199.
 - b⁶. Palpal bulb with scarcely a trace of prominence.
 - a⁷. Fringe of hairs overlapping bacilli on maxilla olive; hairs of body and legs blackish *C. pocockii*, p. 195.
 - b⁷. Fringe on maxilla shining red; hairs of body and legs brown
 - a⁸. Femora of legs scantily clothed with long hairs; carapace just exceeding protarsus of 4th leg. *C. stridulans*, p. 198.

*b*⁸. Femora of legs with many long hairs; carapace considerably exceeding protarsus of 4th leg.

*a*⁹. Carapace shorter than patella and tibia of 2nd leg

C. hardwickii, p. 198.

*b*⁹. Carapace a little longer than patella and tibia of 2nd leg. .

C. sericeus, p. 199.

Females.

a. Underside of palpi and of 1st and 2nd legs black internally, yellow externally.

*a*¹. 4th leg a little longer than 1st; protarsus and tarsus of 4th longer than carapace . .

C. flavo-pilosus, p. 196.

*b*¹. 4th leg much shorter than 1st; protarsus and tarsus of 4th shorter than carapace . .

C. bicolor, p. 196.

b. Palpi and anterior legs uniformly coloured beneath.

*a*². Spicules on outer side of mandible arranged in very definite parallel rows.

C. fumosus, p. 196.

*b*². Spicules on outer side of mandible irregularly arranged.

*a*³. Femora of palp and of anterior legs fringed externally; 1st leg much longer than 4th.

C. fimbriatus, p. 195.

*b*³. Femora of palp and of anterior legs not fringed; 1st leg not longer than 4th.

*a*⁴. Carapace much shorter than patella and tibia of 1st leg.

*a*⁵. Sternum and legs sooty black beneath; legs with pale bands above

C. masoni, p. 197.

*b*⁵. Sternum and legs brown beneath; legs not banded above

C. andersoni, p. 197.

*b*⁴. Carapace not much or scarcely shorter than patella and tibia of 1st leg.

*a*⁶. Hairy clothing of body and limbs blackish; fringe overlapping bacilli on maxilla olive-green

C. pocockii, p. 195.

*b*⁶. Hairy clothing of body and limbs yellowish or greyish brown; fringe on maxilla shining red.

*a*⁷. Width of head about equal to length of 4th protarsus.

*a*⁸. Size large: carapace about 17 mm. long.

C. hardwickii, p. 198.

*b*⁸. Size small: carapace about 12 mm. long.

C. nitelinus, p. 197.

*b*⁷. Width of head much less than length of 4th protarsus.

*a*⁹. 4th leg long, almost three times as long as carapace; paler

C. sericeus, p. 199.

*b*⁹. 4th leg short, about two and a half times the length of the carapace; darker

C. brevipes, p. 199.

184. *Chilobrachys fimbriatus*, Pocock, *Jour. Bom. N. H. Soc.* xii, p. 746, 1899.

♀. *Colour*: integument blackish, covered above with yellowish hairs, intermixed with reddish bristles on the limbs and abdomen; abdomen marked with narrow dark stripes above, velvety black below, like under side of the limbs. *Carapace* as long as patella and tibia of 1st leg, much longer than those of the 4th, and a little longer than protarsus and tarsus of 4th. 1st *leg* longer than 4th; femora of palpi and anterior legs thickly fringed externally.

♂. *Carapace* shorter than patella and tibia of 2nd leg, as long as protarsus and half the tarsus of the 4th. Femur of 3rd *leg* thick. Spine of *palpal organ* thick, blade-like, abruptly narrowed at the point.

Measurements in mm.—♀. Total length 45, carapace 26, 1st leg 67, 2nd 59, 3rd 51, 4th 63, patella and tibia of 4th 23.

♂. Total length 30, carapace 16, 1st leg 54, 2nd 48, 3rd 39, 4th 53, patella and tibia of 1st 21·5, of 4th 13·5.

Loc. Western India: Khandālā (*Phipson*); Jaoli in Satára (*Master*).

185. *Chilobrachys femoralis*, sp. n.

♂. *Colour*: integument jet-black; hairs on carapace golden yellow, elsewhere duller yellow and intermixed with red bristles. *Carapace* as long as patella and tibia of 1st or of 4th legs, longer than those of 2nd, and almost as long as protarsus and tarsus of 4th, very slightly longer than patella, tibia, and tarsus of palp. *Legs* short, 1st and 4th almost equal; femur of 3rd very thick. *Palpal organ* with spine thickish and blade-like, abruptly narrowed and pointed apically.

Measurements in mm.—Total length 22, carapace 11, 1st leg 31, 2nd 28, 3rd 25, 4th 32·5, patella and tibia of 1st 11·5, of 4th 11·5.

Loc. Western India: Nāsik (*Millet*).

186. *Chilobrachys pocockii*, Thorell, *Ann. Mus. Genova*, xxxvii, p. 180, 1897 (*Musagetes*).

♀. *Colour*: integument blackish, hairy clothing deep olive-brown. *Carapace* as long as patella and tibia of 1st, longer than those of 4th, and almost as long as protarsus and tarsus of 4th leg. Fringe overhanging stridulating *bacilli* olive-green, not bright red as in the other species; the bacilli set several rows deep, except at the two ends of the cluster.

♂. *Carapace* shorter than patella and tibia of 2nd, less than protarsus and half the tarsus of 4th leg. Spine of *palpal organ* slender, very long, strongly curved, its distal half bent nearly at right angles, the point slightly expanded.

Measurements in mm.—♀. Total length 46, carapace 20, 1st leg 53, 2nd 45, 3rd 41, 4th 54, patella and tibia of 4th 18.

♂. Total length 27, carapace 14, palp 23, 1st leg 48, 2nd 14, 3rd 36, 4th 48·5, patella and tibia of 4th 16, of 1st 19.

Loc. Upper Burma: Thao and Bia-po in Karennee (*Fea*).

187. *Chilobrachys bicolor*, *Pocock, A. M. N. H.* (6) xv, p. 172, 1895 (Musagetes).

♀. *Colour*: carapace and abdomen covered with yellowish-brown hairs; legs similarly coloured, with the femora much darker and the inner and anterior half of the under side of the 1st and 2nd pairs velvety black. *Carapace* as long as patella and tibia of 1st leg, longer than those of 4th, and much longer than protarsus and tarsus of 4th; width of head equal to 4th protarsus. 1st leg longer than 4th.

♂. *Carapace* exceeding protarsus and half the tarsus of the 4th leg, scarcely shorter than patella and tibia of 2nd, a little shorter than those of 4th. Spine of *palpal organ* broad and flattened, with slight spiral twist and a sharp point (fig. 62, D, p. 198).

Measurements in mm.—♀. Total length 49, carapace 22, 1st leg 56, 2nd 48, 3rd 42, 4th 52, patella and tibia of 1st 22.

♂. Total length 35, carapace 19, palp 30, 1st leg 60, 2nd 53, 3rd 46, 4th 58, patella and tibia of 1st leg 24, of 4th 20.

Loc. Upper Burma: Kyaukse (*Oates*); Myingya (*Watson*).

188. *Chilobrachys flavo-pilosus*, *Simon, Ann. Mus. Genova*, xx, p. 358, 1884 (*Phriectus*): *cervinus*, *Thorell, Spiders of Burma*, p. 5, 1895, in part, ♀: *fuliginus*, *id. op. cit.* p. 8, in part (*Phlogius*): *decipiens*, *id. Ann. Mus. Genova*, xxxvii, p. 179, 1897 (Musagetes).

Resembling *C. bicolor* in colour, but smaller and with longer legs.

♀. *Carapace* at most slightly longer than patella and tibia and a little shorter than protarsus and tarsus of 4th leg; 4th leg a little longer than 1st.

♂. 4th and 1st legs subequal. *Palpal organ* with spine weaker than in *C. bicolor*.

Measurements in mm.—♀. Total length 37, carapace 15·5, 1st leg 42, 2nd 37, 3rd 33, 4th 43, patella and tibia of 4th 15, of 1st 16·5.

♂. Total length 35, carapace 16·5, palp 27, 1st leg 54, 2nd 49, 3rd 43·5, 4th 54, patella and tibia of 4th 18·5.

Loc. Burma: Minhla (*Comotto*); Thayetmyo and Tharrawaddy (*Oates*).

189. *Chilobrachys fumosus*, *Pocock, A. M. N. H.* (6) xv, p. 174, pl. x, fig. 7, 1895 (Musagetes).

♀. *Colour* of integument and hairs mostly blackish, the longer bristles reddish. Distinguishable from the rest of the species by having the *spicules* on the mandible arranged in four definite parallel rows. *Carapace* a little longer than patella and tibia of 1st

or 4th legs, only a little shorter than protarsus and tarsus of 4th. 4th leg much longer than 1st.

Measurements in mm.—Total length 36, carapace 18, 1st leg 44, 2nd 39, 3rd 37·5, 4th 50, patella and tibia of 1st 17, of 4th 16.

Loc. North India.

190. *Chilobrachys masoni*, Pocock, *A. M. N. H.* (6) xv, p. 174, pl. x, fig. 6, 1895 (Musagetes).

Colour: integument clothed with yellowish-brown hairs above, velvety black on lower surface of body and limbs; upper side of limbs with narrow pale longitudinal lines, and on the apices of the segments with narrow transverse pale bands. *Carapace* shorter than patella and tibia of 1st, longer than those of 2nd, equal to those of the 4th leg, nearly as long as protarsus and tarsus of 4th; width of head much less than protarsus of 4th.

Measurements in mm.—Total length 41, carapace 20, 1st leg 54, 2nd 49, 3rd 44, 4th 57, patella and tibia of 1st leg 22, of 4th 20.

Loc. Assam: Sylhet.

191. *Chilobrachys andersoni*, Pocock, *A. M. N. H.* (6) xv, p. 172, 1895, ♀ (Musagetes); *cervinus*, Thorell, *Spiders of Burma*, p. 5, 1895, in part, ♂ (Phlogius): *rufo-fuscus*, Thorell, *Ann. Mus. Genova*, xxxvii, p. 177, 1897, ♀ (Musagetes).

♀. Principally differing from *C. masoni* in being uniformly coloured with yellowish-brown hairs.

♂. Distinguishable by the great length of the legs; *carapace* considerably shorter than protarsus of 4th, equal to patella and tibia of 3rd leg. *Legs* of 4th pair more than four times as long as carapace. *Palpal organ* with spine stout, bicarinate, attenuate, with a small blunt point.

Measurements in mm.—♀. Total length 54, carapace 25, 1st leg 68, 4th 72, patella and tibia of 4th 24.

♂. Total length 30, carapace 14, palp 28, 2nd leg 51, 3rd 44, 4th 60, patella and tibia of 4th 19, protarsus 16.

Loc. Tenasserim (Oates); Mergui (Anderson); Kawkareet (Fea).

192. *Chilobrachys nitelinus*, Karsch, *Berl. ent. Zeits.* xxxvi, p. 270, t. x, fig. 2, 1892.

♀. *Colour*: integument deep brown, hairy clothing yellowish brown. *Carapace* about as long as patella and tibia of 1st leg, longer than those of 4th and than protarsus and tarsus of 4th; width of head about equal to length of 4th protarsus.

♂. *Carapace* a little less than patella and tibia of 2nd leg, a little longer than protarsus of 4th. *Palp* long, about twice the length of the carapace; spine of organ curved, pointed; bulb without prominence.

Measurements in mm.—♀. Total length 26, carapace 12, 1st leg

30, 2nd 26, 3rd 23, 4th 31·5, patella and tibia of 1st 11·5, of 4th 11·3.

♂. Total length 16, carapace 9, palp 18, 1st leg 32, 2nd 28, 3rd 25, 4th 34, patella and tibia of 1st 11·5, of 4th 11.

Loc. Ceylon (*Sarasin*): Punduloya and Dikoya (*Green*).

193. *Chilobrachys hardwickii*, *Pocock*, *A. M. N. H.* (6) xv, p. 174, 1895.

♀. Resembling that of *C. nitelinus*, but much larger; legs of 1st and 4th pairs subequal, patella and tibia of 1st leg distinctly longer than of 4th.

♂. Carapace shorter than patella and tibia of 2nd leg, equal to protarsus and half the tarsus of the 4th, more than half the length of the palpus. Legs with femora thickly clothed with bristles beneath. Bulb of palpal organ without anterior prominence, the spine longish, attenuate, pointed at apex (fig. 62, C).

Measurements in mm.—♀. Total length 34, carapace 18, 1st leg 43, 3rd 34, 4th 43, patella and tibia of 1st leg 17·3, of 4th 15.

♂. Total length 27, carapace 14, palpus 23, 1st leg 46, 2nd 40, 3rd 34, 4th 44, patella and tibia of 1st leg 18·5, of 4th 16.

Loc. Shahjahanpur in North-west Provinces; Bilaspur in Central Provinces (*Phipson*); Chota Nagpur (*Logsdail*); Burdwan (*Hardwicke*).

194. *Chilobrachys stridulans*, *Wood-Mason*, *P. A. S. B.* 1875, p. 197
id. Tr. Ent. Soc. 1877, p. 281, pl. vii (Mygale).

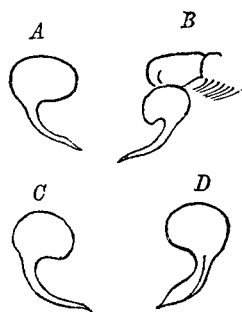


Fig. 62.—A. Palpal organ of ♂ of *Chilobrachys stridulans*; B, of *C. thorellii*; C, of *C. hardwickii*; D, of *C. bicolor*.

Allied to *C. hardwickii*, but with the appendages less hairy and longer. Carapace shorter than the patella, tibia, and half the tarsus of the palp, and just exceeding the protarsus of the 4th leg. 1st and 4th legs subequal. Palpal organ (fig. 62, A) shorter than half the length of the tibia; the spine shorter and straighter than in *C. hardwickii*.

Measurements in mm.—Total length 28, carapace 14, palp 25, 1st leg 50, 2nd 42·5, 3rd 37, 4th 49·5, patella and tibia of 1st leg 20, of 4th 16·5.

Loc. Assam: Sibsagar (*Peal*).

195. *Chilobrachys thorellii*, sp. n.

♂. Distinguishable from *C. hardwickii* and *C. stridulans* by having the portion of the bulb of the palpal organ remote from the spine produced into an anguliform prominence (fig. 62, B). Nearly resembling *C. stridulans* in length of legs, &c., but with the 1st leg shorter.

Measurements in mm.—Total length 30, carapace 14, palpus 23, 1st leg 43, 4th leg 49, patella and tibia of 1st 19, of 4th 16.

Loc. Assam : Sadiya.

196. *Chilobrachys brevipes*, Thorell, *Ann. Mus. Genova*, xxxvii, p. 179, 1897 (Musagetes).

♀. *Colour*: integument blackish, hairy clothing deep olive-yellow. *Carapace* scarcely longer than patella and tibia of 1st leg, slightly longer than those of 4th, a little shorter than protarsus and tarsus of 4th, width of head distinctly less than protarsus of 4th leg.

Measurements in mm.—Total length 27, carapace 12, 1st leg 29, 2nd 25, 3rd 23, 4th 31, patella and tibia of 1st leg 11.5, of 4th 11.

Loc. Burma : Tharrawaddy (*Oates*).

197. *Chilobrachys sericeus*, Thorell, *Spiders of Burma*, p. 10, 1895 (Phlogius).

♀. Closely allied to female of *C. nitelinus* and *hardwickii*, but the width of the head much less than length of 4th protarsus.

♂. Smaller than male of *C. hardwickii*, with the carapace not shorter than the patella and tibia of 2nd leg, a little shorter than those of 4th. Bulb of *palpal organ* rounded; spine subfiliform, but ending in a small blunt point.

Measurements in mm.—♀. Total length 24, carapace 10.5, 1st leg 27.5, 2nd 24, 3rd 21.5, 4th 30, patella and tibia of 1st leg 11, of 4th 10.

♂. Total length 22, carapace 10, palp 15, 1st leg 31, 2nd 26, 3rd 24, 4th 32, patella and tibia of 1st leg 12.5, of 4th 11.

Loc. Burma : Rangoon (*Oates*).

The following species, based upon females, are of doubtful validity :—

Chilobrachys soricinus, Thorell, *Ann. Mus. Genova*, xxv, p. 15, 1888 (Phrictus).

♀. A little larger than the type of *C. sericeus*, with the patella and tibia of 1st leg a little longer as compared with the carapace, and the anterior lateral eyes a little larger as compared with the median.

Loc. Burma : Bhamo (*Fca*).

The specimen identified and described by Thorell in 1897 as *Musagetes soricinus* appears from the leg-measurements to differ specifically from the original *soricinus*.

Chilobrachys oculatus, Thorell, *Spiders of Burma*, p. 13, 1895 (Phlogius).

Based upon a mutilated and doubtfully adult specimen, resembling the type of *C. soricinus* in having the anterior lateral eyes of large size.

Loc. Arrakan : Akyab (*Oates*).

Genus **SELENOCOSMIA**, Auss.

Selenocosmia, Ausserer, *Verh. z.-b. Ges. Wien*, 1871, p. 204; Pocock, *A. M. N. H.* (6) xv, p. 170, 1895.

Phrictus, *L. Koch, Arach. Austral.* p. 488, 1874 (nom. præocc.).

Phlogius, Simon, *Bull. Soc. Ent. Fr.* (6) vii, p. cxcv, 1887; *id. Hist. Nat. Araign.* i, p. 146, 1892.

Closely resembling *Chilobrachys*, but with the spines on the outer side of the mandible long, setiform, and but little differentiated from the oral fringe; while on the maxilla the cluster of bacilli is large and oval, the bacilli lying several rows deep, and there is no fringe of hairs overhauling the bacilli.

Type, *S. javanensis*, Walck.

Distribution. Himalayas, Burma, thence eastwards and southwards into Australia.

Synopsis of Indian Species.

- a. Patellæ paler than the rest of the segments of the legs. *S. himalayana*, p. 200.
- b. Patellæ the same colour as the rest of segments of the legs and palpi.
 - a¹. Tarsal scopula of 4th leg divided; cluster of bacilli on maxilla twice as long as broad *S. fuliginea*, p. 201.
 - a¹. Tarsal scopula of 4th leg undivided; cluster of bacilli on maxilla only a little longer than broad *S. javanensis*, p. 201.

198. *Selenocosmia himalayana*, Pocock, *Jour. Bom. N. H. Soc.* xii, p. 746, 1899.

♀. Colour: integument blackish; carapace and patellæ covered with greyish-yellow hairs, rest of the leg-segments and abdomen blackish brown. Carapace with head low, a little longer than patella and tibia of 1st and 4th legs; eyes of anterior line straight. Stridulating-bristles on mandible spiniform. Tarsal scopula of 4th leg divided by band of setæ; patella and tibia of 1st and 4th legs about equal.

Measurements in mm.—Total length 32, carapace 15, 1st leg 37, 2nd 33, 3rd 31, 4th 43.

Loc. North India : Dehra Dún (*Gleadow*).

199. *Selenocosmia fuliginea*, *Thorell, Spiders of Burma*, p. 8, 1895 (Phlogius).

♀. Uniformly coloured and darker than *S. himalayana*. *Carapace* not quite so long as patella and tibia of 4th leg; cephalic region higher; anterior line of eyes procurved, laterals distinctly smaller than medians. Cluster of bacilli on *maxilla* twice as long as wide, narrowed distally; bristles on mandible slender, evenly attenuate. Patella and tibia of 1st and 4th *legs* about equal; tarsal scopula of 4th divided.

Measurements in mm.—Total length 37, carapace 15, 1st leg 40, 2nd 33, 3rd 29, 4th 42.

Loc. Burma : Tharrawaddy (*Oates*).

200. *Selenocosmia javanensis*, *Walck. Ins. Apt.* i, p. 216, 1837.

♀. Paler in colour than *S. fuliginea*. *Carapace* a little longer than patella and tibia of 4th leg; anterior lateral eyes as long as the medians. Cluster of bacilli on *maxilla* thick, with distal end broad and rounded; bristles on mandible more abundant and attenuate than in *S. fuliginea*. *Legs* with tarsal scopula of 4th not completely divided; patella and tibia of 1st leg longer than of 4th.

Measurements in mm.—Total length 42, carapace 20, 1st leg 52, 2nd 45, 3rd 41, 4th 55.

Loc. Lesser Nicobar (according to *Thorell*); Java.

The following species, based upon immature individuals, cannot be satisfactorily classified :—

Selenocosmia orophila, *Thorell, Ann. Mus. Genova*, xxxvii, p. 175, 1897 (Phlogius).

♀. *Carapace* with thoracic fovea larger than in *S. javanensis* and *S. fuliginea*, about as long as patella and tibia of 1st or 4th leg; size of eyes and shape of cluster of bacilli approaching those of *S. javanensis*; bristles on mandible more like those of *S. fuliginea*. Tarsal scopulæ of 3rd and 4th *legs* divided.

Measurements in mm.—Total length 14, carapace 6·5, 1st leg 16, 4th 17.

Loc. Burma : Bia-po in Karennee (*Fea*).

Genus **PHLOGIELLUS**, Pocock*.

Phlogiellus, Pocock, *Abh. Senck. naturf. Ges.* xxiii, pt. 4, p. 595, 1897

Resembling *Selenocosmia* in the structure of the stridulating-organ and in most structural features, but distinguishable by having the tarsal scopulæ of all the legs divided by a band of setæ and by the retention of the inferior tarsal claw on the posterior pair of legs.

Type, *P. inermis*, Auss.

Distribution. Java; Nicobar Islands.

201. *Phlogiellus subarmatus*, Thorell, *Sv. Vet.-Akad. Handl.* xxiv, no. 2, p. 13, 1891 (*Ischnocolus*).

Colour: integument blackish, hairy clothing ashy red. Carapace low. Legs rather short; scopulæ on anterior legs scanty, on posterior legs thick and divided by a band of setæ.

Measurements in mm.—Total length 15.5, carapace 6, 1st leg 15, 4th 17.

Loc. Nanchoury in the Nicobar Islands (according to Thorell).

Genus **LYROGNATHUS**, Pocock.

Lyrognathus, Pocock, *A. M. N. H.* (6) xv, p. 170, 1895.

At once distinguishable from the rest of the genera of the sub-family by having the legs of the 4th pair much thicker than the rest, with the protarsal scopula extending almost up to the base of the segment; 3rd leg thicker than 2nd, with the scopula also covering the protarsus beneath.

Stridulating-organ and other characters as in *Selenocosmia*.

Type, *L. crotalus*, Poc.

Distribution. North-east India.

Synopsis of Indian Species.

- | | |
|--|------------------------------|
| a. Eyes of anterior line close to the edge of the carapace | <i>L. pugnar</i> , p. 203. |
| b. Eyes of anterior line about twice their own diameter from edge of clypeus. | |
| a ¹ . Legs longer; tibia of 4th about three times as long as high | <i>L. saltator</i> , p. 203. |
| b ¹ . Legs shorter; tibia of 4th only about twice as long as high | <i>L. crotalus</i> , p. 203. |

* Based upon a Javan species, *P. atriceps*, which Prof. Kulczynski informs me (*in litt.*) is identical with *Ischnocolus inermis* of Ausserer. According to Thorell, *I. subarmatus* is also identical with *I. inermis*—an opinion of which the correctness may be questioned.

202. *Lyrognathus crotalus*, Pocock, *A. M. N. H.* (6) xv, p. 175, 1895.

♀. *Colour*: integument blackish brown, covered with dusky brown hairs, intermixed with foxy-grey bristles on legs and abdomen. *Carapace* nearly one-third longer than wide, only very slightly shorter than protarsus and tarsus of 4th leg, or than tibia, protarsus, and tarsus of 3rd, distinctly longer than patella, tibia, and tarsus of palp. *Eyes* of anterior line separated from edge of clypeus by about twice their diameter, medians larger than laterals. Tibia and protarsus of 4th leg with a very thick clothing of short erect hairs, intermixed with long bristles; tibia about as wide as high, its height almost equal to half its length.

Measurements in mm.—Total length 26, carapace 13·5, palp 19, 1st leg 32, 2nd and 3rd legs 27, 4th leg 41, tibia of 4th 8, height of latter 3·5.

Loc. North India.

203. *Lyrognathus saltator*, sp. n.

Allied to the foregoing, but with the legs longer (*cf.* measurements); tibia and protarsus of 4th leg less thickly hairy, the former about three times as long as high. *Carapace* about one-fourth longer than wide, as long as the protarsus and two-thirds of the tarsus of the 4th, scarcely longer than patella, tibia, and tarsus of palp, and noticeably shorter than tibia, protarsus, and tarsus of 3rd.

Measurements in mm.—Total length 32, carapace 15, palpus 22·5, 1st leg 37, 2nd and 3rd legs 32, 4th leg 49, tibia of 4th 10·5, height of latter 3·5.

Loc. Assam: North Khási Hills.

204. *Lyrognathus pugnax*, sp. n.

Allied to the preceding, and especially to *L. saltator*, but at once distinguishable by having the anterior line of eyes close to the edge of the carapace, and separated therefrom by a space which is only about equal to the diameter of the eyes. Tibia of 4th leg higher than in *L. saltator*, but not so high as in *L. crotalus* (*cf.* measurements).

Measurements in mm.—Total length 34, carapace 16, 1st leg 40, 2nd and 3rd legs 34, 4th leg 52, tibia of 4th 11, height of latter 4·5.

Loc. Assam: Shillong (*Peal*).

Subfamily ORNITHOCTONINÆ.

Mandible furnished externally with a dense pad (scopula) composed of short, close-set, plumose hairs; between the scopula and the oral fringe there is a naked area, which, however, bears posteriorly a small number (about four) of large, lightly curved, plumose

bristles springing from the scopula above (fig. 64, *a*). Inner surface of maxilla sparsely hairy, but furnished both above and below the suture with a small number of black tooth-like tubercles (fig. 63).

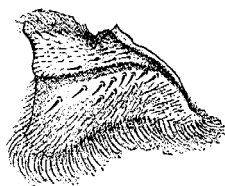


Fig. 63.—Inner surface of maxilla of *Ornithoctonus andersoni*, showing the spines.

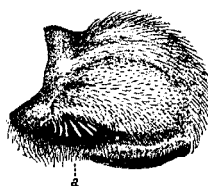


Fig. 64.—Outer surface of mandible of *Ornithoctonus andersoni*. *a*. Stridulating-bristles.

Posterior sternal sigilla remote from the margin. Legs with a few spines at apex of tibiae and protarsi*; tarsal scopulae thick and undivided.

Distribution. From Burma and Siam southwards and eastwards to the Moluccas.

Synopsis of the Burmese Genera.

- a*. Carapace low, ocular tubercle close to edge of clypeus..... CYRIOPAGOPUS, p. 204.
- b*. Carapace elevated in the cephalic region; ocular tubercle some distance behind edge of clypeus.
 - a*¹. Legs strong and short; fovea large, scarcely procurved ORNITHOCTONUS, p. 205.
 - b*¹. Legs slender and long; fovea small and concentric..... MELOPÆUS, p. 205.

Genus CYRIOPAGOPUS, Simon.

Cyriopagopus, Simon, *J. A. S. B.* lvi, p. 110, 1887; *id. Hist. Nat. Araign.* i, p. 152, 1892.

Omothymus, Thorell, *K. Sv. Vet.-Akad. Handl.* xxiv, no. 2, p. 10, 1891; Pocock, *A. M. N. H.* (6) xv, p. 179, 1895.

Carapace low, flattish, the cephalic region gradually and evenly inclined between the fovea and the ocular tubercle; fovea sub-linear, transverse, at most slightly procurved; ocular tubercle low and wide, close to the edge of the clypeus; eyes of anterior line subequal, scarcely procurved. Male with very long legs; tibia of 1st with a single short blunt spur.

Type, *C. paganus*, Simon.

Distribution. Tenasserim and Penang.

* Simon is mistaken in stating that the legs of the type specimen of *Cyriopagopus paganus* are without spines.

205. *Cyriopagopus paganus*, Simon, *J. A. S. B.* lvi, p. 111, 1887.

Colour: integument reddish brown, clothed with greyish-brown pubescence and reddish bristles; ends of leg-segments narrowly white; abdomen obscurely banded. *Carapace* as long as patella and tibia of 1st leg, a little shorter than those of 4th and than protarsus and tarsus of this limb.

Measurements in mm.—Total length 35, length of carapace 14·5, width 12, length of 1st leg 39 (patella + tibia 14·5), 2nd 35, 3rd 32, 4th 43 (patella + tibia 15, protarsus 10).

Loc. Tenasserim: Tavoy (*Moti Ram*).

Genus **MELOPÆUS**, Pocock.

Melopæus, Pocock, *A. M. N. H.* (6) xv, p. 179, 1895.

Carapace with the cephalic region elevated, the area between the fovea and the ocular tubercle distinctly convex both longitudinally and transversely; fovea narrow and crescentically procurved; ocular tubercle high, subcircular, some distance behind the edge of the clypeus. *Legs* long and slender, the 4th thinner than the 1st, its tibia about four times as long as wide. Anterior tibia of male with a single blunt spur as in *Cyriopagopus*.

Type, *M. albostrigatus* (Simon).

Distribution. Siam and Tenasserim.

206. *Melopæus minax*, Thorell, *Ann. Mus. Genova*, xxxvii, p. 182, 1897.

♀. *Colour*: integument blackish, clothed with ruddy brown hairs; ends of leg-segments whitish; abdomen obscurely banded above. *Carapace* as long as patella and tibia and one-fourth of the protarsus of the 1st and 4th legs, very slightly exceeding protarsus and tarsus of 4th; width equal to patella and tibia of 2nd, greater than those of 3rd. *Legs* scantily clothed with bristles, patella and tibia of 4th leg a little shorter than of 1st.

Measurements in mm.—Total length 44, length of carapace 24, 1st leg 59, 2nd 52, 3rd 47, 4th 61, patella + tibia of 4th leg 21, of 1st 22·5.

Loc. Tenasserim: Kawkareet (*Fea*).

Genus **ORNITHOCTONUS**, Pocock.

Ornithoctonus, Pocock, *Jour. Linn. Soc., Zool.* xxiv, p. 317, 1892; *id. A. M. N. H.* (6) xv, p. 179, 1895.

Resembling *Melopæus* in having the fore part of the *carapace* elevated, the ocular tubercle small and situated at some distance from the edge of the clypeus; but differing in having the thoracic *fovea* deep, wide, and scarcely procurved, and the *legs* stout and short, the 4th pair being as thick as the 1st, the width of the tibia of the 4th being more than one-third of the length. Male unknown.

Type, *O. andersoni*, Poc.

Distribution. Burma.

207. *Ornithoctonus andersoni*, Pocock, *Jour. Linn. Soc., Zool.* xxiv, p. 317, pl. xxii, figs. 1-3, 1892.

♀. *Colour*: a nearly uniform reddish brown, darker beneath and on femora, some white hairs at the extremities of the leg-segments. *Carapace* as long as the patella and tibia and one-fourth of the protarsus of the 1st or 4th legs, considerably exceeding protarsus and tarsus of 4th. *Legs* somewhat thickly hairy, 1st and 4th subequal and considerably less than two and a half times the length of the carapace; patella and tibia of 4th leg a little less than of 1st.

Measurements in mm.—Total length 52, carapace 25, 1st leg 61, 2nd and 3rd 54, 4th 62, patella + tibia of 4th 12, of 1st 23.

Loc. Tenasserim: Mergui (*Anderson*).

Suborder ARACHNOMORPHÆ.

Differing from the Mygalomorphæ in having the basal segment of the *mandible* articulated in a horizontal plane to the under side of the head and directed downwards, the *fang* closing obliquely inwards (fig. 52, p. 155). The posterior *respiratory organs* are in the form of tracheal tubes, which in most cases open by a common aperture just in front of the spinners. *Spinning-mamillæ* normally six in number, often accompanied by the *cribellum* or the *colulus*. Coxa of *palp* furnished with a large maxillary process. *Sternum* without distinct sigilla (at least in the Indian genera).

Distribution. Subarctic, temperate, and tropical countries.

With the exception of one or two forms of doubtful systematic position or great scarcity, the Indian species of Arachnomorphæ may be referred to the following families (those that are printed in italics have been omitted from the present volume):—

Synopsis of the principal Indian Families.

- a. Cribellum and calamistrum present.
 - a¹. Head-region large, rounded, high; posterior lateral eyes remote from the rest *Eresidæ.*
 - b¹. Head low, narrowed, not strongly rounded; posterior lateral eyes very rarely remote from the others.
 - a². Tarsi furnished with unguual tufts and an inferior claw *Psechridæ.*
 - b². Tarsi without unguual tufts.
 - a³. Anal papilla long and conically acuminate . *Uloboridæ.*
 - b³. Anal papilla short, semicircular *Dictynidæ.*
- b. Cribellum and calamistrum absent.
 - a⁴. Sternum much wider than long; the posterior coxæ widely separated *Platoridæ.*
 - b⁴. Sternum not wider than long; posterior coxæ not widely separated.
 - a⁵. Posterior spinners absent or much shorter than the anterior *Zodariidæ.*