

# Araneae (I.)

By

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With Plate XI.

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The present paper contains an account of that portion of the Araneae collected by Dr. L. SCHULTZE in South Africa, which falls into the families given in the following list, the numbers in the list being the total number of examples collected of each family and the number of species identified or described in this paper:

Fam. Aviculariidae	66 examples	11 species (10 new)
„ Dictynidae	14 „	3 „ ( 1 „ )
„ Eresidae	1057 <sup>1)</sup> „	10 „ ( 6 „ )
„ Sicariidae	46 „	7 „ ( 4 „ )
„ Dysderidae	144 „	6 „ ( 4 „ )
„ Caponiidae	26 „	1 „
„ Prodidomidae	1 example	1 „
„ Drassidae	557 examples	27 „ (21 „ )
Totals: 1911 examples		66 species (46 new)

Dr. SCHULTZE is to be congratulated on the large number of specimens obtained by him. The most extensive collections were made in Little Namaqualand, but a considerable number of specimens were also obtained in Great Namaqualand (including Possession Island) and in the Kalahari (in the Bechuanaland Protectorate), while a small number came from Southern Hereroland (S. Damaraland) and from the Cape Peninsula. With the exception of the last, all these localities represent practically new fields for the collector of Araneae, for, so far as I am aware, no extensive collections have ever been made in any of them before, and only a few odd species have been recorded from time to time. Accordingly more than two-thirds of the total number of species described or identified in this paper are new to science, although the genera to which they belong are in all cases identical with those of the other and better known dry portions of the interior of Cape Colony.

If the gregarious Eresidae (*Stegodyphus*) be excluded from the above list, it will be seen that the Drassidae are by far the most numerous both in individuals and species, being followed in number by the non-gregarious Eresidae and the Dysderidae. But it must be borne in mind that the underground

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1) Of these 834 are gregarious and 223 not gregarious.

1\*

26\*

Aviculariidae, particularly the Trap-door forms, were probably not collected as thoroughly as the other spiders, owing to the extreme difficulty generally experienced in discovering their retreats. Nevertheless Dr. SCHULTZE obtained at least 7 species, which may with confidence be placed among the trap-door building forms, belonging to the genera *Idiops*, *Stasimopus*, *Pelmatorycter* and *Ancylotrypa*.

The two largest spiders obtained were a large *Harpactira* from Great and Little Namaqualand, and a new *Ceratogyrus* from the Kalahari, the latter having a peculiar horn in the middle of the cephalothorax above.

### Fam. Aviculariidae.

#### Genus *Idiops* PERTY.

##### 1. *Idiops striatipes* n. sp.

1 ♀ from Sekgoma, Kalahari Desert, Bechuanaland Protectorate, November 1904.

Colour ochraceous, the abdomen pale-yellowish. Cephalothorax with some radiating infuscated marks above, the ocular area also infuscated, the soft skin narrowly blackened all round the edges of the cephalothorax. Pedipalps and the two anterior pairs of legs with the tarsi infuscated, reddish-yellow at the apex, and provided below with a narrow ochraceous line, those of the pedipalps with a large cuneate yellow mark at base above; metatarsi of the two anterior pairs of legs strongly blackened, marked at base above like the tarsi of the pedipalps; tibiae of these legs and of the pedipalps also strongly blackened, the upper surface with 2 large yellow bands extending along whole length, the dark band separating them bifid and diverging at base, underside paler below in the second pair of legs; the patellae blackened at the sides in the pedipalps and the two anterior pairs of legs; femora of anterior limbs with some feebly infuscated stripes. Abdomen broadly infuscated above anteriorly.

Cephalothorax (measured along the lateral eyes) as long as the patella, tibia and half the metatarsus of first leg, but a little shorter than the tibia and metatarsus of fourth leg. Ocular area broader than long, its width about  $\frac{7}{8}$  of the length of the metatarsus of first leg. Area formed by the frontal eyes and the anterior median eyes of the posterior group parallel-sided, its length exceeding its width by a diameter of one of its posterior eyes; the frontal eyes oval, rather large, very close together, the common tubercle deeply and angularly grooved above. Posterior lateral eyes long, reniform, their anterior margins in a line with the centres of the anterior median eyes, their posterior margins being only just anterior to a line touching the hind margins of the posterior median eyes, but distinctly posterior to a line joining the centres of these eyes; their distance from the anterior margin of the cephalothorax subequal to their distance from the anterior median eye of the other side but less than their distance from the corresponding posterior median eye; the four median eyes forming an area which is a little broader behind than in front and very much broader than long (but not twice as broad behind as long), the anterior medians about an eye's diameter apart, decidedly larger than the small posterior medians, which are subrotund and distant from each other about one-half further than from the lateral eyes.

Legs. Tibia of first leg as long as the metatarsus and  $\frac{2}{3}$  of the tarsus. Tibia of second leg with a single row of 4 long spines on outer side, the distal spine being slenderer than the other three. Patella of third leg with only a pair of short stout spines (overhanging the distal edge of the posterior upper surface) in addition to the band on the anterior side, the spiniform setae on the upperside long. All the tarsi spined below.

Sternal sagilla small, submarginal, the posterior pair scarcely a diameter from the edge.

Chelicera with 2 well-developed rows of teeth below, the inner row composed of 1 small and 4 large teeth, the outer row of 1 small and 3 large teeth and shorter than the inner row.

Labium with only 2 apical teeth.

Coxae of pedipalps with the teeth extending to about the middle of the lower surface in places at least, the other coxae muticous.

Total length [including chelicera<sup>1)</sup>]  $13\frac{3}{4}$  mm; length of cephalothorax 4 mm; length of ocular area 1 mm; length of tibia of first leg  $1\frac{3}{4}$  mm.

## 2. *Idiops pallidipes* n. sp.

1 ♀ from Southern Hereroland, September or October 1903.

Colour pale-yellow, the abdomen quite pallid, the legs concolourous, the cephalothorax infuscated in the median fovea and between the eyes.

Cephalothorax (measured along a posterior lateral eye) as long as the patella, tibia, and  $\frac{4}{5}$  of the metatarsus of first leg and as the tibia, metatarsus and  $\frac{1}{4}$  of the tarsus of fourth leg. Ocular area short, much broader than long, its width a little less than the length of the metatarsus of first leg. Area formed by the frontal eyes and the anterior median eyes of the posterior group parallel-sided, its length exceeding its width by only half a diameter of one of its posterior eyes; the frontal eyes oval, rather large, about  $\frac{1}{5}$  of a long diameter apart, the tubercle deeply grooved above. Posterior lateral eyes rather short, not reniform, lines touching their anterior and posterior margins passing respectively just behind the centres of the anterior median eyes and just in front of the hind edges of the posterior median eyes; their distance from the anterior margin of the cephalothorax distinctly less than their distance from the anterior median eye of the other side, their distance from this latter eye being also slightly less than their distance from the corresponding posterior median eye; the four median eyes forming an area which is distinctly broader behind than in front and very much (nearly twice) broader than long, the anterior medians about an eye's diameter apart, the posterior medians rotund, only slightly smaller than the anterior medians and very far apart, their distance apart being about 3 times their distance from the lateral eyes.

Legs. Tibia of first leg as long as the metatarsus and  $\frac{2}{5}$  of the tarsus. Spines on the legs as in *I. striatipes* n. sp.; the patella of the third leg with 2—3 distal spines posteriorly above.

Posterior sternal sagilla a little more than a diameter from the edge.

Chelicera and coxae of pedipalps much as in *I. striatipes* n. sp., but the inner row in one jaw with all 5 teeth large.

Labium with 5 apical teeth.

Total length (including chelicera) 12 mm; length of cephalothorax  $3\frac{3}{4}$  mm.

## Genus *Stasimopus* E. SIM.

### 1. *Stasimopus schultzei* n. sp.

2 ♀♀ from Steinkopf, Little Namaqualand, August 1904. (Specimens with contracted abdomens, evidently taken after deposition of eggs.)

Closely allied to *S. leipoldti* PURC. (Trans. S. Afr. Phil. Soc., Vol. XI, p. 348, 1902) from Clanwilliam and *S. schreineri* PURC. (Ann. S. Afr. Mus., Vol. III, p. 19, 1903) from Hanover.

1) Throughout this paper the spinners are never included in the length.



Colour as in *leipoldti*.

Cephalothorax as long as the patella, tibia, and  $\frac{4}{5}$ — $\frac{7}{8}$  of the metatarsus of first leg and slightly exceeding the tibia, metatarsus and half the tarsus of fourth leg. Ocular area wide, its width behind equal to the length of the metatarsus together with  $\frac{1}{2}$ — $\frac{3}{4}$  of the tarsus of first leg but distinctly (about  $\frac{1}{8}$ ) less than that of the fourth metatarsus. Eyes much closer together than in *leipoldti* and *schreineri*; the anterior laterals<sup>1)</sup> large and oval, placed close to the anterior margin, the small medians remote from the margin and nearer to the laterals than to one another, their hind margins in a line with those of the laterals, when viewed from above; posterior row of eyes recurved, the posterior eyes larger than in *leipoldti* and *schreineri*, the medians strongly oval, very close to the laterals and almost touching them, larger than these and very much larger than the anterior medians; the area formed by the posterior median and anterior lateral eyes slightly narrower behind than in front; distance between the posterior and anterior lateral eyes considerably less than the long diameter of the latter, the distance between the former pair of eyes only very slightly less than the width of the anterior row of eyes.

Pedipalps with a band of about 8 or 9 shortish spines extending along the greater part of the innerside of the tarsus, and a large distal and small proximal spine on innerside of the tibia; the upper-side of the tarsus with a long band of minute red spinules, extending from the base to slightly beyond the middle of the segment, the distal spinules very obtuse and granuliform, the tibia with a large distal group of spinules above extending over one-third of the length of the segment at least.

Legs. Length of tibia of first leg equal to that of the metatarsus and very slightly exceeding the width of the anterior row of eyes but much less than the width of the posterior row of eyes; tibia with an internal band of 11—15 spines occupying the distal third at least, the upper surface with a tiny apical patch of minute spinules; metatarsus with a long band of minute spinules above extending from base to beyond the middle of the segment. Second leg with the band of spines on outer surface of the tarsus broad, the inner surface of the tibia with 6—8 spines, the band of spinules on the upperside of the metatarsus only slightly shorter than that of first leg and almost reaching to the middle of the segment. Third leg spined as in *schreineri*<sup>2)</sup>, except that the posterior surface of the tarsus has 5 or more spines, the anterior surface of the metatarsus only 10—12 spines and its posterior surface 14—22 spines. Fourth leg as in *schreineri*.

Labium with 5 apical teeth in two rows.

Total length (including chelicera) 18 mm; length of cephalothorax 8 mm, width  $6\frac{1}{2}$  mm; length of metatarsus of first leg  $2\frac{3}{4}$  mm; width of ocular area  $3\frac{1}{4}$  mm.

A very well-marked species and easily distinguished from *leipoldti* and *schreineri* by the length of the patch of spinules on the upper surface of the tarsus of the pedipalps and of the metatarsi of the first two pairs of legs.

## 2. *Stasimopus obscurus* n. sp.

1 ♀ from Little Namaqualand. (Dr. SCHULTZE states that he is not absolutely certain that the locality here given for this ♀ is quite correct.)

Colour of carapace and limbs brown, the two posterior pairs of legs being lighter; abdomen black, paler below.

1) In one specimen one of these eyes is abnormal and the remarks on the anterior lateral eyes do not refer to those of this specimen.

2) In the original description of *schreineri* the metatarsus of the third leg is stated to be "with an apical patch of spines or setae below". This is a misprint and should of course read "without an apical patch of spines or setae below", as may be seen from the synoptic table in Ann. S. Afr. Mus., Vol. III, p. 85, 1903.

Cephalothorax as long as the patella, tibia and metatarsus of first leg and as the tibia, metatarsus and tarsus of fourth leg. Width of ocular area distinctly less than the length of the metatarsus of first leg and about  $\frac{2}{3}$  of the length of the fourth metatarsus; anterior row of eyes only slightly procurved along hind margin but more so along front margin (viewed from above), the lateral eyes strongly transverse, the medians nearer to the laterals than to one another; posterior row of eyes slightly recurved, the median eyes oval and rather large, a little larger than the laterals and distant about half a long diameter from the latter, distinctly further apart than the anterior lateral eyes; posterior lateral eyes oval, their distance apart scarcely exceeding the width of the anterior row of eyes; distance between the posterior and anterior lateral eyes a little less than the long diameter of the latter eyes.

Pedipalps spined much as in *S. erythrognaethus* PURC. (Ann. S. Afr. Mus., Vol. III, p. 73, 1903), the tibia with 8 or 9 minute apical spinules above.

Legs. Length of tibia of first leg equal to that of the metatarsus but considerably exceeding (by at least the length of a posterior lateral eye) the width of the ocular area; inner surface of tibia with 20—23 spines, the upper surface with a tiny patch of spinules at apex, the basal patch on the metatarsus long, extending over quite  $\frac{2}{3}$  of the length of the dorsal surface. Third leg with 22—24 spines in the band on anterior and posterior surfaces of the metatarsus, the patella with a few stout spines on anterior surface and a distal patch of short spinules (more than a dozen) on upper surface; metatarsus without apical tuft of setae below. Fourth leg with the patch of red spinules on the patella large, occupying over  $\frac{3}{4}$  of the length of the anterior surface; the infero-posterior apical tuft on the metatarsus composed of 5 subequal spiniform setae regularly arranged in a transverse row.

Labium with 8 teeth.

Total length (including chelicera) 24 mm; length of cephalothorax  $8\frac{1}{5}$  mm, width  $7\frac{1}{2}$  mm; length of metatarsus of first leg 3 mm; width of ocular area  $2\frac{3}{4}$  mm.

Closely allied especially to *S. quadratimaculatus* PURC. (Ann. S. Afr. Mus., Vol. III, p. 78, 1903), in which the length of the tibia of first leg exceeds the width of the posterior row of eyes by usually not more than half the length (rarely by as much as the whole length) of a posterior lateral eye. In *quadratimaculatus*, moreover, the posterior median eyes are always much smaller than the posterior laterals. In the other closely allied species, *S. brevipalpis*, *bimaculatus* and *erythrognaethus* PURC. (Ann. S. Afr. Mus., Vol. III, p. 73—80, 1903), the length of the tibia of the first leg is less than or at most equal to the width of the ocular area.

#### Genus *Pelmatorycter* Poc.

##### 1. *Pelmatorycter namaquensis* n. sp.

2 ♂♂ from Steinkopf, Little Namaqualand, August 1904. (One specimen with the cephalothorax smashed.)

Colour. Cephalothorax reddish-yellow, the region of the fovea and the lateral grooves of the cephalic portion darker; chelicera red; legs and pedipalps reddish-ochraceous above, pale-ochraceous below; sternum and abdomen pale-ochraceous, the latter broadly blackened on dorsal surface.

Cephalothorax as long as the tibia and about  $\frac{2}{5}$  of the metatarsus or the metatarsus and half the tarsus of first leg and as the metatarsus and  $\frac{2}{5}$  of the tarsus of fourth leg; posterior part with a group of spines above and between the coxae of fourth pair of legs. Eyes very much as in *P. pallidipes* PURC. (Trans. S. Afr. Phil. Soc., Vol. XV, p. 120, 1904), except that the posterior row is scarcely wider than the anterior row, and the posterior lateral eyes are broader and more rounded oval and about twice as long as the posterior median eyes.



Pedipalps as in *P. pallidipes* and *P. nigriceps* (PURC.) (Trans. S. Afr. Phil. Soc., Vol. XI, p. 358, 1902), but with the process of the bulb considerably longer than the bulb.

Legs. Tarsus I straight, cylindrical, scopulate below in the anterior half only, without spines; II to IV slightly inflated below and more densely scopulate to the base, II and III unspined or III with 1–4 spines on anterior side, IV with 0–1 on inner and 3–4 on outer surfaces. Metatarsi without scopular hairs, I slightly concave along both inner and undersides, with two spines only (along lower outer edge). Tibia I decidedly shorter than the metatarsus, the underside with a double row composed of 1–2 inner and 3–4 outer spines, the inner and outsides besides with 2–3 other spines each. All the claws with a double row of teeth below, the anterior legs with 6–9, the posterior with 5–8 teeth in each row.

Abdomen with some long spines at base above. Posterior spinners with the apical segment considerably longer than the middle segment, these two segments together slightly longer than the basal segment.

Sternal sagitta very characteristic, the posterior pair being very large, pear-shaped, confluent in the median line, but with the outer pointed ends nearer to the lateral border of the sternum than to the median line.

Total length (including chelicera)  $15\frac{1}{2}$  mm; length of cephalothorax  $6\frac{2}{3}$  mm; length of metatarsus of first leg  $5\frac{1}{2}$  mm.

Except in the formation of the sternal sagitta and some minor characters this species closely resembles the two species mentioned above.

## 2. *Pelmatorycter schultzei* n. sp.

1 ♀ from Kubub, Great Namaqualand, March or April 1904.

Colour pale-ochraceous, the cephalic portion of the cephalothorax slightly infuscated posteriorly and along the sides and the median line, the chelicera reddish-yellow, the abdomen pallid, faintly infuscated along the median line above.

Cephalothorax one-third longer than wide, as long as the tibia and metatarsus of fourth leg and as the tibia, metatarsus and tarsus of first leg. Ocular area decidedly more than twice as wide as long and parallel-sided; the anterior eyes equidistant, their hind margins (seen from above) in a straight line, the lateral eyes large, oval; posterior row of eyes with the anterior margin very slightly and the posterior margin strongly recurved, the median eyes very small and round, distant slightly less than their own diameter from the laterals, which are small, longish-oval (not reniform), hardly twice as long as the medians, and separated by almost their own length from the very much larger anterior lateral eyes.

Legs. Tarsus I with 2, II with 3 outer spines, III with 1 posterior dorsal spine, 3 anterior dorsal spines and several other anterior spines below these, IV with several spines on lower part of anterior and posterior sides. Metatarsi I and II with 3 apical, 2–3 mesial and 2 basal spines below, III with a band of spines along upper part of anterior surface, a row along the postero-dorsal edge and several long spines below, at least at the apex, IV with many spines below but only one or none along the upper inner edge. Tibiae I and II with an outer inferior row of five spines of which the apical one at least and, in the first leg, the third and fifth as well (or all) are strong and not setiform, III with no spines below but with 6–9 upper anterior, 3 dorsal and 2–3 posterior spines, IV without any spines or stout setae. Patella III covered with short spines on anterior surface and with 2 spines along postero-dorsal edge, IV with a number of short sharp spinules on anterior surface, especially at the base. Femur IV with a dense group of



short stout apical spines above and externally. Tarsi of first and second legs thickly scopulate, metatarsus of first leg scopulate to the base on both sides, that of second leg nearly to the base on anterior side, the posterior side with scarcely any scopular hairs. Claws of first pair of legs with two rows, each of 6—9 teeth, inner claw of fourth pair of legs with a pair of very minute teeth, the outer claw of these legs apparently muticous.

Posterior sternal sagilla about  $\frac{1}{3}$  of their length apart and a little more than this distance from the lateral margin of the sternum, each produced laterally into a slender process.

Posterior spinners with the apical segment about one-half longer than the penultimate segment (measured along underside).

Total length (including chelicera) 14 mm; length of cephalothorax  $5\frac{2}{3}$  mm, width  $4\frac{1}{3}$  mm.

Genus *Ancylotrypa* E. SIM.

*Ancylotrypa elongata* n. sp.

1 ♀ from Kooa, Kalahari, Bechuanaland Protectorate.

Colour pale-yellowish, the cephalothorax with the thoracic portion as well as the sides and median part of the cephalic portion lightly browned, the chelicera reddish distally; abdomen with a blackish median basal stripe above reaching to the middle.

Body elongate and narrow.

Cephalothorax about  $1\frac{2}{3}$  times as long as wide, as long as the patella, tibia, metatarsus and about  $\frac{2}{3}$  of the tarsus of first leg, and a little longer than the tibia, metatarsus and tarsus of fourth leg. Ocular area nearly  $2\frac{1}{2}$  times as wide as long, parallel-sided; anterior row of eyes (seen from above) with the posterior margin in a straight line, the anterior margin being in a strongly procurved line, the lateral eyes large, oval, the medians small, slightly less than half as long as a lateral eye and nearer to the latter than to one another; posterior row of eyes strongly recurved, the lateral eyes oval or subreniform, scarcely more than half as long as an anterior lateral eye and distant from the latter about half their own length, the median eyes appearing slightly smaller than the anterior medians (examined dry) and distant  $\frac{1}{2}$ — $\frac{2}{3}$  of their diameter from the posterior lateral eyes.

Legs. Tarsi I and II strongly laterally compressed, thinly scopulate distally on the innerside only (like that of the pedipalps), I—III not spined, IV with a number of spines along lower part of outer surface besides some distal spines on under and inner surfaces. Metatarsi not scopulate, I with 2 distal spines and 1 mesial and 1 basal spine or spiniform seta below, II with 1 basal, 2 mesial and 3 distal spines and spiniform setae below, III with a pair of apical spines below and a spiniform seta near the base, the anterior upper edge also with 3, the posterior upper edge with 2—3 strong spines, the outer surface sometimes with a weaker distal spine in addition, IV with a broad band of 10—12 spines arranged in about 3 rows along the lower outer edge, the inner upper edge with 2—3 spines distally. Tibia I with a row of very slender spiniform setae below, II with a row of 4 or 5 stouter spines or spiniform setae below, III with a pair of long apical spines below, the outer surface besides with 1 apical (inferior), 3—4 mesial (in a transverse row) and 1 or 2 basal spines, the inner surface with a curved row of 4 stout spines commencing near base above and ending below distally, IV with a band of long spines and spiniform setae arranged in 2—3 rows below. Patella III with a group of numerous stout spinules occupying the anterior and upper surfaces, the posterior surface with an additional stout apical spine above, IV without spinules. Femur IV with a number of stout, mostly setiform spines overhanging the distal edge. Claws of

anterior legs with 2 rows of numerous, minute, closely-set teeth, those of the posterior pair of legs muticous.

Chelicera long, their length, taken below to distal edge of base of claw, scarcely less than the length of the sternum and labium together; rastellum strong, one tooth at inner angle much stouter than the others; the inner row of 7–8 stout teeth flanked quite posteriorly by a few very minute denticles.

Coxae of pedipalps with the anterior edge lightly convex from base to apex and armed at the base with 2 large and 1–3 minute teeth.

Labium much broader than long.

Posterior sternal sagilla small and oval, about their own length from the lateral borders, their distance apart exceeding the width of the labium.

Posterior spinners with the apical segment stout and about  $\frac{3}{4}$  as long as the penultimate segment (seen from below).

Total length (including chelicera) 12 mm; length of cephalothorax  $3\frac{1}{4}$  mm, width nearly 2 mm.

This spider differs from the females of *Ancylotrypa* in the South African Museum (from Port Elizabeth and Hanover) in being more elongate, with relatively longer chelicera and slightly broader labium the sagilla of the sternum also slightly smaller and further apart, the apical segment of the spinners relatively much shorter, the anterior legs much less scopulate and somewhat more compressed and with the claws more numerous and minutely toothed.

#### Genus *Hermacha* E. SIM.

Specimens. a) 1 ♀ of this genus from Kammaggas, Little Namaqualand, July 1904, closely resembling *H. lanata* PURC. (Trans. S. Afr. Phil. Soc., Vol. XI, p. 373, 1902) from Clanwilliam Division, Cape Colony, but differing slightly in the structure of the eyes. As this character is variable it is difficult to decide whether this ♀ belongs to this species or not.

b) 1 juv. from Lüderitz Bay (Angra Pequena), Great Namaqualand (January 1904), too immature to describe.

#### Genus *Harpactira* AUSS.

##### *Harpactira namaquensis* PURC.

1902, PURCELL, Trans. S. Afr. Phil. Soc., Vol. XI, p. 324.

This species has already been recorded from Steinkopf, Kraaifontein, Ookiep and Concordia in Little Namaqualand and from Touws River in Worcester Division (Cape Colony) (Trans. S. Afr. Phil. Soc., Vol. XI, p. 324–325, 1902). Dr. SCHULTZE found the following specimens:

a) 1 ♂, 3 ♀♀ and 18 juv. from Kamaggas, Little Namaqualand, July 1904.

b) 1 ♀ and 8 juv. from Steinkopf, Little Namaqualand, July (♀) and August 1904.

c) 1 ♂, 1 ♀ and 3 juv. from Kubub, Great Namaqualand, March and April 1904. These specimens do not appear to differ structurally from the typical form from Little Namaqualand, but the colouration is somewhat different, the coat of shorter hairs on the limbs and cephalothorax being blackish-olivaceous, the longer pallid hairs of the latter, however, forming the usual pale radiating stripes and pale foxy-reddish marginal fringe.

d) 2 juv. from Lüderitz Bay (Angra Pequena), Great Namaqualand, January and February 1904.

e) 1 juv. (no. 132) from Prince of Wales Bay, Great Namaqualand.

Although it is not possible to establish with certainty the identity of immature specimens like the two last, there can be little doubt but that these belong to this species.

The young specimens from Steinkopf and Kammaggas so closely resemble the females and young of the two species of *Harpactirella* described above and found in the same localities, that they are distinguishable with certainty only by means of the setae on the sides of the chelicera, as already explained in Trans. S. Afr. Phil. Soc., Vol. XI, p. 341, 1902.

Genus *Ceratogyrus* Poc.

*Ceratogyrus schultzei* n. sp.

4 ♀♀ from Kgokong to Kang, Kalahari, Bechuanaland Protectorate, December 1904.

Colour brown, the abdomen sometimes nearly black. Hairs covering cephalothorax silky, pale-greyish, often tinged with yellowish, those alongside and in front of the ocular tubercle and on the foveal horn olivaceous, those on the ocular tubercle of a deeper yellow; short hairs on the legs for the most part greyish, the long hairs pale-foxy; hair-covering on abdomen grey or pale brownish-yellow, forming numerous pale spots on the dark skin, the longer hairs often pale-foxy; underside of abdomen clothed with pale salmon-tinted hairs on the segment bearing the anterior pair of lungs, except quite anteriorly, where the hairs are black, the rest of the abdomen, including the second pair of lungs, clothed with black hairs below; coxae, sternum, and innerside of pedipalps and of 2 anterior pairs of legs clothed with black hairs; chelicera clothed with pale-greyish hairs, which are often slightly foxy.

Cephalothorax subequal to (only very slightly longer or shorter than) the metatarsus and tarsus of fourth leg, but longer than the tibia and metatarsus of first leg (from very slightly to  $\frac{1}{4}$  longer). Foveal horn very large and long, becoming very gradually and slightly narrower towards the apex, which is rounded and very obtuse; its length along the upperside about  $1\frac{1}{2}$  times its width at the base; seen from the side the horn appears inclined backwards at about half a right angle to the horizontal, its anterior (or upper) edge appearing feebly convex, its posterior edge feebly concave or almost straight and standing up some distance off from the surface of the cephalothorax.

Legs. Tibia of first leg  $3\text{--}3\frac{1}{5}$  times as long as high in the middle, its length exceeding that of the metatarsus (by up to  $\frac{1}{6}$  of the tarsus) and equal to the distance from the fovea to some point between the anterior margin of the ocular tubercle and that of the cephalothorax and also subequal to or slightly less than the length of the fourth tibia.

Apical segment of posterior spinners much longer than the penultimate segment and than the ocular tubercle.

Total length (including chelicera) of a ♀ 40 mm; length of cephalothorax  $16\frac{1}{2}$  mm, width  $13\frac{3}{4}$  mm; length of foveal horn 6 mm, width at base 4 mm, height of highest part above the thorax  $3\frac{2}{3}$  mm; distance of fovea from anterior margin of cephalothorax 9 mm; length of tibia of first leg 8 mm, of metatarsus 7 mm.

These females are certainly specifically distinct from *C. darlingi* Poc. (Proc. Zool. Soc. London, 1897, p. 754), the only other species of which the females have been described. In the latter the foveal horn is much more conical and tapering and more erect, and the second pair of lung-opercula is pale-yellowish and not black below. The colouring of *C. schultzei* n. sp., on the other hand, substantially agrees with that of *C. bechuanicus* PURC. (Trans. S. Afr. Phil. Soc, Vol. XI, p. 339, 1902), also from Bechuanaland, of which only the male is known. In the latter, however, the foveal horn is much more strongly inclined, its posterior surface being actually in contact with the thorax, except quite distally, and there is no reason for believing that these differences are sexual ones.



Genus *Harpactirella* PURC.1. *Harpactirella spinosa* n. sp.

Pl. XI, Fig. 1.

Specimens. a) 4 ♂♂ from Steinkopf, Little Namaqualand, July 1904.

♂♂ (types). Colour. Cephalothorax and limbs dark-brown, the whole body covered with pale-yellowish or yellow hairs, the longer ones on the legs generally tipped with white; abdomen covered with similar hairs, the skin pale-yellowish, marked above with a black median stripe, which expands anteriorly often over the whole width of the dorsal surface and is flanked on each side by oblique black stripes; underside of abdomen with small black mark on inner edge of each posterior lung-operculum, often continued posteriorly in two converging lines or rows of markings.

Cephalothorax (measured laterally to the ocular tubercle) as long as the tibia and  $\frac{1}{3}$ — $\frac{2}{5}$  of the metatarsus of first leg but decidedly shorter than the metatarsus of fourth leg.

Tibia of first leg 5—6 times as long above as high in the middle, its length slightly less than, equal to, or even slightly exceeding that of the metatarsus and, like the latter, always considerably exceeding the distance from the fovea to the anterior margin of the cephalothorax, the apical spur rather short, much shorter than its spine. Metatarsus distinctly curved. Tibiae I—III with 2 apical, 1 (rarely 0) mesial and 1—2 basal spines below, I and II also with 0—1 spine on upper inner edge, III with 0—1 spine on posterior and 1—2 spines on anterior surfaces as well and with the inferior basal spine sometimes absent; IV with 2 spines below at apex, besides 1 (rarely 2) on external and 1 (rarely 0) on internal surfaces. Metatarsi I and II sometimes with a basal spine below, III and IV with a number of spines.

Palpal organ with the spine about as long as the bulb and somewhat flattened (appearing rather stoutish when seen from the flat side, as in Pl. XI, Fig. 1), strongly, evenly and somewhat spirally curved from the base (the basal curvature not visible in the figure).

Apical segment of posterior spinners subfusiform, long, twice as long as the penultimate segment and  $\frac{1}{3}$ — $\frac{1}{2}$  longer than the ocular tubercle.

Labium with 19—31 apical teeth in 2—3 rows.

Total length (including chelicera) 14—16 mm; length of cephalothorax in largest ♂ 7 mm, width  $5\frac{2}{3}$  mm, length of tibia of first leg 5 mm, of first metatarsus  $5\frac{1}{3}$  mm, of fourth metatarsus  $7\frac{1}{2}$  mm.

b) 1 smaller ♂ (length 12 mm) and 1 small and 2 large ♀♀ (no. 673) from Kammaggas, Little Namaqualand, July 1904, the ♂ resembling the types in the formation of the palpal organ and spinners but with only a second and a fourth leg left. The second leg has no trace of mesial or basal spines, which shews that this character is variable.

Large ♀♀. Coloured like the males but with a number of short blackish hairs on the cephalothorax, the longer yellowish hairs forming radiating stripes, the sides of the abdomen with numerous pale spots on a dark ground and the underside with very distinct median black stripe between the lateral pair.

Cephalothorax equal in length to the metatarsus together with at least  $\frac{4}{5}$  of the tarsus (but less than these 2 segments together) of fourth leg and to the tibia and metatarsus together of first leg. Ocular tubercle  $\frac{1}{5}$  of its length or less from the anterior margin.

Rastellum composed of long spiniform setae.

Legs. Tibia of first leg slightly more than 3 times as long as high in the middle, its length a little exceeding that of the metatarsus and just equal to or a little less than the distance from the fovea to the hind margin of the ocular tubercle. First leg (including coxa) shorter than the fourth (by  $\frac{1}{2}$  the fourth

tarsus). Tibiae I—IV with 1—2 apical spines below but without other spines, the spines of the two anterior pairs very small. Metatarsi III and IV spined. Scopula of third metatarsus and of fourth tarsus practically entire (with some fine setae in basal half).

Apical segment of posterior spinners a little longer than the ocular tubercle and at least twice as long as the penultimate segment.

Labium with 29—37 teeth in 3—4 rows.

Total length (including chelicera)  $19\frac{1}{2}$ — $21\frac{1}{2}$  mm; length of cephalothorax in largest ♀  $8\frac{1}{2}$  mm, width  $6\frac{1}{2}$  mm, length of tibia of first leg  $4\frac{1}{2}$  mm, distance from fovea to posterior margin of ocular tubercle  $4\frac{1}{2}$  mm.

This species is closely allied to *H. longipes* PURC. (Trans. S. Afr. Phil. Soc., Vol. XI, p. 343, 1902) from Clanwilliam and Piquetberg Divisions, Cape Colony, but differs very distinctly in the shape of the palpal organ, whose spine is much straighter proximally and slenderer distally in *longipes* (Pl. XI, Fig. 2). In the ♂ of *longipes*, too, the legs are relatively shorter and the tibiae spined at the apex only.

The females closely resemble *H. magna* PURC. (Ann. S. Afr. Mus., Vol. III, p. 102, 1903) from Uitenhage Division, Cape Colony.

## 2. *Harpactirella lapidaria* n. sp.

Pl. XI, Fig. 3.

Specimens. 1 ♂ and 2 ♀♀ from Steinkopf, Little Namaqualand, August 1904. Also 1 juv. from the same locality.

♂ (type). Colour. Cephalothorax and limbs brown to yellowish-brown, the former clothed with shorter blackish hairs and longer pallid hairs, without pale radiating stripes, and fringed at the borders with long pale-yellowish hairs, the longer hairs on the legs pallid, black at base; abdomen with pale-yellowish skin, marked above with the usual black median stripe, which is enlarged anteriorly and flanked on each side by a row of oblique marks; the hairs on the abdomen pale-yellowish, with a few black ones intermixed, a group of the latter being on the anterior black area, the underside of the abdomen blackened on the inner edges of the posterior opercula and between these but otherwise without markings.

Cephalothorax very slightly shorter than the fourth metatarsus and as long as the tibia together with about  $\frac{1}{5}$  of the metatarsus of first leg.

Tibia of first leg 6 times as long as high in the middle, its length equal to that of the metatarsus and  $\frac{1}{6}$  of the tarsus and to the distance from the fovea to the middle of the chelicera, the apical spur rather short, much shorter than its spine. Metatarsus I distinctly curved, its length much exceeding the distance from the fovea to the anterior margin of cephalothorax. Tibiae I—IV with a pair of apical spines but without other spines. Metatarsus I unspined, II with short apical spine, III and IV with several spines.

Palpal organ (Pl. XI, Fig. 3) with the spine about as long as the bulb, rather strongly curved but straighter and more turbinate in the basal part than in the preceding species, the apical portion slightly stouter than in *H. longipes* PURC. but slenderer than in *H. spinosa* n. sp.

Spinners as in the preceding species.

Labium with 12 apical teeth in one row.

♀♀. Colour of cephalothorax and legs yellow, the former with some longer yellowish hairs besides the black ones, especially on the cephalic portion; otherwise much as in the ♂.

Cephalothorax equal in length to the metatarsus and  $\frac{2}{3}$ — $\frac{4}{5}$  of the tarsus of fourth leg and to the tibia and metatarsus together of first leg. Ocular tubercle  $\frac{1}{5}$  of its length or less from the anterior margin of cephalothorax.

Rastellum composed of long spiniform setae or slender spines.

Legs. Tibia of first leg almost 3 times as long above as high in the middle, its length a little exceeding that of the metatarsus and slightly less than or equal to the distance from the fovea to the hind margin of the ocular tubercle. First leg (including coxa) shorter than the fourth (by at least  $\frac{1}{2}$  of the fourth tarsus). Tibiae I—III with 2, IV with 2—3 apical spines. Metatarsus I unspined, II with small apical spine, III and IV with several spines. Scopulae as in ♀ of the foregoing species.

Spinners as in ♂.

Labium with 9—20 apical teeth in 2—3 rows.

Total length (including chelicera), ♂ 13 mm, ♀ 16 mm; length of cephalothorax ♂  $5\frac{1}{6}$  mm, ♀  $5\frac{3}{4}$  mm; length of tibia of first leg ♂  $4\frac{1}{3}$  mm, ♀  $3\frac{1}{5}$  mm; distance from fovea to posterior margin of ocular tubercle ♂  $2\frac{4}{5}$  mm, ♀ 3 mm.

This little species is very closely related to *H. longipes* PURC., but it differs sufficiently in the structure of its palpal organ, which although very similar to that of *longipes* in general shape, has the spermatic duct differently proportioned. The difference is shown in Pl. XI, Figs. 2 and 3, from which it may be seen that the mesial loop of the spermatic duct is much slenderer in *longipes* (Fig. 2) than it is in *lapidaria* (Fig. 3).

In *longipes*, too, the legs are relatively shorter and the labium much more numerously denticulated.

One of the two females of *H. lapidaria* has the abdomen curiously duplicated in the upper part.

## Fam. Dictynidae.

Genus *Auximus* E. SIM.

### 1. *Auximus capensis* Poc.

1900, Pocock, Ann. Mag. Nat. Hist., Ser. 7, Vol. VI, p. 323 (♀♀ from Port Elizabeth and Cape Peninsula).

Specimens. 2 ♀♀ and 3 juv. from the Cape Flats, Cape Peninsula, in September 1904.

### 2. *Auximus hottentottus* Poc.

1900, Pocock, Ann. Mag. Nat. Hist., Ser. 7, Vol. VI, p. 323 (♀ from Garies, Little Namaqualand).

Specimens. a) 5 ♀♀ and 1 ♂ from Steinkopf, Little Namaqualand, July 1904, and 1 juv. from the same locality, August 1904. The ♂, which has not yet been described, has the following characters:

♂. Legs longer than in the ♀; metatarsus I considerably longer than the tibia, the outer upper side with a short but well-marked concavity just proximal to the middle, the outerside being also produced at the proximal end of the concavity into a large strong spur bearing a powerful spine and directed outwards.

Pedipalps with the patella much longer than high, its distal end very obliquely truncated on each side, the upperside thus acutely pointed at apex. Tibia longer than high, the distal edge of outerside oblique but entire and nearly straight, the upperside strongly laterally compressed, forming an obtuse ridge along the middle and produced at the distal end into a peculiar mattock (or —)-shaped rostrum, the lower branch of this rostrum being flattened before and behind and with a broad truncated apex, the upper branch shorter and claw-like, curving slightly inwards and backwards; the innerside of the tibia with the distal edge oblique and entire, except just below the rostrum, where it is emarginate. Tarsus shorter than the femur and than the patella and tibia together, strongly convex above, its outer and inner edges not lobed.



Palpal organ large, its exposed portion composed for the most part of a strongly inflated, subspherical, white, membranous bulb, which is wider than the tarsus and bears on its distal side a large separate claw-shaped piece of brown chitin, the basal part of this claw being large and broad and in contact with the apex of the tarsus or almost so, the apical portion curving backwards, downwards and outwards and rather blunt.

b) 1 ♀ from Kamaggas, Little Namaqualand, July 1904.

Genus *Pseudauximus* E. SIM.

*Pseudauximus annulatus* n. sp.

Pl. XI, Fig. 4.

1 ♂ from Kamaggas, Little Namaqualand, July 1904.

Colour and markings very much as in *P. reticulatus* E. SIM. (Bull. Soc. Ent. Fr., 1902, p. 243) from the Cape Peninsula, but with the legs much more strongly banded with black below on the femora, patellae, and tibiae, the metatarsi only indistinctly banded.

Ocular area broader than in *reticulatus*, the posterior row of eyes being much straighter and only slightly procurved, the median eyes very slightly nearer to the laterals than to one another, the anterior row of eyes lightly procurved, a little narrower than the posterior row; all the eyes subequal.

Legs normal; metatarsus I a little shorter than the tibia.

Pedipalps with 2 spines on upperside of femur and 1 setiform spine at apex of patella above, as in *P. reticulatus*<sup>1)</sup>; femur and patella as in *P. reticulatus*; the tibia, however, much shorter and broader, its length along its axis (apart from the spur) being slightly less than that of the patella, its upper and inner surfaces lightly convex, its outer surface much distended laterally commencing gradually from the base, the segment being widest in the distal third where its width is subequal to its length along the axis, the distended portion produced outwards and forwards beyond the level of the point of insertion of the tarsus and terminating in a pair of spurs with a J-shaped narrow sinus between them, the inner spur being longer than the outer one, sharp and curved; patella and tibia together shorter than the femur; tarsus slightly longer than the patella and tibia (exclusive of the spur) together; palpal organ composed of a convex bulb occupying the greater portion of the underside of the tarsus and provided at its distal end with 2 small, curved, black, spinous processes, just above which the apex of a slender style protrudes (Pl. XI, Fig. 4).

Chelicera with 4—5 denticles in the lower row.

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

Although the posterior row of eyes is much less strongly procurved than in the typical species, *P. reticulatus*, this new species is nevertheless closely related to the latter and has the same broadly truncated sternum and similarly shaped mouth-parts, the short labium not reaching beyond the middle of the coxae of the pedipalps.

Fam. **Eresidae.**

Genus *Stegodyphus* E. SIM.

1. *Stegodyphus deserticola* n. sp.

Pl. XI, Fig. 5.

Specimens. 142 ♀♀ and juv. and 7 ♂♂ from near Khakhea in the Kalahari Desert, Bechuanaland Protectorate, January 1905.

1) The spine on the upper inner edge of the tibia, present in *P. reticulatus*, is absent, but it has probably been broken off, as its position is marked on each tibia by a scar.

♀ Colour. Cephalothorax reddish, the cephalic portion blackened on the sides and behind (except on the 2 posterior red areas), the thoracic portion also more or less infuscated in the middle but broadly yellowish or reddish-yellow at the sides and behind, the margins not at all or only partially blackened. Surface covered with white hairs, except on the ocular area, which is covered with yellow hairs, those on the face forming a large triangular patch bisected down the middle and bordered all round by narrow stripes of white hairs, those behind forming an oblique area on each side separated by a broad median band of white hairs, each again partially divided by a narrow band of white hairs running longitudinally from a posterior lateral eye to meet the transverse white stripe in front of it. Chelicera reddish at the base, black distally, the basal part covered with white hairs, the distal part with black ones. Sternum broadly blackened on each side, except quite behind, the median yellow area widening considerably behind, the hair-covering white, with a few small lateral spots of yellow hairs. Legs pale-yellowish, the two anterior pairs reddish at the distal ends only, all feebly banded with black, the bands like those of *S. tentoriicola* PURC. (Trans. S. Afr. Phil. Soc., Vol. XV, p. 135, 1904) but much paler, the hairs white, those on some of the black bands black. Abdomen pale-yellow, the long lanceolate median area on the dorsal surface without or with only a few minute black spots but bordered on each side by the row of blackened stigmata and other black markings, the sides of the abdomen, the anterior surface and often, also, the anterior part of the upper surface spotted and marked with black (except along the median area); under surface blackened (except on the opercula) on a pair of broad longitudinal bands (diverging posteriorly) behind the opercula and on a few other tiny spots, which are yellowish. Hair-covering of abdomen composed of yellow and white hairs, the yellow predominating in the posterior parts, the white in the anterior parts and along the median dorsal area, the posterior portion of which is provided with 4–6 pairs of short transverse branchlets, composed of white hairs; under surface with some dark hairs on the black patches, especially round the anterior edge of the vulva, the anterior part of the black area between the opercula, and the 4 large yellow areas covered with white hairs, as well as several small dots on the posterior black patch. Spinners with black hairs.

Cephalothorax and eyes as in *S. tentoriicola* PURC. (Trans. S. Afr. Phil. Soc., Vol. XV, p. 135, 1904).

Vulva (Pl. XI, Fig. 5) very like that of *S. tentoriicola* (loc. cit., pl. 10, fig. 6), but the median keel is continued to the end of the tongue-like projection and is enlarged in the middle and flanked posteriorly by a pair of short oblique keels. The shape of the enlarged part varies but is more or less distinctly cruciform, while the 2 posterior keels also vary somewhat in direction, being sometimes more longitudinal, sometimes more transverse than in the figure, and sometimes even uniting with the posterior end of the median keel to form a semicircular crest.

♂♂ Colour. Cephalothorax red at the sides and posterior part of thoracic portion as well. First leg with the coxa, trochanter and femur yellowish-red, the patella and tibia and the 3 other pairs of legs also more reddish-yellow than in the ♀, especially on the darker bands. Abdomen with the area of yellow hairs on each side of the lanceolate median area reaching forwards right to anterior end of the dorsal surface. Sternum redder.

Cephalothorax much more abruptly defined in the cephalic region; its length<sup>1)</sup> equal to that of the tibia and about  $\frac{1}{3}$  of the metatarsus of first leg.

Legs. The two anterior pairs relatively a little longer than in the ♀; tibia of first pair neither fringed below nor minutely spinulose on the black bands.

1) Taken laterally across a posterior lateral eye.

Pedipalps as in *S. tentoriicola* PURC., except that the hairs on the two distal segments are infuscated and those on the remaining proximal segments white.

Length of ♀♀ about 10 mm, of ♂♂  $5\frac{3}{4}$ — $6\frac{3}{4}$  mm.

This species is very near *S. tentoriicola* PURC., but in the latter the vulva of the ♀ is slightly different and the anterior legs of the ♂ are longer and minutely spinulose on the tibia below. Moreover *S. deserticola* is evidently gregarious, judging from the number of specimens collected, whereas *S. tentoriicola* is solitary in its habits.

## 2. *Stegodyphus dunicola* Poc.

1898, Pocock, Ann. Mag. Nat. Hist., Ser. 7, Vol. II, p. 201, pl. 8, fig. 7; also P.Z.S., 1902, Vol. II, p. 144. (From Estcourt in Natal and Vredefort Road in Orange River Colony.)

Specimens. 209 immature examples from the Cape Flats, Cape Peninsula, Cape Colony, September 1904; also 4 others from the same locality but from another nest. As none of these specimens are mature their identification cannot be considered certain.

Description of the web see L. SCHULTZE „Aus Namaland und Kalahari“ Jena, 1907, p. 578 f.

## 3. *Stegodyphus gregarius* O. P. CAMBR.

1889, O. P. CAMBRIDGE, Proc. Zool. Soc. London for 1889, p. 42, pl. 2, figs. 4 and 5. (From Durban, Natal.) Also, Pocock in Ann. Mag. Nat. Hist., Ser. 7, Vol. I, p. 312, 1898 (Ex. recorded from Barberton, Rhodesia).

Specimens. 30 immature examples from Severelela, Kalahari (north-west of Lobatsi), Bechuanaland Protectorate, October 1904, having the same peculiar colour-markings and ocular characters as *S. gregarius*, very probably belong to this species, which is widely distributed from Natal to Rhodesia.

The following specimens of *Stegodyphus* could not be identified at all:

- a) 19 juv. from Lobatsi in Bechuanaland, October 1904.
- b) 1 juv. from Kooa, Kalahari, Bechuanaland Protectorate, November 1904.
- c) 74 juv. from Kooa to Sekgoma, Kalahari, Bechuanaland Protectorate, November 1904.
- d) 189 juv. from Bonche, Kalahari, Bechuanaland Protectorate, January 1905.
- e) 141 juv. from Kang to Kgokong, Kalahari, Bechuanaland Protectorate.
- f) 18 juv. from Little Namaqualand.

## Genus *Adonea* E. SIM.

### *Adonea variegata* PURC.

1904, PURCELL, Trans. S. Afr. Phil. Soc., Vol. XV, p. 137 (from Naroep, Namies and Kykgat, in Great Bushmanland, and from the Calvinia and Worcester Divisions, all in Cape Colony).

Specimens. a) 27 ♀♀ and 32 juv. from Steinkopf, Little Namaqualand, July and August 1904.

b) 16 ♀♀ and 68 juv. from Kamaggas, Little Namaqualand, July 1904.

The adult ♀♀ vary much in size, Dr. SCHULTZE's specimens from the same locality measuring from 10—15 mm in length.

## Genus *Dresserus* E. SIM.

### 1. *Dresserus namaquensis* n. sp.

Pl. XI, Fig. 6.

Specimens. a) 2 ♀♀ (types) and 6 juv. from Steinkopf, Little Namaqualand, July (♀♀) and August 1904.



**Colour.** Head red or reddish-black, darker than the reddish-yellow thoracic portion and clothed with olive-black hairs and an undercoat of short white ones, giving the whole a speckled appearance, especially on the anterior half. Abdomen pale-yellowish or faintly smoky, clothed with black hairs and uniform in colour. Chelicera with some basal white hairs.

Cephalothorax as long<sup>1)</sup> as the patella, tibia, metatarsus and  $\frac{1}{6}$  or slightly less of the tarsus of first leg, very high and rather broad, rising abruptly behind far above the fovea, its highest part lying behind its middle, the posterior part of the upper surface appearing convex, when seen from the side, the anterior part being flattened and sloping forwards; width of head equal to the length of the patella, tibia and  $\frac{1}{3}$  of the metatarsus and to the tibia, metatarsus and  $\frac{1}{4}$  of the tarsus of first leg and to the distance from the anterior surface of the ocular tubercle to the posterior margin of the fovea.

Posterior median eyes large, about  $1\frac{1}{2}$  diameters apart and nearly 3 diameters from the anterior lateral eyes, a line touching the lower edges of the posterior median eyes passing below the centres of the anterior medians.

Vulva as in Pl. XI, Fig. 6.

Total length 15 mm; length of cephalothorax (including ocular tubercle) 6 mm, width  $4\frac{2}{3}$  mm; distance from centre of fovea to anterior surface of ocular tubercle  $4\frac{1}{2}$  mm.

b) 10 juv. from Kamaggas, Little Namaqualand, July 1904.

Allied to *D. laticeps* PURC. (Trans. S. Afr. Phil. Soc., Vol. XV, p. 140, pl. 10, fig. 10, 1904) from Namaqualand Division, Cape Colony, but with narrower head and somewhat different vulva.

## 2. *Dresserus schultzei* n. sp.

Pl. XI, Fig. 7.

1 ♀ from Kubub, Great Namaqualand, March or April 1904.

**Colour.** Cephalothorax reddish-black, covered with olive-black hairs, the thoracic portion paler, reddish-yellow. Abdomen pale-yellow, with black hairs.

Cephalothorax as long as the patella, tibia, metatarsus and  $\frac{1}{4}$  of the tarsus of first leg, shaped much as in *D. namaquensis* n. sp.; width of cephalic portion equal to the length of the patella, tibia and  $\frac{2}{5}$  of the metatarsus and to the tibia, metatarsus and  $\frac{1}{2}$  the tarsus of first leg and to the distance from the anterior surface of the ocular tubercle to the hind margin of the fovea.

Posterior median eyes large, slightly more than  $1\frac{1}{2}$  diameters apart, and at least 3 diameters from the anterior lateral eyes; viewed from the front the centres of the anterior median eyes lie in (but not below) the line joining the lower edges of the posterior median eyes.

Vulva as in Pl. XI, Fig. 7.

Total length  $16\frac{1}{2}$  mm; length of cephalothorax 7 mm, width  $5\frac{1}{4}$  mm; distance from anterior margin of ocular tubercle to centre of fovea  $5\frac{1}{6}$  mm.

Very near *D. laticeps* PURC. and *D. namaquensis* n. sp.

## 3. *Dresserus rostratus* n. sp.

Pl. XI, Fig. 8.

1 ♂ from Southern Hereroland, September or October 1903.

**Colour.** Cephalothorax blackish-red, covered with white hairs, except on the posterior slope of the cephalic portion, where the hairs are black; legs dark reddish-brown, the distal segments dark-reddish,

<sup>1)</sup> Length of cephalothorax is measured here between two parallel lines touching the anterior and posterior margins and including the ocular tubercle.

the hairs pallid to olive-black; chelicera blackish-red, clothed with dark hairs and with some white ones at the base; abdomen pale-yellow, contrasting strongly with the dark cephalothorax and clothed with whitish hairs intermixed with a smaller number of black ones.

Cephalothorax shorter than the tibia, metatarsus and tarsus of first leg (by nearly half the tarsus). Cephalic portion densely punctate, very high and broad, resembling that of the ♀ of *D. namaquensis* n. sp. in shape, when viewed from the side or from in front, but when viewed from above it appears not parallel-sided but somewhat narrowed towards the front, the widest portion being some little distance behind the region of the posterior lateral eyes; width at broadest part exceeding that of the thoracic region and equal to the length of the patella, tibia and  $\frac{1}{8}$  of the metatarsus and to the tibia and  $\frac{7}{8}$  of the metatarsus of first leg, and exceeding the distance from the bottom of the fovea to the anterior surface of the ocular tubercle (by about  $\frac{3}{4}$  of the length of the tubercle).

Ocular tubercle strongly produced in the middle in the form of a cone; the posterior median eyes at the base of the tubercle on each side large, about  $1\frac{1}{3}$  of a diameter apart and nearly 3 diameters from the anterior lateral eyes; the anterior median eyes with their centres just above the level of the lower edges of the posterior medians, situated below the cone, from the apex of which a blunt ridge or keel runs vertically downwards to between the two anterior eyes; anterior lateral eyes each placed on the outer under side of a prominent tubercle, the apex of which forms a short pointed cone projecting beyond the upper part of the eye.

Legs with the metatarsi of the two anterior pairs lightly curved.

Pedipalps with the tibia simple, transverse, much shorter than the patella, these two segments together shorter than the femur or tarsus, the latter broadly ovate, shortly and rather suddenly attenuated at apex, shorter than the femur. Palpal organ large, sublenticular in shape, bearing on its lower surface anteriorly a pallid oval capsule, to the mesial end of which is attached a large stout lunate blade as long as the palpal organ, while from the lateral end of the capsule the very long stylus arises and curving circularly nearly  $1\frac{3}{4}$  times round the rim of the palpal organ ends in a very fine point near the anterior end of the lunate blade (Pl. XI, Fig. 8).

Total length (including chelicera) 9 mm; length of cephalothorax (including ocular tubercle)  $4\frac{3}{4}$  mm; width of cephalic region in widest part  $3\frac{3}{4}$  mm, of thoracic region across the fovea 3 mm; distance from centre of fovea to apex of ocular tubercle  $3\frac{2}{5}$  mm.

#### Genus *Eresus* WALCK.

##### 1. *Eresus namaquensis* n. sp.

Pl. XI, Fig. 9.

Specimens. a) 5 ♀♀, 12 juv. ♀♀ and 1 juv. ♂ from Steinkopf, Little Namaqualand. Adults in July and August 1904.

♀♀. Colour of cephalothorax and legs blackish-red to nearly black, the posterior legs and the underside of the anterior legs paler, the hairs blackish-olivaceous; abdomen sooty-black, with dark hair-covering, numerously speckled with small groups of white hairs, much as in *E. fumosus* C. K., the dorsal stigmata also ringed with white hairs.

Cephalothorax shorter than the tibia, metatarsus and tarsus of first leg by  $\frac{1}{3}$ — $\frac{1}{6}$  of the tarsus<sup>1)</sup>, its surface granular but without spinules on the sides of the head; cephalic portion strongly depressed and

1) In a sixth female from Steinkopf the cephalothorax is slightly longer than these 3 segments in one leg and considerably longer in the other leg, but probably the legs of the first pair in this case are abnormal.

flattened, not at all or only slightly raised above the level of the region of the fovea, its width always considerably less than that of the thoracic region and equal to the patella and  $\frac{3}{5}$ — $\frac{4}{5}$  of the tibia and to the tibia and  $\frac{2}{5}$  to nearly  $\frac{1}{2}$  of the metatarsus of first leg, and to the distance from the bottom of the fovea to some point in front of a transverse line passing midway between the posterior median and the posterior lateral eyes but posterior to a line touching the hind margins of the posterior median eyes.

Posterior median eyes large, distant  $1\frac{1}{5}$ — $1\frac{1}{4}$  of a diameter from each other and less than 2 diameters from the anterior lateral eyes (about a diameter of the latter eye less); centres of the anterior median eyes lying, if anything, a trifle below the level of the lower edges of the posterior medians (viewed from in front).

Legs. All the femora densely clothed below with long fine hairs forming a mane; no short spinules on underside of femora nor on anterior or undersides of trochanters or coxae.

Pedipalps with some long spines amongst the hairs on innerside of the tibia and a number on inner and undersides of the tarsus; femur and patella without spinules.

Chelicera and sternum without short sharp spinules on the surface.

Vulva generally as in Pl. XI, Fig. 9, the median septum between the emarginations somewhat variable, being sometimes slightly narrower and more rounded and sometimes more rectangular at the apex than in the figure, the lateral emarginations large but generally a little narrower than the median septum.

Total length  $14\frac{1}{2}$ —18 mm; length of cephalothorax in largest ♀ (including ocular tubercle)  $8\frac{1}{6}$  mm, width of head  $4\frac{3}{4}$  mm, of thorax  $5\frac{1}{2}$  mm, distance from bottom of fovea to anterior surface of ocular tubercle  $5\frac{1}{2}$  mm.

b) 1 juv. ♀ from Kamaggas, Little Namaqualand, July 1904.

The absence of spinules from the legs and sternum distinguishes this species at once from most other South African species.

## 2. *Eresus fumosus* C. KOCH.

1837—1839 *E. fumosus* C. KOCH, Arach., Bd. IV, p. 100, fig. 314 (♀ from „Africa“).

1865 *E. bubo* L. KOCH, Verh. Zool.-bot. Gesellsch. Wien, Bd. XV, p. 878. (From Algoa Bay.)

Specimens. 1 adult ♀ and 2 juv. from Port Nolloth, Little Namaqualand, April 1905.

In this species the distance between the posterior median eyes varies considerably even in specimens from the same locality, being sometimes more and sometimes less than 2 eye-diameters apart. In this adult ♀ of Dr. SCHULTZE's these eyes are rather nearer together than is usually the case, being scarcely more than  $1\frac{1}{2}$  diameters apart, but the shape of the vulva and the proportions of the cephalothorax agree with those of the numerous specimens of *E. fumosus* in the South African Museum from many other places in Cape Colony.

E. SIMON (Araign., 2nd ed., Vol. I, p. 252 and 253) states that *E. bubo* L. KOCH is the only Australian Eresid known and that its generic position, judging from KOCH's figure, should be in *Stegodyphus*. L. KOCH, however, states in his description that the posterior lateral eyes are as far apart as the anterior lateral eyes, therefore it cannot be a *Stegodyphus* and moreover the locality, Algoa Bay, is in South Africa and not in Australia. There are several adult females of *E. fumosus* from Port Elizabeth (Algoa Bay) in the South African Museum, which entirely agree with L. KOCH's description of *E. bubo*. It may be mentioned that several South African species of Myriapods of the genus *Spirostreptus* are also described from Algoa Bay in the same paper along with *Eresus bubo*, which fact should dispel any doubt as to the locality of the latter.



### 3. *Eresus echinatus* n. sp.

Specimens. 2 adult ♀♀, 1 nearly mature ♀ and 30 very young specimens (mostly from one nest) from Rooibank, south-west of Walfish Bay in Southern Hereroland, May 1905.

Colour as in *E. fumosus* C. KOCH.

Cephalothorax a little longer than the tibia, metatarsus and tarsus of first leg, its surface, especially on the cephalic region, densely covered with granules, the sides of the head with numerous, short, stout, pointed spinules, which are longest in the lower part. Cephalic portion shaped as in *E. fumosus*, high, raised considerably above the level of the foveal region, its width subequal to or slightly exceeding the width of the thorax, subequal to or exceeding the length of the patella and tibia but less than the length of the tibia and metatarsus (by about  $\frac{1}{4}$ — $\frac{1}{8}$  of the metatarsus) of first leg and equal to the distance from the bottom of the fovea to the upper margins of the posterior median eyes.

Posterior median eyes not very large, less than 2 but more than  $1\frac{1}{2}$  diameters apart and about (or nearly) 3 diameters from the anterior lateral eyes; the anterior median eyes a trifle below the level of the lower margins of the posterior median eyes.

Legs. Femora III and IV with a mane of long hairs below, I and II with few or hardly any hairs on underside but thickly covered instead with short stout pointed spinules, like a flat brush, III with a smaller number of similar spinules scattered amongst the long hairs, IV without any spinules; the bases of the femora, at least in I and II, with some very small spinules on the sides as well. Trochanters I and II with only a very few minute spinules between the hairs. Coxae I and II with a few minute appressed spinules on posterior and anterior surfaces but none on underside, III practically without spinules. Patellae without spinules.

Pedipalps densely spined on inner surface of tibia and on inner and under surfaces of tarsus; patella with a number of small spinules on inner surface (much fewer than in *E. fumosus*), only a few of the distal ones overhanging the edge; femur with a few spinules below.

Chelicera with some sharp spinules scattered amongst the hairs of the anterior surface.

Sternum clothed with fine hairs only on the posterior half; the hairs on the anterior half thickened at the base, with a few sharp and rather slender spinules between them.

Vulva as in *E. fumosus*, the emarginations and septum very like that of *E. namaquensis* n. sp.

Total length 16 mm; length of cephalothorax  $7\frac{3}{4}$  mm; width of head  $5\frac{1}{4}$  mm, of thorax across foveal region 5 mm.

This species is very closely allied to *E. fumosus*, the only differences of importance being the spinous characters of the sternum and parts of the legs. In *E. fumosus* the sternum is thickly covered with minute sharp spinules distributed between the hairs, the two anterior coxae of the legs and to a lesser extent the third coxa are also more densely spinulose, and the patellae of the two anterior pairs of legs are densely but very shortly spinulose on the anterior side.

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The following specimens of *Eresus* were too young to be identified:

- a) 1 juv. ♀ from Lüderitz Bay, Great Namaqualand, perhaps identical with *E. namaquensis* n. sp.
- b) 1 juv. ♂ from Kubub, Great Namaqualand.
- c) 2 nearly mature ♀♀ from the Kalahari (Lehututu to Kang), Bechuanaland Protectorate.
- d) 1 juv. from near Severelela, Kalahari, Bechuanaland Protectorate.

Fam. **Sicariidae.**Genus *Sicarius* WALCK.1. *Sicarius testaceus* n. sp.

Specimens. 3 ♀♀ and 1 juv. from Kamaggas, Little Namaqualand, July 1904.

Colour testaceous, the abdomen paler.

Cephalothorax broader than long, its width equal to the tibia and  $\frac{1}{3}$ — $\frac{1}{2}$  of the patella and to the metatarsus and  $\frac{2}{3}$ — $\frac{3}{4}$  of the tarsus of first leg, and only slightly shorter than the patella and tibia of fourth leg. Upper surface beset with a number of swollen infusate or black hairs of various shapes and symmetrically arranged, each leaving a circular scar when removed; the lateral borders of the thoracic portion with a row of these hairs, which are here slightly curved forwards, obtusely pointed at the apex but for the most part not clavate, those at the hind angles several deep and about twice as long as the more anterior ones; anterior margin of head with a row of similar but straighter and often subclavate hairs; rest of the upper surface with a number of short, stumpy, mostly clavate and blacker hairs arranged in symmetrical groups as follows: On the posterior convexity of the head 2 longitudinal groups of 6—8 hairs each, on the anterior part of the head behind the ocular area 4 longitudinal rows of several hairs each, and on the thoracic portion on each side 4 or 5 groups of hairs; between the larger hairs a number of minute swollen hairs are thickly scattered over the upper surface.

Median eyes slightly less than a diameter apart, the lateral eyes about a diameter apart.

Abdomen with a number of erect, strongly curved, clavate, infusate hairs with their curved ends for the most part directed towards the median line, these hairs arranged in symmetrical bands and groups, the spaces between them evenly studded with minute swollen hairs; on the dorsal surface 6 such rounded spaces surrounded by clavate hairs are evident, 3 on each side in a longitudinal row, with a narrow longitudinal space down the median line connected with each of the rounded spaces by 3 narrow transverse spaces; behind these spaces are several transverse spaces lying between the transverse bands of clavate hairs at the hind end of the abdomen.

Legs thickly covered with minute spinules and with numerous larger swollen dark hairs and spines; femora with 2 rows of short rod-like hairs or spines below, the dorsal edge of each femur with a row of 4 large, narrow, ob lanceolate, pointed, white hairs placed at equal distances apart on black tubercles and strongly contrasting with the other dark hairs, etc.; the more distal segments of the legs strongly and sharply spined below.

Length  $7\frac{1}{4}$  mm.

The hairs on these specimens are remarkably well-preserved.

2. *Sicarius albospinosus* n. sp.

Specimens. a) 5 ex. from Lüderitz Bay (Angra Pequena), Great Namaqualand, April 1903 and January 1904.

Colour pale-yellow, the cephalothorax of a darker yellow than the legs and abdomen.

Cephalothorax broader than long, its width equal to the length of the tibia and from  $\frac{1}{3}$  to slightly over  $\frac{1}{2}$  the patella and to that of the metatarsus and  $\frac{3}{4}$ — $\frac{5}{6}$  of the tarsus of first leg, and equal to or less than the length of the patella and tibia of fourth leg. Upper surface beset with numerous minute spinules and a smaller number of short, rod-like, mostly curved, obtuse spines, which do not for the most part form such distinct groups as in the previous species, but are more evenly scattered about; on the head,

however, 2 long bands or rows converging backwards from each group of lateral eyes are noticeable; lateral margins of thorax with a row of longer spines slightly curving forwards, those at the posterior angles several deep, slender and twice as long as the more anterior ones.

Median eyes close together, half a diameter apart; laterals a little less than a diameter apart.

Abdomen with a number of erect, strongly curved, cylindrical (not clavate), pale-yellowish, obtuse hairs, these hairs arranged in the posterior part in the usual transverse rows but more anteriorly they are more evenly scattered than in the previous species, so that the 3 pairs of spaces are scarcely traceable.

Legs much spined; the femora with 2 rows of longish pallid spines below, the upper edge of each with a row of about 8 long, slightly curved and rather slender spines, each of these spines alternating with a shorter and slenderer whitish spine, all the spines arising from black granules.

Length 8 mm.

b) 1 ♀ and 1 juv. from Angra Pequena, Great Namaqualand. The ♀ is evidently an adult of this species, but its spines are not so well-preserved as in some of the smaller typical specimens and the cephalic portion of the cephalothorax is of a deep red colour. Total length of ♀ 11 mm, width of cephalothorax  $5\frac{3}{4}$  mm, this width equal to the length of the tibia and half the patella and nearly equal to the metatarsus and tarsus of first leg.

### 3. *Sicarius hahnii* KARSCH?

1878 *Hexomma hahnii* KARSCH, Z. Ges. Naturw., Bd. LI, p. 325, pl. 9, figs. 2—2c. (Adult ♂ from „Hereroland [Mission Hahn]“.)

Specimens. 1 ♀ from Otjimbingwe in Southern Hereroland, September 1903, and 3 others from „Southern Hereroland“, September and October 1903.

In all these the cephalothorax, the abdomen and most of the leg-segments are entirely denuded of hairs and spines, but judging from the well-marked groups left by the scars, the patterns of which closely agree with KARSCH's figure, it seems very probable that these specimens are females of *S. hahnii*, which appears to have come from the same area.

### Genus *Loxosceles* LOWE.

#### *Loxosceles pilosa* n. sp.

Specimens. a) 2 ♀♀ from Steinkopf, Little Namaqualand, July and August 1904.

Colour pale-yellowish, the cephalothorax broadly infuscated on the sides and posterior part of head (except on a patch behind the ocular area) and on the sides of the thorax, and with a narrow median infuscate stripe down the thorax and several radiating stripes from the fovea, the extreme margin of the cephalothorax finely yellowish; legs with a greenish or blackish tinge on the yellow ground; skin of abdomen pallid.

Cephalothorax broad, with deep fovea, its length a little exceeding half the first metatarsus; its surface with a number of long curved spines arranged as in *L. spinulosa* PURC. (Trans. S. Afr. Phil. Soc., Vol. XV, p. 140, 1904) and a number of appressed black hairs scattered about (partially rubbed off). Eyes arranged much as in *L. spinulosa*, but the anterior lateral eyes distinctly slightly larger than the others and only slightly nearer to the posterior lateral eyes than to the medians.

Abdomen clothed above with black and red hairs arranged in groups forming a mottled pattern (many rubbed off) and with a small number of curved spiniform setae scattered about. Genital opening bordered posteriorly by a narrow transverse yellow plate extending from lung to lung, and anteriorly by a large 3-lobed yellow area, the lateral lobes being the lung-opercula.



Legs very long and slender, clothed with numerous hairs and spiniform setae (mostly rubbed off), fourth leg longer than the first.

Sternum with numerous curved setae.

Length 7 mm, length of first leg (to base of femur) 18 mm, of fourth leg 19 mm.

b) 2 nearly mature ♀♀ (nos. 345 and 406) from Southern Hereroland (1 from Otjimbingwe), September and October 1903. In these specimens the first metatarsus is at least twice as long as the cephalothorax, and the body is almost entirely denuded of hairs and spines; sufficient, however, remains to show that the colour of the hairs was similar to that of the types.

### Genus *Scytodes* LATR.

#### 1. *Scytodes broomi* Poc.

1902, Pocock, Ann. Mag. Nat. Hist., Ser. 7, Vol. X, p. 321 (♀ from Garies in Little Namaqualand), with text-figure of vulva.

Specimens. a) 1 adult ♀ and 1 immature specimen from Kamaggas, Little Namaqualand, July 1904. Length over 10 mm.

The female of this species would fall together with *S. flagellata* PURC. under section b<sup>7</sup> in the synoptic table given on p. 151 in Trans. S. Afr. Phil. Soc., Vol. XV, 1904. It differs, however, from that species as follows:

Median black stripe on carapace absent (except before the eyes)	. . . . .	<i>S. broomi</i> Poc.
Median black stripe on carapace distinct	. . . . .	<i>S. flagellata</i> PURC.

In Dr. SCHULTZE's specimens the horny ridges of the abdomen are distinctly curved outwards at the anterior end and not straight as in Pocock's figure.

b) 1 adult ♀ from Lüderitz Bay, Great Namaqualand, January 1904. Smaller than the typical form (length 7<sup>3</sup>/<sub>4</sub> mm) and almost unpigmented on the under surface. The length of the cephalothorax, also, is greater than that of the tibia of the third leg (but less than this tibia in the type).

c) 1 adult ♀ and 3 juv. from Kubub, Great Namaqualand, March and April 1904, resembling the specimens from Lüderitz Bay.

d) 2 juv. ♀♀ from Angra Pequena, Great Namaqualand, resembling the other specimens from Great Namaqualand.

#### 2. *Scytodes schultzei* n. sp.

Pl. XI, Fig. 10.

Specimens. 3 ♀♀ and 1 juv. from Steinkopf, Little Namaqualand, July and August 1904.

Colour almost exactly as in *S. leipoldti* PURC. (Trans. S. Afr. Phil. Soc., Vol. XV, p. 143, 1904), except that there are only 1–3 pairs of marginal black marks on the sternum or even none at all. In one specimen, also, the medial pair of black stripes are united posteriorly with the more lateral pair on the highest part of the cephalothorax, but in the other specimens they end free.

Horny plates on underside of abdomen different from those of the other species known to me, being very large, longitudinally oval, and bordered on the inner and anterior margins by a pair of very long ridges, the anterior portions of which are boldly outcurved and reach as far as the lateral ends of the genital opening, the posterior ends of the ridges only very slightly, if at all, outcurved (Pl. XI, Fig. 10).

Length of ♀♀ 5–6 mm.

In the synoptic table on p. 151 in Trans. S. Afr. Phil. Soc., Vol. XV, 1904, this species would fall under section b<sup>6</sup> and may be distinguished from the other species in this section by having no median black stripe behind the ocular tubercle.

### 3. *Scytodes arenacea* PURC.

1904, PURCELL, Trans. S. Afr. Phil. Soc., Vol. XV, p. 145 (♀ from Great Bushmanland, Cape Colony).

Specimens. 1 ♂, 2 ♀♀ and 7 juv. from Rooibank near Walfishbay, Southern Hereroland, May 1905.

The black markings of the type-specimen in the South African Museum appear to be very fugaceous, for at the present time (three years after the original description was made) these markings are only just traceable with the assistance of the original description on the cephalothorax, while those on the legs have almost entirely disappeared. As the specimen had been in the Collection for more than four years previously, it is evident that it must have been considerably bleached already at the time the description was made and that the markings must originally have been much stronger and more extensive. In Dr. SCHULTZE's specimens the markings are well-preserved and agree exactly in the pattern with those of the typical form, excepting that additional ones are present as well, as may have been expected.

Colour of Dr. SCHULTZE's specimens. Cephalothorax with the median stripe well-developed, reaching to highest point of cephalothorax and bordered on each side by an equally narrow yellow stripe, which is widened at anterior end behind the median eyes; on each side of this again, is a narrow black stripe, which runs in well-marked specimens from the innerside of the lateral eyes backwards to just beyond the highest part of the cephalothorax, but usually this line is interrupted posteriorly just before the highest part and disconnected anteriorly from the lateral eyes; outside of this line and at some distance from it is a narrow black stripe which, starting from the lateral angles of the clypeus, runs backwards over the lateral eyes and some distance beyond, then curving outwards and then inwards again ends somewhere on the posterior slope of the thorax; this line and the one just before mentioned enclose between them on each side a long broad yellow area, which is divided in well-marked specimens by a transverse black bridge into a small anterior and a large posterior yellow area; sides of the cephalothorax each with two well-marked rows of large yellow areas, defined by a network of black stripes. Femora with well-marked basal, sub-mesial and apical black bands below and black spots in between; patellae blackened at apex; tibiae with 3 black bands; metatarsi blackened at apex. Sternum with some small marginal but no mesial spots. Abdomen well-marked with black spots and stripes.

♂ (not previously described). Palpal organ much longer than the tarsus, intermediate in shape between that of *S. flagellata* and *testudo* PURC. (Trans. S. Afr. Phil. Soc., Vol. XV, pl. 10, figs. 15 and 17, 1904), the proximal portion of the process slightly thicker distally and pointed, the slender distal portion dark, slightly curved, about  $\frac{2}{3}$  or  $\frac{3}{4}$  as long as the proximal portion and provided at its base with a small slender wing or keel (visible from the side). The palpal organ of *S. subulata* PURC. is very like that of *arenacea* PURC., except that in *subulata* the distal part of the process is a trifle longer and its basal keel is less distinct.

Length ♂  $3\frac{3}{4}$  mm, ♀♀  $3\frac{1}{2}$ — $4\frac{1}{4}$  mm.

Dr. SCHULTZE also collected 4 young *Scytodes* from Prince of Wales Bay and Angra Pequena.  
Jenaische Denkschriften. XIII.

Fam. **Dysderidae.**Genus *Ariadna* AUD.1. *Ariadna hottentotta* n. sp.

Specimens. 66 adult and immature ♀♀ from Kamaggas, Little Namaqualand, July 1904.

Colour in adult reddish-yellow, the cephalothorax darkened on the sides of the head anteriorly, the two posterior pairs of legs somewhat paler, the two distal segments of the first pair more reddish; tibia I often with a dark spot above and another on each side at apex; metatarsus I darkened at apex and often on the sides at the base as well; abdomen pale-yellowish (or more or less discoloured), with a broad dorsal band of purplish-black extending from end to end; chelicera dark-red to reddish-black.

Cephalothorax as long as the tibia and  $\frac{1}{3}$ — $\frac{1}{2}$  of the metatarsus of first leg, narrowed in front, its width just behind the eyes  $\frac{3}{5}$  or less of the length of the first tibia. Ocular area narrow, the distance between the median and posterior lateral eyes scarcely or only slightly exceeding the width of a median eye.

Legs longish; fourth femur thicker than the first; anterior pair of legs rather densely clothed with long brownish hairs, those below the femur forming a loose mane, those on the tibia fairly evenly distributed all round the segment, the lower ones somewhat longer, the pubescence, however, less dense and ruddy than in *A. jubata* PURC. (Trans. S. Afr. Phil. Soc., Vol. XV, p. 156, 1904) from the same district; first tibia at least as wide as the distance between the posterior lateral eyes. Metatarsus I equal to or only very slightly shorter than the tibia; I and II with a single series of stout spines on each side below, III with 2 anterior and 2 posterior rows of 2—3 spines each, IV with 1 apical spine below and about 4 setae in the apical comb. Tibia I with 5—6 (rarely 4 or 7) spines in each inferior row, besides 3 (rarely 4) others on each side, II with 3 spines on each side above the inferior row, III with 2 posterior rows of spines and 0—1 anterior spine, IV unspined. Patellae unspined. Femora I—III with dorsal and inner distal spines, III sometimes also with an outer distal spine, the inner distal spines 2—3 in number on first femur, IV unspined.

Chelicera with 2 small superior teeth; the inferior tooth obsolete.

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

In all the other South African species of *Ariadna* the cephalothorax is longer than the tibia and half the metatarsus of the first leg and this is also the case in immature examples of *hottentotta* n. sp.

2. *Ariadna lightfooti* PURC. var.

1904, PURCELL, Trans. S. Afr. Phil. Soc., Vol. XV, p. 155 (♀ from Caledon Division, Cape Colony).

Specimens. 1 adult ♀ and 1 juv. from Kamaggas, Little Namaqualand, 1904.

The adult ♀ differs considerably in colour from the type, being of a deep reddish-black to quite black, with the cephalothorax faintly reddish posteriorly, the two posterior pairs of legs paler distally, the abdomen purplish-black, the lung-opercula pale-yellow, and a triangular spot just behind the genital cleft also pale-yellowish. In spite of the difference in locality I could find no essential structural differences, which would warrant the establishment of a new species.

The cephalothorax is as long as the tibia and  $\frac{5}{6}$  ( $\frac{7}{8}$  in the type) of the metatarsus of first leg. The ocular area and the tibia of first leg are slightly wider than in the type. The first metatarsus is exactly



equal to the tibia in length and the third has a pair of spines along the middle of the posterior (outer) surface, which are absent in the type. Length of cephalothorax + abdomen 13 mm.

The nest consists of a long silken tube with pieces of wood, etc., attached. It was evidently removed from some dead wood or bark in which it had been hidden.

### 3. *Ariadna jubata* PURC.

1904, PURCELL, Trans. S. Afr. Phil. Soc., Vol., XV, p. 156 (♀ from Tsabis, Little Namaqualand).

Specimens. 2 ♀♀ and 3 juv. from Steinkopf, Little Namaqualand, July and August 1904.

A minute inferior lower tooth is sometimes present on the chelicera.

### 4. *Ariadna insularis* n. sp.

Specimens. a) 62 examples, including many adult ♀♀, from Possession Island off the coast of Great Namaqualand, May 1903.

Colour in adult. Cephalothorax dark mahogany-brown, the head blackish at the sides; legs reddish-yellow, the two anterior pairs more reddish distally, all of them more or less infuscated in places, especially on the anterior sides of the femora, patellae and tibiae, the outer (anterior) side of the fourth pair appearing thus more strongly blackened than the outer (posterior) sides of the three anterior pairs; abdomen pale-yellowish, the posterior region all round, a broad mesial dorsal area and the area between the first pair of lung-opercula purplish-black; sternum more or less infuscated, darker than the coxae.

Cephalothorax as long as the tibia and  $\frac{3}{5}$ — $\frac{2}{3}$  of the metatarsus of first leg, its width in front just behind the eyes about  $\frac{3}{4}$  (more or less) of the length of the first tibia. Ocular area moderately wide, the two median eyes together a little wider, however, than the distance between them and a posterior lateral eye.

Legs clothed with blackish hairs, those of the anterior tibiae denser than elsewhere but not very long; fourth femur thicker than the first, the first tibia not much thickened, its width distinctly less than the distance between the posterior lateral eyes. Metatarsus I always decidedly and generally very considerably shorter than the tibia; I and II with a single outer and inner row of stout spines below; III with two inferior rows, besides an outer and inner row of 2—3 spines each; IV with 1 subbasal and 1—2 distal spines below, the apical comb rarely composed of 3 setae and then distinct but generally reduced to 2 slightly separated spines and then not forming a distinct comb. Tibia I with an outer and inner row of 4—6 stout spines each below, and in addition an inner row or band of 3 (sometimes 4—6) and an outer of 4—7 (sometimes only 3) spines on the sides; II as in I, but the outside usually with fewer spines above the inferior row; III with several rows of spines, including a row of 1—3 on the innerside; IV with 0—2 spines below. Patellae unspined (in one specimen with an external spine on one leg of the first pair). Femora I—III with a medio-dorsal row of several spines and an outer distal row of 2 spines (often absent in III), I also with an inner distal group of 3 spines; II and III with 1—2 inner distal spines; IV sometimes with 1—2 spines.

Chelicera with 3 small superior teeth and a small but distinct apical inferior tooth on inner margin.

Length of cephalothorax + abdomen up to 14 mm.

b) 2 examples from Lüderitz Bay (Angra Pequena), Great Namaqualand, January 1904.

This very distinct species differs from all the other South African forms in having the apical comb of the fourth metatarsus rudimentary and generally not recognizable as a comb.

### 5. *Ariadna pulchripes* n. sp.

1 ♀ from Rooibank near Walfishbay, Southern Hereroland, May 1905.

Allied to *A. bilineata* and *karrooica* PURC. (Trans. S. Afr. Phil. Soc., Vol. XV, p. 159, 1904).

Colour. Cephalothorax almost black; abdomen black above the lateral line, paler below it, the lung-opercula pale-yellow; femora and tibiae deeply blackened and without yellow stripes in the two anterior pairs of legs, less deeply blackened and with the usual yellowish stripes in the two posterior pairs; patellae pale-yellow, lightly infuscated on the sides, the two anterior pairs more deeply blackened on the inner side; metatarsi I and II blackened above, paler below, III and IV pale-yellowish, only slightly infuscated and much lighter than the tibiae; anterior tarsi infuscated, posterior tarsi pale-yellowish; anterior coxae more infuscated than the posterior ones, all much paler than the blackened sternum. Whole body covered with black hairs.

Cephalothorax as long as the tibia and  $\frac{2}{3}$  of the metatarsus of first leg, considerably narrowed in front, its width just behind the ocular area scarcely  $\frac{2}{3}$  of the length of the first tibia. Ocular area tolerably wide, the distance between the posterior lateral eyes and the medians only very slightly less than the united width of the latter.

Legs clothed with intensely black hairs, the hairs on the first leg numerous and fairly long. Tibia of first leg wide, wider than the distance between the posterior lateral eyes. Metatarsus I a little shorter than the tibia; II with an inner basal spine above the inner inferior row; III with 3 superior spines on inner surface, none on outer surface and two rows on the under surface, the outer inferior row consisting of an apical spine and a group of 3—5 spines close together but remote from the apical spine; IV with 4 inferior spines and with 6—7 setae in the apical comb. Tibia I with 5—6 spines in each inferior row, the outer surface besides with 5 and the inner surface with 3—4 other spines; II with 3 spines on each side above the inferior rows; III with an inferior row of 3 and a superior inner row of 2 spines; IV unspined. Patellae not spined. Femora II and III with no outer distal spine, IV with an inner distal spine and several stout upper setiform spines near base, the femur otherwise as in *A. bilineata* PURC.

Chelicera with 3 small superior teeth and a minute apical inferior tooth.

Length of cephalothorax + abdomen 12 mm.

### 6. *Ariadna similis* n. sp.

1 ♀ from Mafeking, Bechuanaland, February 1905.

Closely allied to *A. bilineata* PURC. but larger, coloured as in the darker specimens of *bilineata*, except that the superior yellow stripes on the posterior tibia are coalesced to a broad band and the sternum is infuscated.

Cephalothorax as long as the tibia together with over  $\frac{1}{2}$  but less than  $\frac{2}{3}$  (about  $\frac{7}{12}$ ) of the metatarsus of first leg, its width just behind the eyes about  $\frac{2}{3}$  of the length of the first tibia, the latter scarcely wider than the distance between the posterior lateral eyes.

Legs. Metatarsus II with an inner basal spine above the inner inferior row, III with 2 inferior rows of spines and 1 anterior upper spine (but none on posterior surface). Tibia I with 5—6 spines in each inferior row, III with a single (inferior) row of spines only.

Length of cephalothorax + abdomen  $11\frac{1}{2}$  mm.

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Dr. SCHULTZE also collected 4 very young examples of *Ariadna* from Steinkopf, Little Namaqualand, and on the road between Khakhea and Kang, Kalahari, Bechuanaland Protectorate.

Synopsis of the South African species (adult ♀♀) of *Ariadna*.

- a. Metatarsi I and II with 2—3 rows of spines on each side. Head very broad in front, its width behind the ocular area almost equalling the length of the first tibia. Chelicera with the apical tooth of inferior margin of inner surface strong and well-developed and as large as the 3 strong teeth of superior margin. Cape Peninsula . . . . . *A. dentigera* PURC.
- b. Metatarsi I and II with only 1 row of spines on each side below (sometimes with 1—2 superior spines in addition). Head narrowed in front, its width just behind the eyes rarely as much as  $\frac{5}{6}$ , generally  $\frac{4}{5}$  or less of the length of the first tibia. Chelicera with the inferior tooth small or obsolete, rarely as large as the superior tooth.
  - a<sup>1</sup>. Cephalothorax as long as the tibia and  $\frac{1}{3}$ — $\frac{1}{2}$  of the metatarsus of first leg. Little Namaqualand *A. hottentotta* n. sp.
  - b<sup>1</sup>. Cephalothorax distinctly longer than the tibia and  $\frac{1}{2}$  the metatarsus of first leg.
    - a<sup>2</sup>. Metatarsus of first leg subequal to the tibia.
      - a<sup>3</sup>. Tibia I with 5—8 spines above the inferior row on each side. Anterior patella not spined. Caledon and Namaqualand Divs. (Cape Colony) . . . . . *A. lightfooti* PURC.
      - b<sup>3</sup>. Tibia I with 3—4 spines on each side above the inferior row. Anterior patella spined.
        - a<sup>4</sup>. Width of both median eyes together much greater than their distance from posterior lateral eyes. Little Namaqualand . . . . . *A. jubata* PURC.
        - b<sup>4</sup>. Width of both median eyes together subequal to their distance from posterior lateral eyes. Kentani District . . . . . *A. kolbei* PURC.
    - b<sup>2</sup>. Metatarsus of first leg distinctly shorter than the tibia.
      - a<sup>5</sup>. Metatarsus IV with the apical comb generally rudimentary and reduced to 2 spines, rarely composed of 3 setae. Great Namaqualand . . . . . *A. insularis* n. sp.
      - b<sup>5</sup>. Metatarsus IV with well-developed apical comb.
        - a<sup>6</sup>. Legs short, the length of the first metatarsus being subequal to the width of the head just behind the eyes, and the fourth femur only about  $2\frac{1}{2}$  times as long above as high. Colour yellow. Hanover . . . . . *A. scabripes* PURC.
        - b<sup>6</sup>. Legs longer.
          - a<sup>7</sup>. Tibia I with 5—6 superior spines on outside.
            - a<sup>8</sup>. Patella I spined internally. Hanover and Port Elizabeth . . . *A. karrooica* PURC.
            - b<sup>8</sup>. Patella I not spined. Hereroland . . . . . *A. pulchripes* n. sp.
          - b<sup>7</sup>. Tibia I with only 3—4 superior spines on each side. Patella not spined internally.
            - a<sup>9</sup>. Patella I not spined at all.
              - a<sup>10</sup>. Metatarsus IV with 1—2 spines below. Tibia IV unspined.
                - a<sup>11</sup>. Carapace as long as the tibia and  $\frac{2}{3}$  or less of the metatarsus of first leg.
                  - a<sup>12</sup>. Cephalothorax as long as the tibia and  $\frac{2}{3}$  of the metatarsus of first leg, its width just behind the eyes about  $\frac{3}{4}$  of the length of the first tibia. Cape, Caledon, Stellenbosch, Paarl and Malmesbury Divs. *A. bilineata* PURC.
                  - b<sup>12</sup>. Cephalothorax less than the tibia and  $\frac{2}{3}$  of the metatarsus of first leg in length, its width behind the eyes only  $\frac{2}{3}$  of the length of the first tibia. Bechuanaland . . . . . *A. similis* n. sp.



- b<sup>11</sup>. Carapace only a little shorter than the tibia and metatarsus of first leg.  
 Cape Peninsula . . . . . *A. capensis* PURC.  
 b<sup>10</sup>. Metatarsus IV with 4 stout spines below. Tibia IV spined below. Uitenhage  
 Div. . . . . *A. segestrioides* PURC.  
 b<sup>9</sup>. Patella I spined externally. Mashonaland and Bechuanaland . *A. umtalica* PURC.

Genus *Segestria* LATR.

1 mutilated example from Kamaggas, Little Namaqualand, July 1904.

Fam. **Caponiidae.**

Genus *Caponia* E. SIM.

*Caponia capensis* PURC.

1904, PURCELL, Trans. S. Afr. Phil. Soc., Vol. XV, p. 168, pl. 11, fig. 33 (♂♂ and ♀♀ from Cape Peninsula and St. Helena Bay, Cape Colony).

Specimens. a) 5 ♂♂ and 15 ♀♀ and juv. from Kamaggas, Little Namaqualand, July 1904.  
 b) 1 ♂ and 4 ♀♀ from Steinkopf, Little Namaqualand, July and August 1904.

Genus *Diploglena* PURC.

1 example from Port Nolloth, Little Namaqualand, April 1905. Too young for description.

Fam. **Prodidomidae.**

Genus *Prodidomus* HENTZ.

*Prodidomus purpurascens* PURC.

1904, PURCELL, Trans. S. Afr. Phil. Soc., Vol. XV, p. 171, pl. 11, fig. 40 (♀ from Cape Peninsula).

Dr. SCHULTZE obtained a female of this species from Steinkopf, Little Namaqualand, in July 1904.

Fam. **Drassidae.**

Genus *Theuma* E. SIM.

1. *Theuma capensis* PURC.

1907, PURCELL, Ann. Mag. Nat. Hist., Ser. 7, Vol. XX, p. 299 (♀♀ and ♂♂ from Cape, Ceres, Tulbagh and Caledon Divisions, Cape Colony).

Specimens. a) 1 ♀ from between Khakhea and Kang in the Kalahari, Bechuanaland Protectorate.  
 b) 1 ♂ from between Severelela and Kooa in the Kalahari, Bechuanaland Protectorate, October or November 1904.

This specimen differs from the typical form only in having the posterior lateral eyes not quite so distinctly further from the posterior medians than from the anterior laterals, as is usually the case as in the examples from Cape Colony.

2. *Theuma pusilla* n. sp.

Pl. XI, Fig. 11.

Specimens. a) 1 ♀ (type) from Kamaggas, Little Namaqualand, July or August 1904.

Very near *T. capensis* PURC. (Ann. Mag. Nat. Hist., Ser. 7, Vol. XX, p. 299, 1907), but differing as follows:

Colour darker, pale-testaceous; a double median line on anterior part of head just behind the eyes, the groove on each side of the head, and some radiating lines on the thorax lightly infuscated; underside of abdomen with a pair of longitudinal dark stripes; silky hairs on body and legs pale, but the tuft at the end of each tarsus black; the spines mostly darker or black.

Chelicera with 4 or 5 superior and 3 inferior teeth on the inner margin.

Legs. Metatarsus I with 1 subbasal spine on outside only, but without other spines, the 2 scopular bands broad and well-developed on each side and below, leaving only a very narrow strip along the middle of the underside free. Tibia I with 3—4 outer and 2—3 inner spines below, the distal spine of each row remote from the apex, each side with a narrow but distinct scopular band below alongside the row of spines, the scopulae reaching almost to the base.

Vulva with the triangular fovea suddenly circularly enlarged at anterior end (Pl. XI, Fig. 11).

Length of cephalothorax + abdomen  $5\frac{1}{3}$  mm.

b) 1 ♀ from Kubub, Great Namaqualand, March or April 1904. Colour pale-yellowish, as in *T. capensis* PURC. Metatarsus I with 2 inner and 2 outer subbasal spines below. Tibia I with 5 inner and 6—7 outer spines below, several of these on each side being much smaller than the others and out of line with them.

In this species the posterior median eyes are obliquely oval and are the largest of the eight, being slightly larger than the anterior lateral eyes. The numerous cylindrical but pointed setae (resembling slender spines), which are present, particularly on the uppersides of the 3 distal segments of the anterior pair of legs, are longer than in *T. capensis* PURC.

### 3. *Theuma velox* n. sp.

Pl. XI, Fig. 12.

Specimens. 3 ♀♀ from Kubub, Great Namaqualand, March and April 1904.

Very close to *T. pusilla* n. sp. and *T. capensis* PURC.

Colour as in *T. capensis* PURC.

Anterior row of eyes scarcely or only slightly procurved, the medians a little smaller than the laterals; posterior row of eyes wide, only slightly recurved, the medians not small, obliquely oval, subequal to the lateral eyes of both rows, slightly less than a diameter apart and about  $1\frac{1}{2}$  diameters from the posterior lateral eyes, the latter eyes a little nearer to the anterior laterals than to the posterior medians but not as distinctly so as is usual in the species of this section.

Chelicera with 1 smaller and 3 larger superior teeth and 3 smaller inferior teeth.

Legs. Metatarsus I unspined, or with 2 outer subbasal spines below, densely scopulate, except along a very narrow strip along the middle of the underside. Tibia I with 4—5 inner and 3 outer spines below, the distal spine of each row always remote from the apex, the lower edge of the innerside with a narrow but distinct scopula in distal half of segment along the row of spines, the outer scopula obsolete or present and very narrow.

Vulva very like that of *T. pusilla* n. sp., except that the passage connecting the triangular fovea with its anterior enlargement is much wider, as in Pl. XI, Fig. 12.

Inferior spinners short, the length of the basal segment subequal to or even a little less than the width of the ocular area.

Length of cephalothorax + abdomen  $7\frac{1}{2}$  mm.

#### 4. *Theuma fusca* PURC.

1907, PURCELL, Ann. Mag. Nat. Hist., Ser. 7, Vol. XX, p. 300 (♀♀ and ♂♂ from Robertson and Cape Divisions, Cape Colony).

Specimens. 1 ♂, 4 ♀♀ and 1 juv. from Southern Hereroland (♂ and juv. from Otjimbingwe), September and October 1903.

The females agree in their characters with the Cape Colony form, excepting that the posterior median eyes are slightly closer together than is usually the case in the types. The male differs slightly in the position of the free portion of the stylus, which arises opposite to the origin of the coiled tube, whereas in the specimens from Cape Colony the free portion of the stylus arises on the same side as the origin of the coiled tube. As the females do not otherwise appear to differ in any essential point, I do not venture to make a distinct species on this character alone, and, moreover, I have noticed exactly the same variation in the position of the free portion of the stylus among the males of *T. capensis* PURC. from the Cape Peninsula.

#### 5. *Theuma schultzei* n. sp.

Specimens. a) 2 ♀♀ and 4 juv. from Steinkopf, Little Namaqualand, July and August 1904.

Very similar to *T. fusca* PURC. (Ann. Mag. Nat. Hist., Ser. 7, Vol. XX, p. 300, 1907), but differing in the following characters:

Posterior row of eyes wider, with the eyes further apart, the medians almost or quite 2 diameters from the laterals and distinctly much further from them than from the anterior lateral eyes. (The posterior median eyes small, distinctly smaller than the anterior lateral eyes.)

Legs. Metatarsus I with 2 subbasal spines only (1 on each side below). Tibia I with 4 pairs of inferior spines (including an apical pair) but with none on the lateral surfaces.

Inferior spinners (in adult) considerably smaller, their length scarcely or not at all exceeding the width of the posterior row of eyes.

Length of cephalothorax + abdomen 8 mm.

b) 19 juv. from Kammaggas, Little Namaqualand, July and August 1904.

c) 3 subadult specimens from Lüderitz Bay, Great Namaqualand, January and February 1904, probably belonging to this species.

It is noticeable that in the immature examples the spinners are longer relatively to the width of the ocular area than in the adult.

#### 6. *Theuma maculata* PURC.

1907, PURCELL, Ann. Mag. Nat. Hist., Ser. 7, Vol. XX, p. 302 (♀♀ and ♂ from Beaufort West, Cape Colony).

Specimens. a) 1 ♀, 2 ♂♂ and 22 juv. from Kamaggas, Little Namaqualand, July and August 1904.

b) 24 juv. from Steinkopf, Little Namaqualand, July and August 1904.

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DR. SCHULTZE also collected 3 young specimens (no. 525) of *Theuma* from Kubub, Great Namaqualand, and 1 from Steinkopf, Little Namaqualand, which I have not been able to determine.



Genus *Drassodes* WESTR.*Drassodes sesquidentatus* n. sp.

Pl. XI, Figs. 13 and 14.

Specimens. a) 15 ♀♀, 18 ♂♂ and 3 juv. from Kamaggas, Little Namaqualand, July and August 1904.

Very near *D. lophognathus* PURC. (Ann. Mag. Nat. Hist., Ser. 7, Vol. XX, p. 305, 1907) but differing principally as follows:

♀♀. Colour of abdomen more uniform above, especially anteriorly, the posterior stripes less distinct.

Vulva-plate larger, shaped as in Pl. XI, Fig. 13, the distance from the anterior edge of the horse-shoe rim to the hind edge of the vulva generally as long as the coxae of the pedipalps; the median T-shaped keel brown.

♂♂. Abdomen pigmented above, as in *D. lophognathus* PURC.

Pedipalps with the tibia a trifle longer and broader and the teeth on the innerside of the large sigmoid process of the palpal organ differently shaped (Pl. XI, Fig. 14), the proximal tooth being minute and stumpy and placed at some little distance from the much longer distal tooth.

Length of cephalothorax + abdomen, ♀♀ 5—7 $\frac{1}{4}$  mm, ♂♂ 5 $\frac{1}{2}$ —6 $\frac{1}{2}$  mm.

b) 7 ♀♀, 2 ♂♂ and 3 juv. from Steinkopf, Little Namaqualand, July and August 1904. Median keel of vulva sometimes pale-yellowish.

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Dr. SCHULTZE also collected 4 specimens of *Drassodes* from Kubub, Great Namaqualand, and 1 from Rooibank, Southern Hereroland, which were, however, too immature for description.

Genus *Scotophaeus* E. SIM.*Scotophaeus relegatus* PURC.

1907, PURCELL, Ann. Mag. Nat. Hist., Ser. 7, Vol. XX, p. 312, pl. 13, figs. 18 and 18a (♂♂ from Cape Peninsula and Table Bay).

Specimens. 1 ♂, 9 ♀♀ and 1 juv. from Lüderitz Bay (Angra Pequena), Great Namaqualand, February 1904.

Genus *Xerophaeus* PURC.

## Section I

(see Ann. Mag. Nat. Hist., Ser. 7, Vol. XX, p. 314, 1907).

1. *Xerophaeus longispina* n. sp.

Pl. XI, Figs. 15 and 16.

Specimens. a) 134 ♀♀, 1 ♂ and several young from Kamaggas, Little Namaqualand, July and August 1904.

Closely allied to *X. capensis* PURC. (Ann. Mag. Nat. Hist., Ser. 7, Vol. XX, p. 314, 1907).

♀♀. Colour pale yellowish-testaceous, the head and chelicera generally coppery-red, abdomen fulvous.

Cephalothorax much narrowed in front. Ocular area rather narrow; anterior row of eyes strongly procurved, the median eyes large, almost touching the laterals; posterior row less strongly procurved, the oval medians rather large, about  $\frac{1}{3}$  to nearly  $\frac{1}{2}$  a long diameter apart and a long diameter or slightly more from the smaller lateral eyes.

Legs. Metatarsus I with 1—2 basal spines. Tibia I with 1—3 spines in the inferior row and a narrow scopula on each side in the distal half.

Chelicera with 3 superior but no inferior teeth.

Vulva as in Pl. XI, Fig. 15, the central portion smooth, grooved along the median line, the lateral portions finely and densely granular; anterior depression smooth, with sharp anterior edge, which is generally some little distance from the brown oval bodies, as in the figure, but sometimes quite close to them.

♂. Pedipalps and palpal organ almost exactly as in *X. capensis* PURC., differing solely in the shape of the outer tibial spine, which is longer, reaching almost to the apex of the palpal organ, and is quite straight at the apex and simply pointed (Pl. XI, Fig. 16).

Length of cephalothorax + abdomen, ♀♀ 8—11½ mm, ♂ 9 mm.

b) 28 ♀♀ and several juv. from Steinkopf, Little Namaqualand, July and August 1904.

## 2. *Xerophacus hottentottus* n. sp.

Pl. XI, Fig. 17.

3 ♀♀ from Steinkopf, Little Namaqualand, July and August 1904.

Colour as in *X. longispina* n. sp.

Ocular area rather wide, the anterior median eyes moderately large, ½—¾ of a diameter apart, and not touching the smaller laterals; posterior median eyes moderately large, about half a long diameter or more apart and little more than a diameter from the small lateral eyes; area formed by the 4 median eyes distinctly broader in front than behind.

Chelicera with 1 large and 2 small superior teeth but with none on inferior margin.

Legs. Metatarsus I with 2 basal spines. Tibia I with 2—3 spines in the inferior row, the distal half with a narrow weak scopular band on innerside.

Vulva as in Pl. XI, Fig. 17, the central area of the ovate plate strongly convexly raised, the anterior edge of the raised portion falling suddenly perpendicularly and provided with a cavity just posterior to the edge; posterior part of the raised portion with a pair of black deep pits from which a pair of shallow black grooves converge posteriorly to the edge of the genital cleft, the grooves separated by a narrow keel; sides of the plate densely granular.

Length of cephalothorax + abdomen 8¼—10½ mm.

## 3. *Xerophaeus aridus* PURC.

Pl. XI, Fig. 18.

1907, PURCELL, Ann. Mag. Nat. Hist., Ser. 7, Vol. XX, p. 319, pl. 14, fig. 26 (♀ from Great Bushmanland).

Specimens. a) 4 ♀♀, 1 ♂ and 2 juv. from Kubub, Great Namaqualand, March and April 1904.

♀♀. Tibia I with 2—3 spines in the inferior row. Posterior row of eyes not so strongly procurved as in the type, a line joining the posterior margins of the lateral eyes cutting off about ⅓ at least of the median eyes. Chelicera with a minute inferior tooth, which is rarely absent.

♂ (not previously described). Both rows of eyes even less procurved than in the females.

Chelicera without inferior tooth.

Tibia I with 3 spines in the inferior row.

Pedipalps with the tibia about as long as the patella, the outer spine of tibia short, arising from the lower outer edge, slenderer distally and curving upwards and inwards; tarsus quite small; palpal organ small, as in Pl. XI, Fig. 18, terminating distally in a short spine.

Length ♀♀ 9—12 mm, ♂ 6¾ mm.

b) 1 ♂ from Cape Cross, Southern Hereroland, varying slightly from the ♂ from Kubub; tibia I with 3 inner and 1—2 outer spines below; tibia of pedipalp with the outer spur stouter and straighter along the upper edge. Length  $8\frac{1}{2}$  mm.

## Section 2

(see Ann. Mag. Nat. Hist., Ser. 7, Vol. XX, p. 322, 1907).

### 4. *Xerophaeus ahenus* n. sp.

Pl. XI, Fig. 19.

1 ♀ from Steinkopf, Little Namaqualand, July 1904.

Colour. Cephalothorax coppery-red, legs testaceous, abdomen pale fulvous-yellow, chelicera and sternum red.

Cephalothorax longish ( $4\frac{2}{3}$  by  $3\frac{1}{6}$  mm). Ocular area narrow; anterior median eyes large touching the laterals, their lower margins about on a level with the centres of the lateral eyes, which are at least a diameter from the anterior margin of the cephalothorax; second row of eyes also strongly procurved, the medians obliquely oval, larger than the laterals, about  $\frac{1}{3}$  of a long diameter apart and about or nearly a long diameter from the laterals; area formed by the 4 median eyes distinctly wider in front than behind.

Chelicera with 1 large and 2 small superior teeth and 1 small inferior tooth.

Legs. Metatarsus I with 2 basal spines. Tibia I with an inferior row of 2 spines, but with no scopula.

Sternum and coxae of pedipalps somewhat longer and narrower than in the more typical forms of the genus.

Vulva as in Pl. XI, Fig. 19, with a short, median, flexible, tongue-like appendage lying some little distance in front in a cavity, from the hind edge of which a narrow flat median keel extends backwards to the edge of the genital cleft; on each side of the keel are 2 dark bodies below the cuticula.

Length of cephalothorax + abdomen  $10\frac{1}{2}$  mm.

### Genus *Melanophora* C. KOCH.

#### 1. *Melanophora aculeata* n. sp.

Pl. XI, Fig. 20.

Specimens. a) 4 ♀♀, 2 ♂♂ and 3 juv. from Possession Island, off the coast of Great Namaqualand, May 1903.

Very near *M. invida* PURC. (Ann. Mag. Nat. Hist., Ser. 7, Vol. XX, p. 328, 1907), but differing as follows:

♀♀. Colour of cephalothorax dark-brown, veined with black; abdomen black, covered with black hairs (sometimes yellowish and infuscated), pallid below; legs testaceous; sternum and mouth-parts testaceous to brownish.

Posterior median eyes distinctly nearer to the lateral eyes than to one another.

Vulva as in Pl. XI, Fig. 20, being relatively smaller and especially narrower than in *M. invida* PURC and not by any means filling up the area between the lung-opercula, but otherwise presenting almost exactly the appearance of the vulva of the latter species.

♂♂. Pedipalps and palpal organ as in the ♂ of *M. fuliginea* PURC. (Ann. Mag. Nat. Hist., Ser. 7, Vol. XX, p. 327, pl. 15, figs. 45 and 46, 1907).



Other characters as in the female.

Length ♀♀ 6–7½ mm, ♂♂ 5¼–5¾ mm.

b) 1 ♂ and 15 juv. from Port Nolloth, Namaqualand Division, Cape Colony, April 1905. Colour blacker, as in *M. fuliginea* PURC. Apparently specifically identical with the specimens from Possession Island, but in the absence of the female it is not possible to be certain.

Except for the characters of the eyes, the male of this species appears to be indistinguishable from that of *M. fuliginea* PURC.

## 2. *Melanophora flavitarsis* n. sp.

Pl. XI, Fig. 21.

Specimens. 4 ♀♀ and 5 juv. from Kamaggas, Little Namaqualand, July and August 1904.

Colour black; sides of the femora of the first pair of legs (except quite at apex) and the tarsi of all the legs and pedipalps pale-yellowish, the base of the coxae of the legs, the underside of the trochanters and pedipalps and the apex and base of the coxae of the pedipalps yellowish, the metatarsi often more or less yellowish but sometimes quite black; abdomen more or less pale below, clothed with olivaceous hairs; sternum darker than the coxae.

Anterior row of eyes strongly procurved, the median eyes slightly smaller than the laterals and close to them; posterior row of eyes straight, not wider than the anterior row, the medians smaller than the laterals and nearer to them than to one another.

Chelicera with 4–5 superior teeth but no distinct inferior one.

Legs. Anterior tarsi and metatarsi scopulate below, the metatarsus and tibia of the first pair unspined.

Vulva as in Pl. XI, Fig. 21.

Length ♀♀ 4½–7⅓ mm.

## 3. *Melanophora pulchripes* n. sp.

Pl. XI, Figs. 22 and 23.

Specimens. 1 ♂ and 1 ♀ from Steinkopf, Little Namaqualand, July 1904.

♂ (type). Colour. Cephalothorax testaceous, the margins narrowly blackened; abdomen deep black, slightly iridescent, the underside slightly paler in the middle, the lung-opercula and the area between them pale-yellowish; sternum, coxae of pedipalps and the chelicera testaceous; legs pale-ochraceous, the 2 anterior pairs much blackened on the femora, patellae and tibiae, third and fourth pair with a black distal patch on each side of the femora, fourth pair also with a distal black spot on each side of the patella and a long black patch on each side of the tibia extending over more than the distal half of the segment; tibiae and metatarsi pale-ochraceous.

Anterior row of eyes strongly procurved, the laterals larger than the medians; posterior row straight, distinctly wider than the anterior row, the eyes equidistant, the laterals a trifle larger than the medians.

Chelicera with 1 large and 3 small teeth on superior margin but none on inferior margin.

Legs. Metatarsus I with a row of 2 spines below but without scopula; tibia I unspined.

Pedipalps. Femur sinuated on the outside at distal end, the sinus with a short stout spine at its proximal end; patella a little longer than the tibia; tibia short, without the usual outer spur at apex but with a short apical spine above; palpal organ as in Pl. XI, Fig. 22, the distal end with a small horizontal

plate projecting forwards and outwards and provided on the medial side with a small tooth directed downwards and a slender spine projecting forwards and outwards.

♀. Abdomen paler, the legs much less blackened, the posterior pairs almost entirely pale-ochraceous. Anterior pair of legs spined as in the male.

Chelicera with a distinct inferior tooth in addition to the superior ones.

Vulva as in Pl. XI, Fig. 23.

Length ♂  $3\frac{1}{4}$  mm, ♀ 5 mm.

This little species is prettily coloured and is well characterised by the structure of the femur and tibia of the pedipalps of the male. In the ♀ specimen the anterior row of eyes are abortive.

#### 4. *Melanophora procurva* n. sp.

Pl. XI, Figs. 24 and 25.

Specimens. 2 ♀♀ and 2 ♂♂ from Kamaggas, Little Namaqualand, July and August 1904.

Colour. Cephalothorax pale-testaceous; legs ochraceous or pale-testaceous; abdomen pale-yellowish, more or less infuscated above, pallid below; sternum pale-testaceous.

Anterior row of eyes strongly procurved, the medians smaller than the laterals and close to them, the laterals rather large and quite close to the anterior margin of the cephalothorax; posterior row of eyes slightly wider than the anterior row, the anterior margins in a slightly, the posterior margins in a strongly procurved line, the median eyes very large, obliquely oval and contiguous to one another but slightly separated from the smaller lateral eyes.

Chelicera with 1 large and 3—4 small superior teeth and a couple of minute inferior teeth.

Legs. Metatarsus I with several outer and inner spines below in the ♀, the ♂ with fewer spines; tibia I unspined.

Vulva of ♀ as in Pl. XI, Fig. 24.

Pedipalps of ♂ with the patella a little longer than the tibia (exclusive of the spur); the latter with a simple, stout, lateral, apical spur, which is slightly up-turned and is shorter than the rest of the segment; tarsus slightly shorter than the patella and tibia together with the process; palpal organ as in Pl. XI, Fig. 25.

Length ♀♀  $6-6\frac{1}{2}$  mm, ♂♂  $4\frac{3}{4}-6\frac{1}{4}$  mm.

#### 5. *Melanophora corrugata* PURC.

1907, PURCELL, Ann. Mag. Nat. Hist., Ser. 7, Vol. XX, p. 332, pl. 15, figs. 63 and 64 (♀♀ and ♂♂ from Hanover and Kuruman, Cape Colony).

Specimens. a) 1 ♂ and 6 ♀♀ from Rooibank, Southern Hereroland, May 1905, and 2 ♂♂ and 1 ♀ from "Southern Hereroland", September and October 1903.

Tibia of second leg often with a spine below in the female.

b) 1 ♂ (no. 813) from near Severelela, Kalahari, Bechuanaland Protectorate.

Dr. SCHULTZE also collected 3 other specimens of *Melanophora* from Southern Hereroland, 1 from Kubub in Great Namaqualand, 5 from between Khakhea and Kang, Kalahari, and 1 from Kamaggas in Little Namaqualand, all of them too immature for identification.

Genus *Setaphis* E. SIM.1. *Setaphis bechuanica* n. sp.

Pl. XI, Fig. 26.

Specimens. a) 1 ♀ from between Khakhea and Kang, Kalahari, Bechuanaland Protectorate.

Colour of cephalothorax brown, the margins black, the surface sparsely clothed with prone white hairs, finely reticulated with black towards the sides, especially on the head, a longitudinal median band on the head and a broader stellate area on the thorax without black reticulation; chelicera brown, with infuscate stripes; femora, patellae and tibiae of legs (except tibia III) broadly blackened but otherwise yellowish, fourth metatarsus also infuscated, the other metatarsi, the tarsi and tibia III, as well as the coxae and trochanters, pale-yellowish; abdomen white on the anterior  $\frac{3}{5}$  of the upper surface and on the anterior  $\frac{3}{4}$  at least of the lower surface, black posteriorly, the upper surface also with a median black band which divides the white part and expands laterally on the vertical anterior surface, the arms being continued backwards on each side over  $\frac{2}{5}$  of the length of the abdomen and terminating in a triangular dilation, the whole forming an anchor-shaped design; the white area on each side of the median dorsal band of abdomen forming a large longitudinal oval patch, which is connected posteriorly with the white ventral area; hind end of abdomen with a pair of small angular white spots above near the median line.

Cephalothorax broad in front. Anterior row of eyes procurved, the lateral eyes large, much larger than the medians and close to them, and almost their own length from the anterior margin; posterior row of eyes slightly procurved (a trifle wider than the anterior row on one side of the head), the lateral eyes larger than the medians but smaller than the anterior laterals, the medians small, elongate, much nearer to the laterals than to each other.

Chelicera robust, the inner margin with 3 strong superior teeth, of which the middle one is a little larger than the other two; no inferior teeth.

Legs. First pair of legs without spines, the tarsus and metatarsus scopulate; second pair with 1 inner and 2 strong outer spines on the metatarsus below.

Vulva as in Pl. XI, Fig. 26, the fovea longitudinal and very close to the 2 posterior spherical brown bodies.

Length of cephalothorax + abdomen  $5\frac{1}{4}$  mm.

b) 1 ♀ from Bonche in the Kalahari, Bechuanaland Protectorate, January 1905. Legs and cephalothorax more extensively blackened than in the type. Posterior row of eyes straight. Metatarsus II with 2 outer but no inner spines below.

Only one other South African species of this genus has been described.

2. *Setaphis anchoralis* n. sp.

Pl. XI, Fig. 27.

1 ♀ from Lüderitz Bay (Angra Pequena), Great Namaqualand, January 1904.

Colour. Cephalothorax brown, sparsely clothed with black hairs, densely covered with fine infuscated dots, the head with a fine, double, median, black stripe; the femora of all the legs, the patellae and trochanters of the 2 anterior pairs and the tibia of the first pair more or less deeply infuscated, the remaining segments pale-yellow; chelicera reddish-brown, with infuscate lines; sternum ochraceous in the middle, infuscated at the sides; abdomen coloured as in *S. bechuanica* n. sp., except that the 2 posterior white spots are absent.



Cephalothorax broad in front, the cephalic region considerably elevated. Ocular area remote from anterior margin, the clypeus being more than twice the width of an anterior lateral eye; anterior row of eyes procurved, the lateral eyes rather small but larger than the medians and quite close to them; posterior row of eyes distinctly a little wider than the anterior row, slightly procurved, the lateral eyes slightly smaller than the anterior laterals, the medians very small, subrotund, much nearer to the laterals than to one another.

Chelicera robust, with 1 large and 2 smaller teeth on superior margin but no inferior tooth; the claw very stout and strong.

Legs. First pair not spined, the tarsus and metatarsus scopulate below, second pair with an outer row of 2 long spines below; metatarsus III with a dense distal tuft of black hairs, IV with a small tuft at apex below.

Abdomen rather broad posteriorly, with deep median groove in front, the anterior end appearing emarginate.

Vulva as in Pl. XI, Fig. 27, very like that of *S. bechuanica* n. sp.; the fovea longitudinal and close to the 2 spherical brown bodies.

Length of cephalothorax + abdomen 6 mm.

This species is very abnormal and may perhaps form a different genus.

Dr. SCHULTZE also found an immature specimen of a species of *Setaphis* at Keetmanshoop, Great Namaqualand, with 6 white spots on the abdomen, like *S. sexmaculata* E. SIM., but too young to describe.

#### Genus *Callilepis* WESTR.

##### 1. *Callilepis frenata* n. sp.

Pl. XI, Fig. 28.

Specimens. a) 3 ♀♀ from Kamaggas, Little Namaqualand, July and August 1904.

Colour. Cephalothorax brown, with black margins, the surface with infusate reticulation and lines, the head with a broad oblique black band on each side converging behind to form a V, the posterior part of the band often paler in the middle; abdomen infuscated, sometimes paler below; legs pale-yellowish, more or less faintly infuscated, the ends of the segments often finely blackened, the distal segments reddish.

Both rows of eyes, seen from above, parallel, with the eyes large; anterior row, seen from the front, strongly procurved, the lateral eyes very close to the medians, slightly smaller than these and slightly more than a diameter from the anterior margin of the cephalothorax; posterior row of eyes straight, scarcely wider than the anterior row, the median eyes larger than the lateral eyes and nearer to each other than to the laterals.

Keel on inner margin of chelicera large, deeply sinuated, the inner angle strongly prominent and forming a large triangular tooth.

Legs. Femur I with internal spine and 2 long dorsal spiniform setae; tibia I with apical and often also a pair of mesial spines below; metatarsus I with 1 inner and 2 outer spines below; tarsi and 3 anterior pairs of metatarsi scopulate below, the metatarsal scopulae not reaching base, tarsi densely fasciculate at apex.

Vulva as in Pl. XI, Fig. 28.

Inferior spinners short, each with 4 large fusules and a small inferior tooth at apex; median spinner raised on a tuberculate base.

Length of cephalothorax + abdomen  $6\frac{1}{2}$ —7 mm.

b) 1 ♀ from Steinkopf, Little Namaqualand, July 1904. Lighter in colour than the types.

## 2. *Callilepis lineatipes* n. sp.

Pl. XI, Fig. 29.

1 ♀ from between Kang and Khakhea, Kalahari, Bechuanaland Protectorate, December 1904.

Colour brown; densely reticulated and spotted with infusate lines and dots, the head bordered on each side posteriorly by a black band; the surface sparsely clothed with fine white and black hairs; abdomen black, paler below, the hairs fine and dark; legs black, with pale-yellowish longitudinal stripes and bands, the tarsi pale-yellowish; sternum yellowish, the margins narrowly blackened, the surface faintly infuscated; coxae also yellowish, with faint infuscation.

Cephalothorax much narrowed in front and low. Anterior row of eyes strongly procurved, the lateral eyes rather large, distant almost a diameter from the anterior margin, much larger than the small median eyes and placed quite close to them; posterior row of eyes considerably wider than the anterior row and slightly recurved, the median eyes small, oblique, a little nearer to each other than to the lateral eyes, the latter a little larger than the medians but smaller than the anterior laterals.

Legs short and robust, only the tarsi slender, the anterior pairs scopulate below on the tarsi and metatarsi; metatarsi short and robust, I with a stout spine near base; tibia I stout, unspined.

Inferior spinners with only 2 large fusules at apex.

Vulva as in Pl. XI, Fig. 29.

Length 3 mm.

Dr. SCHULTZE also collected 10 immature specimens of a third species of *Callilepis* from between Kang and Khakhea, Kalahari, which were too young for description.

## Genus *Asemesthes* E. SIM.

### 1. *Asemesthes aureus* n. sp.

Specimens. a) 14 subadult ♂♂ and ♀♀ from Kamaggas, Little Namaqualand, July and August 1904.

Colour of integument brown to dark-brown, the 2 distal segments of the legs pale-yellowish to pale-testaceous, the abdomen also generally paler and then pale-brownish or brownish-yellow, its upper surface and upper portion of its lateral surfaces entirely covered by a dense coat of golden-yellow or somewhat orange-yellow, prone, feathery hairs, intermingled with sparsely scattered long black setae; cephalothorax similarly covered with white hairs, amongst which some yellow ones may be intermingled; legs more sparsely clothed with fine white hairs and numerous coarser black hairs and setae; soft skin on sides of cephalothorax and between the segments of the legs black.

Anterior row of eyes strongly procurved, the small medians close to but not touching the very much larger lateral eyes; posterior row of eyes a little narrower than the anterior row and very strongly recurved, much more so than the anterior row viewed from above, the median eyes smaller than the anterior

medians, nearer to each other than to the very large laterals and placed some distance in front of a line joining the anterior margins of the laterals; area formed by the 4 lateral eyes a trifle broader in front than long.

Legs. Tarsus and distal part of metatarsus of first leg very sparingly scopulate below, both segments with a number of slender spiniform setae below arranged in 2 rows, the metatarsus also with 2 outer and 3 inner inferior spines and the tibia with 3 inferior spines on each side.

Inferior spinners with 3 large apical fusules.

Length of largest ♀  $6\frac{1}{2}$  mm.

b) 2 subadult specimens from Steinkopf, Little Namaqualand, July 1904.

## 2. *Asemesthes decoratus* n. sp.

Pl. XI, Fig. 30.

Specimens. a) 3 ♀♀ from Kamaggas, Little Namaqualand, July and August 1904.

Colour pale-yellow; the cephalothorax slightly more testaceous-yellow, finely bordered with black, and marked with 2 broad splashy black bands (clothed with black hairs), which, starting on the head from the posterior lateral eyes, take an outward and then backward course to the hind margin; ocular area black, except in the middle behind; rest of the surface of cephalothorax clothed with prone yellowish hairs; abdomen with a medio-dorsal and 2 lateral bands formed of black patches more or less confluent longitudinally, the surface in between with scattered black dots, the underside not black-spotted; legs (except on the 2 distal segments) banded and spotted with black above and on the sides, the femora with apical and mesial black band and subbasal black spot above (the mesial band sometimes reduced to a black spot on the fourth femur); sternum bordered with black.

Anterior row of eyes (when viewed from the front) with the hind margins of the eyes in a slightly procurved line, the lateral eyes smaller than usual, being scarcely twice as wide as the medians, which are nearer to the laterals than to one another; posterior row of eyes narrower than the anterior row and lightly recurved, the median eyes smaller than the anterior medians and much nearer to the laterals than to one another, their centres in a line with the anterior margins of the large lateral eyes, the latter subequal to the anterior lateral eyes; area formed by the 4 lateral eyes considerably wider than long.

Anterior legs scopulate below on the tarsi and distal part of metatarsi; metatarsus I with 3 pairs of spines below; tibia I with 2 inner and 3 outer spines below, besides 2 other spines on the inner surface; femur I with an inner spine and 3 dorsal setiform spines.

Inferior spinners with 3 apical fusules.

Vulva as in Pl. XI, Fig. 30.

Length of cephalothorax + abdomen 6 mm.

b) 3 immature specimens from Lüderitz Bay, Great Namaqualand, April 1903, apparently belonging to this species.

## 3. *Asemesthes pallidus* n. sp.

Pl. XI, Fig. 31.

1 ♀ from Kamaggas, Little Namaqualand, July or August 1904.

Colour as in *A. decoratus* n. sp., except that the femora of the legs are only lightly infuscated at the apex, the first pair being not distinctly banded, the bands being represented by faint infuscate marks only.



Anterior row of eyes nearly straight, the centres of the four eyes forming only a slightly procurved line, the upper margins of these eyes (seen from above) in a recurved line, the lateral eyes very large, much larger than the small medians and almost in contact with them; posterior row of eyes narrower than the anterior row and strongly recurved, the curvature only a little greater than that of the anterior row (viewed from above), the median eyes smaller than the anterior medians, nearer to one another than to the laterals and placed just in front of a line joining the anterior margins of the lateral eyes, the latter eyes slightly smaller than the anterior laterals; area formed by the four lateral eyes very slightly wider in front than long.

Legs. Metatarsus 1 with 3 inner and 2 outer spines below, tibia I with 3 inferior pairs of spines, femur I with 1 inner and 3 dorsal spines or spiniform setae, the tibia and distal end of the metatarsus sparingly scopulate.

Vulva as in Pl. XI, Fig. 31.

Inferior spinners with 3 apical fusules.

Length of cephalothorax + abdomen 6 mm.

#### 4. *Asemesthes flavipes* n. sp.

Pl. XI, Fig. 32.

Specimens. a) 3 ♀♀ from Lüderitz Bay, Great Namaqualand, January 1904.

Colour. Cephalothorax pale brownish-yellow, marbled and splashed with black, the ocular area black, except in the middle behind, face broadly blackened from below the eyes downwards and outwards; abdomen much as in *A. decoratus* n. sp.; legs clear-yellow, not banded, some of the segments very finely edged with black at the apex, the coxae above and especially the trochanters blackened; sternum blackened, strongly contrasting with the yellow under surface of the coxae; chelicera blackened distally and on innerside.

Anterior row of eyes with the upper margins in a slightly procurved line (viewed from in front), the lateral eyes scarcely twice as wide as the medians and close to them; posterior row of eyes strongly recurved, the curvature equal to that of the anterior row (viewed from above), the eyes practically equidistant, the medians smaller than the anterior medians, their hind margins just cutting a line joining the anterior margins of the lateral eyes, the latter perhaps a trifle smaller than the anterior laterals; area formed by the four lateral eyes considerably wider than long.

Legs. Metatarsus I with 3 inner and 2 outer spines below, the inner surface sometimes with an upper spine besides; tibia I with 3 inferior pairs of spines, besides 2—4 others on the inner surface; femur I with 1 inner and 3 dorsal spines and spiniform setae.

Inferior spinners with 3 apical fusules.

Vulva as in Pl. XI, Fig. 32.

Length  $5\frac{1}{2}$ —6 mm.

b) 3 young specimens from Prince of Wales Bay, Great Namaqualand, 1903.

#### 5. *Asemesthes lineatus* n. sp.

Pl. XI, Figs. 33 and 34.

Specimens. a) 2 ♀♀, 1 ♂ and 2 juv. from Rooibank, Southern Hereroland, May 1905.

Colour pale-yellow, the markings as in *A. pallidus* n. sp., except that the underside is entirely without black (except sometimes between the lung-opercula) and the legs are less strongly banded, the femora often with scarcely any infuscate markings.

Anterior row of eyes strongly procurved, the laterals about twice as wide as a median eye; posterior row of eyes very slightly narrower than the anterior row, strongly procurved, the curvature subequal to (♂) or greater than (♀) that of the anterior row, the median eyes elongate or subreniform, scarcely further from each other than from the laterals, their hind margins touching or just cutting a line joining the anterior margins of the lateral eyes; area formed by the four lateral eyes a little wider than long.

Legs. Metatarsus I with 3 inner and 2 outer spines below, the inner surface in the ♂ sometimes with an upper spine besides; tibia I and femur I spined as in *A. flavipes* n. sp.

Inferior spinners with 3 large apical fusules.

Vulva of ♀ as in Pl. XI, Fig. 33.

Pedipalps of ♂ rather short, the patella short, the tibia with very short transverse body and a very long and stout superior (not outer) process, which is strongly curved and appressed to the tarsus, the distal part descending on the outside of the latter and ending in a curved point, as in Pl. XI, Fig. 34; tarsus large, deeply sinuate distally on outer margin, the basal part with a peculiar forked brown thickening on its outer surface within the curvature of the tibial process; palpal organ very large, with a slender curved spine ending anteriorly under the tip of the tarsus, and a flattened black spine more proximally (both visible in the figure).

Length ♀  $4\frac{3}{4}$  mm, ♂  $4\frac{1}{4}$  mm.

b) 1 ♂ from Otjimbingwe, Southern Hereroland, September 1903, with the epigastric area of abdomen considerably blackened.

#### 6. *Asemesthes albovittatus* n. sp.

Pl. XI, Fig. 35.

1 ♀ from Lüderitz Bay, Great Namaqualand, April 1903.

Colour. Cephalothorax infuscated with a very broad band of prone snow-white hairs on each side along the margin, the space between the bands only a little broader than one of the bands; abdomen closely covered with black and white hairs forming a pattern, the sides and a broad median band extending from the anterior margin to a short distance from the hind end black, the rest of the upper surface white (in the form of a large U occupying the entire length and breadth of the dorsal surface); underside of abdomen pale-yellowish, more sparsely clothed with fine blackish hairs; legs pale-yellowish, sparsely clothed with snow-white hairs and with black hairs and setae, the femora for the greater part infuscated, some of the other segments also faintly infuscated in places, especially the distal ends of the tarsi; sternum blackened round the margins, paler in the middle.

Anterior row of eyes strongly procurved, the median eyes with their centres, if anything, a trifle above the level of the superior margins of the very large lateral eyes; posterior row of eyes narrower, very strongly recurved, the curvature much stronger than that of the anterior row viewed from above, the eyes smaller than the corresponding eyes of the anterior row, the medians round, much nearer to one another than to the laterals and placed at some distance in front of the latter; area formed by the four lateral eyes only very slightly wider in front than long.

Legs very spiny; metatarsus I with 2 inferior pairs of spines; tibia I with 3 outer and 2 inner inferior spines, besides 2 on the anterior and 1 on the dorsal surface; femur with 1 anterior and several dorsal spines and spiniform setae; legs besides these with a number of setae, which much resemble the slender spines.

Vulva as in Pl. XI, Fig. 35.

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

This tiny species has the outward appearance of a *Caesetius*.

Dr. SCHULTZE also collected at various localities 37 other specimens of *Asemesthes*, which I have not been able to identify, nearly all of them being immature.

In addition to the specimens already mentioned some 72 immature examples of various Drassidae were found in the collection, which could not be identified and are of little value for systematic purposes.



## Plate XI.

- Fig. 1. *Harpactirella spinosa* n. sp., ♂. Right palpal organ.  
 „ 2. „ *longipes* PURC., ♂. Right palpal organ.  
 „ 3. „ *lapidaria* n. sp., ♂. Right palpal organ.  
 „ 4. *Pseudauximus annulatus* n. sp., ♂. Right pedipalp from below.  
 „ 5. *Stegodyphus deserticola* n. sp., ♀. Vulva.  
 „ 6. *Dresserus namaquensis* n. sp., ♀. Vulva.  
 „ 7. „ *schultzei* n. sp., ♀. Vulva.  
 „ 8. „ *rostratus* n. sp., ♂. Right palpal organ and tarsus from below.  
 „ 9. *Eresus namaquensis* n. sp., ♀. Vulva.  
 „ 10. *Scytodes schultzei* n. sp., ♀. Vulva.  
 „ 11. *Theuma pusilla* n. sp., ♀. Vulva.  
 „ 12. „ *velox* n. sp., ♀. Vulva.  
 „ 13. *Drassodes sesquidentatus* n. sp., ♀. Vulva.  
 „ 14. „ „ n. sp., ♂. Apex of process of right palpal organ removed from the tarsus  
 and seen obliquely from the medial side and below.  
 „ 15. *Xerophaeus longispina* n. sp., ♀. Vulva.  
 „ 16. „ „ n. sp., ♂. Tibia, tarsus and palpal organ of left pedipalp from outerside.  
 „ 17. „ *hottentottus* n. sp., ♀. Vulva.  
 „ 18. „ *aridus* PURC., ♂. Tarsus and palpal organ of right pedipalp from below.  
 „ 19. „ *ahenus* n. sp., ♀. Vulva.  
 „ 20. *Melanophora aculeata* n. sp., ♀. Vulva.  
 „ 21. „ *flavitaris* n. sp., ♀. Vulva.  
 „ 22. „ *pulchripes* n. sp., ♂. Tarsus and palpal organ of right pedipalp from below.  
 „ 23. „ „ n. sp., ♀. Vulva.  
 „ 24. „ *procurva* n. sp., ♀. Vulva.  
 „ 25. „ „ n. sp., ♂. Tarsus and palpal organ of right pedipalp from below.  
 „ 26. *Setaphis bechuanica* n. sp., ♀. Vulva.  
 „ 27. „ *anchoralis* n. sp., ♀. Vulva.  
 „ 28. *Callilepis frenata* n. sp., ♀. Vulva.  
 „ 29. „ *lineatipes* n. sp., ♀. Vulva.  
 „ 30. *Asemesthes decoratus* n. sp., ♀. Vulva.  
 „ 31. „ *pallidus* n. sp., ♀. Vulva.  
 „ 32. „ *flavipes* n. sp., ♀. Vulva.  
 „ 33. „ *lineatus* n. sp., ♀. Vulva.  
 „ 34. „ „ n. sp., ♂. Right pedipalp from outerside.  
 „ 35. „ *albovittatus* n. sp., ♀. Vulva.



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