

This article was downloaded by: [University of Calgary]

On: 03 February 2015, At: 02:31

Publisher: Taylor & Francis

Informa Ltd Registered in England and Wales Registered Number:  
1072954 Registered office: Mortimer House, 37-41 Mortimer Street,  
London W1T 3JH, UK



## Annals and Magazine of Natural History: Series 7

Publication details, including instructions  
for authors and subscription information:

<http://www.tandfonline.com/loi/tnah13>

### XLII.—New South-African spiders of the family Drassidæ in the collection of the South-African Museum

W.F. Purcell Ph.D. <sup>a</sup>

<sup>a</sup> Cape Town

Published online: 29 Sep 2009.

To cite this article: W.F. Purcell Ph.D. (1907) XLII.—New South-African spiders of the family Drassidæ in the collection of the South-African Museum, *Annals and Magazine of Natural History: Series 7*, 20:118, 297-336, DOI: [10.1080/00222930709487339](https://doi.org/10.1080/00222930709487339)

To link to this article: <http://dx.doi.org/10.1080/00222930709487339>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified

with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

# THE ANNALS

AND

## MAGAZINE OF NATURAL HISTORY.

[SEVENTH SERIES.]

No. 118. OCTOBER 1907.

---

XLII.—*New South-African Spiders of the Family Drassidæ in the Collection of the South-African Museum.* By W. F. PURCELL, Ph.D., Cape Town.

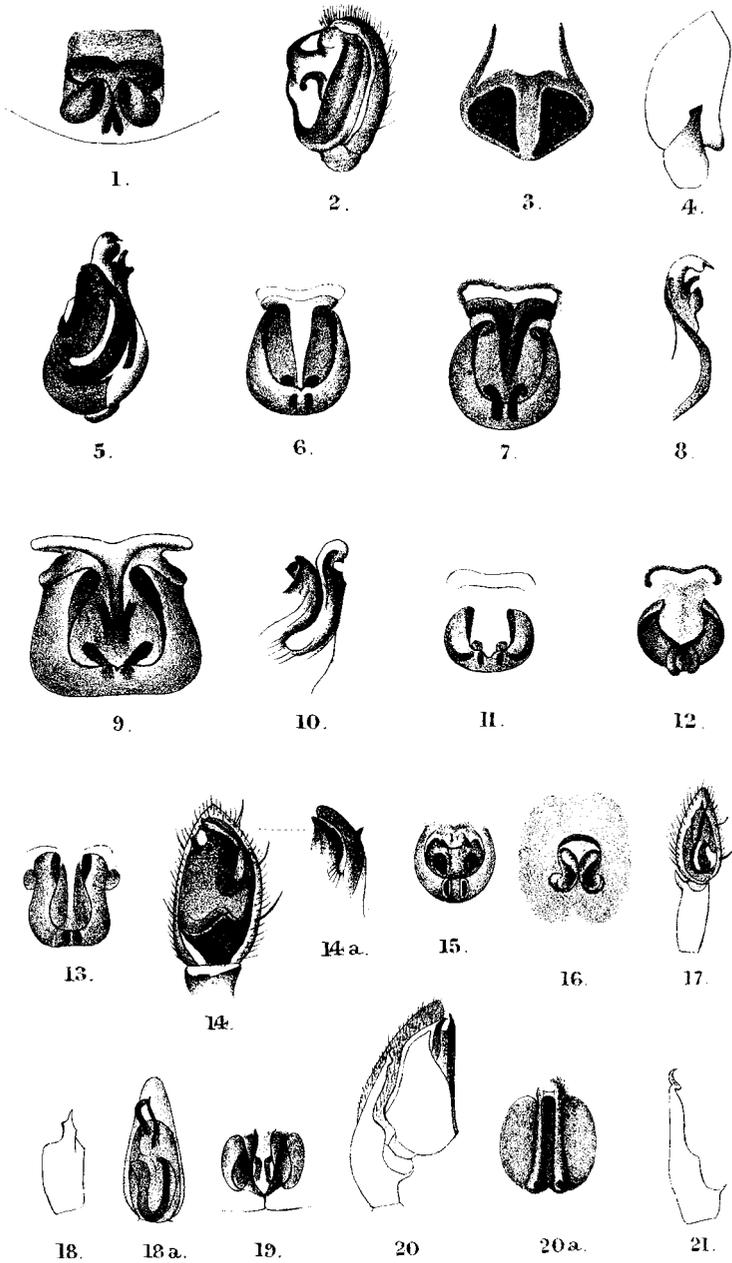
[Plates XIII.—XV.]

THE spiders of the family Drassidæ are particularly numerous both in species and individuals throughout all the non-tropical parts of South Africa. Only very few South-African species have, however, as yet been described, and the entire collection in the South-African Museum, with the exception of one or two forms, is still new to science. The present paper contains the descriptions of fifty-three new species, being that portion of the Collection pertaining to the genera *Platyoides*, Cambr., *Theuma*, E. Sim., *Drassodes*, Westr., *Scotophæus*, E. Sim., and *Melanophora*, C. Koch, as defined in Simon's Hist. Nat. Araign. 2nd ed., together with two new genera for certain forms which did not seem to fall into any of the genera recognized by Simon. In the present uncertain state of the classification of the Drassidæ all of these genera are to be considered as more or less of a temporary nature. All localities are in Cape Colony, except when otherwise stated.

Genus PLATYOIDES, Cambr.

1. *Platyoides bidentatus*, sp. n.  
(Plate XIII. figs. 1 & 2.)

*Specimens.*—(a) 3 ♀♀ and 1 ♂ from Kentani and  
*Ann. & Mag. N. Hist.* Ser. 7. Vol. xx. 20



District, collected by the Rev. Dr. F. C. Kolbe and Miss Alice Pegler; May.

♀ ♀ (*types*).—*Colour* of carapace and chelicera mahogany-brown; sternum and three basal segments of legs yellow, the sternum with a deep blackish-red border all round, the remaining leg-segments (especially the patellæ) and the apex of each femur more or less infuscated; abdomen blackened above, with or without a longitudinal row of more yellowish areas on each side of the median line, the underside paler, yellowish, whitish, or more or less infuscated.

*Carapace* longer than broad, its median length equal to that of the tibia and  $\frac{2}{5}$  or slightly more of the metatarsus of first leg, its margins with slender spines. Anterior median eyes about a diameter apart, their distance from the anterior laterals about  $1\frac{3}{4}$  times their distance from one another. Posterior median eyes obliquely oval, about two long diameters apart and about three from the posterior laterals.

*Chelicera* with spiniform setæ above, the inner margin with a dense stripe of slender setæ borne on small granules and with 2 rather strong and conspicuous teeth in the stripe.

*Legs* with spines and spiniform setæ on the basal segments above and with long black setæ on the other segments; tarsi and metatarsi of two anterior pairs with scopula below, that on the first metatarsus extending over the distal half at least, but that on the second confined to the apex of the segment; tibiæ not scopulate.

*Vulva* as in Pl. XIII. fig. 1; the T-shaped depression with the longitudinal portion finely pointed posteriorly and the transverse portion slightly recurving at each end.

♂.—Very much smaller, being less than half as long as the ♀.

*Carapace* yellowish, its length as in the ♀; the eyes closer together, the anterior medians at least as close to the laterals as to one another, being an eye's diameter or less from them; the posterior median eyes about a diameter from one another and  $1\frac{1}{2}$  diameters from the posterior laterals.

*Chelicera* toothed as in the ♀.

*Pedipalps* short; the femur cylindrical, longer than the patella and tibia together, with mesial spine above; the tibia shorter than the patella, with small apical process on upper outer edge; the tarsus strongly convex, ovate, obtusely lobate at base on outer side; palpal organ as in Pl. XIII. fig. 2.

Length of trunk (carapace and abdomen) ♀ ♀  $11\frac{1}{2}$ –12, ♂  $4\frac{2}{3}$ , of carapace ♀  $4\frac{1}{2}$ , ♂ 2; width of carapace ♀  $4\frac{1}{2}$ , ♂  $1\frac{1}{4}$  mm.

(b) 1 ♀ from East London (*J. Wood*).

(c) 2 ♀ ♀ from Port St. Johns, Pondoland (*Guy Shortridge*).

Somewhat resembling *P. Abrahami*, O. P. Cambr., and *P. laterigradus*, Poc., in the form of the vulva, but possessing two strong teeth on the chelicera.

2. *Platyoides quinquedentatus*, sp. n.  
(Plate XIII. fig. 3.)

*Specimens*.—2 ♀ ♀ and 1 young from Swellendam (*H. A. Fry*, 1900).

♀ ♀.—*Colour* of carapace and chelicera dark mahogany-brown; legs similarly coloured or lighter and more yellowish, the anterior pairs more reddish than the posterior ones, all partially infuscated, the femora not paler than the distal segment; abdomen blackened, with a paler, more or less yellowish, longitudinal dorsal stripe on each side above, the ventral surface pale yellowish; sternum reddish yellow.

*Carapace* as long as the tibia and  $\frac{1}{4}$ – $\frac{1}{3}$  of the metatarsus of first leg, the margin with spiniform setæ and slender spines. Anterior median eyes almost a diameter apart and almost two diameters from the laterals, their distance from the latter being double their distance from one another; posterior median eyes almost transversely oval, about  $2\frac{1}{2}$  diameters apart and almost 3 diameters from the laterals.

*Chelicera* with 5 very strong teeth in the distal half of the inner margin, besides the row of setæ; upperside with spiniform setæ.

*Legs* with spiniform setæ on basal segments, the distal segments with slender setæ; two anterior pairs of tarsi and metatarsi scopulate along whole length below, the first tibia also with tiny apical scopula.

*Vulva* of two black pear-shaped depressions, appearing (in spirits) as in Pl. XIII. fig. 3.

Length of trunk in ♀ ♀ 11–12 $\frac{1}{2}$ , of carapace 4 $\frac{1}{2}$ –5; width of carapace 4 $\frac{1}{4}$ –4 $\frac{1}{2}$  mm.

Genus THEUMA, E. Sim.

1. *Theuma capensis*, sp. n.

*Specimens*.—(a) 10 ♀ ♀, 6 ♂ ♂, and 1 young from the drier slopes of the mountains of the Cape Peninsula, especially the slopes above Camps Bay. ♂ ♂ from September to December.

♀ ♀.—*Colour* yellow, the head, chelicera, tarsi, and metatarsi more rufescent; the abdomen pale yellowish, with yellowish or pale fuscous hairs and darker setæ.

Anterior row of *eyes* scarcely procurved, the medians distinctly smaller than the laterals; posterior row of eyes slightly recurved, the eyes equal, the medians slightly oblique, about a diameter (rarely distinctly less than a diameter) apart and  $1\frac{1}{2}$  diameters from the laterals, the latter distinctly a little nearer to the anterior laterals than to the posterior median eyes.

*Chelicera* with 4-5 superior and only 2 (rarely 3) inferior teeth.

*Legs*.—Metatarsus I with 1-2 inner and 2 outer inferior spines, narrowly scopulate on each side, but not between the rows of spines below. Tibia I with 4-5 inner and 3-6 outer spines below, not distinctly scopulate or at most with a few scopulate hairs along the rows of spines.

*Vulva-plate* longer than wide, the triangular fovea wide behind, narrowed in front.

*Inferior spinners* relatively short, the length of the basal segment taken below a little less than the width of the ocular area.

♂♂.—*Legs* longer; metatarsus I with 2 inner and 3 outer spines below; tibia I with 4 pairs of inferior spines and sometimes with an inner lateral spine as well.

*Inferior spinners* longer, the length of the basal segments exceeding the width of the ocular area.

Tibia of *pedipalps* short and thick, its outer process longer than the segment and suddenly deflexed at apex. Tarsus with a short curved process near the middle of the outer edge.

Length of trunk (carapace and abdomen), ♀♀ 5-7, ♂♂  $4\frac{1}{2}$ -5 mm.

A variety of this form with four minute teeth instead of two on the inferior inner margin of the chelicera is represented by the following specimens:—

(b) 1 ♂ from Ceres (*W. F. P.*).

(c) 1 ♀ from near Tulbagh Road Station (*W. F. P.*).

(d) 1 ♀ from Caledon.

## 2. *Theuma fusca*, sp. n.

*Specimens*.—(a) 6 ♀♀ from the Montagu Baths, a number of young from Kogmans Kloof, and 2 ♂♂ from Aston, Robertson Div., all found by my wife and myself.

♀♀.—*Colour* ochraceous, head and chelicera rufescent; abdomen pale yellowish below, densely clothed above with infuscated hairs.

Anterior row of *eyes* slightly procurved, the laterals very

distinctly larger than the medians; posterior row more strongly recurved than in *T. capensis*, sp. n., the medians smaller than the anterior laterals, rotund, about a diameter (rarely less) apart and less than two diameters from the laterals, the latter eyes perhaps a trifle larger than the medians and about as far from them as from the anterior laterals.

*Chelicera* with 3 larger and 1 small superior and 3-4 inferior teeth.

*Metatarsus* I with 1-2 inner and 2 (rarely 1) outer spines; *tibia* I with 3 pairs of inferior spines (including an apical pair) and sometimes with another internal spine as well.

*Vulva-plate* with the triangular fovea wider behind, its anterior end opening into a small circular fovea.

*Inferior spinners* long, the length of the basal segment much exceeding the width of the ocular area (except in one specimen where the spinners were perhaps damaged in youth).

♂♂.—Legs much longer than in the ♀♀ and more numerous spined. *Metatarsus* I with 4 strong spines. *Tibia* I with 0-1 outer and 1-3 inner spines in addition to the 3 inferior pairs. Posterior median eyes sometimes less than a diameter apart. Hairs on abdomen rubbed off. *Pedipalps* as in *T. capensis*, sp. n.

Length of trunk, ♀♀  $8\frac{3}{4}$ -11, ♂♂  $6\frac{3}{4}$ - $7\frac{3}{4}$  mm.

(b) 2 ♂♂ and 1 young from Bergvliet, Cape Peninsula (*W. F. P.*).

### 3. *Theuma Schreineri*, sp. n.

*Specimens*.—2 ♀♀ and 5 ♂♂ from Hanover (*S. C. Cronwright Schreiner*, September to November 1901, and *G. Shortridge*, 1903).

Differing from *T. fusca*, sp. n., as follows:—

♀♀.—Hairs on *abdomen* paler, brownish.

Posterior row of *eyes* straighter, only very slightly recurved; the eyes subequal, the lateral eyes distinctly a little nearer to the anterior laterals than to the posterior median eyes.

*Chelicera* with 4-5 superior teeth, the proximal one small.

*Tibia* I with 3-4 pairs of non-apical and 0-2 apical spines below, and frequently with 1-2 outer and 1-2 inner spines on the sides as well.

♂♂.—*Metatarsus* I with 5-7 spines. *Tibia* I with 5-6 pairs of spines below, besides 2 outer and 2-4 inner spines on the sides.

Length of trunk, ♀♀  $7-8\frac{1}{2}$ , ♂♂  $6\frac{1}{2}-8$  mm.

Another ♀ from the same place and apparently belonging to the same species is much larger, its carapace alone measuring  $4\frac{3}{4}$  mm. in length.

#### 4. *Theuma maculata*, sp. n.

*Specimens*.—2 ♀♀ (one not quite mature), 1 ♂, and 1 juv. from Beaufort West (*W. F. P.*, September 1896).

♀♀ (*types*).—*Colour* yellow, the abdomen pale yellow below, spotted with black on the sides; the upper surface with a broad irregular band of black on each side and a narrow median black stripe, connected with the lateral bands by a series of oblique black stripes.

Anterior row of *eyes* very distinctly procurved, the laterals very distinctly larger than the small medians; posterior row distinctly recurved, the median eyes almost rotundate and rather large, considerably larger than the anterior medians, and nearly as large as the anterior laterals, their distance apart distinctly less than a diameter, the lateral eyes equidistant from the medians and anterior laterals.

*Chelicera* with 3 large and 1 small superior and 3–4 inferior teeth.

Spines of *legs*, *vulva*, and *spinners* much as in the *T. fusca*, sp. n.

♂.—Like that of *T. fusca*, apart from the ocular characters, except that the tibia of the pedipalps is much more elongate, being distinctly longer along the inner side than thick, its length equalling that of the outer process.

Length of ♀ 7, ♂  $7\frac{1}{2}$  mm.

#### 5. *Theuma cedri*, sp. n.

1 ♀ from Boschklouf Waterfall, Cedar Mountains, Clanwilliam Division (*R. Pattison*, November 1897).

*Colour* yellow; the head, chelicera, and extremities of the legs rufescent; abdomen pale yellow, the upperside clothed with dark hairs, which form spots posteriorly (the hairs rubbed off in the middle, but probably arranged as in *T. maculata*, sp. n.).

*Eyes* and *spinners* much as in *T. maculata*.

*Metatarsus* I with 4 strong spines. *Tibia* I with 3 pairs of inferior spines (including an apical pair) and 2 internal spines in addition.

*Chelicera* with 3 superior and 3 inferior teeth, the latter stronger than usual.

*Vulva-plate* with the fovea elongate and narrow behind.

Length 9 mm.

6. *Theuma mutica*, sp. n.

1 ♀ found at Kogmans Kloof, Robertson Division, in August 1900, by my wife.

*Colour*.—Carapace more or less infuscated, darkest at the lateral margins, paler and yellowish along the middle of anterior half and along posterior border. Chelicera and sternum ochraceous. Legs yellowish, faintly infuscated in parts. Abdomen pale yellowish below, deeply infuscated above and at the sides.

Anterior row of *eyes* slightly procurved, the laterals much larger than the medians. Posterior row of eyes straight, the medians oval, oblique, very close together, separated by less than half a length, but at least an eye's length from the laterals; these latter scarcely larger than the medians and close to the anterior laterals, being less than a diameter from them.

*Chelicera* with 2 larger proximal and 3 smaller distal teeth in the superior row, and only 1 minute tooth in the inferior row.

*Legs* with numerous fine small spines scattered irregularly on the under surface, the first leg without any strong spines below; second leg with a strong mesial spine on tibia; third and especially fourth leg strongly spined on underside as well as on upper.

*Vulva-plate* broader than long, consisting of a pair of oval reddish disks separated by a narrow triangular fovea.

*Inferior spinners* long.

Length  $4\frac{1}{2}$  mm.

A very distinct species.

7. *Theuma parva*, sp. n.

1 ♂ from Eierfontein, 8–9 miles west of Hanover (*S. C. Cronwright Schreiner*, January 1902).

*Colour* very pale yellowish.

Anterior row of *eyes* slightly procurved, the medians a little smaller than and touching the laterals, but a little separated from each other. Posterior row of eyes straight (scarcely recurved at all), the subrotund median eyes comparatively large, being larger than the laterals and at least as large as the anterior laterals, their distance from one another less than an eye's diameter and slightly greater than their distance from the posterior laterals, the latter eyes about as far from the anterior laterals as from the posterior medians.

*Chelicera* with 4 superior and 3 smaller inferior teeth.

*Legs*.—Metatarsus I with 3 long spines at base. Tibia I with 3 pairs of inferior spines (including an apical pair).

*Pedipalps* very like those of *T. capensis*, sp. n., except that the bulb is relatively much larger than in any of the foregoing species.

*Inferior spinners* shortish, their length only just exceeding the width of the ocular area.

Length of carapace and abdomen  $3\frac{3}{4}$  mm.

A very distinct species.

*Table of the Species of Theuma\* described above.*

- a. Posterior row of eyes straight, the medians being a little nearer to the laterals than to one another. (Hanover Div.) . . . . . ♂ *T. parva*, sp. n.
- b. Posterior row of eyes more or less recurved, the medians always nearer to each other than to the lateral eyes.
- a<sup>2</sup>. Posterior row of eyes only slightly recurved, the laterals being distinctly a little nearer to the anterior laterals than to the posterior median eyes.
- a<sup>3</sup>. Females.
- a<sup>4</sup>. Inferior spinners shortish, the length of the basal segment taken below being less than the width of the posterior row of eyes. (Cape, Tulbagh, and Caledon Divs.) . . . . . ♀ *T. capensis*, sp. n.
- b<sup>4</sup>. Inferior spinners long.
- a<sup>5</sup>. Anterior pair of legs strongly spined below. (Hanover.) . . . . . ♀ *T. Schreineri*, sp. n.
- b<sup>5</sup>. Anterior pair of legs with no strong spines below. (Robertson Div.) ♀ *T. mutica*, sp. n.
- b<sup>3</sup>. Males.
- a<sup>6</sup>. Tibia I with 4 pairs of spines below. (Cape and Ceres Divs.) . . . . . ♂ *T. capensis*, sp. n.
- b<sup>6</sup>. Tibia I with 3 pairs of spines below. (Hanover.) . . . . . ♂ *T. Schreineri*, sp. n.
- b<sup>2</sup>. Posterior row of eyes more strongly recurved, the laterals being about as far from the anterior laterals as from the posterior median eyes.
- a<sup>7</sup>. ♀ with the posterior median eyes smaller, about a diameter apart. ♂ with the outer process of the tibia of pedipalps much longer than the short tibia. (Robertson and Cape Divs.) . . ♂ ♀ *T. fusca*, sp. n.

---

\* Two other South-African species, *T. xyliua* and *T. aprica*, E. Sim., have been described (Hist. Nat. Araig. 2nd ed. p. 351), but no locality is given in either case.

- b<sup>7</sup>. ♀ with the posterior median eyes largish, less than a diameter apart.  
 ♂ with the outer process of the tibia of pedipalps about as long as the rather elongate tibia.
- a<sup>8</sup>. Vulva of ♀ with the fovea widened behind. (Beaufort West.) ..... ♂ ♀ *T. maculata*, sp. n.
- b<sup>8</sup>. Vulva with the fovea narrow behind. (Clanwilliam Div.) ..... ♀ *T. cedri*, sp. n.

Genus DRASSODES, Westr.

1. *Drassodes lophognathus*, sp. n.  
 (Pl. XIII. figs. 4-6.)

*Specimens*.—(a) 5 ♀ ♀, 4 ♂ ♂, and 7 young from the north-western slopes of the Devil's Peak, Cape Town, under stones (*W. F. P.*).

♀ ♀ (*types*). *Colour*.—Carapace pale ochraceous, the head often darker brown; chelicera ochraceous to brown; legs pale yellow, the femora very pale, the anterior pairs of legs often brownish yellow distally; sternum pale ochraceous to brownish yellow; abdomen pale yellowish, the upper surface and the posterior part of the sides marked with numerous short black bars and round spots, the anterior half also with a broad, wedge-shaped, median black band, the under surface and the sides pale yellow or more or less infuscated.

*Carapace* broad in front, the width of the head across the second line of eyes being at least  $\frac{2}{3}$  of the greatest width of the carapace.

*Eyes*.—Anterior row considerably procurved, the eyes subequal; the posterior row lightly procurved, the median eyes elongate oval or triquetrous, subcontiguous or as much as half a long diameter apart, and almost or quite a long diameter from the smaller lateral eyes. Median eye-area longer than wide and parallel-sided.

*Chelicera* with the two inferior teeth of moderate size, the distal one being usually a trifle smaller; middle superior tooth very strong, the other two superior teeth small.

*Legs*.—Metatarsus I with 0-2 inferior basal spines. Tibia I unspined, IV without dorsal spines. Tarsi I-III and metatarsi I-II distinctly scopulate at the sides below; tarsus IV and metatarsus III with narrow strip of scopular hairs, the fourth metatarsus with a few external scopular hairs in some specimens at least.

*Vulva-plate* (Pl. XIII. fig. 6) very large, consisting of a brown, horseshoe-shaped curved rim enclosing a large deep

cavity, which is divided longitudinally by a broad, pallid, wedge-shaped keel, dilated anteriorly to form a T; hind part of the rim with a pair of dark admedian spots.

♂ ♂.—Anterior part of head and the chelicera and other mouth-parts often reddish black, the abdominal spots also generally more sharply marked.

*Coxæ of pedipalps* strongly depressed, transversely ridged in the middle, the depression bordered on the outer side as well as on the inner by a well-marked keel, which is absent on the outer side in the female.

*Chelicera* with the inner margin sinuated near the middle and lobate at the base, the superior distal edge of the inner margin with the two proximal teeth fused to form a low keel on which the point of the proximal tooth is usually not distinguishable; this margin also much more oblique distally than in the ♀.

*Pedipalps* short; the tibia together with its strong superior process longer than the patella, this process broadly and obliquely truncated at apex and slightly sinuated on upper inner margin near apex, the lower edge acute at apex; tarsus large, as long as the patella and tibia together (inclusive of the tibial process), somewhat polygonal in outline (Pl. XIII. fig. 4), the outer edge being slightly sinuated, the inner edge with a few fine spiniform setæ. Palpal organ very large, as in Pl. XIII. fig. 5.

Length of trunk, ♀ ♀  $5\frac{1}{2}$ –8, ♂ ♂ 5–6 mm.

(b) Other specimens from the Cape Peninsula (Table Mountain, Camps Bay, Cape Flats, Simonstown). In one of these (a ♀) the chelicera have three inferior and four superior teeth.

(c) 1 ♀ from Stellenbosch (*L. Péringuey*).

(d) 5 ♀ ♀ from the Pass at Avontuur near Stormsvlei, Swellendam Division, collected by my wife and myself.

(e) 1 ♂ and 1 ♀ from St. Helena Bay, Malmesbury Division (*J. E. C. Goold*).

(f) 1 ♂ from Onder Berg Vlei, Clanwilliam Div. (*C. L. Leipoldt*).

(g) 1 ♀ from the Hex River Valley, Worcester Div. (*F. Treleaven*).

(h) 3 ♀ ♀ from Touws River, Worcester Div. (*W. F. P.*).

(i) 3 ♂ ♂ and 7 ♀ ♀ from Matjiesfontein, Worcester Div., and

(j) 1 ♂ and 4 ♀ ♀ from Laingsburg, Pr. Albert Div., collected by Mr. R. M. Lightfoot, my wife, and myself.

(k) 1 ♀ from Beaufort West (*W. F. P.*).

(1) 3 ♀ ♀ from Willowmore (*Dr. H. Brauns*).

The T-shaped median ridge of the vulva is normally white in colour, but occasionally it is more or less lightly browned; the posterior part, too, is sometimes broad behind and parallel-sided, instead of being wedge-shaped. The carapace of the ♀ does not exceed  $2\frac{2}{5}$  mm. in length in the largest specimen, that of the largest ♂ being slightly less. The anterior lateral eyes are their own diameter or less from the anterior margin of the carapace. The spots on the abdomen are occasionally absent. In some ♂ ♂, notably those from Matjesfontein, the two proximal teeth of the superior margin of the chelicera are less completely fused and separately distinguishable.

The species is closely allied to *D. morosus* (O. P. Cambr.) from Palestine, the figure of whose palp, given by Cambridge (P. Z. S. 1872, pl. xv. fig. 9), almost exactly resembles the palp of *D. lophognathus*, sp. n. In *D. morosus*, however, the eyes of the posterior row are said to be equidistant from each other. *D. omissus* (O. P. Cambr.), from Palestine, has a very similar vulva (P. Z. S. 1872, pl. xv. fig. 17).

2. *Drassodes tessellatus*, sp. n.  
(Pl. XIII. figs. 7 & 8.)

*Specimens*.—(a) 17 ♂ ♂ and 45 ♀ ♀, besides a pair *in copulâ*; also 6 ♀ ♀ with variety of the vulva; all collected at Hanover by Mr. S. C. Cronwright Schreiner in 1901.

Very closely allied to *D. lophognathus*, sp. n., but larger, and differing principally in the form of the proximal tooth on the inner side of the large sigmoid process of the palpal organ, this tooth (which is hidden under the tarsus) forming a broad truncated lobe and much broader than the distal tooth (Pl. XIII. fig. 8).

*Colour*.—Carapace often rufescent, the head and chelicera red, the legs yellowish or reddish yellow, the abdomen speckled as in *lophognathus*.

Posterior median *eyes* slightly more than an eye's diameter from the laterals, and the anterior lateral eyes generally slightly more than a diameter from the anterior margin of the carapace.

*Chelicera* of ♂ ♂ with the two proximal teeth on superior inner margin fused to a keel or more or less separate.

*Vulva* of ♀ ♀ normally resembling that of *lophognathus*, the median T-shaped ridge being generally whitish; often, however, this ridge is browned or reddened, and in the

6 ♀ ♀ mentioned above it is dark brown or black, the transverse cavity in front of it then often with a brown margin, as in Pl. XIII. fig. 7.

Length of trunk in ♀ reaching  $10\frac{1}{2}$  mm.; length of carapace in ♀ up to 4 mm.

(b) 1 ♂ and 1 ♀ from Steynsburg Division, Cape Colony (G. G. Ponder).

### 3. *Drassodes solitarius*, sp. n. (Pl. XIII. fig. 9.)

1 ♀ from Hanover (S. C. Cronwright Schreiner).

Very like *D. tessellatus*, sp. n., but still larger and with somewhat different vulva.

*Colour*.—Carapace rufescent, the head and chelicera deeper red, legs ochraceous; abdomen pale yellowish, the dorsal spots only faintly marked, the anterior half with a median pale dorsal stripe bordered on each side by a darker stripe.

Anterior median eyes slightly nearer together than in *tessellatus*, their distance apart being scarcely twice their distance from the lateral eyes; posterior median eyes distinctly more than a diameter from the posterior laterals.

*Chelicera* with all the teeth rather strong, the middle superior tooth very strong.

*Vulva* as in Pl. XIII. fig. 9, the horseshoe rim being relatively broader and more transverse and with its anterior ends more strongly converging than in the preceding forms.

Length of trunk 10, of carapace  $4\frac{1}{2}$  mm.

### 4. *Drassodes caffrerianus*, sp. n. (Pl. XIII. fig. 10.)

1 ♂ from the Keneha Bridge, about 22 miles west of Maclear, Pondoland (A. S. Weisbecker, August 1903).

*Colour* pale yellow, with black reticulation and hairs; legs pale yellow, many of the segments faintly infuscated; abdomen black above, the underside yellowish but infuscated; sternum pale yellowish, with black edges. (The specimen, when caught, had evidently but recently moulted, and maturer specimens would probably be much darker.)

Closely allied to *D. lophognathus*, sp. n., but differing principally as follows:—

*Chelicera* only very feebly sinuated on inner edge, the large tooth of the superior inner margin not keel-like, but erect and conical, and accompanied by a tiny second tooth on its proximal side.

*Pedipalps* closely resembling those of *lophognathus*, but with different dentition on the medial distal process (Pl. XIII. fig. 10).

Length of trunk  $4\frac{1}{5}$  mm.

5. *Drassodes calceatus*, sp. n. (Pl. XIII. fig. 11.)

2 ♀ ♀ from Matjesfontein.

Very like *D. lophognathus*, sp. n., but with the vulva different and shaped as in Pl. XIII. fig. 11.

Length of trunk 5– $5\frac{3}{4}$  mm.

The abdomen is much more thickly spotted on the ventral surface than is the case in any of the female specimens of *lophognathus* from the same locality.

6. *Drassodes Gooldi*, sp. n. (Pl. XIII. fig. 12.)

2 ♀ ♀ from Stompneus, St. Helena Bay, Malmesbury Div. (*J. E. C. Goold*).

Closely allied to *D. calceatus*, sp. n., but larger and without the infusate spots on the abdomen.

*Vulva* as in Pl. XIII. fig. 12; the anterior margin of the anterior cavity brown, and therefore much more distinct than in *calceatus*, and also more strongly emarginate in the middle.

Length of trunk 8, of carapace  $3\frac{1}{2}$  mm.

7. *Drassodes lyratus*, sp. n. (Pl. XIII. fig. 13.)

1 ♀ from Matjesfontein, Worcester Div.

Very like *D. lophognathus*, sp. n., but with the vulva different, as in Pl. XIII. fig. 13.

The abdomen has two fine longitudinal stripes below behind the vulva, but there are no dark spots on the dorsal surface.

Length of trunk  $5\frac{1}{2}$  mm.

8. *Drassodes helenæ*, sp. n.  
(Pl. XIII. figs. 14 & 14 a.)

1 ♂ from Stompneus, St. Helena Bay, Malmesbury Div. (*J. E. C. Goold*).

Allied to *D. lophognathus*, sp. n., with similar maxillæ, &c., but of larger size and with somewhat different pedipalps.

*Carapace* rufescent, the head and chelicera blackish red; abdomen numerously spotted above, the under surface without spots.

Anterior legs unspined.

Posterior median eyes large, angular, subcontiguous, and about their own diameter from the laterals.

*Pedipalps* with the tarsus narrower and symmetrically oval in outline when seen from above, its length almost equalling that of the patella and tibia together (inclusive of the tibial process); surface of the tarsus with slender scattered spines and spiniform setæ, the inner edge with some stronger curved spines, the outer edge convex, not sinuated. Palpal organ also smaller, appearing as in Pl. XIII. fig. 14, when seen from below; the medial distal process of the bulb with simple apex and provided near the middle on the upper surface with a single erect tooth (only seen on lifting the tarsus, as in Pl. XIII. fig. 14 a).

*Chelicera* with strongly oblique inner distal margin, the upper margin with a strong keel-like tooth remote from the apex, the medial sinus short and deep.

Length of trunk  $7\frac{3}{4}$ , of carapace  $3\frac{3}{4}$  mm.

This may, perhaps, be the ♂ of *D. calceatus*, sp. n., from the same locality, but in the latter the infuscated markings on the abdomen are obsolete, while they are strongly marked in *D. helenæ*.

9. *Drassodes Dregei*, sp. n. (Pl. XIII. fig. 15.)

2 ♀ ♀ from Port Elizabeth (*J. L. Drège*, July 1899).

*Colour* of carapace yellow or rufescent, the head and chelicera reddish; legs yellowish or reddish yellow; abdomen pallid, with numerous black spots in rows, the under surface with or without spots; sternum reddish yellow, with darker edges.

Closely resembling *D. lophognathus*, sp. n., but with different vulva, the transverse cavity and fold in front of the horseshoe-shaped ridge found in all the females of *Drassodes* described in the preceding pages being absent. Appearance of vulva in spirits as in Pl. XIII. fig. 15.

*Chelicera* with the two inferior teeth rather small, slightly unequal.

Length of trunk 6 mm.

10. *Drassodes ereptor*, sp. n.

(Pl. XIII. figs. 16 & 17.)

*Specimens*.—(a) 5 ♀ ♀ from the Hot Baths at Montagu (*W. F. P.*, November 1902).

♀ ♀. *Colour*.—Carapace and sternum mahogany-brown,

the chelicera slightly darker; legs yellowish brown, the two anterior pairs with the three distal segments darker brown; abdomen more or less infuscated, the ventral surface generally paler.

*Carapace* broad; width of the head across the second line of eyes a little more than half but less than two thirds of the greatest width of the carapace. Anterior row of eyes procurved, the eyes subequal, the posterior row lightly procurved, the medians obliquely elongate-oval, subcontiguous, and about an eye's diameter or slightly more from the smaller lateral eyes; median eye-area long, slightly wider in front than behind.

*Chelicera* with 2 strong, equal (rarely slightly unequal) inferior teeth (occasionally with a third minute tooth in addition); the superior teeth 3 in number, the middle one very strong, the proximal one small.

*Legs* robust; the anterior pair unspined below, the tarsus rather short, its length being only about  $\frac{2}{3}$  of that of the metatarsus; tarsi and metatarsi of two anterior pairs densely and broadly scopulate to the base below; posterior tarsi more feebly scopulate, but the metatarsi with only a few scopular hairs; fourth tibia with a dorsal spine near base.

*Sternum* broad.

*Vulva* as in Pl. XIII. fig. 16.

Length of trunk 8–10 $\frac{1}{4}$ , length and width of carapace in largest ♀ 4 $\frac{1}{2}$  and 3 $\frac{1}{2}$  mm.

(b) 1 ♀ from Clanwilliam (*C. L. Leipoldt*, October 1897).

(c) 1 ♀ from Bosch Kloof in the Cedarberg Range, Clanwilliam Div. (*C. L. Leipoldt*, December 1897).

(d) 1 ♂ from Salt River Flats, near Cape Town (*W. F. P.*, April 1896).

♂.—Closely resembling the ♀ ♀, with similar chelicera, legs, eyes, &c.

*Maxillæ* normal, without keel on outer edge of lower surface.

*Pedipalps*.—Tibia cylindrical, strongly spined at apex and provided with a small external diverging spur, which is tipped with a sharp, curved, black tooth, its length (exclusive of the spur) subequal to that of the patella; tarsus narrow-ovate, acuminate, small, about as long as the patella and half the tibia (exclusive of the spur), its inner side with several spines; palpal organ with a long slender spine commencing near base and extending along under surface to apex (Pl. XIII, fig. 17).

Length of trunk 6 $\frac{3}{4}$  mm.

The abdomen of the ♂ has a small scutellum in front.

## Genus SCOTOPHÆUS, E. Sim.

*Scotophæus relegatus*, sp. n.  
(Pl. XIII. figs. 18 & 18 a.)

*Specimens*.—(a) 1 ♂ from Cape Town (*E. A. Morris*).

*Colour*.—Legs and carapace pale ochraceous; the head and chelicera testaceous yellow; abdomen yellowish, darker posteriorly, with large scutum in front.

*Carapace* narrowed in front, the width of the head across posterior line of eyes being more than  $\frac{1}{2}$  but considerably less than  $\frac{2}{3}$  of the greatest width of the carapace; head much depressed. Anterior row of eyes procurved, the medians largest, their lower margins, seen from in front, in a line with the centres of the laterals, the length of the clypeus equal to that of a lateral eye, the median eyes only narrowly separated from the laterals. Posterior row of eyes lightly procurved, the median eyes slightly oval, almost rotund, small, being only slightly larger than the lateral eyes, their distance apart a little less than an eye's diameter and their distance from the laterals equal to nearly  $1\frac{1}{2}$  diameters.

*Chelicera* much attenuated at apex, the upper margin with one large and a couple of small teeth and the lower margin with one small tooth.

*Maxillæ* rather long, dilated externally at apex, the outer margin being emarginate.

*Sternum* rather narrow, strongly attenuated in front and produced.

*Legs* stoutish and rather short, the tarsi and anterior metatarsi scopulate to the base, the posterior metatarsi scopulate at apex only; anterior metatarsus with a pair of basal spines; first tibia with 3 inner and 2 outer spines below and some distal scopular hairs on inner side.

*Pedipalps*.—Patella slightly longer than the tibia (exclusive of the process), the two segments together almost equal in length to the small tarsus; lateral process of tibia small, terminating in a sharp incurved claw; palpal organ with black spiral-shaped distal spine and a red hook-like process on outer side next to the spine (Pl. XIII. figs. 18 & 18 a).

Length of trunk  $8\frac{1}{4}$  mm.

(b) 1 ♂ from Robben Island in Table Bay (*A. Tucker*), measuring only 5 mm. in length.

There are also a number of females in the Collection apparently belonging to several species.

## Genus DIAPHRACTUS\*, nov.

Carapace longish ovate, depressed, broad in front, with thoracic stria. Anterior row of eyes almost straight, the eyes a little separated from one another, the medians largest. Posterior row of eyes considerably wider and slightly procurved, the medians subrotund, small. Lateral eyes on each side a little nearer together than the anterior and posterior median eyes. Chelicera strong, somewhat attenuated at apex, the oblique superior margin with three small teeth remote from one another; no inferior teeth present. Labium elongate, narrow, and parallel-sided, only slightly attenuated, emarginate at apex, and reaching almost up to the inner angles of the maxillæ, the lateral margins narrowly keeled, the surface depressed between the keels. Maxillæ broad, strongly depressed, slightly dilated externally at apex and emarginate behind the dilation, the base attenuated, the inner margin straight, the outer margin strongly convex in posterior two-thirds, the posterior three-fourths of maxilla bordered along inner, posterior, and outer margins by a strong continuous keel. Sternum long-ovate, strongly attenuated in front and produced. Legs robust, short, the posterior pairs numerous, the anterior pairs more sparsely spined.

Apparently closely allied to *Scotophaeus*, E. Sim., but resembling a *Clubiona* in appearance.

Type: *D. Leipoldti*, sp. n.

*Diaphractus Leipoldti*, sp. n. (Pl. XIII. fig. 19.)

1 ♀ from Rondegat, near Clanwilliam (*C. L. Leipoldt*).

*Colour*.—Carapace testaceous yellow, the head in front and the chelicera reddish; legs pale yellow, the distal segments of the anterior pairs reddish; sternum and mouth-parts reddish testaceous below; abdomen pale yellowish, with brownish hairs.

*Carapace*.—Width of head across posterior line of eyes at least  $\frac{2}{3}$  of the greatest width of the carapace. Clypeus slightly less than a lateral eye in length; posterior eyes of equal size, small, the medians about a diameter and a half apart and quite two diameters from the lateral eyes.

*Legs*.—All the tarsi and the anterior metatarsi scopulate to the base; metatarsus I with 1–2 basal spines; tibia I stout, with tiny scopula on each side at apex, and with 2 short outer and 2–3 short inner spines below.

\* *Hedged round*, alluding to the maxillæ.

*Vulva* (Pl. XIII. fig. 19) with broad median keel, a cavity (bordered externally by a curved ridge) on each side of the keel, and a large receptaculum partly on outer side of and partly below each cavity.

Length of trunk  $11\frac{1}{2}$  mm.

### Genus XEROPHÆUS, nov.

Carapace moderately convex, attenuated in front, with thoracic stria. Anterior row of eyes strongly procurved, the median eyes large. Posterior row of eyes wider, moderately or strongly procurved, the median eyes generally large, obliquely oval or angular and rather close together. Lateral eyes of each side much closer together than the anterior and posterior median eyes. Chelicera hardly or not attenuated at apex, with three (sometimes two) superior teeth and one inferior tooth, the latter absent in some species. Sternum as in *Drassodes*, rather broad in front, or, at any rate, not strongly attenuated nor produced. Legs generally rather short and robust, the anterior pairs spined below on the metatarsi and tibiæ; tarsi and anterior metatarsi scopulate to the base, the posterior metatarsi and often also the anterior tibia scopulate distally. Abdomen of male scutate above at base.

Type: *X. capensis*, sp. n.

This genus is evidently closely allied to *Scotophæus*, which differs from it, according to Simon's diagnosis, principally in having the sternum strongly attenuated in front. In *Scotophæus*, also, both rows of eyes are apparently straighter, the chelicera more strongly attenuated at apex and the head more depressed.

The species fall into two sections:—

§ 1. *Species in which the median groove of the vulva of the female terminates anteriorly in a small transverse pocket.* (Spp. 1-9.)

#### 1. *Xerophæus capensis*, sp. n. (Pl. XIII. figs. 20 & 20 a.)

*Specimens*.—(a) 11 ♂♂ and 7 ♀♀ from the northern base of Devil's Peak, Cape Peninsula; also 2 ♀♀ from the northern base of Table Mountain.

*Characters of a ♂ specimen (type)*:—

*Carapace* narrowed in front, its width across the posterior row of eyes more than  $\frac{1}{2}$  but less than  $\frac{2}{3}$  of the greatest width. Anterior row of eyes strongly procurved, the median eyes close to the laterals and larger, much further from one another, their lower margins on a level with (or slightly

higher than) the centres of the latter; clypeus very slightly or scarcely longer than an anterior lateral eye's diameter; posterior row of eyes strongly procurved, a line joining the hind margins of the laterals passing slightly in front of the centres of the medians; the median eyes ovate, larger than the laterals and distant about their own length from the latter and nearly half their own length from one another; median eye-area longer than wide, broadest in front; lateral eyes on each side subequal and between  $\frac{1}{2}$ — $\frac{3}{4}$  of a diameter apart; width of the posterior row of eyes slightly more than half the width of the head at the same place, the posterior row also about half a lateral eye's diameter wider on each side than the anterior row.

*Chelicera* with 1 weak inferior and 3 superior teeth, only the middle one being large.

*Legs* robust; all the tarsi and the two anterior pairs of metatarsi scopulate to the base, the posterior scopulæ divided by a broad band of setæ; two posterior pairs of metatarsi with a distal scopular band on the side; tibia I with an inner row of 2 spines below; metatarsus I with a pair of basal spines.

*Pedipalps*.—Tibia (Pl. XIII. fig. 20) measured along upper inner edge subequal to the patella in length, its outer side produced at apex into a long, stout, curved process, which is closely appressed to the tarsus along its whole length with the exception of the apex; this process very broad at base, then suddenly narrowed, the narrow portion long, straight, slightly constricted above and below near apex and ending in a black curved claw. Tarsus large, broadly ovate, acuminate, its length equal to that of the tibia (inclusive of the process), its inner margin with wide shallow sinus. Palpal organ very large and compact, occupying the whole width of the under-side of the tarsus excepting at the apex, its lower surface divided longitudinally by a dark ridge and provided at the apex with two short processes.

♀ ♀.—*Legs* more densely scopulate, the first tibia with a short, internal, distal scopula (almost obsolete in the ♂).

*Vulva* consisting of a dark, convex, hairy, nearly rotund plate (slightly longer than wide), divided longitudinally by a deep groove, which is bordered on each side by a low, smooth, black ridge, the ridges united anteriorly in front by a transverse bridge spanning the anterior end of the groove and ending separately behind in a rounded black convexity; the edge of the bridge (which is visible only when dry, as in Pl. XIII. fig. 20 a) is situated on a level with the anterior edge of the rotund plate, and beneath it the groove is con-

tinued anteriorly for a very short distance, forming a tiny brown pocket, which is truncated or rounded at the anterior end and distinctly visible in spirits through the integument.

Length of trunk, ♀ ♀  $8\frac{1}{2}$ – $11\frac{1}{2}$ , ♂ ♂  $6$ – $8\frac{1}{2}$  mm.

In the maturer specimens of both sexes the carapace is testaceous yellow and thickly clothed with silky yellowish hairs and some scattered fine black bristles; the chelicerae are testaceous and the legs yellowish, with the distal segments testaceous; the abdomen is densely clothed with silky, light or dark, somewhat bronzy brown hairs.

The first tibia has 2–3 spines in the inferior row, and the posterior median eyes are often a little more than an eye's length distant from the laterals, especially in the ♀ ♀.

(b) 2 ♂ ♂ and 5 ♀ ♀ from Stellenbosch (*Dr. R. Broom*).

(c) 2 ♂ ♂ from near Tulbagh Road Station (*W. F. P.*).

(d) 2 ♀ ♀ from Clanwilliam (*R. M. Lightfoot and C. L. Leopoldt*).

(e) 1 ♀ from Boschklouf Waterfall, Cedarbergen, Clanwilliam Div. (*R. Pattison*).

## 2. *Xerophæus delphinurus*, sp. n.

(Pl. XIII. fig. 21.)

*Specimens*.—(a) 6 ♂ ♂ from the Cape Peninsula (Cape Flats, Bergvliet, Silver Mine Stream, and Hout Bay: *W. F. P.*).

*Characters of a ♂ specimen from Bergvliet*:—

Closely agreeing with the type of *X. capensis*, sp. n., and also with similar palpal organ, but differing in having the lateral process of the tibia of the pedipalps distinctly curved just before the apical claw, and with a short but rather deep sinus on the underside here, as in Pl. XIII. fig. 21.

The posterior median eyes are also a little closer together and the tibia of the first leg has 2–3 inferior spines in the inner row.

The other males are similar, but in one of them the first tibia has an extra spine on the inner surface besides the three in the inferior row.

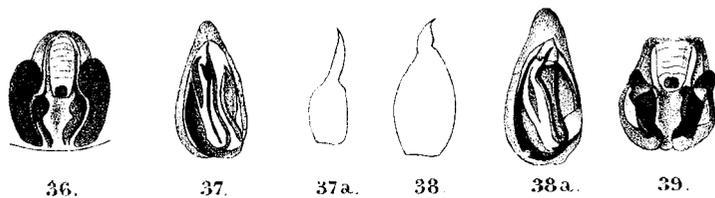
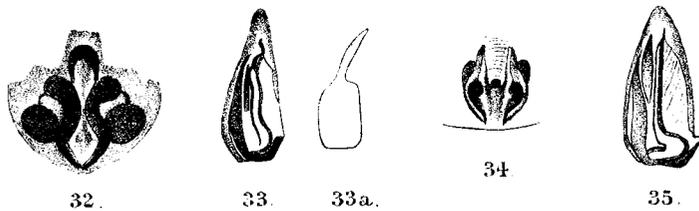
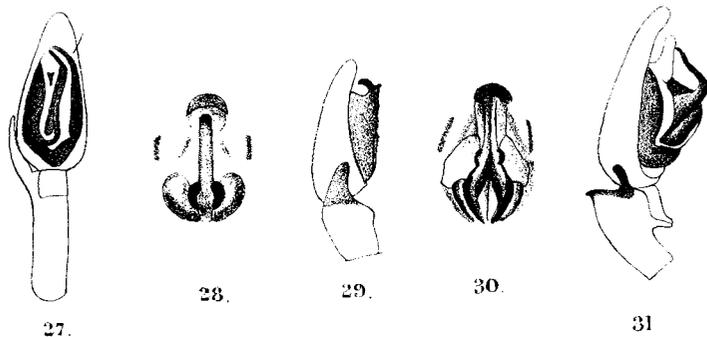
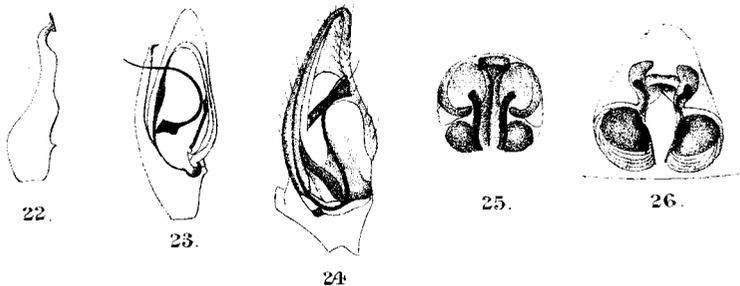
Length of trunk  $6\frac{1}{2}$ – $7\frac{1}{2}$  mm.

(b) 1 ♂ from the Hottentots Holland Mountains, Caledon Div. (near Gordons Bay: *R. M. Lightfoot*).

## 3. *Xerophæus interrogator*, sp. n.

(Pl. XIV. fig. 22.)

3 ♂ ♂ from the Cape Peninsula (Bergvliet and Signal Hill: *W. F. P.*).



Purcell del.

J. Green lith.

*Characters of a ♂ specimen from Bergvliet:—*

Closely agreeing with the type of *X. capensis* and with similar palpal organ, but differing in having the lateral process of the tibia of the pedipalp strongly curved near apex, much more strongly so than in *X. delphinurus*, sp. n., and with a much larger inferior sinus (Pl. XIV. fig. 22).

In the other ♂♂ the first tibia has three inferior spines, and in one case the first metatarsus has two pairs of basal spines.

The anterior row of eyes are also slightly less procurved in this species than in the two preceding species, the lower edges of the medians being slightly below the level of the centres of the laterals.

Length of trunk 8 mm.

In the Museum are also 7 ♀♀ from the Cape Peninsula belonging either to this or the foregoing species or to both, and differing from the ♀♀ of *X. capensis* in that the median groove of the vulva is continued anteriorly for some distance beyond the rotund dark plate. It is noteworthy that none of these females, nor the males of *X. delphinurus* and *interrogator*, have been found on the northern slopes of Devil's Peak and Table Mountain, which are, on the other hand, the only localities in the Peninsula where the males and females of *X. capensis* have been met with.

4. *Xerophæus flavescens*, sp. n. (Pl. XIV. fig. 23.)

1 ♂ from Rondegat, near Clanwilliam (*C. L. Leipoldt*).

*Colour* pale yellow, the chelicera and anterior part of carapace reddish yellow; the abdomen pallid, with dark hairs and yellow scutellum.

*Carapace* narrower than usual; anterior median eyes large, touching the much smaller lateral eyes, whose centres are, if anything, a trifle above the level of the lower margins of the medians, the clypeus subequal to a lateral eye in length; posterior median eyes a little larger than the laterals, about  $\frac{1}{3}$  of a long diameter apart and about a diameter distant from the lateral eyes.

*Legs* longish, the first tibia with an inner row of two spines.

*Chelicera* with 1 strong and 2 feeble superior teeth, the inferior tooth feeble or obsolete.

*Pedipalps*.—Patella decidedly longer than the tibia, the two segments together shorter than the narrow tarsus; lateral process of tibia long and narrow, bent somewhat downwards from the base, but otherwise straight, reaching nearly to end of tarsal organ and minutely inturned at the pointed apex,

very similar to that of *X. crustosus*, sp. n., but straighter; tarsal organ with the greater part of its underside white and membranous, with a long, outcurved, very fine filament arising from a small dark mesial sclerite, the inner basal angle produced into a short horn (Pl. XIV. fig. 23).

Length  $8\frac{1}{2}$  mm.

5. *Xerophæus spiralifer*, sp. n.  
(Pl. XIV. figs. 24 & 25.)

*Specimens*.—2 ♂♂ and 5 ♀♀ from Hanover, and a ♂ and ♀ from Eierfontein, 8–9 miles west of Hanover (*S. C. Cronwright Schreiner*).

♂♂ (*types*).—*Colour* like that of *X. capensis*, sp. n.

*Carapace* shaped as in *X. capensis*. Anterior row of eyes very strongly procurved, the medians large, very close to the laterals, and with their inferior margins a little above the line joining the centres of the latter; clypeus equal to or very slightly longer than a lateral eye; posterior row of eyes only slightly wider than the anterior row, strongly procurved, a line joining the hind margins of the laterals cutting the medians in front of their centres, the median eyes very large, ovate, separated by not more than  $\frac{1}{4}$  of their long diameter from one another and by about a diameter from the laterals; anterior and posterior lateral eyes slightly less than a posterior eye's diameter apart.

*Chelicera* and *legs* as in *capensis*, but with fewer spines, the first metatarsus having 1–2 basal spines and the first tibia only 1 inferior spine.

*Pedipalps*.—Tibia, viewed from above, turbinate, much broader distally than long, its length, measured along inner upper edge, a little less than that of the patella; its distal part strongly produced laterally on outer side, the process very thick and strong, truncated at apex and bearing on its anterior side a slenderer acuminate process, which is directed forwards almost at right angles to the other and ends in a claw curving downwards; tarsus large, strongly acuminate and incurved distally, its length very much greater than that of the patella and tibia together (inclusive of the process), the distal portion projecting for more than  $\frac{1}{3}$  of the whole length beyond the cavity containing the palpal organ; palpal organ complicated, bearing two long spines, viz. a white one arising from the middle of the outer edge, thence running in a slight curve forwards, and ending just before reaching the apex of the tarsus, and an extremely long red spine, which starts at anterior end, and, after describing a spiral curve and

a half, runs backwards to the base of the tarsus and then curves forwards again, running along the outer edge of the tarsus alongside of the white spine, and ending together with the latter. In spirits the underside appears as in Pl. XIV. fig. 24.

♀ ♀.—Tibia and metatarsus of first leg often unspined below, the tibia with conspicuous internal scopula.

*Vulva* appearing in spirits as in Pl. XIV. fig. 25, and consisting of four dark convexities, joined in pairs on each side by a curved deep black ridge and separated by a large longitudinal groove which terminates in front in a small pocket.

Length of trunk, ♂ ♂  $7\frac{3}{4}$ – $8\frac{3}{4}$ , ♀ ♀  $7$ – $10\frac{1}{2}$  mm.

#### 6. *Xerophæus aridus*, sp. n. (Pl. XIV. fig. 26.)

1 ♀ from Tsabis in Bushmanland, 20 miles north-east of Concordia, Namaqualand Div. (*J. H. C. Krapohl*).

Closely allied to *X. spiralisfer*, sp. n., but larger.

*Carapace* similar, but clothed with pale pubescence; anterior row of eyes strongly procurved, the clypeus exceeding the lateral eyes in length; posterior row of eyes also strongly procurved, a line joining the posterior margins of the laterals only just cutting the larger median eyes, the latter eyes about  $\frac{1}{4}$  of a long diameter apart, and, if anything, slightly more than a diameter from the lateral eyes.

*Legs*.—Tibia I scopulate on both sides distally, with one inner apical spine.

*Chelicera* with 3 superior but no inferior teeth.

*Vulva* (Pl. XIV. fig. 26) with two deep angular lateral cavities, the anterior pocket situated more posteriorly than in *X. spiralisfer*.

Length of trunk 12 mm.

#### 7. *Xerophæus lunulifer*, sp. n. (Pl. XIV. figs. 27 & 28.)

*Specimens*.—9 ♂ ♂ and 13 ♀ ♀ from Signal Hill and the northern and western slopes of Table Mountain and Devil's Peak in the Cape Peninsula (*F. Treleaven, W. F. P.*).

♂ ♂ (*types*). *Colour of dark specimens*.—Carapace mahogany-red, with yellow pubescence; chelicera dark red; legs pale testaceous yellow; abdomen with dark brown or nearly black hairs above, the underside paler.

*Carapace*.—Width of head across the posterior line of eyes almost or quite  $\frac{2}{3}$  of the greatest width of the carapace. Anterior median eyes larger than the laterals and separated

from them, their lower margins, if anything, a trifle below the level of the centres of the latter, the clypeus considerably longer than a lateral eye's diameter; posterior row of eyes considerably wider than the anterior row and moderately procurved, a line joining the hind margins of the laterals passing slightly in front of the centres of the medians; the latter oval, a little larger than the laterals, their distance apart about  $\frac{1}{2}$  a long diameter (more or less), their distance from the laterals slightly exceeding a long diameter; the lateral eyes on each side about a diameter or slightly less apart.

*Chelicera* with 3 well-developed teeth on the superior margin, the middle one being very large, the inferior margin with a strong tooth.

*Legs* with the scopulæ and spines as in *X. capensis*, sp. n., but the first tibia with only 1-2 inferior spines and occasionally with an internal spine in addition, but no basal spine.

*Pedipalps* longish; the tibia cylindrical, longish, its length (exclusive of the process) a little exceeding that of the patella, its upper surface with a strong mesial spine, its lateral process slender, acuminate, straight or slightly upturned distally when viewed from the side, but slightly curved when viewed from below and simply pointed; tarsus small and narrow, acuminate, the apex obtuse, palpal organ narrower than the tarsus, appearing in spirits as in Pl. XIV. fig. 27, the apical spine very slender, out-turned.

♀ ♀.—*Bytes* more spaced out than is generally the case in the male, the posterior medians often separated by a space only slightly less than a long diameter and generally about  $1\frac{1}{2}$ - $1\frac{3}{4}$  diameters distant from a lateral eye, the posterior medians also often scarcely larger than the laterals.

First *tibia* with the distal scopula distinct and occasionally with three inferior spines below in the distal half, the basal spine always absent.

*Vulva* appearing in spirits as in Pl. XIV. fig. 28; the posterior part with a pair of blackish somewhat reniform convexities, each with an intensely black cavity on the medial side, and separated by a long median keel, which is strongly convex from behind to in front and sharply marked off on each side; in front of the anterior end of the keel is a small pocket opening posteriorly and visible through the integument as a brown half-moon.

Length, ♂ ♂  $9\frac{1}{2}$ - $11\frac{1}{2}$ , ♀ ♀  $8\frac{1}{2}$ - $14\frac{1}{2}$  mm.

8. *Xerophæus spoliator*, sp. n.  
(Pl. XIV. figs. 29 & 30.)

*Specimens*.—2 ♂♂ and 2 ♀♀ from Hanover (*S. C. Cronwright Schreiner*).

Allied to *X. lunulifer*, sp. n., the darker specimens similarly coloured.

♂♂ (*types*).—*Carapace* and *eyes* much as in the ♂ of *lunulifer*, except that the clypeus is shorter and may be subequal to the length of a lateral eye.

*Chelicera* with 3 (sometimes 4) superior teeth, of which the proximal one is minute; the inferior margin without teeth.

*Legs* with the scopulæ much as in *X. capensis*, sp. n.; metatarsus I with a pair of basal spines; tibia I with 3 (in one leg with 5) pairs of inferior spines.

*Pedipalps* shortish; tibia (exclusive of the process) subequal in length to the short patella, produced at apex on outer side into a stout, dark red, simple process, which hardly equals the rest of the joint in length; tarsus very like that of *X. lunulifer*; palpal organ simple, narrower than the tarsus, the apical spine short and stoutish, directed inwards and upwards (Pl. XIV. fig. 29).

♀♀.—*Legs*. Tibia I with small scopula on outer as well as inner side below and with a single inferior row of 3 spines.

*Eyes* more spaced than in the ♂, the posterior medians at least  $\frac{1}{4}$  of a long diameter apart and nearly or quite 2 diameters from the laterals, which may be distant a diameter or more from the anterior laterals.

*Vulva* appearing in spirits as in Pl. XIV. fig. 30; the two oblique cavities (lighter in the figure) are separated by a broad keel, which is grooved along the median line and diverges posteriorly; in front of the keel is another cavity terminated anteriorly by the brown pocket.

Length of trunk, ♂♂ 9–11, ♀♀ 15 mm.

9. *Xerophæus Lightfooti*, sp. n.  
(Pl. XIV. figs. 31 & 32.)

*Specimens*.—1 ♂ and 1 ♀ from Triangle, Worcester Div. (*R. M. Lightfoot*, May 1898).

Closely allied to *X. spoliator*, sp. n., and similarly coloured.

♂.—*Carapace* narrower in front, the width of head across the posterior line of eyes less than  $\frac{2}{3}$  of the greatest width of the carapace. Anterior median eyes close to the much

smaller laterals, their lower margins on a level with the centres of the latter, the clypeus longer than an eye's diameter. Posterior row of eyes strongly procurved, the median eyes distinctly larger than the laterals and nearly  $\frac{1}{2}$  a long diameter apart, their distance from the laterals also decidedly exceeding their own length.

*Chelicera* with only 2 distinct teeth in upper margin, that corresponding to the proximal tooth of the other species being quite obsolete, the lower margin without teeth.

*Legs* scopulated much as in *X. capensis*, sp. n.; metatarsus I with two basal spines; tibia I with an inferior row of 3 spines.

*Pedipalps* longer than in *spoliator*, the tibia attenuated at base, its dorsal side a little longer than the patella and angularly produced at apex, the angle ending in a short slightly out-turned spur; outer distal edge of tibia obliquely truncated and provided with a small, blunt, subcylindrical process, which curves slightly upwards and inwards at apex; tarsus rather broadly ovate, acuminate at apex; palpal organ very like that of *spoliator* but larger, the apical spine hook-like, strongly curving inwards and upwards (Pl. XIV. fig. 31).

♀.—*Chelicera* sometimes with a minute proximal third tooth.

*Tibia* I with small internal scopula and an interior row of 2-3 inferior spines.

*Vulva-plate* appearing in spirits as in Pl. XIV. fig. 32, as broad as long, allied in form to that of *spoliator*, but smaller, the pair of cavities (light in the figure) separated by a broader keel, which is shallowly grooved longitudinally, its edges diverging anteriorly as well as posteriorly, each cavity with a large dark-coloured convexity behind it, the median groove of the keel deepened anteriorly but not posteriorly and not reaching hind end of the vulva-plate.

Length of trunk, ♂ ♀, 9 mm.

§ 2. *Species in which the longitudinal groove of the vulva of the female is provided anteriorly with a flexible tongue-like appendage instead of a pocket.* (Spp. 10-16.)

10. *Xerophæus communis*, sp. n.  
(Pl. XIV. figs. 33, 33 a, & 34.)

*Specimens*.—(a) 1 ♂ and 3 ♀ from the Willowmore District (*E. H. L. Schwarz*).

♂ (*type*).—Very like *X. capensis* in form, colour, and in the characters of the eyes, legs, and chelicera.

Posterior median *eyes* about a third of a long diameter apart, the clypeus slightly less than a lateral eye's diameter.

*Legs*.—Tibia I with 1 outer and 1–2 inner spines below.

*Pedipalps*.—Patella very slightly longer than the tibia (exclusive of the process), the two segments together equalling the tarsus in length; tibia (Pl. XIV. fig. 33 *a*) oval, cylindrical, provided at its outer distal margin with a strong spiniform process, which is only slightly shorter than the tibia itself, the apex of the process pointed and minutely incurved but not upcurved; palpal organ as in Pl. XIV. fig. 33, the apex with a short, fine, curved spine, the apex of the black sclerite at the inner basal angle produced upwards into a minute process.

♀ ♀.—Tibia I scopulate on both sides distally, but especially on the inner side, the under surface with an inner row of 2 spines.

*Vulva* (Pl. XIV. fig. 34) with a large median groove, containing in its anterior part a large tongue-shaped appendage, the convexity on each side of the posterior half of the groove bordered externally by a curved, black, comma-shaped mark and furrow, the anterior part of the groove flanked on each side by a small depression, the apex of the appendage marked with a small brown spot.

Length of trunk, ♂ 8, ♀ ♀  $8\frac{3}{4}$ – $11\frac{3}{4}$  mm.

(b) 1 ♂ from the Baths near Montagu (*W. F. P.*).

(c) 1 ♂ and 1 ♀ from Touws River Station, Worcester Div. (*W. F. P.*).

(d) 1 ♂ from Laingsburg, Prince Albert Div. (*W. F. P.*).

(e) 2 ♂ ♂ from Prince Albert Village (*W. F. P.*).

(f) 2 ♂ ♂ and 5 ♀ ♀ from Hanover and neighbourhood (Vlagkop, Eierfontein: *S. C. Cronwright Schreiner*).

(g) 1 ♂ from Dunbrody (*Rev. J. A. O'Neil*).

(h) 1 ♂ and 3 ♀ ♀ from the Kentani District, Transkei (*Rev. F. C. Kolbe, Miss A. Pegler, and H. P. Abernethy*).

(i) 1 ♂ from Rhode, Mount Ayliff Distr., Pondoland (*A. Weisbecker*).

Also many other specimens, apparently females of this species, from various parts of Cape Colony.

This is the commonest and most widely distributed species in Cape Colony. In the ♂ ♂ the first tibia has 1 outer and usually 2 (rarely 1 or 4) inner spines below, including an apical pair, but in the ♀ there is no outer apical spine below. The length of the clypeus sometimes equals the length of an anterior lateral eye, and the posterior median eyes are sometimes as much as half an eye's diameter apart. The apical

spine of the palpal organ is frequently much straighter than in the type.

11. *Xerophæus aurariarum*, sp. n.  
(Pl. XIV. figs. 35 & 36.)

*Specimens*.—4 ♂♂ (types) and 3 ♀♀ from Witwatersrand, Transvaal (*Miss A. Pegler*); also several ♀♀ from Johannesburg (*H. A. Fry*) and Krugersdorp, Transvaal.

Closely resembling *X. communis* in general characters, except:—

Length of clypeus exceeding that of an anterior lateral eye, the lower margins of the median eyes also slightly above the level of the centres of the laterals.

Tibia of first leg with 1 outer and 1 inner apical spine (rarely with 2 inner spines below) in the ♂, but with only 1 inferior spine in the ♀.

*Pedipalps* of ♂ short, the patella a little longer than the tibia (exclusive of the process), the two segments together distinctly shorter than the tarsus; lateral process of tibia resembling that of *X. communis* in shape, but subequal to the rest of the joint in length; palpal organ as in Pl. XIV. fig. 35.

*Vulva* of ♀ as in Pl. XIV. fig. 36, the receptaculum seminis on each side large, embracing the comma-shaped black grooves.

Length of trunk, ♂♂ 7–8½, ♀♀ 10½–12¼ mm.

12. *Xerophæus exiguus*, sp. n.  
(Pl. XIV. figs. 37 & 37 a.)

1 ♂ from Laingsburg, Prince Albert Div. (*R. M. Lightfoot*, August 1903).

Closely resembling *X. communis*, sp. n., but smaller.

*Pedipalps*.—Tibia (exclusive of the process) subequal to the patella in length, produced on its outer side into a stout acuminate process, which is slightly upturned at apex and is as long as the rest of the joint (Pl. XIV. fig. 37 a); tarsus ovate, acuminate, longer than the patella and tibia (exclusive of the process); palpal organ very like that of *communis* (Pl. XIV. fig. 37).

Length of trunk 6½ mm.

13. *Xerophæus rostratus*, sp. n.  
(Pl. XIV. figs. 38, 38 a, & 39.)

*Specimens*.—1 ♂ (type) and 1 ♀ from Graaff Reinet (*J. Paynter*, September 1902).

Closely resembling *X. communis*, sp. n., in characters of carapace, eyes, spine-armature, and scopulæ of legs, &c.

Length of *clypeus* subequal to the length of an anterior lateral eye.

*Legs* rather longish, the first tibia in the ♂ with a few inner scopular hairs.

*Chelicera* with a strong inferior tooth.

*Pedipalps* of ♂ longer than in *X. communis*, the patella as long as the tibia (exclusive of the process), but the two segments together longer than the tarsus; lateral process of tibia short and stout, the apex suddenly narrowed and claw-like, strongly curved inwards and a little downwards (Pl. XIV. fig. 38); palpal organ larger and more extensively chitinized than in *communis*, the apical spine very short (Pl. XIV. fig. 38 a).

*Vulva* of ♀ nearly but not quite like that of *communis*, differing mainly in the form of the receptaculum seminis (Pl. XIV. fig. 39).

Length of trunk, ♂  $10\frac{1}{2}$ , ♀ 12 mm.

#### 14. *Xerophæus crustosus*, sp. n. (Pl. XV. fig. 40.)

1 ♂ from East London (*J. Wood*).

Allied to *X. communis*, sp. n., but larger.

*Carapace* mahogany-red, the head narrow; anterior median eyes with their lower margins situated slightly below the level of the centres of the lateral eyes, the *clypeus* a little longer than a lateral eye; posterior row of eyes much wider than the anterior row, the median eyes equal to the laterals in size and at least  $\frac{3}{4}$  of a long diameter apart, distant from the laterals about  $1\frac{1}{2}$  times a long diameter.

*Chelicera* with weak lower tooth, but strong upper teeth.

*Legs* very robust, the first tibia with 0-1 outer and 2 inner spines below.

*Pedipalps*.—Tibia (viewed from above) attenuated at base, its length (exclusive of the process) slightly less than that of the patella, the lateral process resembling that of *X. communis* in shape, but very long, much longer than the rest of the joint, and reaching as far as the distal end of the palpal organ, its distal part slightly curving upwards, the apex pointed and minutely incurved; palpal organ very like that of *X. communis*, the apical spine short (Pl. XV. fig. 40).

Length of trunk 11 mm.



40.



41.



42.



43.



44.



45.



46.



47.



48.



49.



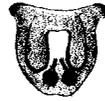
50.



51.



52.



53.



54.



55.



56.



57.



58.



59.



60.



61.



62.



63.



64.



65.



66.

15. *Xerophæus appendiculatus*, sp. n.  
(Pl. XV. figs. 41 & 42.)

*Specimens*.—(a) 3 ♂♂ and 1 ♀ from Hanover (C. S. Cronwright Schreiner).

♂♂ (*types*).—*Colour* of carapace light testaceous yellow, the legs slightly paler; the chelicera blackish red; the abdomen clothed with brown hairs.

*Carapace*.—Width of head across posterior median eyes almost or quite  $\frac{2}{3}$  of the greatest width of the carapace. Anterior row of eyes strongly procurved, the lower margins of the median eyes slightly above the level of the centres of the laterals, the clypeus long, almost twice as long as a lateral eye; posterior row of eyes much wider than the anterior row, moderately procurved, a line joining the hind margins of the laterals cutting the medians a little in front of their centres; the posterior median eyes oval, much larger than the laterals, distant from the latter about  $1\frac{1}{4}$  times a long diameter or slightly more, but only  $\frac{1}{4}$  of a diameter from one another; lateral eyes on each side separated by a little more than a posterior eye's diameter.

*Chelicera* with the inferior tooth rather small.

*Legs* longish, the first tibia conspicuously scopulated on each side distally, the posterior metatarsus strongly scopulate on each side; metatarsus I with 2 basal spines; tibia I with an inferior row of 2–3 spines.

*Pedipalps*.—Tibia (exclusive of the process) short, equal to the patella in length, its shape turbinate when seen from above, its lateral process very long, as long as the patella and tibia together, closely appressed to the tarsus except at the apex, slender, pointed, appearing perfectly straight when seen from the side (except at base, where it is slightly bent and suddenly and strongly thickened); tarsus long, ovate, acuminate; palpal organ rather complex, provided in the middle at apex with a short, curved, black spine or spur and a long, extremely fine filament, and on the inner side at the base with a stout, curved, obtuse process (Pl. XV. fig. 41).

♀.—*Eyes* slightly more spaced, the clypeus  $1\frac{1}{2}$  times the length of an anterior lateral eye, the median eyes a little removed from the laterals, the posterior median eyes distant at least  $1\frac{1}{2}$  times a long diameter from the posterior laterals.

*Legs*.—Metatarsus I with 1–2 basal spines.

*Vulva* (Pl. XV. fig. 42) with a couple of large lateral depressions, which are bordered on the inner side by a pair of sharp black edges converging posteriorly, each depression containing a large brown convexity posteriorly; anterior

part of vulva-plate with a median, flexible, tongue-like appendage lying in a groove.

Length of trunk, ♂ 9–9 $\frac{3}{4}$ , ♀ 12 mm.

(b) 1 ♂ and 1 ♀ from Zululand (*W. Anderson*). The ♂ does not apparently differ from the type, but in the ♀ the appendage of the vulva reaches further back relatively to the lateral cavities.

16. *Xerophæus Patricki*, sp. n. (Pl. XV. fig. 43.)

1 ♂ from the Pungwe, 50 miles east of Umtali, in Portuguese East Africa (*D. L. Patrick*).

*Colour*, form of *carapace*, and the ocular area resembling that of *X. communis*, except that the clypeus is distinctly longer than an anterior lateral eye; the posterior median eyes oval, large, much larger than the laterals, and  $\frac{1}{2}$  of a long diameter apart.

*Chelicera* with the inferior tooth very small.

*Legs* longish, slender; metatarsus I with 0–1 basal spine; tibia I sparsely scopulate on both sides distally, the underside with an inner row of 3–4 spines.

*Pedipalps*.—Tibia (exclusive of the process) slightly longer than the patella, its lateral process resembling that of *X. communis* in shape, but straighter, almost as long as the rest of the joint, its apex pointed and minutely incurved, not quite reaching to the middle of the tarsus; palpal organ somewhat like that of *X. appendiculatus*, with similar internal process, but with only a short apical spine, which is directed outwards and downwards (Pl. XV. fig. 43).

Length of trunk 8 $\frac{1}{2}$  mm.

Genus MELANOPHORA, C. Koch.

1. *Melanophora fuliginea*, (Pl. XV. figs. 44–46.)

*Specimens*.—(a) 7 ♀ ♀ from Signal Hill, Cape Town, and several ♂ ♂ from the same locality. Females of this species have not been found in other parts of the Peninsula.

♀ ♀ (*types*).—*Colour* black, the legs brownish distally and frequently also at base, the first pair of femora with large pale yellowish area on both inner and outer surfaces; pulmonary opercula pale yellowish or brownish, the post-genital portion of the abdomen often more or less pale yellowish.

Anterior row of *eyes* strongly procurved, the lateral eyes considerably larger than the medians, the length of the clypeus

a little exceeding that of a lateral eye; posterior row of eyes almost straight (scarcely recurved), a little wider than the anterior row, the median eyes flattish and appearing (in spirits), if anything, slightly smaller than the convex lateral eyes, their distance apart also slightly less than or subequal to their distance from the laterals.

*Chelicera* normally with 1 large and 3 small superior and 2 small but distinct inferior teeth on the inner margin.

*Legs*.—Anterior tarsi and metatarsi scopulate below, the first metatarsus with 2 inferior basal spines, the tibia unspined.

*Vulva* as in Pl. XV. fig. 44.

♂♂. *Pedipalps*.—Patella a little longer than the tibia (exclusive of the lateral process); tibia with simple straight lateral process, which is slightly longer than the rest of the segment; tarsus oval, acuminate, slightly shorter than the patella and tibia, together with the lateral process; tarsal organ as in Pl. XV. fig. 45, the distal spine curved, strong, with a smaller spine on its side at some distance from the apex (fig. 46), the apex itself not projecting out of the cavity of the tarsus.

Length of trunk. ♀♀,  $6\frac{3}{4}$ –9 mm.

(b) 2 ♀♀ and 1 ♂ from Slanghoek, Worcester Div. (*W. F. P.*).

## 2. *Melanophora invida*, sp. n. (Pl. XV. fig. 47.)

*Specimens*.—(a) 9 ♀♀ from various parts of the Cape Peninsula (Cape Flats, Camps Bay, Hout Bay, Kalk Bay Mountain) and 1 ♀ from Maitland Flats, Cape Div.\*

*Vulva* as in Pl. XV. fig. 47, being very wide and practically filling the space between the lung-opercula.

Other characters as in *M. fuliginea*, sp. n., but the inferior teeth of the chelicera very minute and sometimes apparently obsolete.

Length of trunk, ♀♀,  $6-7\frac{1}{4}$  mm.

(b) 1 ♀ from Stellenbosch (*Dr. R. Broom*).

(c) 1 ♀ from near Bethlehem, Stellenbosch Div. (*G. French*).

(d) 1 ♀ from Ceres (*W. F. P.*).

(e) 2 ♀♀ from Rabiesberg, Worcester Div. (*W. F. P.*).

(f) 1 ♀ from Touws River, Worcester Div. (*W. F. P.*).

\* I am unable to identify the males of this and the following Peninsular forms. Some of these males are apparently scarcely distinguishable from those of *M. fuliginea*, sp. n.

3. *Melanophora Lightfooti*, sp. n. (Pl. XV. fig. 48.)

2 ♀ ♀ from Ceres (*R. M. Lightfoot*).

*Vulva* as in Pl. XV. fig. 48.

Closely allied to *M. invida*, sp. n. *Chelicera* with 2-3 distinct inferior teeth.

Length of trunk  $6\frac{1}{2}$ - $8\frac{1}{2}$  mm.

4. *Melanophora Simoni*, sp. n. (Pl. XV. fig. 49.)

*Sp. cimens.*—(a) 12 ♀ ♀ from various parts of the Cape Peninsula (Cape Flats, Camps Bay, Hout Bay, Kalk Bay and Table Mountains), including a specimen from Signal Hill.

*Vulva* as in Pl. XV. fig. 49.

Closely resembling *M. fuliginea*, sp. n., but smaller and often less black. Posterior median eyes more convex and more sharply defined.

Length of trunk, ♀ ♀,  $5\frac{1}{2}$ - $6\frac{1}{2}$  mm.

(b) 1 ♀ from Grahamstown (*Rev. J. A. O'Neil*).

5. *Melanophora redunca*, sp. n. (Pl. XV. fig. 50.)

*Specimens.*—(a) 5 ♀ ♀ from the Cape Peninsula (Cape Flats, Kalk Bay Mountain).

*Vulva* as in Pl. XV. fig. 50.

Other characters as in *M. Simoni*, sp. n. *Chelicera* with 2-3 minute inferior teeth.

Length of trunk, ♀ ♀,  $5\frac{1}{4}$ - $6\frac{1}{2}$  mm.

(b) 1 ♀ from Brandvlei, Worcester Div. (*W. F. P.*).

(c) 1 ♀ from Touws River, Worcester Div. (*W. F. P.*).

(d) 1 ♀ from Avontuur, near Stormsvlei, Swellendam Div. (*W. F. P.*).

6. *Melanophora montana*, sp. n. (Pl. XV. fig. 51.)

*Specimens.*—(a) 3 ♀ ♀ from the Cape Peninsula (Table Mountain, &c.).

*Vulva* as in Pl. XV. fig. 51.

Other characters as in *M. fuliginea*, sp. n. *Chelicera* with 2-3 inferior teeth.

Length of trunk  $6\frac{3}{4}$ - $8\frac{1}{4}$  mm.

(b) 1 ♀ from Port Elizabeth (*J. L. Drèje*).

7. *Melanophora Broomi*, sp. n. (Pl. XV. fig. 52.)

*Specimens.*—(a) 1 ♀ from Stellenbosch (*Dr. R. Broom*).

*Vulva* as in Pl. XV. fig. 52.

Other characters as in *M. Simoni*, sp. n.

Length of trunk 5 mm.

(b) 1 ♀ from Bergvliet, Cape Peninsula (*W. F. P.*).

(c) 2 ♀ ♀ from St. Helena Bay, Malmesbury Div. (*J. E. C. Goold*).

(d) 2 ♀ ♀ from Porterville Road (formerly Piquetberg Road) Station, Tulbagh Div. (*R. M. Lightfoot*).

(e) 1 ♀ from Tulbagh Road (*W. F. P.*).

#### 8. *Melanophora Gooldi*, sp. n. (Pl. XV. fig. 53.)

3 ♀ ♀ from Stompneus and Steenberg's Cove, St. Helena Bay, Malmesbury Div. (*J. E. C. Goold*).

*Vulva* as in Pl. XV. fig. 53.

Other characters as in *M. fuliginea*, sp. n.

Length of trunk  $6\frac{1}{2}$ – $8\frac{1}{2}$  mm.

#### 9. *Melanophora Cronwrighti*, sp. n.

(Pl. XV. figs. 54 & 55.)

*Specimens*.—(a) 19 ♀ ♀ and 4 ♂ ♂ from Hanover, and 1 ♀ and 2 ♂ ♂ from Vlagkop, 5–6 miles north of Hanover, all collected by Mr. S. C. Cronwright Schreiner.

Very closely allied to *M. Gooldi*, sp. n., but the ♀ ♀ with somewhat different vulva (Pl. XV. fig. 54).

*Chelicera* with 1–2 inferior and 3–4 superior teeth on inner margin.

*Pedipalps of ♂*.—Patella slightly longer than tibia (exclusive of the lateral process); lateral process of tibia longer than the rest of the joint; tarsus as long as the patella and tibia together with the lateral process; tarsal organ very like that of *M. fuliginea*, sp. n., but with the distal spine different (Pl. XV. fig. 55).

Length of trunk, ♀ ♀  $5$ – $8\frac{1}{2}$ , ♂ ♂  $4\frac{3}{4}$ – $6\frac{1}{2}$  mm.

(b) 3 ♀ ♀ from Worcester (*R. M. Lightfoot*).

#### 10. *Melanophora caldaria*, sp. n.

(Pl. XV. figs. 56 & 57.)

*Specimens*.—2 ♀ ♀ and 1 ♂ from the Hot Baths at Montagu, collected by my wife and myself.

♀ ♀ (*types*).—*Colour* as in the preceding forms.

*Eyes*.—Anterior row strongly procurved, the lateral eyes considerably larger than the medians; posterior row straight, scarcely or not at all wider than the anterior row, the eyes equidistant, the laterals larger than the medians.

*Chelicera* with 4 superior but apparently only 1 inferior tooth on inner margin.

Two anterior pairs of *legs* without any spines below.

*Vulva* as in Pl. XV. fig. 56.

♂. *Pedipalps*.—Tibia short, its entire length (inclusive of the lateral process) being only about equal to that of the patella, the process forming about  $\frac{1}{2}$  the whole length, the tarsus considerably longer than these two segments together; palpal organ with a long, fine, curved, black spine on outer side distally (Pl. XV. fig. 57).

Length of trunk, ♀ ♀  $5\frac{1}{3}$ – $5\frac{2}{3}$ , ♂  $4\frac{3}{4}$  mm.

11. *Melanophora zonognathus*, sp. n.  
(Pl. XV. figs. 58 & 59.)

*Specimens*.—4 ♀ ♀ and 4 ♂ ♂ from Eierfontein, 8–9 miles west of Hanover (*S. C. Cronwright Schreiner*).

♀ ♀.—*Abdomen* black; carapace and legs black to dark brown; underside and tarsi paler; the anterior pair of femora dark, without the large pale areas on outer and inner surfaces.

*Eyes*.—Anterior row procurved, the lateral eyes large, much larger than the small medians; posterior row wider, straight, the eyes equidistant, the laterals larger than the medians.

*Labium* and *maxillæ* longish, the latter deeply emarginate on outer side.

*Chelicera* with 1 large and several smaller superior and 2–3 well-developed inferior teeth on inner margin.

*Legs*.—Metatarsus I unspined, II with a pair of basal spines below.

*Vulva* as in Pl. XV. fig. 58.

♂ ♂. *Pedipalps*.—Tibia (including lateral process) as long as the patella, the process small, shorter than the rest of the joint; tarsus longer than the two preceding joints together; palpal organ with long slender black spine arising distally on outer side and curving backwards and then forwards on lateral side (Pl. XV. fig. 59).

Length of trunk, ♀ ♀  $5\frac{1}{2}$ – $6\frac{1}{4}$ , ♂ ♂  $4\frac{3}{4}$ – $6\frac{1}{4}$  mm.

12. *Melanophora humilis*, sp. n.  
(Pl. XV. figs. 60 & 61.)

*Specimens*.—1 ♀ (type) and 1 ♂ from Ceres (*W. F. P.*, October 1897).

Infuscated, the underside and the tarsi paler, the anterior pair of femora with large pale yellowish area on each side.

*Eyes* as in *M. zonognathus*, sp. n.

*Chelicera* with 2 inferior teeth.

*Legs*.—Anterior metatarsus with a pair of inferior spines.

*Vulva* of ♀ as in Pl. XV. fig. 60.

*Pedipalps* of ♂.—Tibia (exclusive of the process) slightly shorter than the patella, but inclusive of the process longer, the process shorter than the rest of the segment; tarsus shorter than the tibia and patella together; palpal organ as in Pl. XV. fig. 61.

Length, ♀ ♂,  $2\frac{4}{5}$  mm.

13. *Melanophora O'Neili*, sp. n. (Pl. XV. fig. 62.)

*Specimens*.—2 ♀ ♀ from Dunbrody, Uitenhage Div. (Rev. J. A. O'Neil).

*Colour*.—Carapace and chelicera mahogany-brown to blackish red, the legs only slightly paler than the carapace. Abdomen infuscated or black, pallid below.

*Eyes*.—Anterior row procurved, the lateral eyes decidedly larger than the medians; posterior row almost straight (a trifle procurved), the medians smaller than the laterals and slightly nearer to the latter than to one another.

*Labium* and *maxillæ* as in *zonognathus*, sp. n.

*Chelicera* with 3 large superior but no inferior teeth.

*Legs*.—Metatarsi I and II unspined.

*Vulva* as in Pl. XV. fig. 62.

Length of trunk  $5\frac{1}{4}$ –7 mm.

14. *Melanophora corrugata*, sp. n.  
(Pl. XV. figs. 63 & 64.)

*Specimens*.—(a) 16 ♀ ♀ and 2 ♂ ♂ from Hanover and 1 ♂ and 3 ♀ ♀ from Vlagkop and Eierfontein, near Hanover (S. C. Cronwright Schreiner).

♀ ♀. *Colour*.—Carapace and sternum light testaceous, the legs paler except the patella and tibia of I and the tibia of II, which are generally darker or more or less infuscated, the fourth tibia and metatarsus also often darkened. Abdomen more or less infuscated above, pale below, the scutellum of the ♂ testaceous.

*Eyes* rather large and conspicuous, the anterior row strongly procurved, the laterals largest; the posterior row wider than the anterior row and very slightly procurved, the medians oblique, very close together, a little larger than the laterals and much nearer to one another than to the latter; clypeus slightly shorter than the length of an anterior lateral eye.

*Maxillæ* broad at base, obtuse at apex, emarginate externally.

*Chelicera* with about 3 minute teeth on superior inner margin, but none on lower margin.

*Legs* stout, especially the femur, patella, and tibia of first pair; tibia I and II unspined below; metatarsus I unspined, II with 1 (rarely 0) outer and 2 inner, stout, short spines.

*Vulva* as in Pl. XV. fig. 63, with a large, transversely striated, anterior area.

♂♂. *Legs*.—Tibiæ I and II with 3-4 outer and 2-4 inner spines below, II with 1-3 upper spines as well; metatarsi I and II with 2 inferior pairs of spines, II with an inner superior spine as well.

*Pedipalps*.—Tibia together with its large process much longer than the patella; palpal organ as in Pl. XV. fig. 64, with a long slender black spine, which arises anteriorly and coils round the upper and outer side and ends on the lower surface.

Length of trunk, ♀♀ 4 $\frac{3}{8}$ -8, ♂♂ 5 $\frac{1}{2}$  mm.

(b) 1 ♀ from Kuruman in British Bechuanaland (*G. E. Beare*).

Very distinct from any of the species described above.

#### 15. *Melanophora arida*, sp. n. (Pl. XV. fig. 65.)

*Specimens*.—1 ♀ and 1 juv. from Laingsburg, Prince Albert Div., collected by my wife and myself.

Very closely allied to the foregoing, but with the abdomen pallid above, the posterior row of eyes not wider than the anterior row, the posterior lateral eyes being nearer the medians (but further from them than the latter are from one another), the chelicera with a minute inferior tooth and 4-5 minute superior teeth on inner margin; tibia II with or without an inferior spine, and the vulva as in Pl. XV. fig. 65.

Length of trunk in ♀ 5 $\frac{1}{2}$  mm.

#### 16. *Melanophora acanthognathus*, sp. n. (Pl. XV. fig. 66.)

*Specimens*.—7 ♀♀ from Cape Town and the Cape Peninsula.

*Colour* testaceous, the legs sometimes somewhat darkened, the sternum bordered with black; the abdomen blackened, its ventral surface pallid, or, at least, paler.

Anterior row of *eyes* strongly procurved, the laterals larger than the medians, the clypeus longer than a lateral eye;

posterior row straight (scarcely procurved), slightly or scarcely at all wider than the anterior row; the eyes large, the medians triangular, larger than the laterals and slightly nearer to one another than to the laterals.

*Chelicera* with some superior but no inferior teeth on inner margin; the anterior surface densely covered with numerous longish spines.

*Maxillæ* obtuse, slightly emarginate externally, the labium shortish.

*Legs*.—Tibiæ I and II with 0–1 inferior spine; metatarsi I and II with two long bands of slenderer spines and generally also a basal pair of stouter spines below; tarsi I and II also furnished with two rows of small spines below and scopulate on each side.

*Vulva* as in Pl. XV. fig. 66.

Length 7–8½ mm.

#### EXPLANATION OF THE PLATES.

##### PLATE XIII.

- Fig. 1.* *Platyoides bidentatus*, sp. n., ♀. Vulva.  
*Fig. 2.* Ditto, ♂. Tibia, tarsus, and palpal organ of left pedipalp from below.  
*Fig. 3.* *Platyoides quinquedentatus*, sp. n., ♀. Vulva.  
*Fig. 4.* *Drassodes lophognathus*, sp. n., ♂. Tibia and tarsus of right pedipalp from above.  
*Fig. 5.* Ditto, ♂. Right palpal organ removed from the tarsus and seen obliquely from the medial side and below.  
*Fig. 6.* Ditto, ♀. Vulva.  
*Fig. 7.* *Drassodes tessellatus*, sp. n., ♀. Vulva.  
*Fig. 8.* Ditto, ♂. Apex of process of right palpal organ in same position as in fig. 5.  
*Fig. 9.* *Drassodes solitarius*, sp. n., ♀. Vulva.  
*Fig. 10.* *Drassodes caffrerianus*, sp. n., ♂. Distal part of right palpal organ in same position as in fig. 5.  
*Fig. 11.* *Drassodes calceatus*, sp. n., ♀. Vulva.  
*Fig. 12.* *Drassodes Gooldi*, sp. n., ♀. Vulva.  
*Fig. 13.* *Drassodes lyratus*, sp. n., ♀. Vulva.  
*Fig. 14.* *Drassodes helena*, sp. n., ♂. Right pedipalp from below.  
 14 a. Distal process of palpal organ in same position as in fig. 5, to show the dorsal tooth.  
*Fig. 15.* *Drassodes Dregei*, sp. n., ♀. Vulva.  
*Fig. 16.* *Drassodes ereptor*, sp. n., ♀. Vulva.  
*Fig. 17.* Ditto, ♂. Right pedipalp from below.  
*Fig. 18.* *Scotophæus relegatus*, sp. n., ♂. Tibia of right pedipalp from outer side. 18 a. Tarsus and palpal organ of right pedipalp from below.  
*Fig. 19.* *Diaphractus Leipoldti*, sp. n., ♀. Vulva.  
*Fig. 20.* *Xerophæus capensis*, sp. n., ♂. Right pedipalp from outer side.  
 20 a. ♀, vulva.  
*Fig. 21.* *Xerophæus de phinurus*, sp. n., ♂. Tibia of right pedipalp from outer side.

## PLATE XIV.

- Fig. 22. Xerophæus interrogator*, sp. n., ♂. Tibia of right pedipalp from outer side.
- Fig. 23. Xerophæus flavescens*, sp. n., ♂. Right pedipalp from below.
- Fig. 24. Xerophæus spiralifer*, sp. n., ♂. Right pedipalp from below.
- Fig. 25. Ditto*, ♀. Vulva.
- Fig. 26. Xerophæus aridus*, sp. n., ♀. Vulva.
- Fig. 27. Xerophæus lunulifer*, sp. n., ♂. Right pedipalp from below.
- Fig. 28. Ditto*, ♀. Vulva.
- Fig. 29. Xerophæus spoliator*, sp. n., ♂. Right pedipalp from outer side.
- Fig. 30. Ditto*, ♀. Vulva.
- Fig. 31. Xerophæus Lightfooti*, sp. n., ♂. Right pedipalp from outer side.
- Fig. 32. Ditto*, ♀. Vulva.
- Fig. 33. Xerophæus communis*, sp. n., ♂. Tarsus and palpal organ of right pedipalp from below. 33 a. Tibia of right pedipalp from outer side.
- Fig. 34. Ditto*, ♀. Vulva.
- Fig. 35. Xerophæus aurariarum*, sp. n., ♂. Tarsus and palpal organ of right pedipalp from below.
- Fig. 36. Ditto*, ♀. Vulva.
- Fig. 37. Xerophæus exiguus*, sp. n., ♂. Tarsus and palpal organ of right pedipalp from below. 37 a. Tibia of right pedipalp from outer side.
- Fig. 38. Xerophæus rostratus*, sp. n., ♂. Tibia of right pedipalp from outer side. 38 a. Tarsus and palpal organ of right pedipalp from below.
- Fig. 39. Ditto*, ♀. Vulva.

## PLATE XV.

- Fig. 40. Xerophæus crustosus*, sp. n., ♂. Tarsus and palpal organ of right pedipalp from below.
- Fig. 41. Xerophæus appendiculatus*, sp. n., ♂. Right pedipalp from below.
- Fig. 42. Ditto*, ♀. Vulva.
- Fig. 43. Xerophæus Patricki*, sp. n., ♂. Tarsus and palpal organ of right pedipalp from below.
- Fig. 44. Melanophora fuliginea*, sp. n., ♀. Vulva.
- Fig. 45. Ditto*, ♂. Tarsus and palpal organ of right pedipalp from below.
- Fig. 46. Ditto*, ♂. Distal part of right palpal organ from outer side with the tarsus removed.
- Fig. 47. Melanophora invida*, sp. n., ♀. Vulva.
- Fig. 48. Melanophora Lightfooti*, sp. n., ♀. Vulva.
- Fig. 49. Melanophora Simoni*, sp. n., ♀. Vulva.
- Fig. 50. Melanophora redunca*, sp. n., ♀. Vulva.
- Fig. 51. Melanophora montana*, sp. n., ♀. Vulva.
- Fig. 52. Melanophora Broomi*, sp. n., ♀. Vulva.
- Fig. 53. Melanophora Goodii*, sp. n., ♀. Vulva.
- Fig. 54. Melanophora Cronwrighti*, sp. n., ♀. Vulva.
- Fig. 55. Ditto*, ♂. Right palpal organ from outer side, removed from the tarsus.
- Fig. 56. Melanophora caldaria*, sp. n., ♀. Vulva.
- Fig. 57. Ditto*, ♂. Right palpal organ from outer side, removed from the tarsus.

Fig. 58. *Melanophora zonognathus*, sp. n., ♀. Vulva.

Fig. 59. Ditto, ♂. Tarsus and palpal organ of right pedipalp from below.

Fig. 60. *Melanophora humilis*, sp. n., ♀. Vulva.

Fig. 61. Ditto, ♂. Tarsus and palpal organ of right pedipalp from below.

Fig. 62. *Melanophora O'Neili*, sp. n., ♀. Vulva.

Fig. 63. *Melanophora corrugata*, sp. n., ♀. Vulva.

Fig. 64. Ditto, ♂. Right pedipalp from below.

Fig. 65. *Melanophora arida*, sp. n., ♀. Vulva.

Fig. 66. *Melanophora acanthognathus*, sp. n., ♀. Vulva.

---

XLIII.—*Descriptions of Two new African Species of Barbus.*  
By G. A. BOULENGER, F.R.S.

THE paradoxical section of Barbels without barbels (*Systemus*, McClelland, Bleeker), long believed to be restricted to South-eastern Asia, has, within the present century, received several additions from Africa. Two further species are here described, bringing the number of African species up to eight, which may be distinguished by means of the following key:—

A. Lateral line complete.

- Sc. 29–32  $\frac{5\frac{1}{2}}{6\frac{1}{2}}$ ; depth of body  $3\frac{1}{2}$  to  $3\frac{3}{4}$  times in total length; caudal peduncle twice as long as deep ..... [1906 (L. Victoria).  
*B. Magdalence*, Blgr.,
- Sc. 28  $\frac{3\frac{1}{2}}{3\frac{3}{4}}$ ; depth of body 3 times in total length; caudal peduncle once and  $\frac{1}{2}$  as long as deep ..... [1902 (Congo).  
*B. Brazzae*, Pellegr.,
- Sc. 25  $\frac{3\frac{1}{2}}{3\frac{3}{4}}$ ; depth of body  $2\frac{1}{2}$  times in total length; caudal peduncle as long as deep. . . . . [(S. Cameroon).  
*B. aspilus*, sp. n.
- Sc. 22–25  $\frac{3\frac{3}{4}-4\frac{1}{2}}{3\frac{1}{2}}$ ; depth of body  $2\frac{2}{3}$  to  $3\frac{1}{3}$  times in total length; caudal peduncle not or but slightly longer than deep ..... [(Nile).  
*B. anema*, Blgr., 1903
- Sc. 23  $\frac{3\frac{1}{2}}{3\frac{3}{4}}$ ; depth of body  $3\frac{1}{4}$  times in total length; caudal peduncle once and  $\frac{1}{2}$  as long as deep ..... [(Congo?).  
*B. trispilomimus*, sp. n.

B. Lateral line absent or reduced to a few tubules; depth of body equal or nearly equal to length of head, 3 to  $3\frac{1}{2}$  times in total length.

- Sc. 22–25  $\frac{3\frac{1}{2}-4\frac{1}{2}}{2\frac{1}{2}-3\frac{1}{2}}$ ; origin of dorsal midway between end of snout and root of caudal . . . . . [1903 (Nile).  
*B. stigmatopygus*, Blgr.,
- Sc. 20–23  $\frac{3\frac{1}{2}}{3\frac{3}{4}}$ ; origin of dorsal nearer end of snout than caudal . . . . . [(S. Cameroon).  
*B. Jæ*, Blgr., 1903
- Sc. 19–20  $\frac{3\frac{1}{2}}{2\frac{1}{2}}$ ; origin of dorsal midway between end of snout and root of caudal . . . . . [(Nile).  
*B. pumilus*, Blgr., 1901