

XV.—Descriptions of several species of Arachnida in the collection of
the Durban Museum,

by

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ORDER SOLIFUGÆ.

SOLPUGA SUFFUSCA sp. nov. (text fig. 13).

TYPE. A single adult male example in the Durban Museum without precise locality data but suspected to have come from some part of Natal. This species is possibly the same as *S. caffra* Pocock (Ann. Mag. Nat. Hist. 6. XX, p. 262), a species founded on a female example from Estcourt. The species of this genus cannot be determined from female characters alone, and until adult male examples from Estcourt are known *S. caffra* may be disregarded.

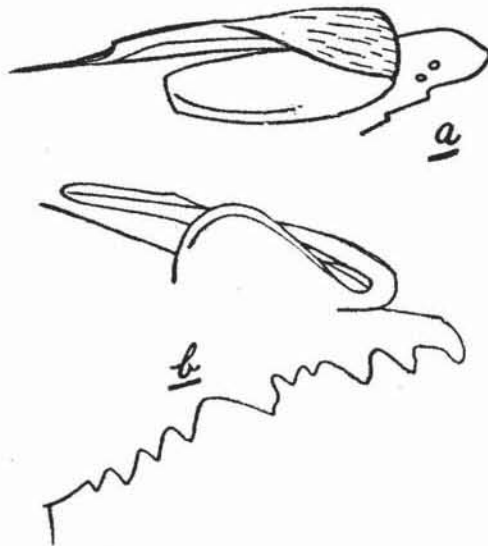
PEDIPALP subequal in length to the third leg. Metatarsus scopulate over the greater portion of its length inferiorly except the distal and proximal eighths.

CHELICERA. In the upper jaw the main row of teeth forms an uninterrupted series. The first and second teeth are large, the third and fourth small, the third especially so, the fifth large: at the base of the fifth on its anterior side is a small hump, apparently representing an obsolete tooth. The double series include four teeth in each row. The terminal fang is rather short but broad: superiorly, it carries two small tubercles on the inner side. Lower jaw with two strong curved teeth and a small intermediate one: the apex of the first tooth is approximately intermediate between the apex of the third and the tip of the fang: except near the apex, where it is keeled on both sides, the lower jaw is not keeled on its outer side.

FLAGELLUM. The basal enlargement is not greatly produced anteriorly and rises fairly high, but there is no sharp keel either superiorly or posteriorly. In front it makes a sudden curve in passing into the recurrent portion. The recurrent portion is low lying, hardly rising quite so high as the basal enlargement, and from its base is directed to the inner side of the basal enlargement: anteriorly it is very broad being greatly flattened, and, seen from above, is much broader than the fang. The recurrent portion is flattened throughout

its length and gradually diminishes in breadth: just before the middle point of its length it is strongly twisted so that here the true ventral surface is uppermost: a little posterior to the hind margin of the basal enlargement, the upper edge of the flagellum presents a small sharp tooth and at this point it has another slight twist, so that, viewed directly from above, this apical portion has the appearance of a slender spine, whilst from the side it looks like a knife blade with blunt end. The tip is approximately midway between the anterior bend and the anterior margin of the head-plate.

TEXT-FIG. 13.



SOLPUGA SUFFUSCA sp. nov.

- (a) shewing flagellum, as seen in dorsolateral view.
 (b) shewing dentition and flagellum in side view.

POSTERIOR LEGS with some very long hairs but not forming a mane.

COLOUR. Head-plate, mandibles, palps and legs dark brown, the tarsi and metatarsi of the legs somewhat paler. Tergites of abdomen brown in the first three segments but black in the following segments: sides of abdomen clothed with yellowish hairs. Abdominal sterna not infuscated, but pale brown. Coxæ of appendages ventrally with a rufous tinge. Malleoli edged with dark brown.

MEASUREMENTS. Total length 40 mm., length of flagellum 3.6, of tibia of palp 9.6, of tarsus and metatarsus of palp 9.5, of tibia of fourth leg 10, of metatarsus of fourth leg 8.5.

REMARKS. The relationships of this species are not clear to me. It may be allied to *S. sagittaria*, Poc. of Mashonaland (Ann. Mag. Nat. Hist. 7. 5. p. 299, figs. 5, 5a) but is certainly distinct therefrom: it also presents points of resemblance to *Zeriassa cunicornis*, Purcell from Southern Rhodesia (Ann. S. African Mus. I, p. 413, figs. 20, 20a).

ORDER ARANEÆ.

FAM. ZODARIIDÆ.

TRYSSOCLITUS BEVISI, sp. nov. (Text-fig. 14).

TYPE. A single adult female example from Ngxwala Hill, Northern Zululand, collected for the Durban Museum by Mr. L. Bevis in July 1915.

The species seems to agree more closely with that originally described by Mr. Simon under the name of *Cesetius politus*, the geno-type of *Tryssoclitus*, than with the various species to which that author has recently restricted the generic name *Cesetius* (Jena. Denkschr. XVI, p. 185, 1909), yet in the final rearrangement of the species I think that *politus* and *bevisi* will be merged into *Cesetius*.

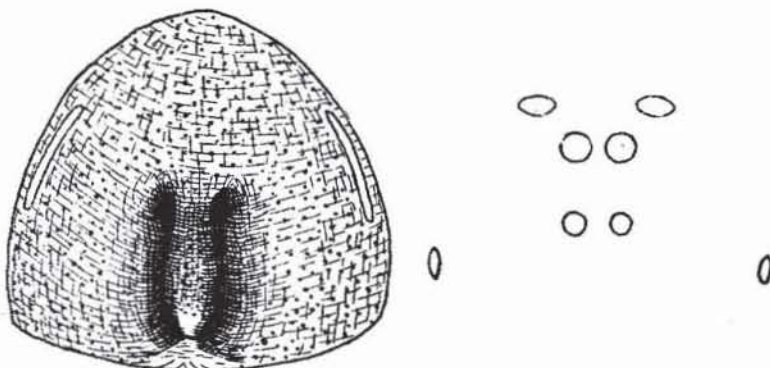
The species now described differs from *politus* in that the carapace is not glabrous but decidedly hairy.

OCULAR AREA. Eyes of anterior row subequal in size, the medians about half a diameter apart. Quadrilateral formed by four median eyes a little longer than broad, a trifle broader anteriorly than posteriorly. Posterior medians about half as large as anterior medians and a trifle more than a diameter apart. Posterior row of eyes moderately recurved, the anterior row being more strongly procurved than the posterior row is recurved.

CARAPACE. The distance from an anterior lateral eye to the anterior margin of the carapace is very slightly less than the length of the quadrilateral enclosing the four median eyes. The clypeus and dorsolateral portions of the carapace are covered with rather long yellowish white hairs. There is a tuft of long hairs projecting upwards from the clypeus between the eyes of the anterior row.

LEGS. All the legs are short and hairy. The tarsi and metatarsi especially are well clothed with short hairs, and at the apex of the metatarsi II-IV inferiorly there are thick tufts of long stiffish hairs. The first pair of legs is devoid of spines, the second pair has only a couple of spines at the apex of the metatarsus inferiorly. There are very long spiniform setae on the inferior surfaces of tibia II, and to a less extent of metatarsus II. Femur III has two spines at the apex distally, IV with two or three at the apex superiorly and one weaker one posterodorsally not far from the apex. Patella III anterodorsally with a row of five spines, towards the posterior portion of the dorsal surface with a row of three spines, and there is also a rather longer spine on the posterior surface near to the apex: patella IV with four

TEXT-FIG. 14.



TRYSSOCLITUS BEVISI sp. nov.

SHEWING EPIGYNE AND OCULAR AREA SEEN FROM ABOVE.

spines anterodorsally, three posterodorsally and one on the posterior surface. Tibia III with about six spines superiorly, also two on the posterior surface and two longer and weaker ones on the anterior surface: IV similarly spined. Inferiorly, the fourth legs present several pairs of very long spiniform setae on both tibia and metatarsus, the pair apically situated on the tibia and about five at the apex of the metatarsus being definitely spines of no great length. The inferior surface of the third leg presents similar characters. The tarsus of III and IV is devoid of spines except for three or two small ones inferiorly in the distal half. Tarsal claws of first leg with six teeth.

PALP not very stout nor very spinous. There is a single spine on the inner side near the apex of the tibia. The tarsus altogether bears about twelve spines, practically all of which are situated on the inner surfaces.

COLOUR. Carapace dark brown. Abdomen covered with hairs of two kinds, some golden and others black, the general colour to the naked eye being a more or less uniform dull brown finely spotted; in the hinder half of the abdomen superiorly are traces of a series of several pale Λ -shaped markings. The legs present paler subannulated markings, the hairs at the apices of the femora and patellæ and at the bases of the tibiæ being pale yellowish: there is a pale spot on the metatarsus, a little nearer to the base than to the apex. Inferiorly three dark longitudinal stripes pass from the region of the epigynæ to the spinners.

EPIGYNE (see fig.). The striking feature is a long free spatulate median process arising anteriorly and covering the deep part of the fovea. The upper side of this process is convex. The epigynæ and process, except near the apex of the latter, is covered with hairs which arise from rather coarse pits.

TOTAL LENGTH 12.5 mm., length of fourth leg 14 mm.

The species of *Cæsetius* and *Tryssoclitus* are only known to me through their descriptions. A noteworthy feature of *T. bevisi*, in comparison with the species of *Cydrela*, is the shortness of the legs especially the third and fourth pairs.

FAM. CTENIZIDÆ.

Gen. SPIROCTENUS, E. Simon.

1888 (1889), E. Sim., Act. Soc. Linn. Bord. p. 408.

Hermachastes R. I. Pocock, 1900, Ann. Mag. Nat. Hist. 7. VI, p. 319.

Bessia R. I. Pocock, *ibid* p. 320.

Homostola W. F. Purcell (not Simon), 1902, Trans. S. Af. Phil. Soc. p. 359.

Stictogaster W. F. Purcell, *ibid* 361.

Hermachastes W. F. Purcell, *ibid* 363.

Bemmeris E. Simon, 1902, Bull. Soc. Ent. Fr. p. 42.

Ctenonemus E. Simon, *ibid* p. 43.

Paromostola W. F. Purcell, 1903, *Ann. S. Af. Mus.* III, p. 93.

Spiroctenus W. F. Purcell, 1904, *Trans. S. Af. Phil. Soc.* XV, p. 121.

SPIROCTENUS PUNCTATUS, sp. nov.

TYPE. A single female example collected for the Durban Museum at Ngxwala Hill, Northern Zululand, by Mr. L. Bevis, July 1915.

The species is very closely related to *Paromostola* (?) *pardalina* mihi, described from Barberton (*Records Albany Museum* II, p. 424), but differs therefrom in the following characters: dentition of chelicerae, spinulation of labium, armature of patella III.

CHELICERAE. Two rows of teeth, the inner comprising 10-12 teeth of moderate size, though varying considerably in their degree of development: outer row with only about six teeth, all rather small, and in addition there are a number of minute teeth at the base of the series. In *pardalina* the inner row is better developed, including 11 or 12 strong teeth.

LABIUM with 31 cusps (in *pardalina* there are 59).

PATELLA of third leg anteriorly with a series of short stout spines or spinules the distal three being best developed whilst those at the base of the segment comprise about five stout spinules. (In *pardalina* the series includes only three stout but rather long spines).

POSTERIOR SPINNERS with apical segment scarcely half as long as the middle segment.

PAIRED CLAWS of fourth tarsus with two rows of 2-3 teeth each, the inner row about half-way up the claw and composed of minute teeth, the outer row basal and composed of strong teeth.

COLOUR. Carapace, chelicerae and femora of palps and legs dark olive-brown, patellae and more distal segments of palps and legs paler. Abdomen dark above with numerous small pale spots of irregular size.

TOTAL LENGTH 16 mm., length of carapace 5.6.

REMARKS ON THE CHARACTERS OF SOME CTENIZID GENERA.

The genus *Spiroctenus*, according to my view, should no longer be restricted to that group of species which have only one distinct row of teeth on the fang groove. If the character of the dentition be regarded as of only specific importance the genus will embrace a

number of species (*vide supra*) for which special generic names have been created by other authors: on the other hand, if that character be maintained as generic it will be necessary to generically separate such closely allied species as *Bessia fossoria*, Pocock and *Bessia minor*, mihi.

The dentition of the tarsal claws in the female is a character of somewhat greater value, and it may perhaps be possible to recognise two subgenera on that basis, *Bessia*, *Homostola zebrina*, *Paromostola* and *Stictogaster* constituting one group, and *Hermachastes* the other: yet I do not think that such groups can be sharply separated.

One the characters of the genus as now enlarged is the presence of a comb of 3-5 spiniform setæ at the apex of metatarsus IV inferiorly: it occurs in both species of *Bessia*, in *Paromostola pardalina* mihi, in the species just described, in *Homostola zebrina* Purcell, and in several species of *Spiroctenus* as defined by M. Simon, but I am not able to state whether the character is absolutely constant throughout the genus. It occurs also in the allied genus *Hermacha*.

The species *Homostola zebrina* Purcell, seems to me only an aberrant *Spiroctenus* standing somewhat isolated in the genus owing to the large size and close approximation of the posterior sternal sigilla. Still, several of Dr. Purcell's species (cf. *Stictogaster reticulatus* and *Hermachastes flavopunctatus*) offer connecting links between *zebrina* and the more typical *Spiroctenus*.

The position of Simon's genus *Homostola* is unknown to me, for it is not clear that *H. zebrina* Purcell is referable thereto. The generic characters given by Mr. Simon in Hist. Nat. Aráign. II, p. 898, include "ungues postici serie unica dentium 6-7 inæqualium armati" and "metatarsi antici . . . parce et minutissimi aculeati," characters which are not found in *zebrina*.

The group characters by which Mr. Simon seeks to separate his group *Cyrtachenieæ*, including amongst others the S. African genera *Pelmatorycter* and *Homostola*, from the group *Nemesiæ*, including *Spiroctenus*, etc. are very unreliable. One of the most important characters of the group *Cyrtachenieæ* is stated to be the very large size and close approximation of the posterior sternal sigilla: actually, however, the character of the posterior sternal sigilla is only of specific importance for in the genus *Pelmatorycter* those sigilla may be small and submarginal, or very large and submedian. I believe indeed that

this character will be found to vary considerably amongst individuals of the same species.

I am also inclined to suspect that the group *Aporoptychæ* is unnatural, and that its S. African representative, *Ancylotrypa*, is identical with *Pelmatorycter*.

The type of the genus *Ancylotrypa* is *A. fossor* Sim., based on an immature female from Landana (Congo). At the same time as he described that species (Act. Soc. Linn. Bordeaux XLII, 1889) M. Simon also described a male from Pt. Elizabeth under the name of *A. spinosa*. The description of *spinosa* is too short for purposes of specific identification but I think it probably refers to a male of the genus for which Mr. Pocock created the name *Pelmatorycter* (A.M.N.H. 7. X, p. 12. 1902), based on female examples, the genotype being *Cyrtachenius flaviceps* from British East Africa. Whether *Ancylotrypa fossor* of Landana and *Pelmatorycter flaviceps* of British East Africa are cogenetic or not, can best be judged when both sexes of these species are available for comparison together and with the various S. African species associated under these generic names. At any rate I suspect that the S. African species hitherto referred to the two genera are all cogenetic. For the present we may still use the more recent name *Pelmatorycter* as it does not seem quite certain that *A. spinosa* Sim. of Pt. Elizabeth is cogenetic with *A. fossor* of Landana, whereas there is no reason to doubt but that the South African species described under the name of *Pelmatorycter* are cogenetic with *flaviceps*.

The group *Amblyocarencæ*, again, is proposed by Simon for the reception of genera which differ from *Cyrtachenius* in the small size and wide separation of the posterior sternal sigilla and thus is mostly likely quite unnatural. It includes the S. African genus *Damarchodes* founded on a Stellenbosch species *D. purcelli* Sim. (Bull. Soc. Ent. France, 1903, p. 43) which is not known to me: many of its characters, according to the description, would seem to ally it with *Pelmatorycter* yet it must differ therefrom, apparently, in that the claws of the anterior tarsi are armed with a single series of teeth (Histoire Nat. Araig. II, p. 901) and the cephalothorax is 'crebre sericeo-pubescent.'

The following are the principal distinguishing characters of the Ctenizid genera known to me from S. Africa:—

Sub-fam. IDIOPINÆ.

Acanthodon,* Guérin. Eyes in two groups, the anterior laterals situated near the anterior edge of the carapace mesially, and the remaining six eyes forming a transverse group at some distance behind: either two or three pairs of sternal sigilla the first pair marginal or sometimes (= *Gorgyrella* Purc.) a little separated from the margin: under side of chelicera with an inner row of 4-6 strong teeth flanked on the outer side by one or two short rows, situated near the basal portion of the main row, and composed usually of small or minute teeth but sometimes including one or two strong teeth: abdomen soft-skinned.

Galeosoma, Purcell. Similar to *Acanthodon* but abdomen with a hard shield posterodorsally.

Idiops, Perty. Eyes like *Acanthodon*. Under side of chelicera with both outer and inner row of teeth well developed and reaching to the distal margin. Tibia of third leg not impressed above at the base.

This genus is not very rigidly separated from *Acanthodon*.

Heligmomerus, Simon. Similar to *Idiops* but tibia of third leg impressed above at the base in the female, somewhat less distinctly so in the adult male.

* The S. African species now referred to this genus are in my opinion cogenetic with the genotype of *Acanthodon* (Guérin 1838) from Brazil, but according to Mons. Simon, in Vol. II of his *Histoire Naturelle*, this name should be abandoned in favour of *Idiops* (Perty 1833) founded on a male example also taken in the Brazilian region. Simon endeavours to shew that the American *Acanthodons*, which he calls *Idiops*, are generically distinct from those of the Old World and refers the latter to three distinct genera, *Pachyidiops*, *Titanidiops* and *Gorgyrella* (also *Heligmomerus*). Accordingly, the S. African species which I include under the names of *Acanthodon* and *Idiops* would probably be referred by Simon to no less than four genera viz.: *Idiops*, *Pachyidiops*, *Titanidiops* and *Gorgyrella*. His new genera do not seem to me to be well founded: *Pachyidiops* and *Titanidiops*, for example, seem to differ chiefly in that the former has all the coxæ "simpliciter pilosæ" whilst in the latter the third coxa is "postice vitta crebre setosa vel spinulosa munita."

Curiously enough, Simon makes no use whatever of the character which was utilized by Dr. Purcell in distinguishing his *Ctenolophus* (= *Acanthodon*, Guérin) from *Idiops*, viz.: the dentition, a character which is comparatively very reliable: I am therefore unable to say which, if any, of Simon's genera is identical with the genus *Idiops* as understood by Purcell (*Trans. S. Afr. Phil. Soc.* XV, p. 118, 1904) and as employed by me here. It must be admitted that our usage of the term *Idiops* is not necessarily the original one and no finality is claimed for the nomenclature here followed. Probably, *Acanthodon* and *Idiops* will eventually be united.

Sub-fam. CTENIZINÆ.

Stasinopus, Simon. Eyes not raised on a common tubercle. Fovea strongly procurved. Tarsi not scopulate in the female; paired tarsal claws with one or two basal teeth in the female but with an extensive single row of about eight or nine teeth in the adult male, at any rate on the anterior legs. Femur IV without a rastellum at its distal end superiorly. Chelicerae with two main rows of strong teeth, about four or five in each row: a rastellum of rather numerous short but very stout spines borne on a strongly projecting anterior process in the female, but the process is weakly developed and the spines much fewer in the adult male. Labium elongated and tapering anteriorly, toothed but not numerously so in the female. Maxilla with a number of strong cusps near the antero-basal angle inferiorly in the female. The two anterior pairs of sternal sigilla obsolete, third pair elongated and nearly meeting mesially. A comb of stiff setae near the apex of metatarsus IV inferiorly may be present or absent in the female.

Pelmatorycter, Pocock. The two anterior median eyes usually distinctly raised on an ill-defined low tubercle. Fovea procurved. Tarsi, and metatarsi wholly or in part, of the two anterior pairs of legs scopulate in the female: paired tarsal claws with two rows of teeth, those on the anterior legs including usually about six or seven teeth in each row, the rows being opposite to each other. Femur IV with a rastellum at its distal end superiorly. No compact comb of spiniform setae near the apex of metatarsus IV inferiorly. Chelicerae with only one row of well developed teeth inferiorly: rastellum strong, with rather numerous short stout spines, mostly concentrated near the inner margin of the segment, though not borne on a strongly projecting anterior process. Labium broad, without cusps; maxilla with or without one or several weak cusps at the anterobasal angle inferiorly. Three pairs of sternal sigilla. The anterior articulating surfaces of the coxae and trochanters of the first two pairs of legs present patches of fine spinules rather densely crowded together.

Spiroctenus, Simon. All the eyes grouped on a common tubercle. Paired tarsal claws of adult male carrying a single long spirally curving numerously toothed row, of female and young with two rows, one of the rows being more distal than the other and the number of teeth in each row varying from about eight to two, in which latter case the individual teeth of the inner row may be very minute. Inferior tarsal claw comparatively large on all the legs. Anterior tarsi, and metatarsi wholly or in part, more or less distinctly scopulate

in the female. Femur IV with a rastellum at the distal end superiorly. A compact comb of 3-5 spiniform setæ near the apex of metatarsus IV inferiorly in the female. Dentition of chelicerae variable, either a single well developed row, or two such rows, or an irregular arrangement. The long stout spines of the rastellum are not numerous, being usually about six or seven fringing the anterior margin of the segment. Labium broader than long, with few or numerous cusps. Maxillæ with very few or numerous cusps at the base inferiorly. Three pairs of sternal sigilla. Fovea straight or a little recurved or rather strongly procurved.

Hermacha, Simon. Carapace hairy throughout. All the eyes on a common tubercle. Paired tarsal claws with a double row of numerous teeth in both sexes. Inferior claw minute on the anterior legs. Tarsus and metatarsus of first two pairs of legs with a dense undivided scopula. No spines at the distal end of femur IV superiorly. Metatarsus IV with a comb of spiniform setæ at the apex inferiorly in the female. A single row of strong teeth below the chelicerae. Rastellum weak, composed of slender spines or bristles. Labium broad, without cusps or with a few on the apical margin. Maxillæ with few or many teeth at the base inferiorly. Three pairs of sternal sigilla.

In addition to the genera previously mentioned, several provisional generic names have been proposed for species which seem to differ only slightly from *Hermacha* and may perhaps have to be eventually abandoned, viz.: *Pionothele* and *Lepthercus* described by Dr. Purcell (Trans. S. Af. Phil. Soc., XI, p. 379-382, 1902), which are unknown to me, and *Hermachola* founded by me for the reception of a species in which the adult male has the spine of the bulbal organ spirally coiled like a corkscrew (Annals Natal Mus., III, pt. 2). In the last mentioned genus the bulbal organ character is held to be of generic value in view of the general uniformity which otherwise prevails therein throughout the Ctenizinae.