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LXIX.—*Some new and old Genera of S.-American Aviculariidae.* By R. I. POCKOCK.

I HAVE elsewhere shown, in the works cited below, that the most satisfactory basis for a phylogenetic classification of the spiders referred by Simon to the Aviculariinae is furnished by the stridulating-organs, or rather hairy structures that are found between the base of the mandible and palp or palp and first leg. By their structure, in conjunction with other features, the spiders in question fall into a series of natural groups*, each of which, with the exception of the last, is confined to a definite geographical area.

The following list shows the distribution of these subfamilies and the genera they contain:—

1. ORNITHOCTONINÆ: *Cyriopagopus*, Sim. (= *Omothymus*, Thor.); *Melopæus*, Poc.; *Ornithoctonus*, Poc.; *Citharognathus*, Poc.; and *Phormingochilus*, Poc. (? = *Lampropelma*, Sim., or *Haplopelma*, Sim.).

Distribution. Burma and Siam, Celebes and Halmahera.

2. HARPACTIRINÆ: *Harpactira*, Auss.; *Pterinochilus*, Poc.; *Ceratogyrus*, Poc.; and *Eucratoscelus*, Poc.

Distribution. East and South Africa from Somaliland to Cape Colony.

For the characters of these genera see Proc. Zool. Soc. 1897, p. 745, and 1898, p. 500.

3. THRIGMOPŒINÆ: *Haploclastus*, Sim., and *Thrigmopæus*, Poc.

Distribution. S. India.

For tabulation of the characters see 'Fauna of British India,' Arachnida, p. 184 (1900).

4. SELENOCOSMIINÆ: *Pæcilotheia*, Sim.; *Chilobrachys*, Karsch (= *Musagetes*, Poc.); *Selenocosmia*, Auss. (= *Phlogius*, Sim.); *Lyrognathus*, Poc.; *Phlogiellus*, Poc.; *Coremiocnemis*, Sim.; *Selenotypus*, Poc.; and probably *Orphnæcus*, Sim.

Distribution. Oriental Region (India to Australia).

For tabulation of characters of these genera see Ann. &

* It is a matter of no great moment whether we term these groups subfamilies with the termination *-inae* or sections with the termination *-ecæ*. The main point to be borne in mind is that they are natural and not artificial assemblages like the "Selenocosmiæ," "Chætopelmatæ," &c. of Simon, Hist. Nat. Araign. i. (1892).

Mag. Nat. Hist. (6) xv. pp. 169-170 (1895), and 'Fauna of British India,' Arachnida, p. 187 (1900).

5. EUMENOPHORINÆ: *Loxomphalia*, Sim.; *Hysterochrates*, Sim. (= *Hysterochrates* + *Phoneyusa*, Sim. (not *Phoneyusa*, Karsch) + *Lycotharses*, Thor.); *Phoneyusa*, Karsch (= almost certainly *Pelinobius*, Karsch); *Eumenophorus*, Poc.; *Citharischius*, Poc.; *Monocentropus*, Poc.; *Anoplascelus*, Poc.

Distribution. Tropical Africa from Sierra Leone and the Congo in the west to Abyssinia and the Zambesi in the east.

For the synonymy and characters of these genera see Proc. Zool. Soc. 1897, pp. 758-773, and 1899, pp. 841-845; Ann. & Mag. Nat. Hist. (6) xv. p. 167, and (7) vi. pp. 489-494.

6. THERAPHOSINÆ: containing a large number of genera, principally confined to America, south of, and including, the Sonoran area, with a few outlying forms in the Mediterranean, Indian, and Tropical African Regions.

This subfamily will probably prove to be capable of finer subdivision. At present it contains a very heterogeneous assemblage of genera, many of which are based upon differences in the size or position of the eyes, the divisional line of bristles on the tarsi, or other unsatisfactory characters. In the following pages I have made use of certain new features, namely, the nature of the hairs clothing the surfaces lying between the palpi and the legs of the first pair which are constant in both sexes, and for the males the method of folding of the protarsus of the first leg with reference to the tibial spurs.

By these characters I find that the so-called genus *Lasiodora* is divisible into several distinct genera, and that under *Eurypelma* have been included species belonging to widely divergent genera. The name *Eurypelma* was affixed by Simon in 1892 to the species erroneously described by Koch as *avicularia*, Linn., and afterwards named *rubropilosum* by Ausserer. I am not aware whether this species is known to Simon; it is unknown to me: nor do I know that Ausserer's specimens were specifically identical with those described by Koch. Koch, however, speaks of the first leg of the male as being furnished on the tibia "mit einem dicken, hakenförmig einwärts gekrümmten borstigen Sporn"—a feature which is characteristic of *Avicularia* or perhaps *Acanthoscurria*, but not of *Eurypelma* as recognized by Ausserer in 1871 and Simon in 1892. In 1864, however, Simon evidently intended to restrict the name *Eurypelma* to a section

including the species subsequently referred by him to *Avicularia* and *Tapinauchenius*. In view, then, of the obscurity in which *Eurypelma* is wrapped, I have ignored it altogether in the following pages as a "genus ignotum," at all events for the time being.

Several other genera of the group are unknown to me, c. g. *Planadecta*, *Rhecostica*, *Grammostola*, and *Agathostola*. The latter, however, is certainly nearly allied to *Homœomma*, Auss. (nec *Homœomma*, Sim.) ; and both *Homœomma*, Sim., and *Grammostola*, Sim., are possibly identical with the genus I have described as *Citharoscclus* (Ann. & Mag. Nat. Hist. (7) iii. p. 347, 1899). It is hoped that the types of these genera will be re-examined with reference to the hairy clothing of the base of the legs and palpi, so that they may be established on a securer basis.

Part I.—*The Genera of the Section "Theraphosa" of Simon.*

Simon's table of the genera of this section is satisfactory only so far as the male characters are concerned. He admits five genera : *Acanthoscurria*, *Theraphosia**, *Sericopelma*, *Xenesthis*, and *Lasiadora*. In my opinion the differences between *Theraphosia* and *Sericopelma* are only of specific importance, whereas the species assigned to *Lasiadora* represent four distinct genera. To these I have to add the new genus *Eupalestrus*, which is, however, merely included here on account of the scopulation of the femur of the fourth leg. It differs from all the known South-American genera in the form of its posterior legs. Until the male comes to hand there is no prospect of locating the genus more accurately.

The males alone may be classified mainly by the structure of the first legs as follows :—

- a. Tibia of first leg without a spur *Theraphosia*.
- b. Tibia of first leg with one or two spurs.
 - a¹. Tibia of first leg with one spur on the inner side ; a spur on tibia of palp *Acanthoscurria*.
 - b¹. Tibia of first leg with two spurs, a larger inferior and a smaller superior ; no spur on tibia of palp.
 - a². Protarsus of first leg closing on the outer side of the lower spur.
 - a³. A stridulating-organ between the base of the palpus and first leg *Phormictopus*.
 - b². No stridulating-organ in this position *Megaphobema*.

* I here adopt Dahl's name instead of "*Theraphosa*," Walck, the destiny of which has yet to be settled.

- b*². Protarsus of first leg not closing outside the lower spur.
 - a*¹. Protarsus of first leg closing on the summit of the inferior spur; a stridulating-organ between the palpus and first leg *Lasiodora*.
 - b*¹. Protarsus of first leg closing between the two spurs; no stridulating-organ present.
 - a*¹. Protarsus of fourth leg scopulate to base. *Xenesthis*.
 - b*¹. Protarsus of fourth leg scopulate apically. *Pamphobeteus*.

The females may be analyzed as follows:—

- a*. Fourth leg much thicker and stronger than first, the tibia as thick as the femur; the tibia and protarsus strongly hirsute, the latter convex above at the base *Eupalestrus*, nov.
- b*. Fourth leg not thicker than first, the tibia much thinner than the femur; protarsus slender, cylindrical.
 - a*¹. A stridulating-organ, consisting of clavate plumose bristles, between the basal segments of the palpus and of the first leg.
 - a*². A cluster of stridulating-bristles upon the trochanters of the palpus and first leg.
 - a*³. No stridulating-bristles upon the coxæ of palpus and first leg *Acanthoscurria*.
 - b*¹. Stridulating-bristles upon the coxæ of the palp and first leg *Phormictopus*.
 - b*². The stridulating-organ consisting of a cluster of clavate bristles above the suture of the coxæ of the first leg and of spines upon the adjacent area on the coxa of the palpus, none upon the trochanters *Lasiodora*.
 - b*¹. No stridulating-bristles present between the bases of the first leg and palpus.
 - a*¹. Protarsus of fourth leg scopulate to base .. *Xenesthis*.
 - b*¹. Protarsus of fourth leg scopulate at its distal end.
 - a*³. Femur of third leg enormously swollen; fourth leg much longer than first *Megaphobema*.
 - b*¹. Femur of third leg not swollen; fourth leg longer than first by about the length of the tarsus; the patella + tibia of the fourth leg at most a little longer than the first *Theraphosus* and *Pamphobeteus*.

Genus ACANTHOSCURRIA, Ausserer, emend.

Acanthoscurria, Auss. Verh. z.-b. Wien, xxi. p. 205 (1871); Simon, Hist. Nat. Araign. i. p. 157 (1893).
Acanthopalpus, Auss. Verh. z.-b. Wien, xxi. p. 207 (1871).
Cullyntropus, Auss. Verh. z.-b. Wien, xxv. p. 181 (1876).

In this genus there is a stridulating-organ consisting of

many, sometimes clavate, sometimes attenuate, stout plumose bristles upon the posterior side of the trochanter of the palp, and a corresponding cluster of plumose, mostly attenuate spines, intermixed with one or two simple spines, on the anterior surface of the trochanter of the first leg.

The discovery of these organs enables the females of this genus to be classified. Previously the genus was recognizable mainly from the characters of the male sex.

I have added the name *Callyntropus* to the synonymy of *Acanthoscurria* on the supposition that the former is based upon specimens in Keyserling's collection which Ausserer determined as *Callyntropus convexus*, C. Koch, *convexus* being cited as the typical species of *Callyntropus*. There is, however, no evidence beyond Ausserer's opinion, of which the value is more than doubtful, that this specimen is co-specific with *Eurypelma convexa*, C. Koch. Nevertheless, I presume that the genus must rest upon the species represented by the specimens examined and diagnosed by Ausserer. As I have already pointed out (*Ann. & Mag. Nat. Hist.* (6) xv. p. 226, 1895), the division of the tarsal scopula in *Callyntropus* is nothing but a sign of immaturity.

Genus LASIODORA, Koch, emend.

(= *Lusiodora*, Koch, Ausserer, and Simon in part.)

This genus, as recognized by Ausserer and Simon, I find to be capable of severance into four distinct genera: *Lasiadora* (*sensu stricto*, type *L. Klugii*), *Pamphobeteus*, nov. (type *L. nigricolor*, Auss.), *Megaphobema*, nov. (type *L. robustum*, Auss.), and *Phormictopus*, nov. (type *L. cancerides*, Latr., = *Erichsonii*, Koch).

Out of the crowd of species referred by Koch to *Lasiadora*, Simon has selected *L. Klugii* as the type. Specimens of this species in the British Museum from Brazil (Iguarassu, São Paulo, &c.) and from Recife and Cabo in the Argentine have plumose stridulating-bristles upon the coxa of the palp and of the first leg as in *Citharoscelus*.

The stridulating-organ consists of a cluster of a dozen or more stout, mostly acuminate, plumose spines above the suture on the coxa of the first leg, and of some spinules rising from amongst plumose hairs upon the posterior side of the coxa of the palp. The coxa, trochanter, and femur of palp are scopulate behind, those of the first leg scopulate in front; the femur of the second leg is also scopulate in front, those of the third and fourth scopulate behind.

The protarsus of the first leg in the male closes against

the apex of the lower spur on the tibia, without touching the upper spur.

The different distribution of *L. Klugii* as compared with the other species hitherto referred to *Lasiadora* is to be borne in mind.

Genus PHORMICTOPUS, nov.

Resembling *Acanthoscurria* in the presence, position, and structure of its stridulating-bristles upon the trochanter of the palp and first leg; but with an additional cluster of clavate plumose bristles above the suture on the coxa of the first leg and in a corresponding position upon the posterior side of the coxa of the palp; also like that genus in the hairiness of the summit of the rostrum, and other structural characters, except that in the male there are two normal tibial spurs on the first leg and no spurs on the tibia of the palp.

The two species I refer to this genus were included by Ausserer in *Lasiadora* of Koch, and both fall into that genus as diagnosed by Simon; but they differ from all the other species in having the stridulating-bristles on the trochanter of the palp and first leg. They further differ from *Lasiadora* (*sensu stricto*), and from that section that I call *Pamphobeteus*, in that the protarsus of the first leg in the male closes on the outer side of the lower tibial spur—a feature in which they agree with the one known species of *Megaphobema*.

The type of this genus is the species represented in the British Museum by specimens from Haiti, identified as *Mygale cancerides*, Latreille*, which I believe to be the oldest name for the spider called *Eurypelma Erichsonii* by Koch.

Lasiadora cauta, Auss., also falls into this genus.

Genus PAMPHOBETEUS, nov.

Differing from *Lasiadora*, as typified by *L. Klugii*, in having no stridulating-bristles on the anterior side of the coxa of the first leg and on the posterior side of the coxa of the palp and no scopula on the inner side of the femur of the first leg.

Protarsus of first leg in male closing between the tibial spurs, thus coming into contact with the inner side of the lower spur and the outer side of the upper spur. Femur of third leg not thickened; patella + tibia of fourth only slightly longer than of first, which, at least in the female, falls short

* *Mygale cancerides*, Latreille (Gen. Crust. et Ins. i. p. 83, 1800), was originally recorded from St. Domingo (Haiti).

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of the fourth by only about the length of the tarsus of the latter.

Type *Pamphobeteus nigricolor*, Auss. (sub *Lasiodora*).

Hab. Colombia, Ecuador, and Bolivia.

Genus MEGAPHOBEMA, nov.

Differing from *Pamphobeteus* in that the protarsus of the first leg in the male closes on the outer side of the lower tibial spur without coming into contact with the upper spur. Moreover, in both sexes the femur of the third leg is much swollen and the third and fourth legs are longer and stronger as compared with the first and second, the patella + tibia of fourth being much longer than of first, and the latter falls short of the length of the fourth by the tarsus and nearly half the protarsus in the female.

Type *Megaphobema robustum* (Auss.) (sub *Lasiodora*).

Hab. Llanos, Sta. Fé de Bogotá.

Genus XENESTHIS, Simon.

Xenesthis, Simon, Act. Soc. Linn. Bord. 1892, p. 332; Hist. Nat. Araign. i. p. 160 (1892).

As in *Pamphobeteus* and *Megaphobema*, this genus has no stridulating-organs at the base of the palpus and first leg. The protarsus of the first leg in the male passes when closed between the two tibial spurs as in *Pamphobeteus*, and, as in the two genera just mentioned, the femur of the fourth leg is covered with a scopula on its inner side. Distinctive of the genus is the scopulation of the protarsus of third and fourth legs right up to the base.

Type *Xenesthis immanis*, Auss. (= *colombiana*, Simon).

Genus EUPALÆSTRUS, nov.

Differing from the rest of the genera of this section in the form of the fourth leg, which is considerably longer than the first and thicker, the tibia being as thick as the femur, only a little more than twice as long as thick, and, like the protarsus, studded with stiff erect bristles; the protarsus is convexly elevated at the base, as high as wide, and about three times as long as high.

Tibiæ and protarsi of first and second legs spined apically beneath, the tibia with one submedian spine on the inner side; tibiæ and protarsi of third and fourth with many spines; protarsus of third with its distal half scopulate, of fourth scopulate only on the distal fifth of its length. First leg

with the anterior side of its coxa thickly clothed with setæ, that of the trochanter and femur scantily scopulate; trochanter of palpus lightly scopulate behind. Thoracic fovea transverse, as wide as the ocular tubercle, which is one-fourth wider than long; eyes of anterior line moderately procurved, the posterior edge of the laterals about on a level with the centre of the medians, which are in front of the middle of the ocular area, rather larger in area than the laterals, and less than a diameter apart in a dried specimen. *Labium* and adjacent area of *maxillæ* thickly cuspluate. *Sternum* with marginal sigilla.

Type *Eupalæstrus pugilator*, sp. n.

Eupalæstrus pugilator, sp. n.

♀ (dry, somewhat faded).—Dorsal integument covered with mouse-brown hairs, darker beneath, a narrow rim of pale hairs at the distal end of the leg-segments.

Carapace about one-fourth longer than wide, moderately elevated in front; a little longer than patella + tibia of fourth or of first leg, the width equal to those of the second leg, the length equal to protarsus + tarsus of fourth; length from fovea to anterior border equal to protarsus of fourth.

Measurements in millimetres.—Total length 56; length of carapace 22, width 17.5; length of first leg 52, second 46, third 44, fourth 58; patella + tibia of first 19.5, of fourth 22; width of tibia of fourth 5, length 12.5; height of protarsus 4.2, length 14.

Loc.? Very likely S. America.

Part II.—*The Genera of the Section Aviculariæ.*

The S.-American genera referable to Simon's Aviculariæ* may be tabulated thus:—

- a. A stridulating-organ of clavate bristles differentiated from the oral fringe on the anterior side of the coxa of the palp; posterior side of coxa of palp at its distal end and of trochanter and base of femur scopulate; anterior side of coxa of first leg thickly hairy, of trochanter scopulate; two tibial spurs in male *Psalmopæus*, 1'oc.
- b. No stridulator on anterior side of coxa of palp.
 - a'. Posterior side of trochanter and of coxa of palp at its distal end and anterior side of trochanter of first leg scopulate. Male unknown; eyes as in *Tapinauchenius*..... *Ephelopus* †.

* To this section may also be referred the West-African genera *Scodra*, Becker (= *Stromatopelma*, Karsch, and *Hyurachne*, Thor.), and *Heteroscodra*, Poc.

† Syn. *Santaremia*, F. Cambr. On a visit to the British Museum

- δ*¹. Posterior side of coxa of palp naked throughout the middle of its length; anterior side of trochanter of palp with ragged, not erect and stiff, hairs; anterior side of coxa of first leg thickly clothed with erect bristly hairs.
- α*². Male with two tibial spurs; posterior sternal sigilla conspicuous, remote from the margin; anterior median eyes lying far in advance of the middle of the ocular area, owing to the weak procurvatura of the anterior line *Tapinauchenius*.
- β*². Male with one tibial spur on first leg; posterior sternal sigilla inconspicuous, submarginal.
- α*³. Eyes as in *Tapinauchenius*, no tibial spur on second leg in male *Pachistopelma*.
- β*³. Eyes of anterior line strongly procurved, the medians lying in the middle of the ocular area.
- α*⁴. No tibial spur on second leg in male; fourth leg longer than first *Avicularia*.
- δ*⁴. A tibial spur on second leg in male; fourth leg shorter than first *Iridopelma*.

Genus PACHISTOPELMA, nov.

Resembling *Avicularia* in the presence of a single spinous spur on the tibia of the first leg in the male, the marginal position of the sternal sigilla, absence of spines, development of scopulæ on legs, &c., but differing in having the eyes of the anterior line only a little procurved, the centres of the medians lying in front of the middle of the ocular area, the anterior edge of the medians being well in advance of the posterior edge of the laterals. As in *Avicularia* and *Tapinauchenius*, the posterior side of the coxa of the palp is naked throughout the middle of its length, the trochanter is clothed with long, soft, flexible hairs, and the anterior side of the coxa and trochanter of the first leg with simple slender hairs, intermixed just below the suture on the former segment with some delicate pin-like hairs.

Type *Pachistopelma rufonigrum*, sp. n.

Pachistopelma rufonigrum, sp. n.

♀.—Body and limbs clothed with short pale brown hairs; setæ on the limbs shorter than is usually the case and brownish; the femora, patellæ, and tibiæ indistinctly adorned with whitish bands, which are most conspicuous on the patellæ, protarsi ornamented with a median brown stripe

some years ago Mons. Simon recognized the identity between the types of *Santaremia* and *Ephelopus*. The latter was referred by Simon to his section "Selenocosmiæ."

which proximally ends in a spot upon the posterior side of the segment. Abdomen covered with shortish rusty-red setæ. Inferior surface of trunk and coxæ black.

Carapace long, distinctly longer than broad, its width just exceeding patella and tibia of second leg, its length considerably exceeding patella and tibia of first, the distance between the fovea and the anterior border exceeding the length of the fourth protarsus. Ocular tubercle moderately high, wider than long; anterior row of eyes slightly procurved, the anterior edge of the laterals being only very slightly in front of that of the medians, which are considerably larger; space between the latter about equal to a diameter, and a little greater than between median and lateral. The two laterals on each side subequal in size, space between them less than their long diameter. *Legs* 1 and 4, 3, 2; femora and patella of first and fourth equal in length.

♂.—Considerably smaller than female, with longer legs and relatively wider carapace, the width just exceeding patella and tibia of third leg and considerably longer than protarsus of fourth, the length equal to patella and tibia of second leg; length from the fovea to the anterior border equal to the protarsus of the first.

Spur on tibia of first leg a simple, short, blunt, spinulose process. Palpal organ very much like that of *Avicularia avicularia*, but the proximal half of the filiform portion less strongly curved, the whole terminal portion when seen from above presenting a slight and very open sigmoid curvature. *Legs* 4 and 1, 2, 3; patella and tibia of fourth slightly longer than of first.

Measurements in millimetres.—♀. Total length 42, carapace 17, width of latter 14.8; length of first leg 49.5, of second 45.5, of third 42, of fourth 49.5; patella + tibia of first 15.5, of fourth 15.5.

♂. Total length 28.5, carapace 13, width of latter 11.8; length of first leg 45, of second 41.5, of third 38, of fourth 48; patella + tibia of first 14, of fourth 14.7.

Loc. Brazil; Iguarassu (*G. A. Ramage*).

Eight specimens of this species are in the British Museum collection, two adult males and six females, varying from 15 up to about 40 millim. In young specimens the abdomen has a sharply-defined, median, black line and four large yellow spots on each side.

Genus IRIDOPELMA, nov.

Differs from *Avicularia* in having a spur on the tibia of

the second leg similar to, but smaller than, that on the first leg. Moreover, the fourth leg is shorter than the first.

Type *Iridopelma hirsutum*, sp. n.

Iridopelma hirsutum, sp. n.

♀.—Carapace and limbs clothed with a short coating of greyish or yellowish-green hairs, the long setæ on the limbs also greyish green, no red hairs on the tarsi; the middle of the upper surface of the abdomen with a wide dark stripe extending from its base to the anus, with a band of long yellowish hairs on each side of it, with large ill-defined fuscous spots externally to the hairs; lower surface of abdomen, coxæ, and sternum black.

Carapace a little longer than wide, its width distinctly less than the patella and tibia of the second leg, which also just exceed its length, convex from side to side, the cephalic region scarcely at all elevated; ocular tubercle moderately high, oval, wider than long; anterior median eyes separated by a space which is greater than a diameter and greater than the space between them and the laterals, which they noticeably exceed in size; the two lateral eyes on each side about equal, space between them perhaps a little less than their long diameter. *Legs* 1, 4, 2, 3; patella and tibia of fourth less than of first, and only a shade greater than of second.

♂.—Much smaller than female. *Carapace* longer than wide, its width distinctly less than patella and tibia of third leg and than protarsus of first or fourth, just equal to tibia of fourth; length almost equal to protarsus of first, less than patella and tibia of third; length from fovea to anterior edge a little greater than patella of first, and exceeding half the length of the first protarsus. *Palpal organ* with the filiform piece curved through about one-third of a circle, the apex flexed slightly outwards.

Legs long and slender, 1, 4, 2, 3; patella and tibia of fourth equal to patella and tibia of second.

Measurements in millimetres.—♀. Total length 50, carapace 18, width of latter 17; length of first leg 65, of second 66, third 52, fourth 62·5; patella+tibia of first 20·5, of fourth 19·5.

♂. Total length 27, carapace 11; first leg 55, second 49, third 40·2, fourth 49; patella+tibia of first 16·3, of fourth 14·8.

Loc. Brazil (*D. Wilson-Barker*); Pernambuco (type) (*H. N. Ridley*); Iguarassu (*G. A. Klamage*).

It appears to me that *Mygale detrita* of C. Koch (*Die Arachn.* ix. p. 85) may belong to this genus. It is certainly,

however, I should say, specifically distinct from *hirsutum*, on account of the greater length of its posterior legs and difference of colour. Moreover, no mention is made in the diagnosis of the tibial process of the second leg.

Part III.—Genera dismembered from *Eurypelma*.

Genus CITHARACANTHUS, nov.

Resembling *Lyrosceles*, F. Cambr., in possessing a system of stout plumose stridulating-bristles upon the trochanter of the palp and first leg; but differing in the presence of a second organ upon the coxæ of these appendages, the organ consisting of a large number of short, stout, almost conical spines, terminating in a long, filiform, frequently fractured extremity, and rising in the midst of a thick cluster of simple hairs. These spines occur both above and below the suture on the coxa of the first leg, and near the upper margin of the posterior side of the coxa of the palp.

Type *Citharacanthus longipes*, F. Cambr. (sub *Eurypelma*).

Citharacanthus longipes (F. Cambr.).

Eurypelma longipes, F. Cambridge, Biol. Centr.-Amer., Araneiden, ii. p. 21, pl. i. figs. 15 a-c (1897).

The type of this species is an adult male taken at Chicomoyito in Guatemala. An adult female from the same locality presents the same structural features. The specimen from Cubilquitz, doubtfully referred to this species, belongs to the genus *Brachypelma*.

Genus PTERINOPELMA, nov.

Resembling *Brachypelma* in having the posterior side of the trochanter of the palp and the anterior side of that of the first leg scopulate with finer or coarser delicately plumose hairs, but without scopula of similar hairs upon the anterior inner side of the femur of the first leg, and the inner side of the coxa of the first leg clothed with simple hairs with slender not spiniform bases. Protarsus of first leg closing outside the lower tibial spur.

Type *Pterinopelma viliosum*, Keys. (sub *Eurypelma*).

Distribution. Southern part of North America (Monte Video, Uruguay, &c.).

Genus DUGESIELLA, nov.

A scopula of very delicately, almost invisibly, plumose

hairs upon the posterior side of the trochanter of the palp (a few also on the base of its femur), also upon the inner side of the femur of the first leg as in *Brachypelma*, but on the anterior side of the trochanter of the first leg the plumose scopula present in that genus is almost entirely replaced by basally stout and apically filiform spines; hairs on the anterior side of the coxa almost wholly converted into similar spines both above and below the suture. Also on the posterior side of the coxa of the palp there are similar spines intermixed with the hairs both above and below the naked area, while near the middle of the base of this area there is a small cluster of spines.

The spines on the coxæ suggest those of *Citharacanthus*, but in the latter they are considerably stouter and do not replace the normal clothing of slender hairs below the suture. Moreover, there is in *Citharacanthus* no scopula on the inner side of the femur of the first leg, and there are long delicately plumose spines rising amongst the scopular hairs on the trochanter of the palp, and large plumose spines on that of the first leg.

Type *Dugesiella crinita*, sp. n.

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♂.—*Colour*: carapace, legs, and mandibles covered with olive-black hairs; abdomen more intensely black; legs above and below, sternum, and abdomen thickly hirsute with long foxy-red bristles.

Carapace nearly as wide as long, a little shorter than protarsus of fourth, and about as long as tibia and half the patella of this leg, as long as femur of fourth or of first and as patella + tibia of palp; cephalic area moderately high.

Eyes of anterior line subequal; mediaus rather more than a diameter apart, rather less from the laterals.

Legs 4, 1, 2, 3, fourth exceeding the first by about half its tarsus; protarsus of first and second scopulate to base, without basal spines on first, and with one basal spine on second; tibia of first not incrassate, with one external basal spine and two strong apical spines above the spur; upper spur cylindrical, obtuse, with a short straight spine below it; lower spur only lightly curved and armed with a short blunt spine; protarsus strongly arcuate. Tibiæ of second, third, and fourth legs with only a few inferior spines; inner side of femur of first and of fourth and posterior side of trochanter of palp subscopulate with simple hairs.

Palp long, reaching nearly to end of tibia of first leg, its

tibia armed with one internal spine; palpal organ serrate along the convex side of the base of the spine as in *Eurypelma serratum*, but the spine is much thinner than in that species, though otherwise similar.

♀.—Like the male in colour, but more hirsute.

Carapace as long as patella + tibia of first or fourth leg (protarsus of fourth scarcely exceeding cephalic area in length), and as protarsus and half the tarsus of the fourth, and scarcely shorter than tibia and protarsus of second or third. A second specimen, perhaps not quite adult, has relatively longer legs, the patella and tibia of first and fourth being considerably longer than the carapace, the cephalic area of which is also much shorter than the fourth protarsus.

Measurements in millimetres.—♂ (type). Total length 27; length of carapace 13, width 12; length of cephalic area 8.5, of first leg 47, second leg 45.5, third leg 42, fourth leg 51; patella + tibia of first and of fourth 16, protarsus of fourth 14.5.

♀. Total length 42; length of carapace 18, width 16 length of cephalic area 12, of first leg 46.5, second 44, third 41, fourth 52; patella + tibia of first and fourth 18, protarsus of fourth 13.

Loc. Mexico; Guanajuato (*A. Dugès*).

Genus APHONOPELMA, nov.

Anterior side of coxa of first leg thickly clothed with hairs, most of which have stout spiniform bases and slender filiform extremities; anterior side of trochanter with clothing of simple hairs, with at most one or two spiniform setæ; no plumose scopula on the inside of the femur and no plumose scopula on posterior side of trochanter of palp, merely simple hairs, and no spines or spiniform setæ on the posterior side of the coxa of the palp.

Type *Aphonopelma Seemanni*, F. Cambr. (sub *Eurypelma*).

Distribution. Southern States of North America and Mexico.

I also refer to this genus species from California and Texas as well as *Eurypelma rusticum*.

Genus PLESIOPELMA, nov.

Resembling *Homœomma* in that the base of the protarsus of the first leg in the male passes between the two tibial spurs, but differing in having the protarsi of first and second legs scopulate to base, of third more than half covered below, and of fourth with nearly half of it covered. Palpal bulb without

basal prominence, and with spine slender and apically pointed. Coxa of first leg clothed in front with simple slender bristles intermixed with erect pin-like hairs, of trochanter covered with slender ragged bristles; coxa of palp naked throughout its median length behind, the trochanter without scopula.

Type *Plesiopelma myodes*, sp. n.

Plesiopelma myodes, sp. n.

♂.—Prevailing colour black, hairy clothing olive-brown with silky-golden lustre, legs indistinctly banded longitudinally above.

Carapace low, longer than wide, as long as patella and tibia of second leg, a little shorter than those of fourth, considerably shorter than those of first, slightly longer than protarsus and tarsus of first, than protarsus and half the tarsus of the fourth, and than patella, tibia, and tarsus of the palp; length from fovea equal to tibia of fourth or of first.

Eyes of anterior line large, laterals larger than medians; medians considerably less than a diameter from each other and from the laterals.

Legs 1, 2, 3, fourth a little more than three times as long as the carapace, not so thick as the first; tibia of first armed with two internal and about four inferior spines, its protarsus scopulate to base, but not spinous proximally; protarsus of second with about three strong spines at base of scopula; protarsus of third with more than its lower half, of fourth with its lower half scopulate. Upper tibial spur of first leg short, cylindrical, with long inferior spine, lower spur stout, not strongly arcuate, with short apical spine; protarsus not arched, with external basal nodule. Tibia of palp with one inner spine; palpal organ with spine stout at base, filiform at apex, with a slight spiral curvature and two strong keels. Basal segment of palp and first leg clothed with simple hairs.

Measurements in millimetres.—Total length 26; length of carapace 13, width 11; length from fovea 8; length of first leg 39, second 36, third 32, fourth 41; patella + tibia of first 15, of fourth 18.5; protarsus of fourth 9.5.

Loc. Uruguay.

Genus ACENTROPELMA, nov.

Resembling *Metriopelma*, but with the anterior side of the trochanter and femur of the first leg and the posterior side of the trochanter of the palp covered with a scopula of relatively stout delicately plumose bristles.

Type *Acentropelma spinulosum*, F. Cambr. (sub *Metriopelma*).

In *Metriopelma*, at least in the species that I refer to *Breyeri* and *tetricum*, there is no scopula, merely normal hairs on the surfaces above mentioned.

To the synonymy of *Metriopelma tetricum*, Sim., must be added *Miaschistopus rapidus*, Poc., based upon specimens in the British Museum from Keyserling's collection labelled W. Africa. The error of locality misled me into describing the specimens as the representatives of a new genus and species.

I.XX.—*Description of Two new Species of Bracon from Bengal.* By Col. C. T. BINGHAM, F.Z.S., F.E.S.

My friend Mr. L. de Nicéville, Government Entomologist, Indian Museum, Calcutta, has kindly entrusted to me for identification two species of *Bracon* bred from the larvæ of *Scirpophaga auriflua*, Zeller, a moth belonging to the family Crambidae, extremely destructive to the sugar-cane plantations in Bengal. So far as a careful examination of the material in the collections of the British Museum and of the very scattered literature on the subject have enabled me to judge, both the species sent have not been previously described. I have ventured to name one after Mr. de Nicéville.

Bracon Nicévillii, sp. n.

♀. Fulvous yellow, the tips of the mandibles, the antennæ, a broad band across the vertex of the head, the fifth and base of the sixth abdominal segment above, and the sheath of the ovipositor black, the ovipositor itself yellow, the posterior tibiæ and tarsi fuscous: wings hyaline yellow, the apex of both and inferior margin of hind wing infuscated; the front wing with two fuscous clouds, one in front of the basal nervure, passing from the costal margin of the wing through the discoidal cells, the other covering the apical half of the stigma and passing through the second cubital cell; base of stigma yellow; a clear hyaline spot in the first cubital cell. Head and thorax smooth and shining; legs covered with a short pubescence; a triangular impressed mark on the face above the clypeus slightly raised in the middle, with a small pit at each angle connected by furrows; a deep, short, impressed line vertically from between the base of the antennæ to the pit at the apex of the triangle; the thorax