A COLLECTION OF ARACHNIDA AND MYRIOPODA FROM THE TRANSVAAL MUSEUM

BY R. F. LAWRENCE
Natal Museum, Pietermaritzburg

(With 8 Text-figures)

THE following paper deals with a collection of Arachnida and Myriopoda which has been entrusted to me by Dr V. FitzSimons, Director of the Transvaal Museum. The Myriopoda consist mainly of a general collection which has accumulated over a number of years in the Museum from various provinces of the Union, and more recently, as the result of Museum expeditions to the Kalahari, South-west Africa and southern Angola.

The Arachnida, consisting of Scorpions and Solifugae, are more exclusively from South-west Africa and southern Angola, a region which has always provided interesting forms in these orders. I have also been allowed to include some records and notes on Transvaal and South Rhodesian species of Solifugae.

The Transvaal is one of the least known of the South African provinces in respect of its Myriopoda; the fauna of the South-west Cape and Natal is admittedly far richer than that of the Transvaal but the forests of the eastern and north-eastern borders of the province must support a considerable fauna which is still only partly explored. In Attems's South African monograph of 1928 not a single Polydesmid millipede was listed from the Transvaal but the present paper brings the number up to eight species; similarly the number of Chilopoda known from the Transvaal have been increased from eighteen to twenty-nine species since 1928.

The results of the collections can be briefly set out as follows:

	No. of species recorded	No. of new species
Chilopoda	34	2
Diplopoda	7	5
Solifugae	8	1
Scorpions	11	1
Total	60	9

CHILOPODA

GEOPHILOMORPHA

Family ORYIDAE

Genus **Aspidopleres** Porat

Aspidopleres intercalatus (Porat)

A ♂ and ♀ from Pofadder, North Cape Province (6515), the ♂ with 97 the ♀ with 105 pairs of legs. One ♂ from Aar, near Aus, S.W. Africa (6525) with 93 pairs of legs; both lots collected by V. FitzSimons, May 1933.

Genus **Orphnaeus** Meinert

Orphnaeus brevilabiatus (Newport)

From the following localities in the Transvaal: Klaserie, E. Transvaal (6385), collected A. G. White, July 1928; Njelele River, Zoutpansberg, Northern Transvaal (623–5), collected G. van Dam, July 1916; Gravelotte, E. Transvaal (626–8), collected G. van Dam, June 1917; Magalakwin River, N. Transvaal (1379), collected G. van Dam, Aug. 1928; Mopani, N. Transvaal (5261), collected V. FitzSimons, Nov. 1931; Mafuleni, near Letaba, E. Transvaal (8880), collected H. Lang, Nov. 1933. The leg pairs ranging from 71 to 75. One ♂ with seventy-one pairs of legs from Lucira, South Angola (8937), collected by G. Rudebeck, Sept. 1956. Chamberlin (1951) has recorded this species from N.E. Angola.

Family SCHENDYLIDAE

Genus **Mesoschendyla** Attems

Mesoschendyla caledonica Attems

Five specimens from Grootvadersbosch, near Rivier Zonderend, Cape Province (8886), collected by V. FitzSimons, Dec. 1940; the two largest specimens with 77 (♂) and 67 (♀) pairs of legs; 4 specimens from Lamotte Forest Stn, Frenchhoek, Cape Province (8908), collected by V. FitzSimons, Dec. 1940.

Family GEOPHILIDAE

Genus **Polygonarea** Attems

Polygonarea oligopus Attems

Six specimens from Jonkersberg, Cape Province (8902), collected by V. FitzSimons, Dec. 1940; two males with 55 and 53 pairs of legs.

Polygonarea lawrencei Verhoeff

One ♂ with 55 pairs of legs; Morgenzon, S.E. Transvaal (6340), collected by M. Hazelhurst, 1928.

Polygonarea sp.

Five specimens from Baviaanspoort (629, 630) and Groenkloof (631–3) both near Pretoria, Transvaal, appear to be a new form of *Polygonarea* allied to *robusta* Lawrence; the specimens are, however, old and much contracted; both lots were collected by G. van Dam, Feb. 1920 and Nov. 1921.

Polygonarea transvaalica n.sp.

(Figs. 1*a–e*)

Types, 2 ♂♂ (5293) Entabeni, Zoutpansberg, N. Transvaal, collected by V. FitzSimons, Nov. 1931.

Colour yellow, head-plate reddish-yellow.

Antennae with a basal whorl of longer bristles on segment I, II–VI with only the apical whorl, regular and enlarged, the remaining segments with irregular shorter bristles covering their whole length.

Head-plate widening anteriorly, $1\frac{1}{3}$–$1\frac{1}{2}$ times as long as its greatest width (Fig. 1*a*) with a few long lateral bristles as in Fig. 1*a*, a rounded to truncate projection in the middle of the anterior margin (seen from below); dorsal surface with

scattered pits of very variable size containing short setae, but the anterior third or two-fifths smooth and shiny.

Coxal plate with very distinct, regularly arranged pits, a shallow but distinct median groove, two small distinct black teeth in the middle of the anterior border; claw of maxillipede with a small but strongly projecting tooth at its base, pre-femur with an indistinct inner apical tooth; inner and outer sides of maxillipede with some long setae (3–6).

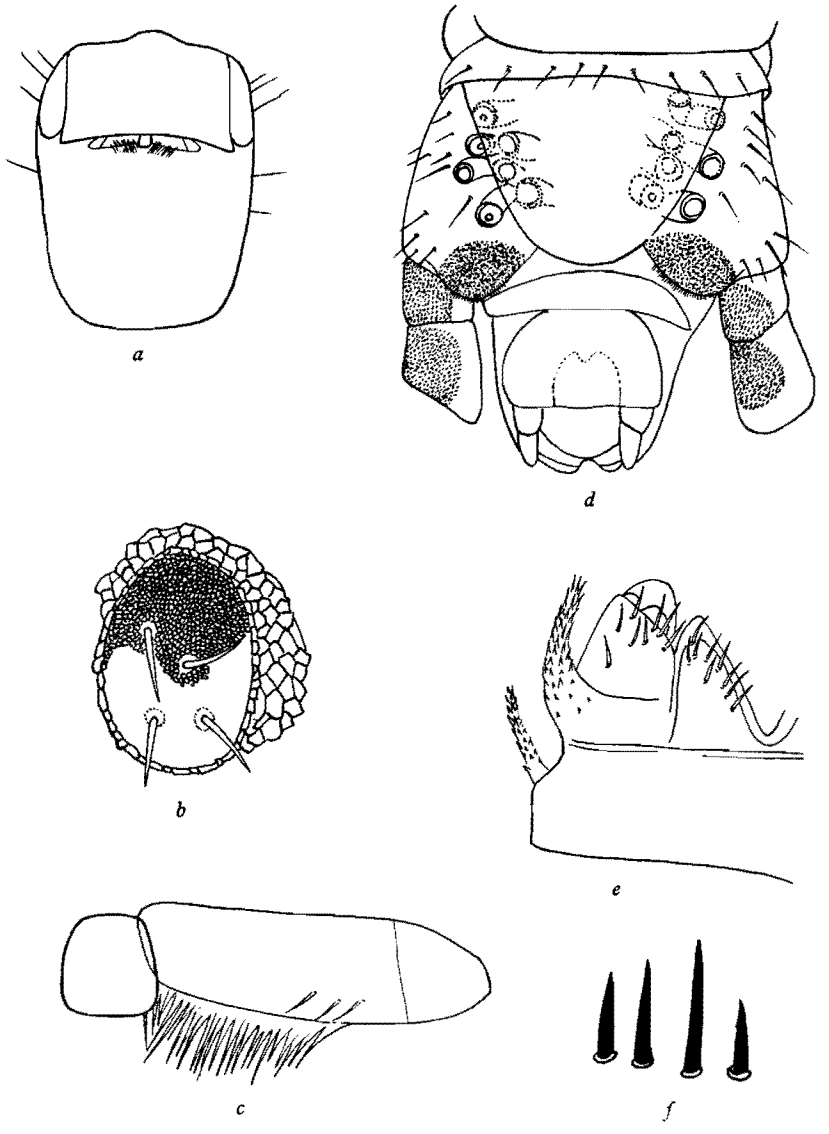

Fig. 1. *Polygonarea transvaalica* n.sp. ♂. *a*, head-plate from below; *b*, clypeal area; *c*, median and a lateral piece of labrum, enlarged; *d*, posterior end of body, ventral view; *e*, first maxillae. *Cryptops fitzSimonsi* n.sp. *f*, spines of pre-femur of end-legs, enlarged.

Tergites shiny with scattered pits and two transverse rows of fine, moderately long setae, praetergites with a single row; paramedian sulci very distinct, commencing from V or VI.

Median piece of labrum subquadrate, quite smooth, lateral pieces fringed on their inner three-fifths, Fig. 1*c*; clypeal area with surrounding reticulation as in Fig. 1*b*, no spines between the labral and frontal areas except the four on the clypeal area.

First maxillae rather as in *P. monospathis* Attems, Fig. 1*e*. Second maxillae with the inner basal process reaching to the middle, or a little further, of the femur; claw of apical segment shorter than inner side of middle segment. Pores of sternites indistinct, I–X without or with a very small area at each anterolateral angle, from X onwards a third basal median group becoming progressively wider than long, at XIX beginning to divide into two more or less rounded groups which rejoin at XXX or XXXI, again forming an area wider than long.

Genital segment as in Fig. 1*d*, with 7 large pores, all except 2 or 3 opening beneath the sternite; claw of tarsus short but stout, last segment three-quarters the length of penultimate segment; no terminal (genital) pores.

Both specimens with 45 pairs of legs, the small 29 mm., the larger 33 mm. in total length.

SCOLOPENDROMORPHA

Family SCOLOPENDRIDAE

Genus **Scolopendra** Linn.

Scolopendra morsitans Linn.

The species is represented by numerous specimens from central, eastern and northern Transvaal, S. Rhodesia, northern Cape, Zululand, and one record from S. Angola. It would serve no purpose giving detailed localities for this extremely widespread species. The following are the registration numbers: 6504, 6688, 7383, 7451, 7481, 7499, 7946, 7947, 8006, 8010, 8021, 8077, 8170–8173, 8250, 8789, 8829, 8844, 8887, 8888, 8918, 8925, 8934.

Genus **Arthrorhabdus** Pocock

Arthrorhabdus formosus Pocock

The species is represented from the following localities in the Cape Province: De Wet, near Worcester (8890), Deepwalls, Knysna (8891), Soetendal's Vlei, Bredasdorp (8892); Sevenweekspoort, near Ladysmith (8905); Matjesfontein (8896, 8887); Cape Agulhas (8914); about 50 specimens, all collected by V. Fitz-Simons during November and December, 1940.

Genus **Cormocephalus** Newport

Cormocephalus aeruginosus Attems

About 40 specimens collected by V. FitzSimons in December 1940 from Jonkersberg (8889), Stilbay, Riversdale (8893) and Lamotte Forest Stn, Frenchhoek (8907), all localities in the western Cape Province.

Cormocephalus, anceps anceps Porat

About 47 specimens from Soetendals Vlei, Bredasdorp (8892), Lamotte Forest, Frenchhoek (8907), Deepwalls, Knysna (8900), Pakhuis Pass, Clanwilliam (8913)

in the Cape Province; from Potchefstroom (8898) and Louwscreek, E. Transvaal (7336, 7337), in the Transvaal; all except the Louwscreek specimens (G. van Dam) collected by V. FitzSimons in Dec. 1940.

Cormocephalus anceps segnis Attems

About 18 specimens from Grootvadersbosch, near Rivier Zonderend (8883), Garcia Forest, Riversdale (8895), Deepwalls, Knysna (8912) and Mitchell's Pass, Ceres (8911), all in the Cape Province, collected by V. FitzSimons; Pretoria, Transvaal (622), collected by G. van Dam, Sept. 1921, and Junction of the Ouob and Nossob rivers, Bechuanaland Protectorate, collected V. FitzSimons, May 1956.

Cormocephalus brevicornis Kraepelin

Five specimens from Vumba, Umtali district (7942) and Chirinda Forest, Mt Silinda (7992, 7993, 8004, 8005) both in southern Rhodesia, collected by V. FitzSimons, Dec. 1937.

Cormocephalus büttneri Kraepelin

Two specimens from Vumba, Umtali district, S. Rhodesia (7945, 7948), collected by V. FitzSimons, Dec. 1937.

Cormocephalus calcaratus Porat

About 20 specimens from Grootvadersbosch, near Rivier Zonderend (8884) and Lamotte Forest Stn, Frenchhoek (8907) both Cape Province, collected by V. FitzSimons, Dec. 1940.

Cormocephalus cupipes Pocock

A single specimen from Vumba, Umtali district, S. Rhodesia (7944), collected by V. FitzSimons, Dec. 1937.

Cormocephalus elegans elegans Kraepelin

About 18 specimens from Matjesfontein (8888) and Deepwalls, Knysna (8900), collected by V. FitzSimons in the Cape Province; Sabie, E. Transvaal (8931), collected by T. de Beer, Jan. 1955 and Mont-aux-Sources, Natal (8878), collected H. Lang, Nov. 1933.

Cormocephalus multispinosus Attems

Five specimens from Matjesfontein, Cape Province (8896) and Barby, near Helmeringshausen, S.W. Africa (7842), collected by V. FitzSimons in Nov. 1940 and July 1937 respectively.

Cormocephalus multispinus (Kraepelin)

Eleven specimens from Cathkin Peak, Natal (8934), collected by V. FitzSimons, Sept. 1943, and Mafuleni, near Letaba, E. Transvaal (8879), collected by H. Lang, Sept. 1932.

Cormocephalus nitidus nitidus Porat

About 11 specimens from Grahamstown (8272) and Lamotte Forestry Stn, Frenchhoek (8907), in the Cape, collected by V. FitzSimons; Mbabane, Swaziland (8237), collected by V. FitzSimons, Oct. 1938; Blouberg, N. Transvaal

(8881, 8882), collected by G. Rudebeck, Jan. 1955, and Klaserie, E. Transvaal (6386), collected by A. G. White, July 1928.

Cormocephalus nitidus calvus Attems

One specimen from Inhaca Island, Delagoa Bay (8860), collected by C. K. Brain, Sept. 1957 and one each from Crocodile River, E. Transvaal (8259), collected by C. Hall, Nov. 1938 and Pretoria (8839), collected by Malan, Jan. 1957.

Cormocephalus oligoporus Kraepelin

One specimen each from Dikbaardsmanskolk, Nossob River, Bechuanaland Protectorate (8801), collected by V. FitzSimons, May 1956, and Hopetown, northern Cape Province (8906), collected by V. FitzSimons, Nov. 1940.

Cormocephalus punctatus Attems

Seven specimens from Vumba, Umtali district (7943) and Chirinda Forest, Mt Silinda (8003, 8007, 8008, 8012, 8013, 8020), both South Rhodesia, collected by V. FitzSimons, Dec. 1937.

Cormocephalus setiger Poart

Two specimens from Matjesfontein, Cape Province (8887), collected by V. FitzSimons, Nov. 1940.

Cormocephalus westwoodi dispar Poart

Nine specimens from Deepwalls, Knysna (8900), collected by V. FitzSimons, Dec. 1940; Inhaca Island, Delagoa Bay (8859), collected C. K. Brain, Sept. 1957, and Mafuteni, near Letaba, E. Transvaal (8879), collected by H. Lang, Sept. 1932.

Genus **Colobopleurus** Kraepelin

Colobopleurus fontinalis Attems

One specimen from Standerton, Transvaal (7406), collected P. G. Kilian, June 1935.

Genus **Ethmostigmus** Pocock

Ethmostigmus trigonopodus (Leach)

One specimen from Teubosch, Transvaal (8683), collected Van Heerden, Nov. 1947.

Genus **Rhysida** Wood

Rhysida afra afra (Peters)

Four specimens, one from Inhaca Island, Delagoa Bay (8858), collected by C. K. Brain, Sept. 1957, and 3 from Blouberg, N. Transvaal (8929), collected G. Rudebeck, Jan. 1955.

Genus **Alipes** Imhoff

Alipes calcipes Cook

A single specimen from Shewasaula, Zoutpansberg, N. Transvaal (8930), collected by W. J. van der Berg, May 1952.

This constitutes a new record for southern Africa as the species was hitherto

only known from Angola and S. Rhodesia. On the anterior and middle segments the granulation between the middle and lateral keels is very distinct but considerably weaker between the middle keels themselves; in this respect it seems a link between *calcipes* and *crotalus* which is found in the S.E. Transvaal (Hectorspruit and Newington).

Family CRYPTOPIDAE

Genus **Cryptops** Leach

Cryptops australis africanus Lawrence

Three specimens from Cathkin Peak, Drakensberg Mts, Natal (8936), collected by V. FitzSimons, Sept. 1943.

Cryptops fitzSimonsi n.sp.

(Figs. 1*f*, 2*a*, *b*)

Types, 3 specimens, Jonkersberg, Cape Province (8903), collected by V. FitzSimons, Dec. 1940.

Colour yellow, the head last segment orange. Head-plate with a number of small scattered pits with fine short setae, anterior margin truncate in the middle, no median sulci.

Antennal segments I–III with long irregular bristles, especially in I, remaining segments with a distinct basal whorl of longer bristles, these diminishing progressively in length distally, IV to the apical segment with a dense fur-like covering of fine short bristles. Coxal plate and pre-femur of maxillipedes with distinct, fairly numerous, regularly distributed punctures, coxal plate without median suture, its anterior margin straight.

Tergites. I distinctly overlapping head-plate, completely without median sulci but with a very distinct anterior collar-furrow; II with distinct median sulci, not however reaching to the anterior margin; tergites from III backwards with very distinct median and lateral sulci, the median complete, the lateral ones only occupying anterior two-thirds but very distinct, penultimate and last tergites without either median or lateral sulci; last tergite with a median, fairly wide, shallow depression, its lateral borders very strongly emarginate, its posterior border forming an almost complete right angle in the middle; tergites with scattered, fairly numerous, distinct punctures, very faint in the last 7–10 tergites. Sternites with a longitudinal and transverse furrow, the former deeper and stronger than the transverse furrows, the arms of which are directed slightly forwards on each side; last sternite considerably wider than long, Fig. 2*b*.

Genital legs. Pre-femur as in Fig. 2*a* seen from below, with stout blade-like blackish spinules, Fig. 1*f*, a longitudinal strip on inner ventral surface unspined, femur and tibia with similar spinules, those of femur a little less numerous than in pre-femur, with a similar but wider unspined strip on ventral surface; tibia with a few spinules only on inner side, remaining segments with only very fine bristles; pre-femur with 0, tibia with a row of 7–8, metatarsus with 4 minute ventral teeth. All the remaining legs, especially the 3–4 anterior ones and the penultimate leg, with strong blackish spinules on the ventral surfaces of the three basal segments.

Dimensions of largest specimen (holotype): 34 mm. total length.

The species is named in honour of the Director of the Transvaal Museum, Dr V. FitzSimons, who collected a large proportion of the material dealt with in this paper.

LITHOBIOMORPHA

Genus **Paralamyctes** Pocock

Paralamyctes spenceri Pocock

One specimen, Grootvadersbosch, near Rivier Zonderend (8885), 3 from Jonkersberg (8904), and 1 from Deepwalls, Knysna (8900), Cape Province; 2 from Cathkin Peak, Drakensberg Mts., Natal (8934), all collected by V.Fitz-Simons, Dec. 1940 and Sept. 1943.

Genus **Lamyctes** Meinert

Four specimens of this genus from Wonderboom, Pretoria (634, 643) and from Louwscreek, E. Transvaal (644, 645), collected by G. van Dam, Feb. and March 1920, are in too poor a condition to be identified.

SCUTIGEROMORPHA

Genus **Scutigerina** Silvestri

Scutigerina weberi Silvestri

Thirteen specimens from Lamotte Forest Stn, Frenchhoek (8909), 9 from Stilbay, Riversdale (8910) and 4 from Garcia Forest, Riversdale (8915), all collected by V. FitzSimons, Dec. 1940.

DIPLOPODA

Order POLYDESMOIDEA

Family GOMPHODESMIDAE

Genus **Antiphonus** Attems

Antiphonus capensis n.sp.

(Fig. 2*c–f*)

Types, 1 ♂, 1 ♀, Jonkershoek, S.W. Cape (8901), collected by V. FitzSimons, Dec. 1940.

♂. *Colour* cream to yellow-brown.

Labral sinus with two even rows of bristles, clypeus almost entirely smooth, tergites smooth and shiny. Collum very slightly narrower than tergite I, the lateral margin shaped like a wide cone with evenly rounded apex; keels of tergites strongly projecting laterally (Fig. 2*d*), very clearly defined, occupying the whole length of metasomite, not projecting beyond its posterior margin as a tooth, the pore-bearing ones shaped as in Fig. 2*c*, widening a little posteriorly, the pores subterminal (in posterior segments) or about a fourth from posterior end of metasomite (the more anterior ones), situated about half-way between the lateral and medial margins of the keel or just lateral to this; in segment XIX the keel represented by a small round tubercle at the tip of which is situated the reduced pore. Pleural keels obsolete.

Tail long and projecting, seen from the side; seen from above broadly triangular, the apex abruptly truncate; on each side 3 bristles near apex and 2 near base rising from small tubercles; anal valves with large, clearly defined, well raised margins, bearing two pairs of bristles rising from pits; anal scale flattened, much wider than long, subtriangular, two small but distinctly projecting tubercles at its apex.

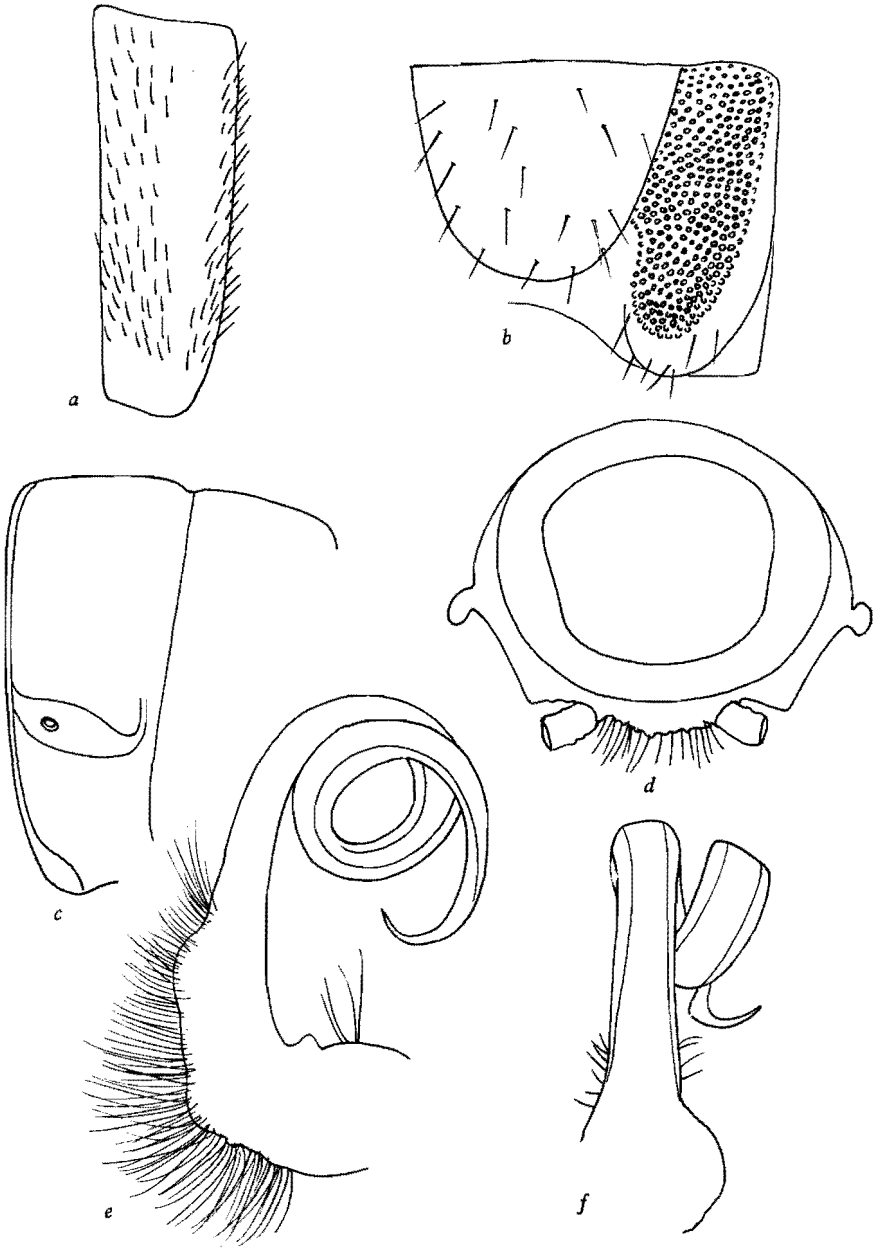

Fig. 2. *Cryptops fitzSimonsi* n.sp. *a*, pre-femur of end-legs, ventral view; *b*, posterior end of body, from below. *Antiphonus capensis* n.sp., ♂. *c*, segment VI from the side; *d*, the same in transverse view; *e*, gonopods from the outer side; *f*, the same in aboral view.

Sternite VI with a very low keel-like projection between anterior legs (Fig. 2*d*), not triangular or divided into two tubercles; remaining segments without processes, except the genital ones on coxa II which are conspicuous, oval, or conical tubercles projecting well above the level of the coxa. Anterior legs without pads.

Gonopods large, flattened, rather like those of *Ulodesmus*, describing 2½ spirals as in *diploconus* Attems, Fig. 2*e*, *f*.

Dimensions. Total length approximately 30 mm. Greatest width of metasomite 4·5, of prosomite 3·4 mm.

The species strongly resembles *Antiphonus diploconus* Attems from Port Elizabeth in the shape of the telepodites but differs from it in a number of characters, e.g. lacking a pair of processes between the anterior legs of sternite VI (in this resembling *conatus*); in the shape of the pore-bearing keels it resembles *circulus*; but differs markedly from both *conatus* and *circulus* in the gonopods.

Family SPHAEROTRICHOPIDAE

Genus **Gnomeskelus** Attems

Gnomeskelus tugelanus alticolus Verhoeff

Six specimens, Cathkin Peak, Drakensberg Mts, Natal (8933), collected by V. FitzSimons, Sept. 1943.

Gnomeskelus silvaticus Attems

Sixteen specimens from Deepwalls, Knysna (8897, 8912); 1 ♂ from Stilbay, Riversdale, Cape Province (8894), collected by V. FitzSimons Dec. 1940.

Gnomeskelus fitzSimonsi n.sp.

(Fig. 3*a–c*)

Types, 10 ♂♂ and ♀♀, Jonkersberg, S.W. Cape Province (8901), collected by V. FitzSimons, Dec. 1940.

♂. *Colour*. Dorsal surface slate grey (probably faded in alcohol) with a more or less triangular yellow spot on the metasomites, shaped as in Fig. 3*c*, prosomites unmarked; in the first 6 segments this spot is more or less diamond-shaped and wider than long.

Antennae dark purplish red, legs light reddish, keels of tergites more or less yellow but less so than the median marking.

Collum with rounded sides; all lateral keels rounded posteriorly, only a little pointed in last 2 segments, the postero-lateral angle produced only slightly backwards, more so in the posterior segments; sides of metasomites flanked by a deep furrow which passes well beyond the middle before curving inwards. No pleural keels.

Head thickly covered with short bristles below the antennae; collum and metasomites I and II with a few minute scattered bristles, remaining tergites apparently quite smooth.

Legs with tarsi very long, 8–10 times greatest width, all segments from prefemur to tarsus of leg XII with spherico-conical bristles along the whole length of their ventral surfaces.

Gonopods as in Fig. 3*a*, resembling in general plan and shape those of *G. silvaticus* Attems, the telepodite, however, much incrassate at its base and strongly bent, the femur and tibia separable; the canal-bearing (tibial) process at apex of tele-

podite much larger in proportion to the tarsus than in *silvaticus* and without a spine-like style as in the latter species, Fig. 3*b*.

Dimensions. Total length 25 mm. or a little more, width of metasomite 2·9, of prosomite 2·4 mm.

The species is certainly related to *silvaticus* in the structure of the gonopods

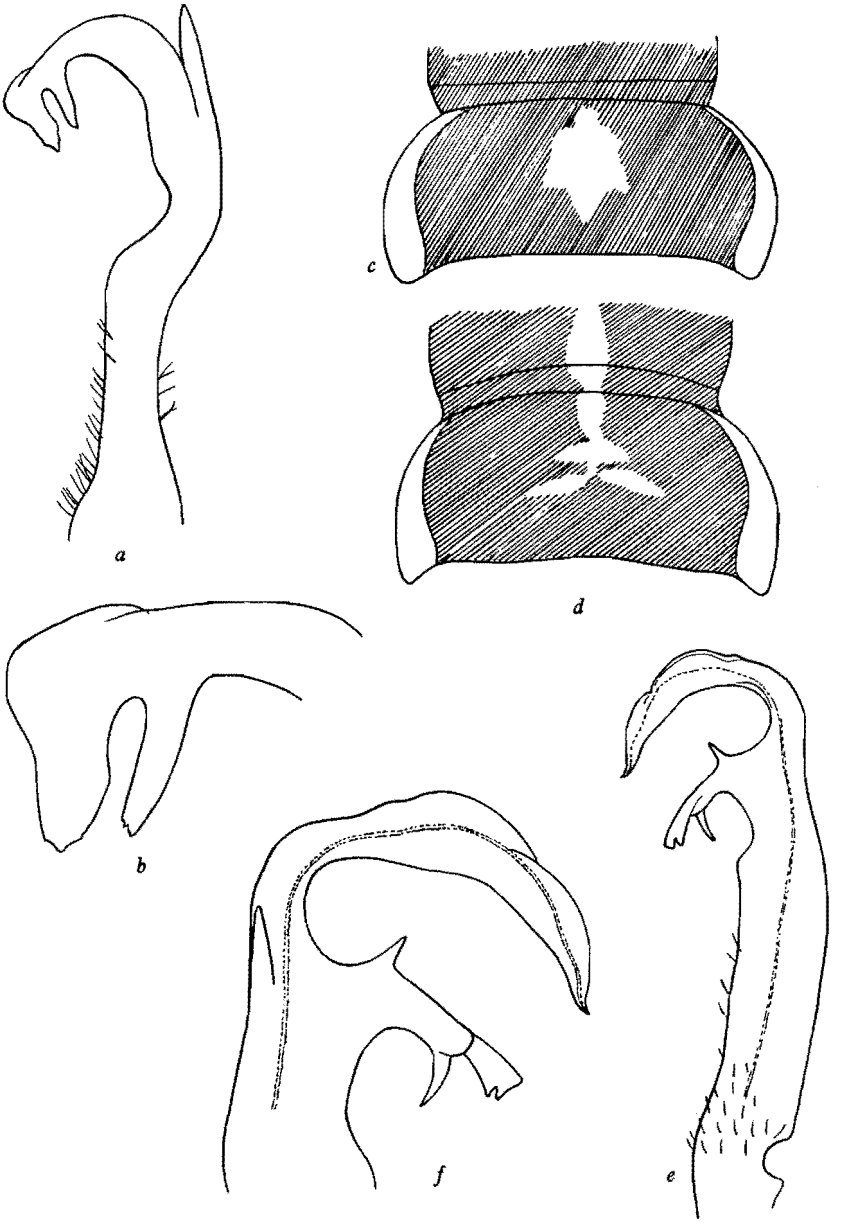

Fig. 3. *Gnomeskelus fitzSimonsi* n.sp. ♂. *a*, gonopod, aboral view; *b*, apex of the same enlarged; *c*, segment XIII from above; *d*, the same of *silvaticus* Attems. *Gnomeskelus rudebecki* n.sp., ♂. *e*, gonopod, aboral view; *f*, apex of same enlarged, oral view.

and legs, also in the colour pattern; in its colouring, however, *silvaticus* is easily distinguished by having the yellow median marking of the tergites narrower and roughly in the shape of an inverted Y, Fig. 3*d*. The Y shape is clearly defined in the middle segments, in the posterior ones the arms of the Y become more or less detached as a pair of oblique or transverse stripes. In *silvaticus* the marking is continued on to the prosomite, but not in *fitzSimonsi*.

The species is named for Dr V. FitzSimons, the well-known herpetologist and Director of the Transvaal Museum.

Gnomeskelus cygniceps n.sp.

(Fig. 4*a–d*)

Types, 1 ♂, 1 ♀, Entabeni, Zoutpansberg, N. Transvaal (5293), collected V. FitzSimons, Nov. 1931.

♂. *Colour*. Light yellow-brown, the colour probably faded in alcohol; legs cream to yellow, antennae infuscated blackish (purple?), especially at the apices of the segments.

Antennae normal, segment II longest, VI not much wider than the others. Collum narrow, the segments behind it progressively wider, especially from V backwards; VI almost twice as wide as collum but II only slightly wider; lateral keels very narrowly emarginate but sharp and clearly defined from III onwards, with a very small but fairly sharp tooth at the postero-lateral angle, becoming smaller and more blunt in the posterior segments; none of the segments with a small accessory tooth medially to this; pleural keels distinct; the pores situated in the postero-lateral angle just medial to the apex of the keel; metasomites with a transverse row of a few slender minute setae near the anterior margin, otherwise quite smooth; near the posterior margin some shallow longitudinal grooves which give this part of the tergite a wrinkled appearance.

Legs. In posterior half of body the tarsi with two ventral protuberances as in Fig. 4*d*, tibia with a long stout apical seta; all segments from pre-femur to tarsus with triangular or bluntly conical unstriated bristles, Fig. 4*d*; between the two tubercles of the tarsus they are sparse, absent between the distal tubercle and apex of tarsus (leg XII).

Gonopods as in Fig. 4*a*, *b* seen from the oral and aboral sides.

Dimensions. Total length approximately 14·4; width 2·2 mm.

♀. *Colour* slate grey, considerably darker than the ♂, the antennae with blackish infuscation, the legs grey, considerably darker than in the ♂. Segments in the middle of body (from XII backwards) with a minute accessory tooth medially to the keel tooth at postero-lateral apex of the tergites, the pore situated between these teeth; in segments XV and XVI there may be 2 minute accessory teeth; keels on the whole larger and more distinct than in the ♂; otherwise as in the description of the ♂.

Dimensions. Total length 18 mm., greatest width 2·4 mm.

The species is quite distinctive and can be easily recognized by the two ventral tarsal tubercles of the legs in the ♂, the complex gonopods with large dagger-shaped tibio-tarsus and femoral spine, and the swan-headed shape of the canal branch of the telepodite.

Gnomeskelus rudebecki n.sp.

(Figs. 3*e*, *f* and 4*e*)

Types, 1 ♂, 1 ♀, Entabeni, Zoutpansberg, N. Transvaal (5293), collected by V. FitzSimons, Nov. 1931.

Colour. Yellow-grey variegated with purple, tergites with a narrow posterior

purple marginal border, the keels and pores surrounded by an indistinct purple ring, antennae blackish to purple; legs yellow-white, the two or three apical segments purplish.

Antennae normal, segment VI not enlarged or inflated.

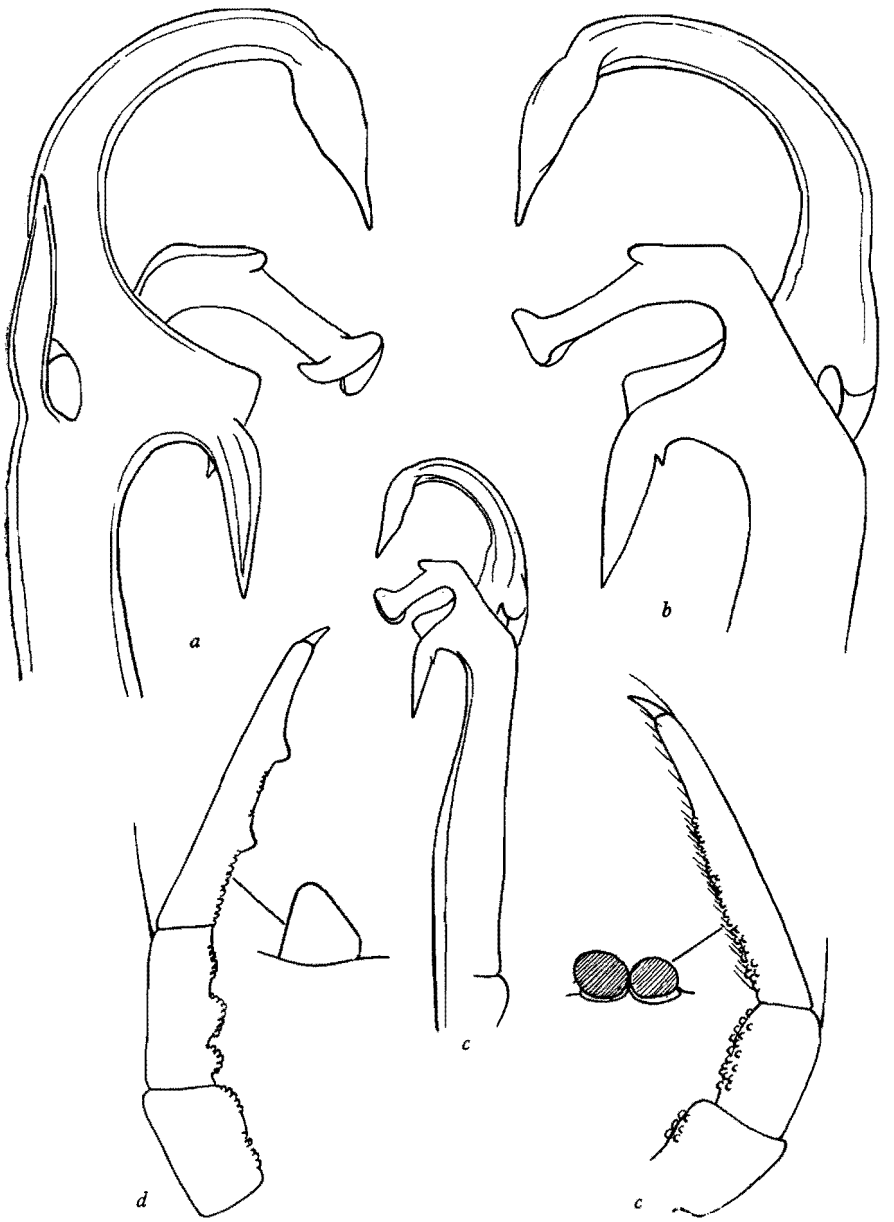

Fig. 4. *Gnomeskelus cygniceps* n.sp., ♂. *a*, apex of gonopod enlarged, oral view; *b*, the same aboral view; *c*, whole gonopod, aboral view; *d*, post-femur to tarsus of leg XII; *e*, the same of *Gnomeskelus rudebecki* n.sp.

Collum and tergites dorsally quite smooth, without fine bristles; segments from V backwards abruptly widening, tergite II very little wider than collum; keels fine, clearly defined, the end tooth small but distinct though hardly surpassing the posterior margin of the tergites; pores about one-sixth from the posterior end of the metasomite, situated just mesially to the keel; only the last 3 or 4 segments with a minute accessory tooth on the posterior margin of metasomite mesially to the keel tooth; pleural keels distinct.

Legs. Tarsi of legs in posterior half of body without ventral tubercles; all segments with almost spherical modified bristles, Fig. 4*e*, these very faintly striated; on tarsus XII they occupy the basal two-thirds of the segment, then coming to an abrupt stop; tibia with a row of about 9 bristles, post-femur with 3 or 4, these rows irregularly duplicated; spherical bristles of the tarsus usually with an apical seta, those of the other segments without.

Gonopods as in Fig. 3*e,f*. Tibio-tarsus, not visible from in front, Fig. 3*e*; when the gonopod is turned round it is seen to be a short strong tooth closely applied to the telepodite opposite the origin of the parsolanomerit, Fig. 3*f*.

Dimensions. Total length of 12–13 mm.; greatest width 1·5 mm.

The species is named in honour of Dr G. Rudebeck, Ornithologist to the Transvaal Museum, who collected a number of the arachnida and myriopoda dealt with in this paper.

Genus **Platytarrus** Attems

Platytarrus excelsus n.sp.

(Fig. 5*a–c*)

Type, 1 ♂, Mont-aux-Sources, Drakensberg Mts, Natal (8226), collected by V. FitzSimons, April 1938.

Colour. Dorsal surface yellow, lightly variegated with reddish purple, the whole giving an impression of pink; legs and ventral surface creamy white.

Collum with irregular transverse rows of small tubercles, tergites generally with 3 fairly regular transverse rows, the posterior one more distinct than the others.

Tergites in general with 5 distinct tooth-like processes on the keels and 4 notches, those without pores with only 4 processes. Metasomites more than three times as wide as long, Fig. 5*c*.

Legs with modified hairs of the ventral surface very much as in my figure of *P. polydesmoides* Verhoeff (1953, p. 335, fig. 11*e, f*) except that the notch of the thickened curved hairs is a little further from the apex than in fig. 11*f*.

Gonopods as in Fig. 5*a, b*, seen from the aboral and oral aspects, agreeing with *guduensis* Schubart in having the dagger-shaped bristles both on the parsolanomerit and the inner side of the telepodite; in *excelsus*, however, the latter are limited to a few very large blade-shaped bristles which are opposed to those of the parsolanomerit as are the fingers of a claw; in *guduensis* (see Schubart, 1956, figs. 13, 14, p. 37) these bristles reach much further basally on the two segments and the detail of the membranous apex of telepodite and tibio-tarsus is different in the two species.

Dimensions. Total length 16 mm., width of metasomite XII 2·7, of prosomite XII 1·6 mm.

The two genera *Platytarrus* and *Platytarropus* are very similar in most respects. The structure of the gonopods are indeed very different but I do not think the sharpness of the posterior angle of the lateral keels, as used by Schubart in his key on p. 80 (1956), can be used as a clear-cut difference between the two genera. The fact that there is no pore on segment XIV of *P. excelsus* serves to

confirm Schubart's surmise (*loc. cit.* p. 32) that in its pore formula, the single ♂ type of *P. cryptodesmoides* Attems, was abnormal.

P. excelsus agrees closely with *guduensis* Schubart in its small size and the general structure of the gonopods. It differs in the smaller number of lateral processes on the keels and in various details of the structure of the gonopods.

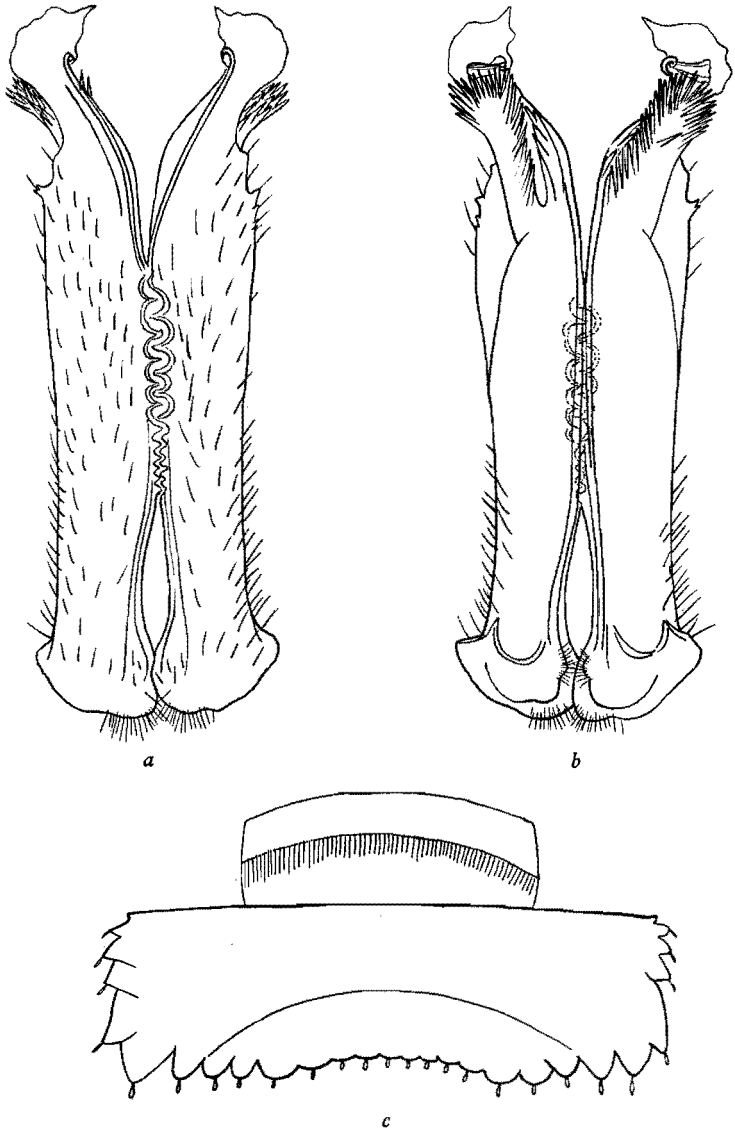

Fig. 5. *Platytarrus excelsus* n.sp., ♂. *a*, gonopods, aboral view; *b*, the same, oral view; *c*, segment XVI from above.

ARACHNIDA

Order SOLIFUGAE

Family HEXISOPIDAE

Genus **Chelypus** Purcell

Chelypus kalaharicus Lawrence

One ♂, Dikbaardmanskolk, Nossob River (8818), collected by V. FitzSimons, May 1956. This is only the second specimen of this species to be found. Total length 21·5 mm., thus larger than the type.

Chelypus barberi Purcell

One large ♂, Twee Rivieren, Kalahari National Park (8951) collected by G. van Son, Feb. 1958. This specimen measures 35 mm. in total length. The type came from the junction of the Molopo and Moshowing Rivers, Bechuanaland.

Family DAESIIDAE

Genus **Biton** Karsch

Biton schultzei Kraepelin

Two adult ♀♀, Twee Rivieren, Kalahari National Park (8817), collected V. FitzSimons, May 1956. I also refer two immature females, between Twee Rivieren and Mata Mata, Kalahari National Park (8813) to this species.

Biton rhodesianus (Hewitt)

One ♂, 2 ♀♀ from Birchenough Bridge, S. Rhodesia (NM 810), collected R. F. Lawrence and B. Stuckenberg, Sept. 1957. It should be noted that Roewer's fig. 278*m* (1934, p. 398) does not in a number of respects correspond with that given by Hewitt for the type (1914, p. 165, fig. 26), under the name *Daesia rhodesiana*.

Genus **Solpugassa** Roewer

Solpugassa kochi n.sp.

(Figs. 6*a*, *b* and 7*a*, *b*, *g*)

Types, 2 ♂♂ from Ohopoho, Kaokoveld, S.W. Africa (8843), collected by C. Koch, Aug. 1956.

Colour. Chelicerae and head-plate with diffused pale violet infuscation composed of fine reticulation without definite stripes or markings except along the anterior margins of head-plate and a short lateral and median longitudinal stripe on the dorsal surface of mandible, thoracic and anterior abdominal tergites with violet markings considerably darker than the rest of the body, forming sinuous transverse stripes; whole surface of tergites with diffused light violet infuscation becoming lighter posteriorly, without bands or stripes. Appendages with violet infuscation as follows: whole pedipalp except basal half of femur and tarsus, femur of leg I except basally; whole of femur of legs II and III, the tibiae of these legs with broad stripes on lateral surface; femur, tibia and a small basal part of metatarsus IV. Whole of ventral surface, including malleoli, pale yellow.

Dentition closely resembling that of *kaokoensis* Lawrence, ventral jaw on its inner side with a sharp, black, forwardly directed tooth below the main basal tooth, Fig. 7*g*, resembling that of *furcifera* Kraep., its outer surface with a sinuous, slightly raised shiny keel, emphasized by a regular row of minute but distinct granules. Stridulatory area with 7 ridges.

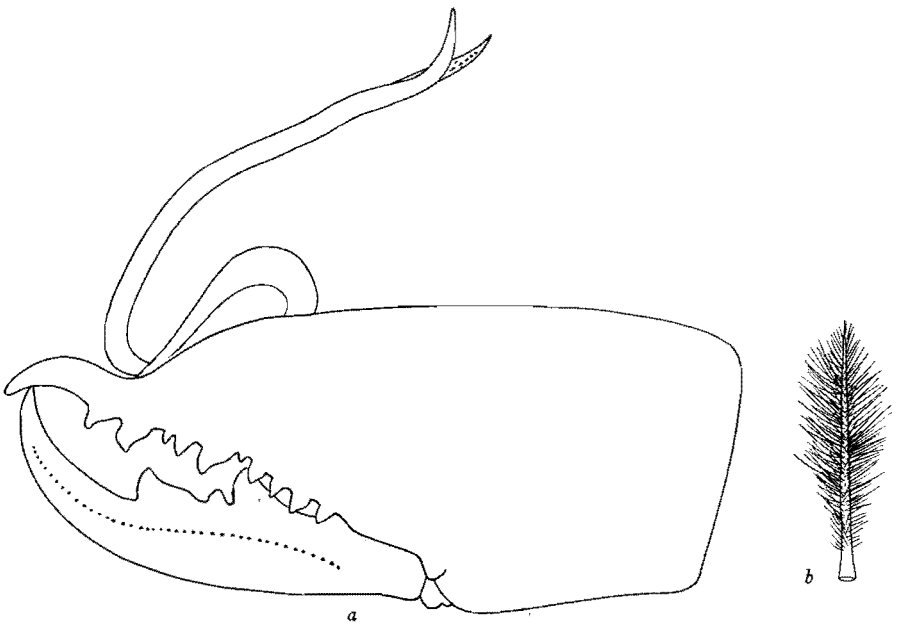

Fig. 6. *Solpugassa kochi* n.sp., ♂. *a*, chelicera from outer side; *b*, hair from scopula of pedipalp-metatarsus, enlarged.

Fig. 7. *Solpugassa kochi* n.sp., ♂. *a*, flagellum from above; *b*, apex of same enlarged; *g*, second main tooth of ventral jaw, inner side. *Solpugassa kaokoensis* (Lawrence), type ♂. *c*, flagellum from above; *d*, apex of same enlarged; *e*, apex of flagellum from outer side, enlarged; *f*, second main tooth of ventral jaw, inner side.

Flagellum. Dorsal jaw with a strong saddle-shaped depression at the origin of the flagellum; seen from the side, Fig. 6*a*, it is directed more upwards than in *kaokoensis*, its apex reaching a point a little nearer the basal enlargement than the anterior margin of head-plate; the shaft much thicker and somewhat shorter than that of *kaokoensis*, the apex of which reaches a point a little nearer the anterior margin of head-plate than the basal enlargement; seen from above the shaft is much more sinuate, Fig. 7*a*, does not reach so far forwards, so that a longer portion of the dorsal jaw is seen from above than in *kaokoensis* Fig. 7*a*, *c*.

Spination. Dorsal surface of mandibles and head-plate with sparse, long setae, none of them stout and spiniform, tergites of abdomen sparsely clothed with long setae mixed with much shorter and more numerous bristles, these varying in length; ventral surface with long silvery hairs. Metatarsus of palp with a sparse scopula except in basal and apical fifth, and a few scattered cylinder bristles. Ramose hairs of the scopula as in Fig. 6*b* enlarged.

Dimensions. Width of head-plate 5·2, length 4·3, metatarsus + tarsus of palp 9·2, tibia 8·7, whole palp (femur-tarsus) 28; total length of body 24 mm.

The species is more closely related to *kaokoensis* Lawrence than to *furcifera* (Kraepelin) and has the spination formula of *Solpugassa* on tarsi II–IV. It is named in honour of Dr C. Koch, the outstanding Coleopterist of the Transvaal Museum, who collected it.

Solpugassa kaokoensis (Lawrence)

(Fig. 7*c–f*)

The type, a ♂ from Kaross, Kaokoveld, S.W. Africa (S.A.M. 6406) has been re-examined and I give the following supplementary description.

The shaft of the flagellum, seen from above, almost straight, Fig. 7*c*, the upward anterior curve passing well forward in a wide sweep over the dorsal jaw, so that only a short portion of its apex is visible from above (this apex considerably wider than *kochi* and different in detail). Apex of flagellum seen from above and from the side (both enlarged), Fig. 7*d*, *e*, differing in detail from *kochi*, Fig. 7*b*.

Ventral jaw with the sinuous row of granules on its outer surface very faint, not distinct as in *kochi*; inner surface with an indistinct keel below the posterior main tooth, ending in a blunt rounded tubercle, Fig. 7*f*, but not a sharp black tooth as in *kochi* and *furcifera*. Stridulatory area with 9 ridges.

Spination as in the description of *kochi* but the setae of dorsal surface of chelicerae and anterior portion of head-plate definitely shorter. Pedipalps very long (28·3 mm.), the tarsus relatively long and slender, more than a fourth of metatarsus.

There is little doubt that the species described by Kraus (1956, p. 423, fig. 2) under the name of *Solpugeira damarensis* is synonymous with *Solpugassa kaokoensis* (Lawrence), even though the author found the third tarsal segment of legs II and III to have a pair of spines, while in *Solpugassa* there are none. This may have been an abnormality but even if it was not, the presence of 2 spines does not necessarily constitute a generic difference and the accumulation of details in which it agrees with *S. kaokoensis* seem to me of greater importance. These are, the dentition, the minute structure of the flagellum, the presence of a keel on the inner side of lower jaw beneath the posterior main tooth, the dimensions, especially that of the pedipalp which is longer than the body, and the comparatively long and slender palpal tarsus. The type localities of the two species cannot have been very far apart.

The species or subspecies of *Solpugassa* found in S.W. Africa form an allied group composed of *furcifera*, *furcifera jordani*, *kochi* and *kaokoensis*; *furcifera jordani* (Lawrence, 1952, p. 966, fig. 4) is certainly more closely allied to *kaokoen-*

sis than to *furcifera* but for the moment I propose to regard it as of specific rank. The males of this group are comparatively small, 20–25 mm. in total length, the pedipalps long and slender, with a scopula always present on the metatarsus. These species all have an apically bifurcate flagellum and distinct tooth or tubercle at the apex of a short keel below the main basal tooth of the lower jaw (on its inner side).

The four species can be separated by means of the following key:

1. Shaft almost reaching anterior margin of head-plate; apical forks of flagellum subequal, both spiculated; dorsal jaw with a shallow depression anteriorly at the origin of the flagellar shaft **furcifera** (Kraepelin)

— Shaft falling far short of anterior margin of head-plate; apical forks of flagellum unequal, only one branch spiculate; dorsal jaw with a deep saddle-shaped depression anteriorly at the origin of the flagellar shaft 2

2. Apex of flagellum falling just short of mid-point between anterior margin of head-plate and basal enlargement; shaft sinuous seen from above; 7 stridulatory ridges **kochi** n.sp.

— Apex of flagellum just surpassing mid-point between anterior margin of head-plate and basal enlargement; shaft almost straight seen from above; 9 stridulatory ridges 3

3. Inner branch of apical fork of flagellum spiculate **kaokoensis** (Lawrence)

— Outer branch of apical fork of flagellum very weakly spiculate **jordani** Lawrence

Solpuga serraticornis Purcell

(Fig. 8*a–c*)

The ♂ type of this species from Bulawayo, S. Rhodesia, in the South African Museum, Cape Town (S.A.M. 1180), has recently been examined and the resulting notes made on the species are as follows:

Roewer's illustration (1934, fig. 294*c*, p. 447) is incorrect and as the original one given by Purcell is rather poor, I give figures of the dorsal jaw, Fig. 8*a*, *b*, seen from the inner side and from above. In Roewer's illustration the small tooth on the inner apex of dorsal jaw is placed behind the anterior main tooth, while in the type it is well in front of it, as can also be seen in Purcell's figure (1899, p. 410, fig. 16).

Seen from above, the shaft of the flagellum is wide at its base but narrows fairly rapidly and regularly to a fine point, Fig. 8*b*.

Inner side of lower jaw with a well marked keel below the basal main tooth, ending in a low rounded tubercle; as seen in Roewer's illustration (*loc. cit.* fig. 294*c*) there is a cluster of at least 8 prominent, basally thickened spinose setae (Borsten), curved and quite smooth, arranged more or less in two oblique rows, those of the anterior row thicker.

Pedipalp with tarsus short, one-fifth length of metatarsus, the latter scopulate ventrally except on the apical and basal fifth (the hairs as in Fig. 8*c*), a large number of stout cylinder bristles on both segments, especially numerous on tarsus and apex of metatarsus; tibia with far fewer cylinder bristles; sides of both tibia and metatarsus with very long setiform bristles, some as long as the segments themselves. Stridulatory area with 7 distinct ridges and another much shorter one.

Solpugyla umtalica (Hewitt)

(Fig. 8*d*)

One ♂ (NM 809) Chitengo, Gorongoza Game Reserve, Portuguese East Africa, collected by B. Stuckenberg, Sept. 1957.

This specimen agrees very closely with Hewitt's figure (1914, p. 162, fig. 24). Roewer's figure (1934, p. 437, fig. 294*d*) does not correspond with that of the type, differing in the shape of the flagellum and the inner tooth of the apex of the dorsal jaw which is placed too near the anterior bend of the flagellum and is too large.

Colour. Chelicerae and head-plate blackish-brown above and at the sides, abdomen greyish-brown above and below, remainder of venter yellow; appendages lightly infuscated violet, metatarsi of palp and apices of femora IV a little darker.

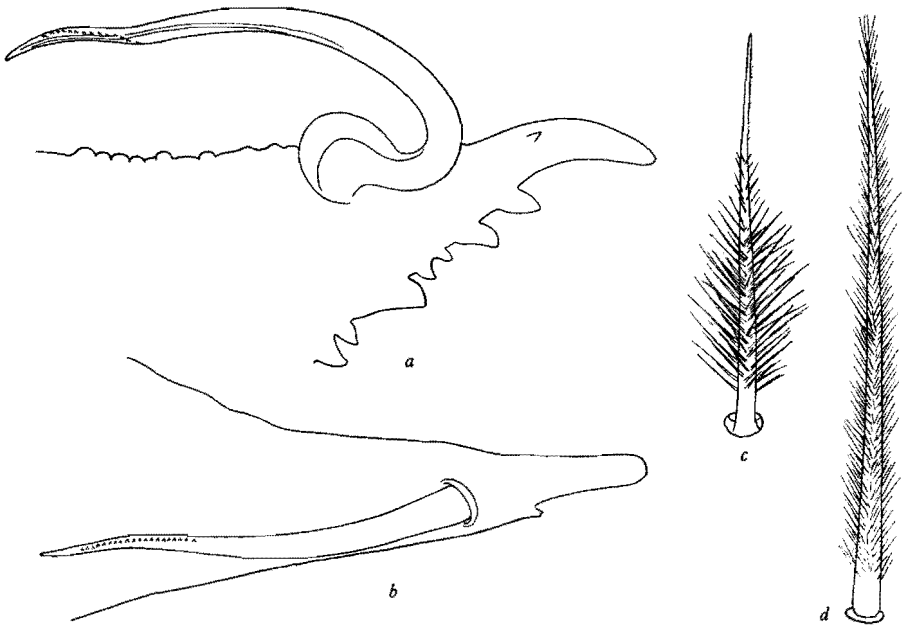

Fig. 8. *Solpuga serraticornis* Purcell (type ♂). *a*, distal half of dorsal jaw of chelicera, inner side; *b*, the same from above; *c*, hair from scopula of pedipalp-metatarsus, enlarged; *d*, the same of *Solpugyla umtalica* (Hewitt), ♂ from Gorongoza, P.E. Africa.

Flagellum. Shaft seen from the side considerably more slender and longer than in *serraticornis* Purcell; seen from above it is almost quite straight; near the apex where it begins to taper there is a slight bend towards the lateral side.

Chelicerae. Lower jaw with a keel below the basal main tooth but not ending in a tooth or tubercle; inner surface below the anterior main tooth with a row of 4 very strong, basally incrassate, smooth spinose setae, much thicker than any setae just posterior to it and much stouter than the thickest of the corresponding ones in *serraticornis*; stridulatory area with 9 distinct ridges and another very small one. Dorsal jaw at its inner apex with only a small round granule, hardly a tooth, about half-way between apex of jaw and anterior bend of flagellum, or a little nearer the latter.

Spination. Mandibles with numerous strong erect spines, head-plate with

fewer but longer spinose setae; abdomen above with stiff golden setae. Pedipalp relatively short and stout, metatarsus only about 3 times as long as tarsus, femur with 4–6 very stout inwardly and downward directed spinose setae, distal segments with some long but not very long setiform hairs, metatarsus ventrally with a scopula except on apical and basal fifth, the scopular hairs differing markedly from those of *serraticornis*, Fig. 8*d*, *c*; cylinder bristles stout and fairly short, very numerous on tarsus and at apex of metatarsus. Spination of last three segments of tarsi II and III, 2. 1. 2, that of IV as in *Solpuga*.

Dimensions. Width of head-plate 8·4, length 7·6; length of chelicerae 7·7; tibia of palp 12·5, metatarsus + tarsus 12·2, tarsus 3·1, total length of palp 37; body length 37·5 mm. Hewitt (*loc. cit.* p. 162) supposed *umtalica* to be related to *serraticornis*, describing it as a variety thereof, but, as pointed out by Roewer, the two species are quite different and can conveniently be assigned to different genera.

In my check-list of the South African Solifugae (1955, p. 194) I regrettably included this species in the genus *Solpuga* under the name of *S. serraticornis umtalica* Hewitt as well as in the genus *Solpugyla* (*Solpugyla umtalica* (Hewitt), p. 189); the latter being the correct entry, the name *S. serraticornis umtalica* should have been omitted.

Apart from the spination formula of tarsi II and III, the species differs from *serraticornis* in the longer and more slender flagellum, the relatively longer tarsus of the pedipalp, the structure of the scopular hairs of the pedipalp, the group of 4 basally thickened spinose setae on inner surface of ventral jaw, instead of 8 in *serraticornis*, 9–10 stridulatory ridges instead of 7–8, etc.

Genus **Solpugiba** Roewer

One ♀ between Twee Rivieren and Mata Mata, Kalahari National Park (8814), collected by V. FitzSimons, May 1956. This ♀ appears to be a female of Purcell's *brevipalpus* (1899, p. 430) but it is impossible to say with certainty. *S. brevipalpus* may again be a synonym of *S. lineata* (Koch) which it closely resembles. Roewer (1934, p. 489) gives the body length of *lineata* as 22 mm., that of *brevipalpus* as 23 mm. in his key to the genus. Body size is of little diagnostic value in female Solpugids but Purcell (1899, pp. 430, 431) gives 32 mm. as the body length of a ♂ *lineata*, 31 mm. as the length of his female type of *brevipalpus*. The female from the Kalahari, while probably immature, at least differs from *brevipalpus* in having no vestige of a 'mane' on the fourth pair of legs, though there are a few very long isolated silky hairs.

SCORPIONES

Family BUTHIDAE

Genus **Parabuthus** Pocock

Parabuthus brevimanus Thorell

One specimen from Orupembe, Kaokoveld, S.W. Africa (8831), collected by C. K. Brain, Aug. 1956.

Parabuthus granulatus (H. & E.)

Two specimens from between Twee Rivieren and Mata Mata, Ouob River, Kalahari (8808, 8809), collected by V. FitzSimons, May 1956. Three specimens from Mocamedes, S. Angola (8845, 8917), collected by C. Koch, Aug.–Sept. 1956.

Genus **Buthus** Leach

Buthus aeratus Lawrence

One specimen from Orupembe, Kaokoveld, S.W. Africa (8833), collected by C. K. Brain, Aug. 1956.

Genus **Uroplectes** Peters

Uroplectes pilosus (Thorell)

Three specimens from Cape Cross, Namib, S.W. Africa (8924), collected by C. Koch, July 1954. This rare species is seldom met with in museum collections; Thorell gave the type locality as 'Caffraria' but Roewer's record of the species from Luderitz Bay and these specimens from Cape Cross seem to establish the territory of the species as being a narrow coastal strip of S.W. Africa (the Namib) from Luderitzbucht northwards.

Uroplectes planimanus (Karsch)

Three specimens from Lungo, near Vila Arriaga, S. Angola (8927), collected by G. Rudebeck, Aug. 1956, and 3 from Caracul, S. Angola (8926), collected by C. Koch, June 1954. The males have 23–25, the females 20–21 pectinal teeth.

Uroplectes carinatus mediostriatus Kraepelin

Three specimens from between Twee Rivieren and Mata Mata, Ouob River (8811), 6 from the junction of the Ouob and Nossob Rivers (8815), both collected by V. FitzSimons, May 1956, in the Kalahari National Park.

Family SCORPIONIDAE

Genus **Opisthophthalmus** C. L. Koch

Opisthophthalmus carinatus histrio Thorell

Four specimens from Dikbaardmanskolk, Nossob River (8802–8805) and 1 from between Twee Rivieren and Mata Mata, Ouob River (8810), both in the Kalahari National Park, collected by V. FitzSimons, May 1956.

Opisthophthalmus wahlbergi typicus (Thorell)

Two specimens between Twee Rivieren and Mata Mata, Ouob River (8806, 8807), and 1 at Kwang Pan, Nossob River (8796), both in the Kalahari National Park, collected by V. FitzSimons, May 1956.

Opisthophthalmus luciranus n.sp.

Holotype, 1 adult ♀, paratypes 2 juvenile specimens (one of these a ♂) from Lucira, S. Angola (8939, 8940, 8942), collected by G. Rudebeck, Sept. 1956.

Colour. Whole dorsal surface dark reddish-brown, except hands (to base of fingers), legs, and the triangle between the eyes, which are yellow-brown; tail and last three abdominal tergites darker, almost black; ventral surface in general yellow-brown, coxae and first four abdominal sternites with a greenish tinge, last sternite very dark olive green, tail segments almost black, vesicle dark-reddish brown.

Carapace. Median eyes situate far behind the middle, almost twice as far from anterior as from posterior margin of carapace, a distinct narrow groove from median eyes to anterior margin, very indistinctly forked anteriorly (fork visible as

a lighter line but not grooved), between the arms of the fork the carapace deeply and abruptly excavated; interocular area smooth, shiny, interspersed with minute faint granules; area behind median eyes smooth but sides of carapace roughened with large, round, shiny granules, largest just behind the lateral eyes; sides of carapace steep.

Abdomen. Tergites smooth, rather creased and shiny, quite without granules except for some fine dust-like granulation at the lateral edges, with a few large scattered pits, the posterior margin of each tergite with a regular row of these; only the last tergite with some scattered granules on each side, those in the postero-lateral angle of moderate size, most of the others minute. Sternites smooth and shiny, with some large coarse pits, last sternite with one weak lateral keel.

Tail. Segment I very short, considerably wider than long, II as long as wide; dorso-medial keels abbreviated, consisting of a row of 3–4 granules in I, of 4–5 in II, these keels fairly well developed on III and IV, obsolete in V, the lateral keels in this segment consisting of an ill-defined row of 10 small granules; terminal granule of the dorsal keels of III and IV not, or very slightly, enlarged. Ventral surface of segments I and II smooth, shiny, no groove between the median keels in I, those of II slightly grooved, the keels of both quite smooth, each with a row of 2 or 3 large pits; median keels of III smooth but well raised, of IV slightly serrated; ventral surface of V regularly covered with sharp pointed granules of varying size, the ventro-lateral keels consisting of a row of about 17 strong saw-like teeth; the sides of both IV and V with small dust-like granules; vesicle below quite smooth, shiny, moderately pilose.

Pedipalps. Dorsal surface of hand slightly convex, almost smooth, shiny, with low, smooth, sinuous, anastomosing ridges; finger keel quite absent; upper surface almost at right angles to outer, separated from it by a strong keel; outer surface regularly covered with fairly prominent round shiny granules; inner edge of hand sharp, granulated, moderately curved; width of hand just equal to hand-back. Dorsal surface of humerus twice as wide as anterior surface, entirely covered with large scattered granules, anterior surface smooth except for a row of 7 large granules in the middle.

Legs. Superior lobes of tarsi III and IV not reaching as far as the lateral, inner lateral lobe with 5, outer with 4 spines; tarsus ventrally with a row of 5 inner, 3 outer spines. Pectines with 14 teeth (pectine on one side missing), the basal sixth without teeth.

Dimensions. Total length 67; trunk 37·5, tail 31; carapace 13·5; eyes from anterior margin of carapace 8, from posterior margin 4·8; width of hand 9, of handback 9, movable finger 13 mm.

An immature ♂, 55 mm. in length, differs from the above in lacking an anterior fork on the carapace, the handback considerably exceeding the width of hand, hand with slightly stronger dorsal granulation; the pectines are toothed up to the base which is rectangular, with 23–24 teeth. Otherwise as in the description of the ♀.

This is, as far as I am aware, only the second species of *Opisthophthalmus* to be recorded from Angola. The other species, *O. lundensis*, described by Monard (1937, p. 267) from Tyihumwè, appears to be most closely related to *O. wahlbergi* Thorell.

The present species finds its nearest relationships with *O. karrooensis rugosus* Lawr. and perhaps to one of the forms of *laticauda*. It differs in such a large number of characters from all the other known forms of *Opisthophthalmus* however, that I have had no hesitation in describing it as a new species.

Opisthophthalmus sp.

A single juvenile ♂ from Cape Cross, the Namib, S.W. Africa (8923), is perhaps comparable with *schultzei* but seems to differ from all the known forms of *Opisthophthalmus*.

Carapace without trace of an anterior fork; median eyes not far behind the middle of the carapace; tarsus IV with 7 exterior, 9 interior spines; all sternites of abdomen and caudal segments I–IV ventrally quite smooth and shiny; tail longer than trunk; vesicle unusually pilose, the hairs long and fine, quite without ventral granulation; pectinal teeth 16–18. Total length 55 (trunk 24, tail 32 mm.).

Genus **Hadogenes** Kraepelin

Hadogenes taeniurus Thorell

Three ♀♀ from Lungo near Vila Arriaga, S. Angola (8919, 8920, 8921) and 1 ♀ from Lucira, S. Angola (8941), collected by G. Rudebeck, Aug. 1956. Pectinal teeth 16–18.

This seems to be the first record of the species from Angola; Monard (1937) does not include it in his list of Angola scorpions.

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