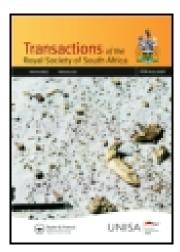
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Transactions of the South African Philosophical Society

Publication details, including instructions for authors and subscription information:

http://www.tandfonline.com/loi/ttrs19

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Published online: 28 Jun 2010.

To cite this article: W. F. Purcell Ph.D. (1900) ON THE SOUTH AFRICAN THERAPHOSIDÆ, OR "BAVIAAN" SPIDERS, IN THE COLLECTION OF THE SOUTH AFRICAN MUSEUM, Transactions of the South African Philosophical Society, 11:1, 319-347, DOI: 10.1080/21560382.1900.9525971

To link to this article: http://dx.doi.org/10.1080/21560382.1900.9525971

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ON THE SOUTH AFRICAN THERAPHOSIDÆ, OR "BAVIAAN" SPIDERS, IN THE COLLECTION OF THE SOUTH AFRICAN MUSEUM.

By W. F. PURCELL, Ph.D.,

First Assistant in the Museum.

(Communicated September 4, 1901.)

The South African species of *Theraphosida* * were until recently comprised in the single genus *Harpactira*. In 1897 two new genera were recognised by Pocock and two more are added in this paper. These five genera may be distinguished as follows:—

- a. Cheliceræ without scopulæ on the sides Harpactirella, nov. b. Cheliceræ with a thick scopula of feathery hairs on the outer surface
- above.

 a. Cheliceræ with a row of modified stridulating bristles extending obliquely

 a. harizentally across the relad area on the lower part of the outer surface.

 - b. Cheliceræ without a row of stridulating bristles on the outer surface and without a scopula on the inner surface.

 - b2. Thoracic fovea normal, transverse or procurved.
 - a³. Outer surface of chelicers with a strong transverse impression posteriorly. Foves strongly procurved . . . Cælogenium, nov.
 - b3. Outer surface of cheliceræ without a strong posterior impression. Fovea at most slightly procurved Pterinochilus, Poc.

^{*} For the information of collectors I may mention that these comprise the medium-sized and large, hairy, four-lunged spiders, generally known in South African Dutch as the "Baviaan Spinnekop" (Baboon Spider) and locally also as the "Tarantula" and "Monkey-fingered Spider," from the resemblance of the padded feet to the fingers of a monkey. They may be known from other four-lunged spiders, such as the Trap-door Spiders, &c., by having the tips of the legs, as well as the under surface of the two distal leg joints covered with a dense pad of short iridescent hairs. Another characteristic of these spiders is that when attacked they raise their front legs and jaws in a threatening manner and face their enemy.

GEN. HARPACTIRA, Auss.

1. HARPACTIRA ATRA (Latr.).

1832. Mygale atra, Latreille, Nouv. Ann. Mus. d'hist. nat., v. 1, p. 70.

1837. M. funebra, Walckenaer, Ins. apt., v. 1, p. 226, 3 and 9 from "Cape of Good Hope."

1842. M. coracina, C. L. Koch, Arach., v. 9, p. 37, f. 714, 3 from "Cape of Good Hope."

1842. M. funebris, C. L. Koch, ibid., p. 81, f. 742 and 743, ? and juv. from "Cape of Good Hope."

1897. Harpactira atra, Pocock, P.Z.S., 1897, p. 749, 3 and 2 from Simons Town, 3 from Zululand, juv. from Worcester.

The Museum possesses the following specimens:-

- (a) Thirteen \mathcal{J} and a number of \mathcal{I} and juv. from various parts of the Cape Peninsula.
- 3. Colour.—Limbs and carapace black or nearly so, more rarely chestnut-brown; the hairs on the legs olivaceous black (olive-brown in brown individuals), the long hairs often brownish distally; the hairs on the carapace, including those at the margins, uniformly olivaceous black (olivaceous in brown individuals); the under coat of shorter hairs on the abdomen black (olive-brown in brown individuals), the middle coat dense, composed of stiff black bristles, the outer coat of long foxy-red hairs.

Carapace as long as the metatarsus together with from $\frac{1}{3}$ to slightly over $\frac{2}{5}$ of the tarsus of fourth leg, and as long as the tibia together with $\frac{5}{6} - \frac{3}{8}$ of the metatarsus of first leg.

Tibia of first leg short and thick, $2\frac{3}{4}$ -3 times as long as high in the middle, its length mostly slightly less than, but sometimes equal to, that of the metatarsus and generally about equal to the distance from the centre of the fovea to the hind margin of the ocular tubercle, rarely greater or considerably less than this distance, at any rate not exceeding the distance from the fovea to the middle of the ocular tubercle. Metatarsus only slightly curved, its length equal to the distance from the fovea to some point on the ocular tubercle.

Bulb of pedipalp with the process gradually tapering from the stout base to the slender, subulate, distal part, which is terete and shows scarcely any or no sigmoid flexure.

Posterior spinners short, the apical segment obtusely conical in form (when not grooved on the under side), equal to or a little longer than the penultimate segment, and shorter than the ocular tubercle.*

* The length of the segments of the spinners is taken on the under side near the lateral margin. ?. Colour.—Limbs and carapace mostly dark chestnut or blackish brown; the hairs on the carapace olivaceous to black-olivaceous, the lateral fringe often pale; the hairs on the legs mostly dark olive to olive-brown; the shorter hairs of the abdomen black-olivaceous to brown, the middle coat composed of black or brown hairs and less bristly than in the 3, the long reddish hairs often much paler than in the 3. (In immature specimens the dark dorsal pattern found on the abdomen in tigrina, &c., is generally very distinct. In the adult this pattern is generally obliterated, but in some of the browner individuals, particularly females, it may be indistinctly observed, together with numerous small yellowish but not very distinct spots on the sides.)

Carapace a little shorter than, or slightly or considerably longer than the metatarsus and tarsus of fourth leg, and as long as the tibia and metatarsus together with from $\frac{1}{2}$ to the whole of the tarsus of first leg.

Tibia of first leg short and thick, $2\frac{2}{5}-2\frac{1}{2}$ times as long as high in the middle, its length varying from nearly $\frac{3}{4}$ to $\frac{4}{5}$ of the distance from the centre of the fovea to the hind margin of the ocular tubercle in the adult, and only very slightly exceeding the length of the metatarsus.

Apical segment of posterior spinners very short, slightly shorter than the penultimate segment.

Measurements.*—Total length 326-34, largest 33; length of carapace in $311\frac{1}{4}-14\frac{1}{2}$, in 318; length of tibia of first leg in largest $37\frac{1}{2}$, $77\frac{1}{2}$, of metatarsus in 38, in 77; distance from centre of fovea to anterior margin of carapace in $39\frac{1}{4}$, to posterior margin of ocular tubercle in $77\frac{2}{3}$, in $710\frac{1}{2}$.

Lower group of notes on cheliceræ formed of 10-18 spines † irregularly arranged 2-3 deep, more rarely more or less regularly biseriate, very slightly, scarcely, or not at all separated from the setæ of the inferior fringe.

- (b) One 3 and a number of 2 and juv. from Robben Island in Table Bay, collected by Mr. R. M. Lightfoot, Mr. A. Tucker, and myself. Resemble the specimens from the Peninsula.
- * Total length includes the cheliceræ but not the spinners; the length of the leg segments is taken along the middle dorsal line; the length of the carapace is its greatest not its median length. The measurements are in millimetres.
- † These spines in this as in the other species are short posteriorly and mostly curved in a sigmoid fashion, becoming gradually longer anteriorly and merging here insensibly into the setæ of the oral fringe. Inferiorly the notes are distinguishable from the adjacent posterior setæ of the fringe by being much shorter and mostly diverging from them in direction. The upper series of notes in atra varies in number from 5-11 and is generally uniseriate but sometimes irregularly arranged 2-3 deep.

- (c) One 3 from Gordons Bay, Stellenbosch Div. (Dr. Geo. Corstorphine). The legs shorter than in the examples from the Cape Peninsula, the tibia of first leg scarcely $2\frac{1}{2}$ times as long as high, the carapace as long as the metatarsus together with nearly $\frac{1}{3}$ of the tarsus of fourth leg and slightly longer than the tibia and metatarsus of first leg.
 - (d) One ? from Darling, Malmesbury Div.

These are the only localities known to me outside of the Peninsula, but Pocock records a 3 from Zululand and a young ? from Worcester.

H. atra is fairly common about the Peninsula and Robben Island. It lives in silk-lined holes under stones on the hillsides or in open sandy plains where there are no stones, sometimes utilising portions of old mole burrows for its dwelling.

2. HARPACTIRA MARKSI, n. sp.

- (a) Two 3 and 2 ad. 2 (types, No. 2161) from Gutverwacht Mission Station, Piquetberg Div., collected by the Rev. Richard Marks.
- 3. Colour of limbs and carapace a rich dark chestnut-brown or almost black; the under coat of short hairs on the limbs dark olivaceous, the long hairs pale foxy-red distally, the white transverse fringe at the apex of the segments very conspicuous; the hairs on the carapace uniformly dark olive-green, but some of those at the margins pale foxy-red at apex; the rich dark olivaceous hairy coat of the abdomen almost uniform in colour, spotted with yellow at most at the sides, the middle coat of bristly hairs black, the long hairs pale foxy-reddish.

Carapace as long as the metatarsus, or as the metatarsus and $\frac{1}{6}$ of the tarsus of fourth leg, and equal to the tibia together with $\frac{1}{2}$ of the metatarus of first leg.

Tibia of first leg $4\frac{1}{6}-4\frac{1}{3}$ times as long as high in the middle, its length equal to or slightly less than that of the metatarsus and slightly exceeding or slightly less than the distance from the centre of the fovea to the anterior margin of the carapace. Metatarsus strongly curved in the middle, its length slightly exceeding the distance from the fovea to the anterior margin of the carapace.

Bulb of pedipalp with the process rather long and slender, becoming gradually thinner from the base to slightly beyond the middle, the distal $\frac{2}{5}$ being filiform, very fine and slender, terete, with slight or no sigmoid flexure at the apex.

Apical segment of posterior spinners subfusiform (when not grooved below), about $1\frac{1}{2}-1\frac{3}{4}$ times as long as the penultimate segment and $1\frac{1}{3}-1\frac{1}{4}$ times as long as the ocular tubercle.

?. Colour much the same as in 3, the limbs and carapace a rich dark brown, the coat of short hairs on the limbs and trunk a more greyish olivaceous, the abdomen thickly speckled all over with grey spots and with a few obliquely transverse dark lines on the back, the fringe at the margins of the carapace pale foxy-reddish.

Carapace somewhat shorter than the metatarsus and tarsus of fourth leg and slightly or considerably longer than the tibia and metatarsus of first leg.

Tibia of first leg 3 times as long as high in the middle, its length a little exceeding that of the metatarsus, and from $\frac{7}{8}$ of to slightly less than the distance from the fovea to the hind margin of the ocular tubercle.

Apical segment of posterior spinners shorter than in the 3 and (when not grooved below) slightly conical in form, about $\frac{1}{b}-\frac{1}{4}$ longer than the penultimate segment and only a little longer than the ocular tubercle.

Measurements.—Total length in 33-41, in 949; length of carapace in 314-16, in 918; length of tibia of first leg in largest 310, 99, of metatarsus 310, 98; distance from centre of fovea to anterior margin of carapace in 310, to posterior margin of ocular tubercle in 99.2.

Lower cluster of stridulating notes on the cheliceræ composed of 8–20 spines, irregularly arranged 2–3 deep or more or less regularly biseriate, sometimes situated in the margin of the inferior fringe of setæ but more often slightly separated from, although very close to, the latter.

(b) One 3 from Elizabethfontein, Clanwilliam Div. (1,000 feet elevation, Miss M. Bergh). A very small specimen, measuring only about 24 mm. in length, with the carapace 10½ mm. long; the tibia of first leg only 4 times as long as high; the carapace slightly shorter than the metatarsus of fourth leg.

The conspicuous white bands of the legs contrasting with the rich dark brown and dark olive-green background give the males described above a very handsome appearance, not so noticeable in the more sombre but otherwise very similarly coloured 3 of atra.

(c) One 3, found on the mountain-side at the entrance to Kogmans Kloof near Ashton, Robertson Div., by my wife. This is a very small example, measuring only 20 mm. in length. Tibia of first leg 4 times as long as high, its length a little exceeding that of the metatarsus, and exceeding the distance from the fovea to the anterior margin of carapace; metatarsus much less strongly curved than in the types; apical segment of spinners very long, more than twice as long as the penultimate segment; carapace and limbs

brown, the shorter hair-covering olivaceous, but the leg segments without an apical fringe of conspicuously white hairs. There appears to be no sufficient reason for separating this form from the typical marksi.

3. HARPACTIRA GIGAS, Poc

1898. H. g., Pocock, Ann. Mag. N. H. s. 7, v. 1, p. 316, $\mathfrak P$ from Barberton, Transvaal.

The Museum possesses a single large dried ? from Barberton, agreeing exactly with the type in its proportions, as given by Pocock. The posterior spinners are somewhat shrivelled up, but the apical segment exceeds the penultimate segment in length, and is at least not shorter than the ocular tubercle.

4. HARPACTIRA NAMAQUENSIS, n. sp.

- (a) Three \mathcal{S} , 2 \mathfrak{P} , and several juv. (types, No. 3975), all from Ookiep, excepting one which came from Kraaifontein (Dr. R. H. Howard); 2 \mathcal{S} and 1 \mathcal{P} from Concordia (J. H. C. Krapohl); 1 \mathcal{P} from Steinkopf; all these localities in the Div. of Namaqualand, Cape Colony.
- 3. Colour of limbs and carapace dark brown to black; under coat of short hairs on the legs mouse-grey to mouse-brown, the tips of the shorter bristles and the distal part of the long hairs pale brownish to whitish; the dense hair at the lateral borders and the radiating bands on the carapace pale ochraceous to pale cream-coloured, the dark hairs almost or quite absent, even alongside of the ocular tubercle; abdomen almost uniformly golden-brown, the middle coat of bristles dark brown to nearly black.

Carapace somewhat longer or shorter than the metatarsus of fourth leg, and equal to the tibia together with over $\frac{1}{3}$ but less than $\frac{1}{2}$ the metatarsus of first leg.

Tibia of first leg 4½-5 times as long as high in the middle, its length distinctly and generally considerably less than that of the metatarsus, but subequal to or more or less considerably exceeding the distance from the fovea to the anterior margin of carapace. Metatarsus strongly curved in the middle and always much longer than the distance from the fovea to the anterior margin of carapace.

Bulb of pedipalp with the process rather long, almost terete, thick throughout the greater part of its length, excepting the distal $\frac{1}{5}$ or $\frac{1}{4}$, which becomes rather suddenly very slender, filiform, and flexible.

Spinners very long, the apical segment subfusiform, from $1\frac{1}{2}$ to nearly twice as long as the penultimate segment, and from $1\frac{1}{2}$ to nearly twice as long as the ocular tubercle.

2. Colour of limbs and carapace mostly brown, sometimes nearly black; abdomen dark brown, thickly speckled with grey spots and patches, the usual dark pattern on the back indistinct.

Carapace as long as the metatarsus together with from \(^3\) to the whole of the tarsus of fourth leg, and shorter than or slightly exceeding the tibia and metatarsus of first leg.

Tibia of first leg 3-3; times as long as high in the middle, its length equalling or slightly exceeding that of the metatarsus, and from ; of to equal to the distance from the fovea to the hind margin of the ocular tubercle.

Apical segment of posterior spinners subfusiform, the proportions as in the male.

Measurements of Ookiep specimens.—Total length of 3 37-48, of \mathfrak{P} 49; length of carapace in \mathfrak{F} 17 $\frac{1}{4}$ -18 $\frac{1}{2}$, in \mathfrak{P} 20; length of tibia of first leg in largest \mathfrak{F} 13, in \mathfrak{P} 10 $\frac{1}{2}$, of metatarsus in \mathfrak{F} 14, in \mathfrak{P} 10; distance from fovea to anterior margin of carapace in \mathfrak{F} 12, to posterior margin of ocular tubercle in \mathfrak{P} 11.

The lower group of notes on the cheliceræ are 8-15 in number, and either irregularly arranged and not at all or scarcely separated from the setæ of the inferior fringe, or more or less regularly uniseriate and then generally very slightly separated from the fringe, this latter being generally the case in the males.

- (b) One 3 and several 2 and juv.; old spirit specimens labelled "Touws River," Worcester Div. (Dr. W. P. Le Feuvre and W. Mellet). The apex of the process of the pedipalpal bulb is unfortunately broken off in the 3, but otherwise these specimens do not appear to differ from the Namaqualand form.
- (c) One 3, an old spirit specimen labelled "British Kaffraria." This locality is very vague and doubtful, but the specimen is interesting on account of the proportions, the tibia of the first leg being only $4\frac{1}{3}-4\frac{2}{5}$ times as long as high, its length only equalling the distance from the fovea to the anterior margin of the ocular tubercle. Other characters much as in the types.

5. HARPACTIRA CAFRERIANA (Walck.).

1837. Mygale cafreriana, Walckenaer, Ins. Apt. v. 1, p. 225, pl. 5, f. 1D (3) and 1E (pedipalpal bulb), 3 and 2 from "Caffraria."

1837. ? M. villosa, Walckenaer, ibid., p. 226, ? from "Cape of Good Hope."

- 1842. M. cafreriana, C. L. Koch, Die Arachn. v. 9, p. 80, f. 741, from "Cape of Good Hope."
 - (a) One 3 recently found by Mr. Harold A. Fry at Swellendam.
- 3. Colour.—Carapace and limbs almost black; the under coat of short hairs on the limbs and abdomen bright reddish orange, the long hairs on these parts whitish distally and only very faintly tinged with red; abdomen with distinct black markings above similar to those in tigrina, the bristles of the middle coat reddish orange, excepting in the black bands where they are black; the triangular cephalic portion of the carapace densely covered with brilliant orange-red hairs, dark hairs being absent, the thoracic portion also covered with similar hairs arranged in radiating, more densely hairy stripes alternating with less hairy interspaces, the latter almost entirely without dark hairs. Under surface of coxe and sternum brownish black, with brownish black hairs.

Carapace as long as the metatarsus and $\frac{1}{3}$ of the tarsus of fourth leg, and equal to the tibia together with nearly $\frac{3}{4}$ of the metatarsus of first leg.

Tibia of first leg proportioned almost exactly as in the Port Elizabeth σ of tigrina; the tibia 4 times as long as high in the middle, its length equal to that of the metatarsus together with $\frac{1}{5}$ of the tarsus, and just exceeding the distance from the centre of the fovea to the middle of the ocular tubercle. Metatarsus slightly curved, subequal in length to the distance from the fovea to the hind margin of the ocular tubercle.

The arcuate process of the bulb of the pedipalp becoming gradually thinner to beyond the middle, the distal part very slender and filiform, simply curved outwards at the apex, but without distinct sigmoid flexure.

Apical segment of posterior spinners about \(\frac{1}{4}\) longer than the penultimate segment, and equalling or even slightly exceeding the ocular tubercle in length.

Lower series of notes on the cheliceræ composed of about 2-3 rows of spines and widely separated from the inferior fringe of setæ,* the distance between the latter and the posteriormost notes being quite $\frac{1}{4}$ - $\frac{1}{3}$ of the distance between the upper and the lower group of notes.

Measurements.—Total length 30; length of carapace $12\frac{1}{2}$; length of tibia of first leg 7.8, of metatarsus 7; distance from fovea to anterior margin of carapace $8\frac{1}{2}$, to posterior margin of ocular tubercle 6.9.

- (b) One 2 (33 mm. long and apparently almost mature) found on
- * Anteriorly the notes pass over insensibly into the setæ of the fringe, as in the other species.

the mountain-side at the village of Caledon by Mr. Geo. French. Carapace and limbs brown; hairy covering on upper side of limbs and abdomen much the same as in the 3 from Swellendam; on the carapace, however, which is considerably rubbed, there are some olivaceous hairs between the reddish orange stripes and also behind the ocular tubercle, but not alongside of it. Carapace a little shorter than the tarsus and metatarsus of fourth leg, and equal to the tibia, metatarsus and $\frac{1}{5}$ of the tarsus of first leg. Tibia of first leg 3 times as long as high, its length equal to that of the metatarsus together with about $\frac{1}{6}$ of the tarsus, and about $\frac{9}{10}$ of the distance from the fovea to the hind margin of the ocular tubercle. Apical segment of posterior spinners a little longer than the penultimate segment, and about equal to the ocular tubercle in length. The distance between the posteriormost notes of the lower group and the setæ of the inferior fringe about ½ the distance between the upper and lower group of notes.

(c) One 3 and 2 immature specimens (the largest 25 mm. long) collected by Mr. H. A. Fry in the Bredasdorp Div. The 3 closely resembles the example from Swellendam, but is less red, the short hairs of the trunk and limbs being testaceous yellow, while there are a number of black-olivaceous hairs on the carapace in the darker spaces between the yellow stripes and also on a large, lozenge-shaped, median area behind, but not alongside of, the tubercle on the cephalic portion. The long hairs also more foxy-red. Apical segment of spinners nearly \(\frac{1}{4}\) longer than the ocular tubercle. Process of bulb very fine, not compressed distally. Carapace as long as the tibia and \(\frac{3}{5}\) of the metatarsus of first leg. Total length 29 mm. The Bredasdorp form may possibly be separable as a local colour variety.

The immature specimens resemble the 3, excepting that the hair covering is much less red, the short hairs being more yellow and the long hairs whitish. The proportions of the tibia of the first leg as in the 2 from Caledon. The apical segment of the spinners about 1 longer than the penultimate segment, and decidedly longer than the ocular tubercle.

The spines of the lower group of notes on the cheliceræ in the 3 are arranged irregularly and 3-4 deep.

(d) A large immature specimen (28 mm. in length) and 3 smaller ones from Slanghoek, Worcester Div., collected by Mr. R. Francke and myself. In the larger example the short hairs are yellowish, the proportions of the tibia of the first leg are as in the 2 from Caledon, and the apical segment of the spinners is considerably longer than the ocular tubercle.

- (e) An immature specimen (26 mm. in length) from Jonkershoek, in the Stellenbosch Div., found by myself. The short hairs are yellowish.
- (f) Three immature specimens (the largest 23 mm. in length) from Knysna, collected by myself. Darker specimens, the short hairs on the legs and abdomen greenish-yellow to light olivaceous, the carapace with olivaceous hairs between the yellow stripes.
- H. cafreriana is easily recognised by the position of the lower group of notes, which is much more isolated posteriorly than in any of the other species known to me. H. chrysogaster, Poc., with similar notes is probably merely a colour variety. The apical segment of the posterior spinners is longer than the penultimate segment (up to \frac{1}{4} longer), and subequal to or more or less considerably longer than the ocular tubercle.

Walckenaer describes the colour of his specimens as "rouge clair, uniforme dans les femelles, gris de souris dans le mâle," meaning, I presume, that the female is of a uniform light reddish colour and the male reddish, mingled with mouse-grey. Koch's male is described as of a "very beautiful yellowish red, almost fiery red," colour. In both cases the carapace is represented as uniformly coloured, and therefore most like that of our example from Swellendam. In size our specimens nearly resemble the two figured males. The pedipalpal bulb, as figured by Walckenaer, is also closely similar, except that the process is more arcuate than in our examples.

H. villosa (Walck.) is said to be like cafreriana, except that it is more hairy. These two species are probably identical.

6. HARPACTIRA TIGRINA, Auss.

- 1875. H. t., Ausserer, Verh. zoo.-bot. Ges. Wien, v. 25, p. 185, p. from Algoa Bay. The type is in the British Museum.
- 1897. H. t., Pocock, P.Z.S. 1897, p. 748, pl. 43, f. 5 (spinners), 9 or young from Port Elizabeth, Eastern Karroo, East London, Pondoland, Kei Road (Kingwilliamstown Div.), Matabeleland and Somaliland,
- (a) One 3, 3 ♀, and 1 juv. from Port Elizabeth, collected by Mr. J. L. Drège.
- 3. Colour.—Carapace and limbs chestnut-brown; the coat of short hairs on the legs grey-yellowish, the long hairs pale distally and brownish; the carapace with numerous radiating stripes of pale ochraceous silky hairs, the hairs between the stripes olivaceous; abdomen with an under coat of grey-yellowish silky hairs, with distinct black dorsal pattern, the middle coat of bristles dark brown to nearly black, the long hairs pale, with brownish or reddish tinge.

Carapace about as long as the metatarsus and half the tarsus of fourth leg, and as long as the tibia and $\frac{3}{4}$ of the metatarsus of first leg.

Tibia of first leg 4 times as long as high in the middle, its length equal to that of the metatarsus together with $\frac{1}{4}$ of the tarsus, and almost equal to the distance from the fovea to the anterior margin of the ocular tubercle. Metatarsus only very slightly curved, its length equal to the distance from the fovea to the posterior margin of the ocular tubercle.

Process of pedipalpal bulb stoutish, not filiform but rather broad and distinctly laterally compressed distally, with well-marked sigmoid flexure at the apex.

Apical segment of posterior spinners obtusely conical in form and a little (about $\frac{1}{5}$) longer than the penultimate segment, but a little shorter than the ocular tubercle.

?. Colour.—Carapace and limbs chestnut to mahogany-brown; the short hairs on the legs mouse-grey; the stripes on the carapace pale ochraceous to pale cream-coloured; the coat of shorter hairs on the abdomen dark, thickly speckled all over with mouse-grey or mouse-brown spots, the dorsal surface with a very distinct black pattern.

Carapace slightly or considerably longer than the metatarsus and tarsus of fourth leg, and equal to the tibia, metatarsus and $\frac{2}{5}$ to $\frac{1}{2}$ the tarsus of first leg.

Tibia of first leg $2\frac{3}{4}$ times as long as high in the middle, its length being from over $\frac{3}{4}$ up to $\frac{6}{7}$ of the distance from the fovea to the hind margin of the ocular tubercle, and equal to the metatarsus and $\frac{1}{3}-\frac{1}{4}$ of the tarsus.

Apical segment of spinners obtusely conical in form (when not grooved below), and equal to or a little longer than the penultimate segment, but decidedly shorter than the ocular tubercle.

Measurements.—Total length of largest specimens 328, 942; length of carapace 312, $918\frac{1}{2}$, of tibia of first leg $37\frac{1}{4}$, $98\frac{1}{4}$, of metatarsus 362, 97; distance from fovea to anterior margin of carapace in 38, to posterior margin of ocular tubercle in $910\frac{1}{3}$.

The lower group of notes on the cheliceræ are composed of 8-13 spines arranged in one or two more or less regular series, or irregularly and about 2 deep, the whole group being in some cases not separated from the setæ of the inferior fringe, while in others it is distinctly, although only very slightly, separated from the fringe.

(b) Five 3 and a number of ♀ and juv. from Dunbrody on the Sundays River, Uitenhage Div. (about 34 miles north of Port

Elizabeth), collected by the Rev. J. A. O'Neil. The hairs on the carapace and on the femora of the legs sometimes golden-yellow in the δ ; the radiating stripes on the carapace sometimes very faint. The carapace in the 3 as long as the metatarsus and $\frac{1}{3}$ of the tarsus of fourth leg, and equal to the tibia and 1 the metatarsus of first leg. In the 2 the carapace is a little shorter or longer than the metatarsus and tarsus of fourth leg, and equal to the tibia, metatarsus and $\frac{1}{6} - \frac{1}{3}$ of the tarsus of first leg. The tibia of first leg longer than in the Port Elizabeth form, its length in the 3 being 4½-5 times its height in the middle and equal to the length of the metatarsus together with from $\frac{1}{3}$ to nearly $\frac{1}{2}$ of the tarsus, and always (generally considerably) exceeding the distance from the centre of the fovea to the anterior margin of the carapace; the length of the metatarsus equal to the distance from the fovea to near the middle of the ocular tubercle. In the 2 the tibia of the first leg is $2\frac{5}{6}$ -3 times as long as high, its length varying from $\frac{9}{10}$ of to almost equal to the distance from the fovea to the hind margin of the ocular tubercle, and equal to the metatarsus together with $\frac{1}{5}$ of the tarsus. The apical segment of the spinners shaped as in the specimens from Port Elizabeth and equal to or more generally (especially in the 3) a little longer than the penultimate segment, sometimes quite 1 longer in the 3, but always shorter than the ocular tubercle. The lower series of notes on the cheliceræ often composed of a more or less regularly uniseriate series, and generally slightly but distinctly separated from the inferior fringe, the distance between the posteriormost notes and the adjacent inferior setæ being as usual many times less than the distance between the upper and lower group of Total length of 25½-33, largest 2 42; length of carapace 3 $11\frac{1}{2}$ -14, 2 $16\frac{1}{2}$, of tibia of first leg in largest 3 $10\frac{1}{2}$, 2 7.8, of metatarsus 3 8, 9 $6\frac{1}{2}$; distance from fovea to anterior margin of carapace in 3 9, to posterior margin of ocular tubercle in 2 81.

(c) Two \mathcal{J} and 4 \mathfrak{P} from East London, collected by Mr. John Wood. Most of these specimens are remarkable for their large size and darker colouration, the carapace and limbs being often blackish brown. The stripes on the carapace and the shorter hairs on the femora and patellæ of the legs are golden-yellow in the \mathcal{J} . In the \mathcal{J} the tibia of the first leg is $4\frac{2}{3}$ to $4\frac{3}{4}$ times as long as high, its length being equal to the distance from the fovea to the anterior margin of the ocular tubercle or even a little exceeding the distance from the fovea to the anterior margin of the carapace, and equal to the length of the metatarsus together with about $\frac{1}{3}$ of the tarsus. The metatarsus is a little longer or shorter than the distance from the fovea to the posterior margin of the ocular tubercle. The carapace

is as long as the fourth metatarsus together with $\frac{2}{3}-\frac{1}{2}$ of the tarsus, and equal to the first tibia together with $\frac{1}{2}-\frac{2}{3}$ of the metatarsus. In the 2 the tibia of the first leg is 3 or very slightly over 3 times as long as high, its length being equal to that of the metatarsus together with about $\frac{1}{4}$ of the tarsus, while the carapace is as long as or considerably longer than the fourth metatarsus and tarsus together, and as long as the tibia, metatarsus, and $\frac{1}{6}-\frac{3}{3}$ of the tarsus of first leg. The apical segment of the spinners is longer than usual, being longer than the penultimate segment and generally equal to or only very slightly (rarely considerably) shorter than the ocular tubercle. Total length of largest 3 and 3 and 3 and 3 and 4 and 4

- (d) Four large 2 and 1 3 collected by Mr. F. A. Pym, near Kingwilliamstown. Large specimens, closely resembling those from East London.
- (e) Two 3 found at Bizana, East Pondoland, by Mr. E. H. L. Schwarz and Mr. A. W. Rogers of the Geological Commission. Very darkly coloured specimens closely resembling those from East London.

The Museum also possesses females from Port Alfred in the Bathurst Division (dry ex., Miss Bowker), Umtata (L. H. Sitwell), and the Bedford Div. (E. S. Stephenson).

7. HARPACTIRA DICTATOR, n. sp.

- (a) Three 3 and 2 ad. 2 (types, No. 8838), all from Bonnie Vale Farm, in the Swellendam Div. (close to Bushmans Drift on the Breede River and a few miles from Ashton). They were dug out of the ground and collected by Mr. Charles Groom during the construction of a water-furrow.
- 3. Colour.—Carapace and limbs black or almost black; the coat of short hairs on the limbs mouse-grey, the tips of the shorter bristles, the distal part of the long hairs, and the apical fringe of the leg segments pale or whitish, tinged with foxy-red; carapace with a marginal fringe and numerous radiating bands composed of pale, reddish-yellow, silky hairs, these bands, however, not so well defined as in tigrina; the interspaces with blackish-green hairs; abdomen with an undercoat of silky reddish-yellow hairs, a middle coat of stiff black bristles, and a coat of long, pale, foxy-reddish hairs, but without distinct spots or dark pattern above; sternum and under

side of coxe of legs black, with black or red-tipped hairs, the coxa of pedipalps paler.

Carapace subequal to the fourth metatarsus in length or longer (as long as this segment together with up to nearly $\frac{1}{2}$ the tarsus), as long as the tibia together with $\frac{1}{4} - \frac{2}{3}$ of the metatarsus of first leg.

Tibia of first leg $4\frac{2}{5}-5\frac{1}{3}$ times as long as high, its length subequalling or a little exceeding that of the metatarsus, and slightly or considerably exceeding the distance from the fovea to the anterior margin of the carapace. *Metatarsus* strongly curved in the middle, its length equalling or exceeding the distance from the fovea to the anterior margin of carapace.

Process of pedipalpal bulb as in tigrina, the distal portion being stoutish and laterally compressed, with distinct sigmoid flexure.

Apical segment of posterior spinners much as in marksi, somewhat fusiform, $1\frac{1}{3}-1\frac{3}{5}$ times as long as the penultimate segment and a little (up to $\frac{1}{4}$) longer than the ocular tubercle.

q. Colour.—Carapace and limbs dark chestnut-brown; the pale
hairs on the carapace mouse-grey, the dark ones dark green or dark
brown; abdomen with the under coat of dark brown hairs thickly
speckled all over with mouse-grey spots and furnished with the
usual dark pattern above, the middle coat variable, of brown or black,
mostly pale-tipped bristles.

Carapace subequal to or considerably longer than the metatarsus and tarsus of fourth leg, and only slightly longer than the tibia and metatarsus of first leg.

Tibia of first leg nearly $3\frac{1}{2}$ times as long as high in the middle, its length equal to that of the metatarsus together with $\frac{1}{5}-\frac{1}{4}$ of the tarsus, and a little less than the distance from the fovea to the hind margin of the ocular tubercle.

Apical segment of posterior spinners about $1\frac{3}{3}$ times as long as the penultimate segment, and from a little to $\frac{1}{4}$ longer than the ocular tubercle.

Measurements.—Total length 3 36-45, largest ? (abdomen not distended) 55; length of carapace in 3 15 $\frac{1}{4}$ -20, in ? 26, of tibia of first leg in largest 3 13, ? 13 $\frac{1}{2}$, of metatarsus 3 121, ? 11.8; distance from fovea to anterior margin of carapace in 3 12 $\frac{1}{2}$, to posterior margin of ocular tubercle in ? 14.8.

The lower series of notes on the cheliceræ generally consists of a single row of 6-9 spines (sometimes irregularly arranged about 2 deep) and is not at all or scarcely separated from the inferior fringe of setæ.

(b) One 3 from Zandvliet Farm at Ashton, Robertson Div., collected by Mr. Ernest de Wet. Carapace and limbs dark brown.

(c) One 3 from the Pass at Avontuur, near Storms Vlei, Swellendam Div., found by myself under a stone. Colour of carapace and limbs dark brown.

The Museum also possesses females of the same species from Slanghoek ($R.\ Francke$), Rabiesberg near Nuy River Station ($W.\ F.\ Purcell$), and Worcester ($I.\ Meiring$), all in the Div. of Worcester. Also, a dried 2 from Ladismith, Cape Colony ($W.\ E.\ Fry$). In several of these specimens the apical segment of the posterior spinners is scarcely as long as the ocular tubercle, although always longer than the penultimate segment, while the tibia of the first leg may be only 3 times as long as high. The carapace may be as long as the tibia, metatarsus and $\frac{1}{4}$ of the tarsus of first leg.

This species closely resembles *H. lineata*, Poc., in the proportions of the carapace and legs, but in the latter species the apical segment of the posterior spinners is presumably shorter than the penultimate segment (see P.Z.S., 1897, p. 745).

The species described above may be distinguished from the following table:—

MALES.

- a. Distal part of the process of pedipalpal bulb slender, filiform and very flexible, with very slight or no sigmoid flexure.
 - a^t. Lower group of notes on outer surface of cheliceræ very close to the setæ of the inferior fringe.
 - a². Metatarsus of 1st leg only slightly curved, its length equal to the distance from the fovea to some point on the ocular tubercle. Apical segment of spinners shorter than the ocular tubercle. Carapace without pale radiating stripes 1. H. atra (Latr.)
 - b². Metatarsus of 1st leg generally strongly curved in the middle, its length exceeding the distance from the fovea to the anterior margin of the carapace. Apical segment of spinners not shorter than the ocular tubercle.
 - a3. Carapace without pale radiating stripes. Tibia of 1st leg 4-4½ times as long as high in the middle. Process of bulb becoming gradually thinner from the base to slightly beyond the middle, the distal ½ being very fine and filiform 2. H. marksi, n. sp.
 - b3. Carapace with distinct pale radiating stripes of hairs. Tibia of 1st leg 4½-5 times as long as high in the middle. Process of bulb becoming rather suddenly thinner at the commencement of the distal fourth or fifth of its length . . 4. H. namaquensis, n. sp.
 - b. Lower group of notes remote from the inferior fringe, the distance between the posteriormost notes and the nearest setæ being 4-3 of the distance between the upper and lower group of notes .. 5. H. cafreriana (Walck.)
- b. Process of pedipalpal bulb stoutish, compressed to the apex, the distal part rather broad and flattened but not filiform, with distinct sigmoid flexure. Carapace with radiating stripes of paler hairs.
 - a4. Metatarsus of 1st leg only slightly curved, its length equal to the distance from the fovea to near the middle of the ocular tubercle or less. Apical

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 - segment of spinners $1-1\frac{1}{4}$ times as long as the penultimate segment and less than or at least not exceeding the ocular tubercle in length.

FEMALES.

- b. Lower group of notes very close to the inferior fringe of setæ.
 - a. Carapace without radiating stripes of paler hairs.*
 - a2. Apical segment of spinners much shorter than the ocular tubercle.
 - 1. H. atra (Latr.)
 - b^2 . Apical segment of spinners at least as long as the ocular tubercle.
 - a^3 . Carapace not longer than metatarsus and tarsus of 4th leg.
 - 2. H. marksi, n. sp.
 - b3. Carapace considerably longer than metatarsus and tarsus of 4th leg.
 3. H. qiqas, Poc.
 - b1. Carapace with radiating stripes of whitish to yellow hairs.
 - a4. Tibia of 1st leg equalling or only slightly exceeding the metatarsus in length. Carapace shorter than or subequal to the 4th metatarsus and tarsus, and slightly exceeding the tibia and metatarsus of 1st leg. Apical segment of spinners subfusiform and very long, 1½ times to nearly twice as long as the ocular tubercle.. 4. H. namaquensis, n. sp.
 - b4. Tibia of 1st leg as long as the metatarsus together with $\frac{1}{5}$ - $\frac{1}{4}$ of the tarsus.
 - a5. Apical segment of spinners considerably shorter than or subequal to the ocular tubercle, and often subconical in shape. Carapace as long as the tibia, metatarsus and 1/6-3 of the tarsus of 1st leg. Tibia of 1st leg 23 to about 3 times as long as high. 6. H. tigrina, Auss.

The following species of *Harpactira* have been recently described by Pocock, but I have not been able to identify any of them with certainty from specimens in the Museum:—

- H. lineata, Poc., P.Z.S., 1897, p. 749, ? from "South Africa." Resembles tigrina, Auss., and dictator, n. sp.
- H. curvipes, Poc., ibid., p. 750, ? from Natal. Uniform mouse-brown in colour; the metatarsus of fourth leg distinctly bowed, convex internally.
- H. chrysogaster, Poc., ibid., p. 750, pl. 43, f. 5a & 5b, 3 from "South Africa." Probably identical with cafreriana (Walck.), from
- * According to Pocock gigas belongs here; in our example the carapace is rubbed.

which it differs in having the carapace and limbs clothed with greenish black instead of orange or yellowish hairs.

H. curator, Poc., Ann. Mag. N. H. s. 7, v. 2, p. 199, pl. 8, f. 7 (pedipalpal bulb of 3), 1898, 3 and 2 from Malvern, Natal. Appears to resemble tigrina in its colouration and also in the shape of the pedipalpal bulb.

H. pulchripes, Poc., ibid., v. 7, p. 287, 1901, \mathfrak{P} from Brakkloof, near Grahamstown.

In the Museum are also a number of female specimens from various parts of South Africa, which I have been unable to identify. As it is very difficult to recognise a species from a diagnosis of the Q only, none of these specimens are here described as new.

GEN. PTERINOCHILUS, Poc.

Pterinochilus crassispina, n. sp.

- (a) One 3 (type, No. 6252) from the Metopo District, Matabeleland, collected by Mr. R. Pillans.
- 3. Colour.—Carapace dark chestnut-brown, covered with almost uniformly brownish olivaceous hairs, without paler radiating stripes, the marginal fringe composed of yellow and whitish hairs intermixed with some dark ones; the short hairs on the upper side of the femora and patellæ of legs olivaceous brown, those on the tibiæ greyolivaceous, those on the metatarsi and tarsi whitish intermingled with pale olivaceous hairs; the hairs on the cheliceræ and pedipalps mostly olivaceous; the undercoat on the abdomen composed of golden-brownish hairs mingled with blackish brown hairs, the latter forming a pattern of paired oblique lines on the posterior part of the dorsal surface, as in Harpactira; the middle coat on the abdomen of blackish-brown bristles; the long hairs on the abdomen and limbs mostly dark at base, foxy-red in the middle and white distally; sternum and the under side of the coxæ and abdomen covered with dark olive-brown hairs; apical fringe of white hairs on the segments of the limbs very conspicuous, as in Harpactira marksi, n. sp.

Carapace broad, evenly elliptical, its width quite $\frac{1}{3}$ of the length, its length equal to that of the fourth metatarsus together with $\frac{1}{4}$ of the tarsus, and to the tibia together with $\frac{1}{3}$ of the metatarsus of first leg; ocular tubercle somewhat wider than long, its length about twice its distance from the anterior margin of carapace; the anterior median eyes large, their diameter equal to the long diameter of the anterior laterals and much greater than that of the posterior medians.

Tibia of first leg normal, 3\frac{3}{4} times as long as high in the middle, its length scarcely less than that of the metatarsus and equal to the distance from the fovea to a point on the ocular tubercle, midway between the posterior margin and the middle of the latter. Metatarsus straight, not hollowed out at base on the inner side.

Process of pedipalpal bulb arcuate, stoutish, striated externally, strongly flattened distally and slightly twisted, bent outwards rather suddenly near the apex, the apex itself rounded, with keel-like dilatation.

Cheliceræ with the lower non-scopulate portion of the outer surface only slightly narrower than the scopula and provided behind with an oblique patch of very fine, rather sparsely distributed hairs, which are directed forwards and downwards.*

Apical segment of posterior spinners subconical, equalling the penultimate segment in length and considerably shorter than the ocular tubercle.

Measurements.—Total length 32; length of carapace 13, width $10\frac{1}{2}$; length of tibia and of metatarsus of first leg $7\frac{1}{2}$; distance from fovea to posterior margin of ocular tubercle 7, to anterior margin of carapace 9.

- (b) One 3 and 1 ♀ from Vryburg in Bechuanaland, Cape Colony (Mrs. A. W. Fincham).
- $\mathfrak Z$ with the hairs on the carapace more of a dark bronzy olivaceous colour, the distal segments of the legs scarcely paler than the proximal segments, the under surface of trunk with dark chocolate-brown hairs. Carapace as long as the fourth metatarsus together with $\frac{1}{3}$ of the tarsus, and only a little shorter than the tibia and metatarsus of first leg. Tibia of first leg about $3\frac{1}{4}-3\frac{1}{3}$ times as long as high, its length slightly less than that of the metatarsus and subequal to the distance from the fovea to the posterior margin of the ocular tubercle, the length of the metatarsus just exceeding this distance.
- ?. Carapace with numerous radiating stripes of pale cream-coloured hairs, the interspaces clothed with dark greenish-brown hairs; the 3 distal leg segments clothed with greyish hairs, the femurand patella with more olive-brown hairs and with 2 longitudinal grey stripes above; abdomen dark, densely speckled with cream-coloured confluent spots, the usual dark dorsal pattern distinct. Carapace slightly shorter than the metatarsus and tarsus of fourth leg, and as long as the tibia, metatarsus and ½ the tarsus of first leg. Tibia of first leg 2½ times as long as high, its length equal to that of the metatarsus, together with about $\frac{1}{6}$ of the tarsus, and

^{*} A similar patch occurs in Harpactirella, nov.

slightly more than $\frac{1}{5}$ of the distance from the fovea to the hind margin of the ocular tubercle.

Total length 334, 36; length of carapace $315\frac{1}{4}$, 15, width $12\frac{1}{2}$, $12\cdot2$; length of tibia of first leg 38, $16\frac{1}{2}$, of metatarsus 168,

- (c) One 3 from a collection containing East African insects, &c., presented by Dr. J. D. F. Gilchrist. Hair-covering dark greenish-brown, including the fringe of carapace and the hair on legs and abdomen, the long hairs reddish distally and pale at the tips. Carapace as long as the fourth metatarsus together with nearly $\frac{1}{2}$ of the tarsus, and only slightly shorter than the tibia and metatarsus of first leg.
 - (d) One dried σ from the Zambesi River (J. Fry).

Pale stripes are entirely absent from the carapace in all the males, the latter being in good condition in the spirit specimens and in nowise rubbed. Although the ? example is so differently marked, I believe it to belong to the same species, as it has similar eyes and spinners.

P. nigrofulvus, Poc., from Barberton, Transvaal, appears to be a nearly allied species with somewhat similar pedipalpal bulb, but the carapace is provided with radiating stripes of golden hairs, and the apical segment of the posterior spinners is presumably elongated as in P. vorax, Poc.

The following South African species of *Pterinochilus* could not be identified from the specimens in the Collection:—

- P. nigrofulvus, Poc., Ann. Mag. N. H., s. 7, v. 1, p. 317, 1898, 3 and \$\varphi\$ from Barberton.
 - P. lugardi, Poc., ibid., v. 6, p. 318, 1900, 3 from near Lake Ngami. P. schönlandi, Poc., ibid., 3 from Grahamstown.

Harpactira elevata, Karsch, Monatsb. Ak. wiss. Berlin, 1878, p. 316 (3 and 2 from Tette and Mozambique), probably also belongs to Pterinochilus, as suggested by Pocock.

GEN. CŒLOGENIUM, nov.

Carapace about $\frac{1}{3}$ longer than wide, the cephalic portion moderately convex in the 2, the fovea moderately deep, strongly procurved, semicircular in form and situated more posteriorly than in Harpactira, its distance from the hind margin of the carapace only $\frac{1}{3}$ of its distance from the anterior margin along the median line. Ocular tubercle and eyes as in Harpactira. Fourth pair of legs slightly shorter than the first pair, the patella and tibia of the fourth pair

also a little shorter than those of the first pair. Tibia of pedipalp spined at the apex below. Tibiæ and metatarsi of legs also spined, at least at the apex, excepting the metatarsus of the first pair. Scopula of first and second metatarsus thick, reaching as in Harpactira almost or quite to the base, that of third and fourth metatarsus leaving the basal fourth or third of the segment free, that of fourth metatarsus divided by a band of setæ, the other scopulæ entire. Outer surface of cheliceræ with a strong transverse depression commencing suddenly near hind margin, occupying the whole width of the outer surface, and extending anteriorly up to the apex; the outer scopula very large, occupying the greater portion of the depression, the narrow, non-scopulate, inferior portion with sparsely distributed, fine, long hairs in the middle; inner surface of cheliceræ without scopula. Posterior sternal sagilla near the margin.

Type.—C. pillansi, n. sp.

This genus belongs to Pocock's sub-family Harpactirinæ and would fall together with Harpactira in Simon's table of the Selenocosmieæ.

CŒLOGENIUM PILLANSI, n. sp.

Type.—One example (2 or juv., No. 5749) from Rhodesia, found by Mr. R. Pillans.

Colour.—Carapace mahogany-brown, covered with golden-yellow hairs forming radiating stripes (only visible when dried); cheliceræ with yellow hairs above; the hairs on the legs, including the long hairs on the under side of the femora, mostly yellowish, mingled, especially on the patellæ and tibiæ, with some black ones; the anterior surface of the pedipalps and of the first 2 pairs of legs darker, with short olive-green hairs; abdomen golden-yellow, with dark pattern above; sternum and under side of coxæ of legs yellowish brown, with dark hairs, the posterior coxæ pale yellowish below, with pale yellowish hairs; coxæ of pedipalps brownish yellow below, with fiery red oral fringe; under side of abdomen yellowish, with a posterior transverse row of 4 small dark spots.

Carapace about $\frac{1}{3}$ longer than wide, considerably longer than the metatarsus and tarsus and almost as long as the tibia and metatarsus of fourth leg, as long as the tibia, metatarsus and $\frac{1}{5}$ of the tarsus of first leg. Ocular tubercle distant from anterior margin nearly $\frac{1}{3}$ of its length, the anterior median eyes not large.

Tibia of first leg about $2\frac{1}{2}$ times as long as high in the middle, its length equal to that of the metatarsus, together with nearly $\frac{1}{4}$ of the tarsus. Tibia of first leg with 1, of second with 1-2, of third and fourth with 2 apical spines below; no other spines on the tibiæ.

Metatarsus of first leg not spined, that of second leg with 1, that of third and fourth legs with several apical spines, the third and fourth metatarsus with 1-2 other spines near the middle of the segment as well.

Apical segment of posterior spinners subfusiform, about $\frac{3}{4}$ longer than the penultimate segment and $\frac{1}{3}$ longer than the ocular tubercle.

Measurements.—Total length 28; length of carapace 9.8, width 7; length of tibia of first leg 5, of metatarsus 4.1; distance from centre of fovea to hind margin of ocular tubercle 6.

GEN. CERATOGYRUS, Poc.

CERATOGYRUS BECHUANICUS, n. sp.

Locality.—Two ad. 3 (dried, No. 4539) from Mochuli in Bechuanaland (Miss Neethling).

3. Colour.—Carapace black, clothed with pinkish-white hairs, forming radiating stripes, and especially dense at the sides; cephalic portion with a large patch of dark olivaceous hairs on each side of the ocular tubercle; some such hairs also between the radiating stripes on the thoracic portion; the horn of the fovea clothed with dark olivaceous hairs and striped with white; limbs clothed on the upper surface with mouse-brown and grey hairs intermixed, the tibiæ with a pair of distinct or indistinct rows of white dashes; the sides and under surface of the limbs with the short hairs paler whitish-grey, but the short hairs on the anterior and under surfaces of the pedipalps and first two pairs of legs intensely velvety black on the femora and patellæ, and to a lesser extent on the tibiæ also; the long hairs on the legs dark at base, brownish distally, those on the under side of the femora foxy-reddish, the whitish or pinkish white apical fringe of the leg segments very conspicuous; the shorter hairs on the abdomen greyish white, the longer ones foxy-reddish; under surface of abdomen, sternum, and coxæ deep velvety black.

Carapace about ½ longer than wide, longer than the patella and tibia of fourth leg, subequal to those of first leg, but considerably shorter than the metatarsus and tarsus of fourth leg; the horn of the fovea very large and long, becoming very gradually narrower towards the apex, which is rounded and not pointed, its length along the upper side about 13 of its width at the base; seen from the side the upper edge of the horn appears strongly curved.

Tibia of first leg about four times as long as high in the middle, its length equal to that of the metatarsus together with $\frac{1}{5}$ of the tarsus, and exceeding the distance from the anterior edge of the fovea to the

anterior margin of the carapace. *Metatarsus* distinctly curved, its length a little less than or a little exceeding the distance from the fovea to the anterior margin of the carapace.

Process of pedipalpal bulb arcuate, stoutish, the distal portion strongly laterally compressed and flattened, curved outwards, the apex suddenly pointed like the nib of a pen with a very short point.

Apical segment of posterior spinners very much longer than the penultimate segment, and about $1\frac{1}{3}$ times as long as the ocular tubercle.

Measurements.—Length of carapace $19\frac{1}{4}$ – $21\frac{1}{2}$, width $16\frac{1}{3}$ – $17\frac{1}{3}$; length of foveal horn in largest 37, width at base 4·2, height of apex above thorax 2·8; distance of fovea from anterior margin of carapace 12; length of tibia of first leg $12\frac{3}{4}$, of metatarsus $11\frac{1}{2}$.

In the large size of the foveal horn this species most nearly resembles C. darlingi, Poc., of which only the female has been described. In the latter species, however, the horn is more conical and more erect and straight (see Pocock, P.Z.S., 1897, pl. 43, f. 1 & 1a), whereas in bechuanicus it is not conical, much more inclined and strongly curved backwards.

The following species are not in the Collection:-

Ceratogyrus darlingi, Poc., P.Z.S., 1897, p. 754, pl. 42, f. 5; pl. 43, f. 1, 1a, 2 from Enkeldoorn, S. of Salisbury, in Mashonaland.

Ceratogyrus marshalli, Poc., ibid., p. 754, pl. 43, f. 2-2b, 3 from the same locality.

GEN. HARPACTIRELLA, nov.

Carapace about $\frac{1}{4} - \frac{2}{5}$ times longer than wide, the cephalic portion moderately convex in the 2 but lower in the 3, the fovea moderately deep, transverse or nearly so, its position as in Harpactira. Ocular tubercle and eyes as in Harpactira. Legs much as in Harpactira, the fourth pair not shorter than the first. Tibia of pedipalps with apical Tibiæ and metatarsi of legs also spined, at least at the apex in the third and fourth pairs, but the metatarsi of first and second pairs not spined at the apex. Patella and tibia of fourth pair together subequal to or slightly exceeding the same segments of the first leg. Scopula of first and second metatarsus thick, reaching as in Harpactira almost or quite to the base, that of third and fourth metatarsus leaving the basal fourth or third of the segment free, that of fourth metatarsus divided by a band of setæ, the other scopulæ entire. Sides of cheliceræ without feathery scopulæ, the outer surface furnished posteriorly with an obliquely transverse patch of very fine, rather sparsely distributed hairs, which

are directed downwards and forwards. Sternal sagilla marginal. Tibia of first leg in δ furnished with a strong spur bearing one of the two apical spines as in Harpactira, but the spine longer than the spur.

Type.—H. treleaveni, n. sp.

On the outer surface of the cheliceræ a horizontal row of 2-4 long red setæ, resembling the upper series of stridulating bristles of Harpactira, is frequently found. They are situated more forward in the anterior part of the middle third at a little distance from the red inferior fringe, just above where the hairs of the latter are most These setæ may be absent, or hidden amongst other but darker hairs, or they may stand out isolated and very conspicuous. The outer surface in a very young Harpactira, before the scopula and the lower group of stridulating notes have been formed, is very similar to that of an adult Harpactirella, having a similar posterior patch of fine hairs, but it may be distinguished at once by the position of the upper series of stridulating bristles. In the young Harpactira this series is always well developed, with the posterior bristles situated some distance behind the middle of the chelicera; whereas in Harpactirella the posterior bristle, when distinguishable, is situated in the middle or, more generally, some distance anterior to the middle.

The absence of scopulæ from the sides of the cheliceræ is apparently the only character which distinguishes this genus from *Harpactira*, with which it would fall in Simon's table of the Selenocosmieæ. The genus includes the four small species described below from the south-western parts of Cape Colony, and also several other forms from Cape Colony, Natal, and the Transvaal, of which, however, we possess at present only female examples. The largest specimen (from Dunbrody, Uitenhage Div.) measures 35 mm. in length, but this length appears to be quite exceptional in the genus.

1. HARPACTIRELLA TRELEAVENI, n. sp.

Locality.—One 3 (type, No. 4496) found by Mr. F. Treleaven on the Cape Town side of Table Mountain; also 1 3 and a large number of 2 and juv. from various parts of the Cape Peninsula, mostly under stones (Signal Hill, Cape Town, slopes of Devils Peak and Table Mountain, Camps Bay, collected by F. Treleaven, C. L. Leipoldt, and myself).

3. Colour.—Carapace and limbs chestnut-brown; carapace clothed with olivaceous or greenish-black hairs, but without paler radiating stripes, the marginal fringe paler; the short hairs on the legs also

olivaceous or greenish-black, the longer hairs greenish-brown or black, pallid or white distally; the hairs on the abdomen more golden olivaceous, with the usual dark pattern above, the long hairs whitish distally; seen in spirits the upper surface and sides of the abdomen in the lighter-coloured type-specimen appear dark brown and thickly speckled with yellow confluent spots; under side of abdomen pale yellowish, with brownish to blackish hairs and with a dark spot on each side of each of the posterior lungbooks and a transverse row of 4 much smaller spots in the posterior part of the abdomen; under side of coxe and sternum pale brown to blackish-brown, with brown or blackish hairs.

Carpace narrow, about $\frac{2}{5}$ longer than broad, slightly longer than the metatarsus and $\frac{1}{2}$ the tarsus of fourth leg, but about as long as the tibia and metatarsus of first leg.

Tibia of first leg about 23-3 times as long as high in the middle, a little longer than the metatarsus, and almost equal in length to the distance from the fovea to the centre of the ocular tubercle. Metatarsus straight (except perhaps quite at the base), its length subequalling or slightly exceeding the distance from the fovea to the posterior margin of the ocular tubercle. Tibia of first, second, and third legs with 2, that of fourth leg with 3 apical spines; metatarsus of first and second legs not spined, that of third and fourth legs with several spines at the apex and also on the upper and lower surface and on the sides.

Pedipalpal bulb with the arcuate process slender and terete, much longer than the bulb, the distant portion filiform and lightly curving outwards.

Apical segment of posterior spinners short, equalling the penultimate segment and equalling or slightly exceeding the ocular tubercle in length.

Q. Colour.—Carapace and limbs light brown to brownish-yellow, often pale ochraceous in the younger individuals; the hairs on the carapace and abdomen golden-olivaceous, golden-brown, or mouse-brown; the carapace without radiating stripes of paler hairs; under surface of abdomen often with a dark spot on each of the anterior lung-books and several scattered spots in addition to the spots described for the male.

Carapace subequalling or a little shorter than the metatarsus and tarsus of fourth leg, and equal to the tibia, metatarsus, and from $\frac{2}{3} - \frac{3}{4}$ of the tarsus of first leg.

Tibia of first leg about $2\frac{1}{2}$ times as long as high in the middle, its length equal to that of the metatarsus together with about $\frac{1}{7} - \frac{1}{5}$ of the tarsus. Tibia of first leg with 0-2, that of second leg with 0-1, that

of third leg with 1-2, that of fourth leg with 2-4 apical spines; no other spines on the tibiæ; metatarsus spined as in 3; first leg shorter than the fourth by $\frac{1}{2}-\frac{2}{3}$ of the tarsus of the latter.*

Apical segment of posterior spinners equal to or slightly longer or shorter than the ocular tubercle, and equal to or slightly longer than the penultimate segment.

Measurements.—Total length $3 \cdot 16\frac{1}{2}$, largest $2 \cdot 21\frac{1}{2}$; length of carapace $3 \cdot 6\frac{2}{3}$, $2 \cdot 8\frac{2}{3}$, width $3 \cdot 4 \cdot 8$, $2 \cdot 6\frac{1}{2}$; length of tibia of first leg $3 \cdot 3\frac{2}{3}$, $2 \cdot 4$, of metatarsus $3 \cdot 3\frac{1}{3}$, $2 \cdot 3\frac{1}{2}$; distance from fovea to posterior margin of ocular tubercle $3 \cdot 3 \cdot 1$, $2 \cdot 4\frac{1}{3}$.

This species is fairly common round Cape Town. It lives in silk-lined holes under stones, like *Harpactira*.

2. HARPACTIRELLA LONGIPES, n. sp.

- (a) One 3 (type, No. 3567) found by Mr. C. L. Leipoldt at the village of Clanwilliam.
- 3. Colour much the same as in the 3 of treleaveni, but the spots on the under side of the abdomen are not marked and the hairs on the upper side of the abdomen are yellowish.

Carapace about $\frac{2}{5}$ longer than wide, as long as the metatarsus together with $\frac{1}{3}$ of the tarsus of fourth leg, and the tibia together with about $\frac{1}{3}$ of the metatarsus of first leg.

Tibia of first leg almost 4 times as long as high in the middle, its length slightly exceeding that of the metatarsus and also the distance from the fovea to the anterior margin of carapace. Metatarsus slightly but distinctly curved proximally to the middle, its length subequal to the distance from the fovea to the anterior margin of carapace. Spines of the legs as in treleaveni.

Pedipalpal bulb turbinate; the process short, arcuate and slender, only slightly longer than the bulb, its distal portion filiform, curving outwards at the apex.

Apical segment of posterior spinners subfusiform, about \(\frac{3}{4} \) longer than the penultimate segment and a little longer than the ocular tubercle.

Measurements.—Total length 18; length of carapace 7.8, width $5\frac{1}{2}$; length of tibia of first leg 5.1, of metatarsus 5; distance from fovea to anterior margin of carapace 5.

(b) One 3 from Porterville, Piquetberg Div. (Max Schlechter). Carapace with yellow hairs; the limbs with mouse-brown hairs; the abdomen with ochre-yellow hairs. Carapace only a little longer than the metatarsus of fourth leg, and slightly longer than the tibia

^{*} The coxe are included in the length.

and $\frac{1}{3}$ of the metatarsus of first leg. Tibia of first leg a little more than 4 times as long as high, its length slightly exceeding that of the metatarsus and nearly equal to the distance from the fovea to the middle of the cheliceræ; the length of the metatarsus much exceeding the distance from the fovea to the anterior margin of the carapace Process of pedipalpal bulb apparently with the tip broken off. Apical segment of spinners about $\frac{1}{3}$ longer than the penultimate segment. Total length 17; length of metatarsus of first leg $5\frac{1}{4}$; distance from fovea to anterior margin of carapace $4\frac{3}{4}$.

(c) The Museum also possesses an apparently nearly mature ? (measuring 30½ mm. in length) from Olyvenbosch Kraal, near the Bergvlei River in Clanwilliam Div., just north of the Piquetberg Range, and 4 smaller examples from Onder Bergvlei near the above locality, all from Mr. C. L. Leipoldt; also, an immature specimen from Boschkloof Waterfall in the Cedarbergen, collected by Mr. R. Pattison. From the length of the posterior legs these specimens would appear to belong to this species. The colour is pale ochraceous to brownish yellow, the abdomen being spotted above as in treleaveni.

In the largest example the carapace is about equal to the metatarsus and $\frac{1}{2}$ the tarsus of the fourth leg, and to the tibia and metatarsus of the first leg. The tibia of first and second legs with a basal spine below and another on the inner (anterior) surface, that of third and especially of fourth leg with several spines below and on the sides, in addition to the ordinary spines at the apex. The first leg is shorter than the fourth by the length of the tarsus of the latter.

In the smaller examples the legs are relatively shorter, and the spines on the tibiæ are mostly absent, excepting those at the apex.

The apical segment of the posterior spinners is equal to or slightly exceeds the penultimate segment, and is subequal to the ocular tubercle in length.

3. HARPACTIRELLA KARROOICA, n. sp.

Locality.—One & (type, No. 3432), 1 large 2 and 3 immature examples collected by myself round the village of Prince Albert.

3. Colour.—Carapace and legs chestnut-brown; the hairs on the carapace, abdomen, and legs cream-coloured, the long hairs pallid; under side of coxæ and sternum pale brown, that of abdomen pale yellowish.

Carapace about $\frac{1}{2}$ longer than wide, almost as long as the metatarsus and $\frac{1}{2}$ the tarsus of fourth leg, and somewhat shorter than the tibia and metatarsus of first leg.

Tibia of first leg $3\frac{1}{2}$ times as long as high, its length equal to that of the metatarsus together with $\frac{1}{6}$ of the tarsus, and to the distance from the fovea to the anterior margin of the ocular tubercle. Metatarsus scarcely curved, its length only slightly exceeding the distance from the fovea to the posterior margin of the ocular tubercle. Legs spined as in the 3 of treleaveni (in the first left leg the tibial spur bears two apical spines and the metatarsus has a spine near the base anteriorly).

Pedipalpal bulb subturbinate; the process much longer than the bulb, scarcely curved in the proximal part, the middle part strongly laterally compressed; seen from the side the process appears broader and band-like up to the commencement of the distal third, where it suddenly narrows, the distal third being very slender, filiform, and curved gradually outwards.

Apical segment of posterior spinners subconical, short, subequal to the penultimate segment, but shorter than the ocular tubercle.

? . Colour.—Carapace and legs lighter brown, the shorter hairs on the carapace golden-yellow, those on the limbs mouse-brown and mouse-grey, those on the abdomen yellowish; under side of abdomen dark brown, with pale yellowish hairs, the lung-books infuscated laterally. (The immature examples paler, with the abdomen spotted above as in treleaveni.)

Carapace equal in length to the metatarsus and $\frac{2}{3}$ of the tarsus of fourth leg, and to the tibia and metatarsus of first leg.

Tibia of first leg about 3 times as long as high, its length very slightly exceeding that of the metatarsus and only a little less than the distance from the fovea to the posterior margin of the ocular tubercle. Spine armature of the legs as in the $\mathfrak P$ of treleaveni. (In one case the third tibia has an external spine in addition to the apical ones.) First leg shorter than the fourth by $\frac{1}{2}$ the tarsus of the latter.

Apical segment of spinners as in 3.

Juv.—In the 3 young individuals the tibia of the first leg is equal to the metatarsus together with about $\frac{1}{4}$ of the tarsus in length, the apical segment of the spinners is slightly shorter than the penultimate segment, and the carapace is only slightly shorter than the metatarsus and tarsus of fourth leg. First leg shorter than the fourth by about $\frac{1}{5}$ of the tarsus of the latter.

Measurements.—Total length 3 17, 9 28; length of carapace 3 7 $\frac{1}{4}$, 9 8 $\frac{3}{4}$, width 3 5 $\frac{1}{2}$, 9 7; length of tibia of first leg 3 4 $\frac{1}{4}$, 9 4·6, of metatarsus 3 3 $\frac{3}{4}$, 9 4 $\frac{1}{2}$; distance from fovea to posterior margin of ocular tubercle 3 3 $\frac{1}{2}$, 9 4·8.

4. HARPACTIRELLA LIGHTFOOTI, n. sp.

Types.—Four apparently mature ? and 2 smaller specimens (types, No. 3219), found by Mr. R. M. Lightfoot at the Paarl, Cape Colony.

9. Colour.—Carapace blackish-brown, covered with dark olive-greenish hairs and provided with well-defined radiating stripes and a marginal fringe of pale cream-coloured or slightly pinkish hairs, the cephalic portion clothed with yellowish hairs, those round the ocular tubercle bright golden-yellow (in the small specimens all the hairs on the carapace are golden-yellow); the shorter hairs on the legs olive-greenish, those on the distal segments of the posterior legs pallid; longer hairs on the legs pale; abdomen with yellow or greyish-yellow hairs and the usual dark pattern above; under side of coxæ and sternum dark blackish brown, with hairs of the same colour; under side of abdomen dark, the opercula of the lung-books pale yellow, infuscated laterally.

Carapace slightly or very distinctly longer than the metatarsus and tarsus of fourth leg, and only a little longer (by at most $\frac{1}{6}$ of the tarsus) than the tibia and metatarsus of first leg.

Tibia of first leg about 3-3½ times as long as high, its length equalling or slightly exceeding (by at most ½ of the tarsus) that of the metatarsus, and a little less than the distance from the fovea to the hind margin of the ocular tubercle. First leg subequal to the fourth or only slightly shorter (by at most ½ of the tarsus of the latter). Spines on the legs much the same as in treleaveni.

Apical segment of spinners about $\frac{1}{2}$ — $\frac{3}{4}$ longer than the penultimate segment, and scarcely longer or as much as $\frac{1}{4}$ longer than the ocular tubercle.

Measurements of largest ?.—Total length 30; length of carapace 12, width $8\frac{1}{3}$; length of tibia of first leg $5\frac{3}{4}$, of metatarsus $5\frac{1}{2}$; distance from fovea to posterior margin of ocular tubercle $6\frac{3}{4}$; length of first leg (including coxa) 35, of fourth leg 35.

This is a larger and blacker species than any of those described above.

The 4 species may be determined from the following table:—

MALES.

- b. Tibia of first leg shorter than the distance from the fovea to the anterior margin of the carapace.
 - a¹. Process of pedipalpal bulb slender, becoming gradually thinner from the base to slightly beyond the middle, which is not laterally compressed.

H. treleaveni, n. sp.

FEMALES.

- b. Carapace equal to the metatarsus together with 3 or more of the tibia of fourth leg.

 - - b^2 . Carapace equal to the tibia and metatarsus of first leg.

H. karrooica, n. sp.