

A Contribution to the Araneid Fauna of Natal and Zululand.

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With 32 Text-figures.

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THE following study is based on specimens belonging to a number of families of spiders collected in Natal and Zululand at different times. Of the 43 species listed in the paper 27 are new to science. The localities in Zululand are Kosi Bay, and Ingwavuma in the Ubombo Mountains, while the Natal forms were collected at various localities, the majority coming from Umhlali on the North Coast.

Two species have been included in the paper which do not fall within the area under consideration, one from Swaziland, the other from the North Eastern Transvaal, where it was collected by Mr. H. K. Munro of the Entomological Bureau, Pretoria.

Family ULOBORIDÆ.

Gen. *Dinopsis* MacLeay.

Dinopsis cylindraceus Poc.

1 ♂, Umhlali, North Coast, Natal (N.M. 2918).

Family ZODARIIDÆ.

Gen. *Chariobas* E. Simon.

Chariobas cylindraceus E. Simon. Text-fig. 1a, b.

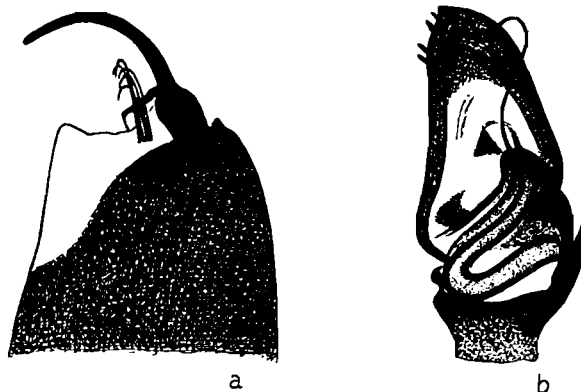
1 ♂, Umhlali, North Coast, Natal (N.M. 2437).

Lessert has given several good descriptions (10, 11, 12) of the female of

this species, which has a wide distribution in tropical and subtropical Africa. I have no doubt that the Natal Museum specimen can be referred to this form. The following is a description of the male :

Colour.—Carapace black, abdomen above black with 6 white markings on each side, the first two comma-shaped, the third in the form of a right angle, the fourth and fifth rounded dots, the sixth a transverse bar which may be broken ; sides of abdomen black with a white dot below each lung book and a smaller white dot near the spinners ; ventral surface black, with two small white dots a little anterior to the spinners ; sternum black ; coxae white, their margins black ; mouthparts black (maxillæ tipped with white). Femora of all legs black, patellæ of anterior legs infuscated blackish but lighter above, remaining segments of anterior legs yellow ; tibia to tarsus of leg III yellow-

TEXT-FIG. 1.



Chariobas cylindraceus E. Simon. ♂. *a*, Chelicera ; *b*, pedipalp.

brown ; leg IV black, a band in the middle of tibia and the whole of tarsus a little lighter.

Eyes.—Seen from in front the anterior row more strongly procurved than posterior row, medians half as large as the laterals and a little less than their own diameter apart ; posterior medians a little larger than posterior laterals, less than their radius apart and a little more from the laterals ; median quadrangle as long as posteriorly wide ; laterals on each side nearer to each other than are the medians to each other ; clypeus more than twice the length of median quadrangle.

Carapace.—Seen from above the carapace narrows anteriorly to a blunt point ; seen from the side the clypeus slopes so strongly backwards that the carapace again appears to form a blunt point on which the eyes are situated.

Chelicerae.—Anterior surfaces with transverse corrugations, a pit-like rounded depression apically near their inner margins. Fang of chelicerae long, slender, and more or less the same width throughout its length, widening a

little near its base, the apex blunt (fig. 1a). Inner margin of chelicerae, seen from below, with a large fleshy lamella projecting inwards and forming a well-defined angle; near the base of the fang a solitary group of 4-5 long curved hairs, their bases contiguous (fig. 1a). Abdomen more or less parallel sided, a little more than twice as long as wide.

Pedipalp as in fig. 1b, seen from in front; tibia considerably shorter than patella, with a sharp pointed process on its outer side.

Legs.—Tibia I with 3 pairs of inferior spines and a seventh spine on inner side between the basal and middle pairs, in addition 4 strong lateral spines on inner side; tibia II similar but with only 1 sub-basal outer spine instead of a pair, and 3 lateral spines on the inner side. Metatarsus I with 2 pairs of inferior spines, and 3 strong but shorter spines at its apex; metatarsus II below with 1 pair of sub-basal spines, 3 shorter apical spines, and 2 lateral inner spines.

Dimensions.—Length of carapace 3.6, length of abdomen 3.5, width 1.6; total length 7 mm.

Chariobas lineatus, described by Pocock from Kingwilliamstown, Cape Province (16), was probably based on an adult ♀; it differs very markedly in colouring from *C. cylindraceus* Simon.

Gen. *Cydrelichus* Pocock.

Cydrelichus fagei Lawrence.

C. fagei Lawrence, Ann. Natal Mus., vol. viii, Pt. 2, p. 225, fig. 6, 1937.

1 adult ♀ from Drummond, near Pietermaritzburg, Natal (N.M. 2632).

Cydreliceus globicoxis n. sp. Text-fig. 2 a-d.

Types, 4 ♂♂, Kosi Bay, Zululand (N.M. 1789).

Colour.—Carapace dark reddish-brown, with scattered white hairs, more numerous on the cephalic portion; legs and palps brown, legs lighter at their apices; abdomen above smoky black, with 4 white spots in its anterior half and a white bar above the spinners in posterior half; between these, 4-5 whitish chevron markings, smaller and less clearly defined than the other markings; abdomen below black, without markings; sternum brown, darker at the sides, posterior coxae dark brown, anterior ones and mouthparts a little lighter.

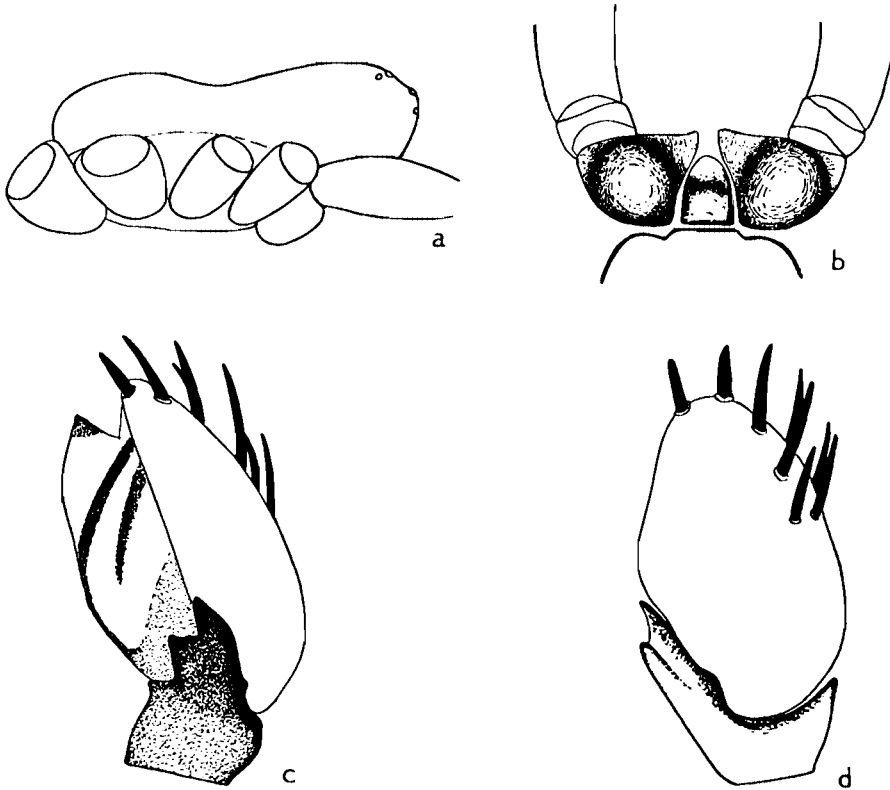
Carapace finely shagreened on its dorsal surface, anterior surface (clypeus) with coarse granules; seen from the side (fig. 2a) the carapace is saddle-shaped and much depressed at the junction of the cephalic and the thoracic regions.

Eyes.—Anterior medians smaller than anterior laterals, separated by their own diameter, and $1\frac{1}{2}$ diameters from the laterals; laterals $1\frac{1}{2}$ -2 their diameter from each other; posterior row, seen from above, a little recurved, medians

oval, subequal to laterals, their short diameter apart and about 2 long diameters from the laterals; median quadrangle considerably longer than posteriorly wide, a little wider behind than in front; clypeus a little more than twice the length of the quadrangle formed by the four anterior eyes.

Chelicerae.—Inferior and superior margins without teeth, anterior surface of chelicerae roughly granular, less so distally.

TEXT-FIG. 2.



Cydrelichus globicoxis n. sp. ♂. a, Carapace from the side; b, labium and maxillae; c, pedipalp from outer side; d, from behind.

Mouthparts.—Basal portion of maxillae shiny, smooth, and very prominent, forming a regularly oval swelling which is well demarcated from the rest of the structure (fig. 2b); seen from the side this portion of the maxilla projects downwards beyond the level of the sternum and the coxæ of the legs. Trochanter of palp inserted at the upper level of the maxilla, not at the side; sternum creased at the sides and posteriorly.

Pedipalp.—Seen from the outer side as in fig. 2c, and from behind as in fig. 2d; tibia shorter than patella, especially when seen from the inner side.

Legs.—Coxa IV with strong transverse grooves or creases on its outer surface ; remaining coxæ also creased, but much less strongly. Tibiæ I and II with 3 pairs of long, weak inferior spines ; metatarsi I and II with 3 pairs of shorter and stronger spines below ; posterior legs with numerous spines.

Dimensions.—Length of carapace 4·8, total length 8·5 mm.

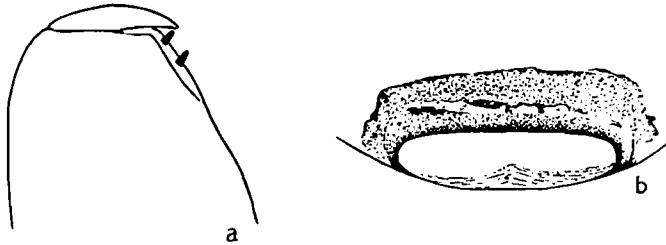
Gen. *Hermippus* E. Simon.

Hermippus septemguttatus n. sp. Text-fig. 3a, b.

Types.—2 ♀♀, Kosi Bay, Zululand (Coll. R. Toppin, N.M. 1785).

Colour.—Carapace and mandibles deep black, abdomen above black, with seven yellow or ivory-white markings arranged as follows : One cuneiform marking in the middle near anterior apex, then a pair of widely separated

TEXT-FIG. 3.



Hermippus septemguttatus n. sp. ♀. a, Chelicera ; b, vulva.

cuneiform markings, posterior to these a pair of widely separated transverse bars ; at the posterior end of abdomen two markings, the distal one foliiform and situated just above the spinners, the other, a transverse bar very close to it ; sides of abdomen dirty white ; ventral surface dirty white, mottled with brown spots of irregular shape. Legs (including coxæ) yellow, a little darker at their apices ; sternum and mouthparts brown ; palp yellow, tibia and tarsus dark brown.

Eyes.—Anterior row slightly procurved, medians $\frac{1}{3}$ larger than laterals, less than their own radius apart (about $\frac{1}{3}$ diameter), and about $1\frac{1}{2}$ diameters (or a very little more) from the laterals ; laterals on each side subequal (the posteriors a little larger), and about half the radius of an anterior lateral apart ; median quadrangle slightly wider behind than in front and a little wider behind than long ; anterior medians twice as large as posterior medians ; posterior row a very little more procurved than anterior row, medians a little smaller than laterals, $1\frac{1}{2}$ –2 their diameter apart, and about twice as far from the laterals as from each other ; clypeus 2–3 times the length of the median quadrangle.

Whole of carapace finely shagreened, but clypeus with fine regular granulation ; sternum with small regular granules, these well separated ; coxæ smooth.

Chelicerae.—Superior margin with 2 small but distinct black teeth, inferior margin with none (fig. 3a).

Vulva as in fig. 3b, situated at the posterior end of a large strongly chitinized plate, the posterior margin raised, then rounded and bent strongly downwards.

Legs.—Tibiae I and II with 3 pairs of inferior spines, metatarsi I and II with 4 rather irregular pairs of inferior spines and a lateral apical spine on each side; tarsus I with two rows of 4–6 spines; claw of palp pectinate, with about 7 minute teeth.

Dimensions.—Length of carapace 4.5, total length of larger specimen 10 mm.

Lessert (13) has given a list of the four other species of *Hermippus* found in Africa, all of which seem to have been based on male specimens. Our species differs from these in the coloration and in having two distinct teeth on the inferior margin of the chelicerae (one in the case of males of *H. loricator* Simon and *H. schoutedeni* Lessert).

Family THOMISIDÆ.

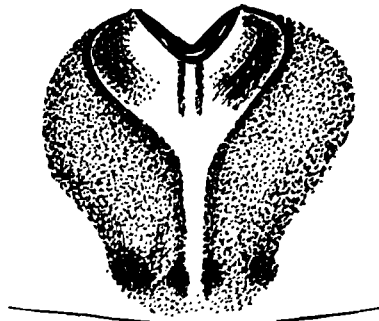
Gen. *Simorcus* E. Simon.

Simorcus zuluanus n. sp. Text-fig. 4.

Types.—2 adult ♀♀, 5 immature ♀♀, Kosi Bay, Zululand (N.M. 1983).

Colour.—Carapace mottled light reddish-brown, clypeus and a patch above

TEXT-FIG. 4.



Simorcus zuluanus n. sp. ♀. Vulva.

leg I white; abdomen mottled grey; dorsal surfaces of femora I and II white, ventral surfaces light brown with a blackish spot at their bases, remaining segments of anterior legs mottled yellow brown, tibiae and metatarsi with a lighter band at their bases.

Eyes.—Anterior row equidistant, laterals almost three times as large as medians, medians separated by 4 times their own diameter; posterior row

recurved, medians half as large as laterals and $1\frac{1}{2}$ times as far from each other as from them ; median quadrangle wider behind than long, much wider behind than in front ; clypeus $2\frac{1}{2}$ times the distance between the anterior median eyes.

Carapace with two small tubercles (not four) behind the posterior row of eyes, the anterior margin with a rather irregular row of 12-14 short spines, the length of these more or less uniform.

Chelicerae with 9 thickened black hairs on their anterior surfaces arranged in three short transverse rows of 3 each.

Legs.—I, II, IV, III. Femora, patellæ and tibiæ of all legs with coarse tubercles above but not below ; tibiæ, metatarsi and tarsi of legs I and II with longitudinal regular rows of small tooth-like spines on their inferior surfaces ; these rows occupying the whole length of the segment in metatarsi and tarsi but only the distal portion of the tibiæ ; in the same segments of the posterior legs these spines replaced by hairs or setæ. Metatarsus I $2\frac{1}{2}$ -3 times tarsus I.

Vulva as in fig. 4.

Dimensions.—Smaller adult : length of carapace 3, length of abdomen 3.5, width 3 mm. Larger adult : length of carapace 3.6, length of abdomen 5 mm. This species is undoubtedly closely related to *S. cotti* Lessert (12) and the general form of the vulva in the two species is very similar ; it differs from *cotti* in having 2 small tubercles behind the posterior eyes, in the disposition of the eyes, in leg I being a little longer than leg II, and in the detailed structure of the vulva.

Gen. *Tmarus* E. Simon.

Tmarus lesserti n. sp. Text-fig. 5.

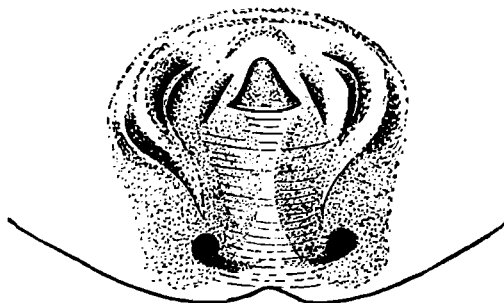
Type.—1 ♀, Kosi Bay, Zululand (N.M. 2958).

Colour.—Specimen rather faded in alcohol. Thoracic area brown ; cephalic area, including ocular region and clypeus, much lighter, more or less grey ; apex of cephalic area with a small white cuneiform marking from each side of which a fine line passes posteriorly and laterally ; cephalic area also with some fine white lines, one at each side of the area, one in the middle and a transverse shorter one behind the posterior median eyes ; chelicerae with coloration similar to that of the clypeus ; abdomen above mottled grey, brown, and white, with some fine white transverse lines, one at the interior apex, one near the middle, and one or two near the posterior apex ; posterior upper margin of abdomen defined by a brown stripe which is darker near each of the postero-lateral angles ; ventral surface greyish-white, a broad quadrati-form marking in the middle darker ; legs yellow, antero-inferior surfaces mottled with white.

Eyes.—Anterior row slightly recurved ; a line touching the upper surfaces of

the medians would pass through the centres of the laterals; medians half or a little less than half as large as the laterals, as far from them as from each other; posterior row seen from above distinctly recurved, medians half as large as laterals and $1\frac{1}{2}$ –2 as far from them as from each other; median quadrangle a little wider behind than in front and as long as posteriorly wide, posterior medians a little smaller than anterior medians; posterior laterals a little smaller than anterior laterals and a little further from them than are the posterior medians from the anterior medians; posterior laterals a little nearer to anterior laterals than to posterior medians. Clypeus equal to the length of median quadrangle.

TEXT-FIG. 5.

*Tmarus lesserti* n. sp. ♀. Vulva.

Chelicerae.—Both superior and inferior margins toothless.

Vulva.—As in fig. 5, with a hood-like anterior pocket.

Legs.—Femora I and II with 3 anterior, 2 superior, 3 posterior spines, tibiae I and II with 3 pairs of supero-lateral spines and 1–2 inferior spines; metatarsi I and II with 3 anterior and 2 posterior spines below, and 2 pairs of supero-lateral spines.

Dimensions.—Length of carapace 2, total length 4.7 mm.

This species may prove to be the ♀ of *Tmarus natalensis* Lessert (8) described from Amanzimtoti, Natal.

Gen. *Thomisops* Karsch.

Thomisops pupa Karsch. Text-fig. 6a, b.

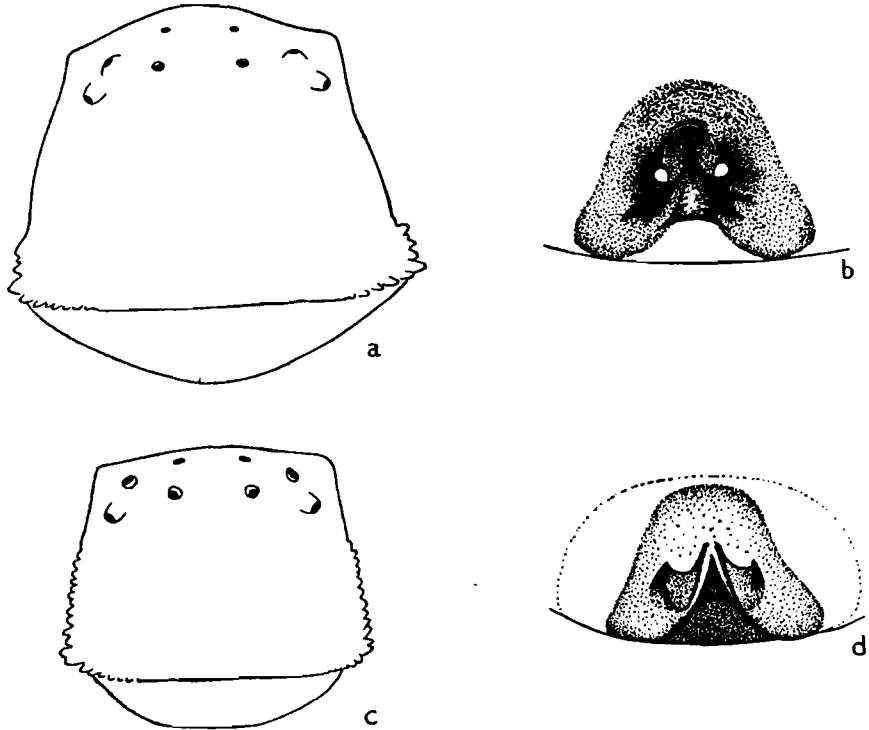
The Natal Museum has a number of specimens of both sexes, all from Zululand. These agree well with Lessert's descriptions and figures (11, 12). As he has not, however, figured the vulva of the female, I have done this for an adult ♀ specimen from Kosi Bay, Zululand (fig. 6b). We have 5 ♀♀, and 4 ♂♂, from the above named locality in the collections of the Natal Museum N.M. 1989, 1750, 1787, 1981).

Thomisops nigroannulatus n. sp. Text-fig. 6c, d.

Type.—1 ♀, Umhlali, North Coast, Natal (N.M. 1454).

Colour.—Carapace blackish-brown at the sides, a fairly broad subparallel blackish stripe in the middle giving off a narrow stripe anteriorly to each posterior median eye and a fainter stripe in the middle which is again subdivided; carapace between this marking and the sides light reddish-brown;

TEXT-FIG. 6.



Thomisops pupa Karsch. ♀. a, Carapace from above; b, vulva. *Thomisops nigroannulatus* n. sp. ♀. c, Carapace from above; d, vulva.

ocular area, clypeus and mandibles, orange to light reddish-brown; the tubercles of the eyes white; abdomen above confused light yellow-brown, with some ill-defined black spots and transverse bands; spinners blackish. Sternum yellow with black marginal dots tending to form a continuous blackish margin; coxæ and trochanters with a distinct but narrow black apical ring. Legs in general yellow, femora with a distinct black apical band above, and a black band in the middle below (more distinct in the posterior legs); patellæ (especially the posterior ones) with a black dot on each side at their bases;

tibiæ with an incomplete black band at their bases ; tarsi with a narrow black band at their bases (at least in the posterior legs). Carapace strongly and coarsely granular, the granules considerably larger than those of *T. pupa*, the ridge of granules at the side of the carapace strong and continued anteriorly; carapace seen from above with more or less parallel sides (in *T. pupa* the carapace is considerably wider behind than in front ; compare fig. 6a with fig. 6c).

Eyes.—Anterior row strongly recurved, subequal (the medians white, the laterals black) ; medians $1\frac{1}{2}$ times as far from each other as from the laterals ; posterior row, seen from above, less recurved than anterior row, subequal, or the medians a very little smaller ; medians $1\frac{1}{3}$ as far from each other as from the laterals ; median quadrangle a little wider behind than in front and wider in front than long ; clypeus a little deeper than the length of median quadrangle.

Abdomen truncate along its anterior margin, rounded behind, its dorsal surface with numerous (for the most part white), evenly distributed granules. In *T. pupa* these granules are more numerous at the sides while the central portion is more or less smooth.

Vulva as in fig. 6d.

Legs without spines, but patellæ and tibiæ with rows of distinct white granules.

Dimensions.—Length of carapace 2.3, width 2.6 ; length of abdomen 3.3, width 4.1 mm.

Additional specimens.—1 adult ♀, 1 immature ♀, Umhlali, North Coast, Natal (N.M. 2920, 1440).

The female from Umhlali recorded as *Thomisops pupa* by myself (4, p. 486) should be referred to this species. *T. pupa* does not appear to be found south of Zululand, while *nigroannulatus* is a Natal species. *T. nigroannulatus* differs from *T. pupa* in the following particulars :

T. nigroannulatus.

1. Carapace with large coarse granules.
2. Carapace with more or less parallel sides (fig. 6c).
3. Legs with black annulations.
4. Patellæ and tibiæ of legs granular.
5. Vulva as in fig. 6d.
6. Granules on dorsum of abdomen numerous.

T. pupa.

- Carapace with small granules.
 Carapace much wider behind than in front (fig. 6a).
 Legs without markings.
 These segments smooth.
 Vulva as in fig. 6b.
 Granules on dorsum of abdomen not numerous except at the side.

In its colouring *Thomisops nigroannulatus* closely resembles *T. crassiceps* Strand (23) from the Congo. The anterior median eyes are, however, not smaller than the anterior laterals, as in Strand's description, but if anything a little larger. The colour of the sternum and mouthparts is predominantly yellow, while in *T. crassiceps* it is blackish. The species is evidently more

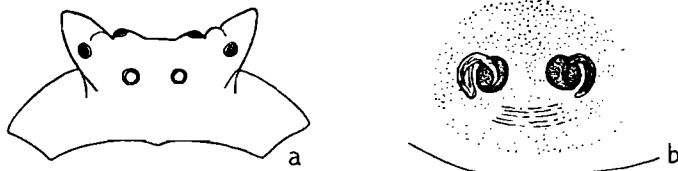
closely related to *crassiceps* than to *pupa*. It is difficult to compare this form with Simon's two species from the Transvaal, *bullatus* and *sulcatus* (18), but, judging from the brief descriptions given, it differs in colouring from both of them, more markedly so in the case of *sulcatus*.

Thomisus sepiosus n. sp. Text-fig. 7a, b.

Type.—1 ♀, Pietermaritzburg, Natal (N.M. 2945).

Colour.—Carapace yellow, with rather irregular submarginal brown bands along the sides reaching the ocular tubercles anteriorly, but not the posterior margin of the carapace; cephalic area with an ivory-white branched symmetrical marking including the ocular area, tubercles, and middle portion of the clypeus; chelicerae yellow with a cuneiform white marking at their bases; abdomen above yellow, the tubercles lighter, with a short black stripe on their

TEXT-FIG. 7.



Thomisus sepiosus n. sp. ♀. a, Carapace seen from in front; b, vulva.

inner sides; abdomen below yellow, a little darker in the middle between the spinners and the epigastric region.

Sternum and coxae variegated white and light brown, coxae I and II with a white anterior marginal stripe and a brown bar at their distal spices.

Legs yellow with brown and ivory-white spots and bands as follows: Infero-anterior surfaces of femora I and II with a small white basal spot and a smaller brown contiguous spot (this absent in femur II), in the middle a distinct black bar with a white bar on each side of it, at the apex a white ring; anterior patellae with a white apical ring; anterior tibiae without markings above, below in the middle with a brown bar and a smaller white one just distal to it, a narrow white apical ring; anterior metatarsi darkened in their distal halves; posterior legs with a brown dot near the antero-inferior apices of the femora and tibiae, and some white annulations.

Eyes.—Anterior row seen from in front strongly recurved, medians smaller than the laterals, and a little more than $1\frac{1}{2}$ times as far from them as from each other; posterior row much less recurved than anterior row, medians $1\frac{1}{2}$ –2 as far from each other as from the laterals, distinctly larger than the laterals which are situated on the posterior surfaces of the tubercles; median quadrangle considerably wider behind than in front, as long as posteriorly wide

(seen from above and in front), anterior medians a little larger than posterior medians; clypeus a little less than twice the distance between the anterior median eyes. Lateral tubercles (fig. 7a) directed more upwards than sideways, the area between them, seen from in front, strongly concave (fig. 7a); tubercles $2\frac{1}{2}$ -3 times the diameter of the anterior lateral eyes; the posterior median eyes situated on swollen subtubercular bases.

Chelicerae.—Anterior surfaces with a patch of stout black bristles along their inner margins distally, these not, however, dense.

Abdomen with conical lateral tubercles directed almost vertically upwards, their apices distinctly truncate.

Vulva as in fig. 7b.

Legs.—Femur I with 3 anterior, 1 superior spine, femur II with only 1 superior spine. Tibia I with 2-3 anterior and 1 posterior spine below, II with 1 anterior and 1 posterior spine below; metatarsi I and II with 5 anterior and 4 posterior spines below.

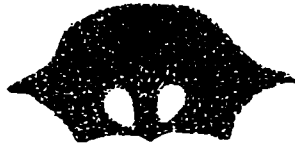
Dimensions.—Length of carapace 2.7, total length 5.7 mm.

Thomisus urbensis n. sp. Text-fig. 8.

Type.—1 ♀, Pietermaritzburg, Natal (N.M. 2194).

Colour.—Carapace yellow with a pattern of ivory-white markings as follows: A \cap -shaped marking at the posterior apex of cephalic area connected with

TEXT-FIG. 8.



Thomisus urbensis n. sp. ♀. Vulva.

the ocular area and tubercles by fine white line on each side; the whole of ocular region, including the tubercles and central portion of the clypeus, ivory-white, except a subquadrate area surrounding the anterior median eyes which is the same colour as the general background of the carapace; chelicerae ivory except near their bases and along their inner margins, which are yellow; legs yellow with longitudinal stripes of ivory-white, especially on the antero-inferior surfaces of femora; abdomen creamy white without markings; sternum white; coxae yellow, mottled with white. Carapace and legs smooth, without

fine or coarse granules or spicules ; abdomen perfectly smooth, rounded above, without lateral tubercles.

Eyes.—Anterior row fairly strongly recurved, medians a very little larger than the laterals and $1\frac{1}{2}$ – $1\frac{3}{4}$ times as far from them as from each other ; posterior row very slightly recurved, medians larger than the laterals and a little less than twice as far from each other as from them ; median quadrangle much wider behind than in front, as long as anteriorly wide, the anterior almost twice as large as the posterior median eyes ; clypeus a little less than twice the distance between the anterior median eyes ; lateral tubercles short, 3–4 times the diameter of an anterior lateral eye, directed a little more outwards than upwards ; seen from in front the area between the tubercles is distinctly concave.

Vulva as in fig. 8.

Legs.—Tibia I with 4 anterior and 1 posterior spine in its distal half below, II with 2 anterior and 1 posterior spine below in distal half ; metatarsus I with 7.6 or 6.6 spines below, metatarsus II with 6.5 spines below (6 anterior, 5 posterior).

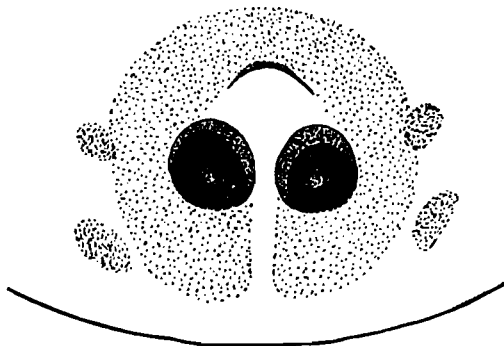
Dimensions.—Length of carapace 3.2, total length 8 mm.

Thomisus anthobioides n. sp. Text-fig. 9.

Type.—1 ♀, Umhlali, North Coast, Natal (N.M. 2924).

Colour.—Entire specimen light yellow, the ocular tubercles, ocular area, and part of the clypeus forming a wide triangle which is ivory-white in contrast

TEXT-FIG. 9.



Thomisus anthobioides n. sp. ♀. Vulva.

to the remainder of the carapace, this triangle with its apex directed downwards near the edge of the clypeus ; chelicerae ivory-white except near its base anteriorly.

Eyes.—Anterior row fairly strongly recurved, medians a little larger than the laterals and a little less than $1\frac{1}{2}$ times as far from them as from each other ;

posterior row very slightly recurved, medians distinctly smaller than the laterals and about $1\frac{1}{4}$ times as far from them as from each other. Median quadrangle much wider behind than in front and distinctly longer than anteriorly wide; posterior medians half as large as anterior medians; clypeus twice or a little more the distance between the anterior median eyes; lateral tubercles directed much more laterally than upwards, the area between the tubercles, seen from in front, slightly concave.

Granulation: Carapace and abdomen quite smooth, without spicules or granules, abdomen pentagonal, distinctly longer than wide; a very weakly developed tubercle on each lateral edge midway between the anterior and posterior apices of abdomen.

Vulva as in fig. 9; resembling that of *T. anthobius* Pocock (15), from Estcourt, Natal. It differs from it, however, in having the blackish rounded pits considerably closer to each other.

Legs.—Leg I missing. Tibia II below with 2 anterior and 1 posterior spine in its distal third, or with simply a pair of spines; metatarsus II below with 6 anterior, 5 posterior spines.

Dimensions.—Length of carapace 3.3, total length 7.5 mm.

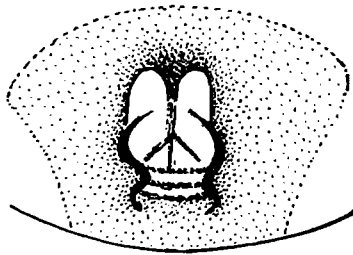
Although the formation of the vulva is somewhat similar to that of *T. anthobius* Pocock, the colouring of the latter species is quite different, the ocular region being ornamented with black stripes (also found in *T. malevolus* Cambr. (1)), which are entirely absent in the species under consideration.

Thomisus zuluanus n. sp. Text-fig. 10.

Type.—1 ♀, Kosi Bay, Zululand (N.M. 1992).

Colour.—Carapace yellow, some broken lines composed of white dots on the cephalic area, thoracic area with some minute white dots; tubercles and

TEXT-FIG. 10.



Thomisus zuluanus n. sp. ♀. Vulva.

ocular region forming a triangular area with its apex at the edge of clypeus, this area tinged with brown, especially at the apices of the tubercles, and distinct from the remainder of the carapace; abdomen ivory-white; legs yellow.

Eyes.—Anterior row moderately recurved, equal, medians $1\frac{1}{2}$ times as far from the laterals as from each other; posterior row seen from above slightly recurved, medians a fraction larger than the laterals; median quadrangle much wider behind than in front, its anterior width greater than its length; clypeus $1\frac{1}{4}$ – $1\frac{1}{2}$ times the distance between the anterior median eyes. Lateral tubercles 3–4 times the diameter of an anterior lateral eye; seen from in front the area between the tubercles is quite level or a little concave in the middle.

Carapace with a few minute scattered granules, each bearing a small fairly stout seta; abdomen with similar but more numerous granules. Abdomen wider than long, pentagonal, the upper edges well-defined and sharp, the lateral tubercles weak and much closer to the posterior than the anterior margins.

Vulva as in fig. 10.

Legs.—Tibia I with 6, tibia II with 4 pairs of inferior spines; metatarsi I and II usually with 7–8 irregular spines on each side inferiorly, sometimes only 6. Femur I with 3 anterior and 2 superior spines, femur II with 2 superior spines only.

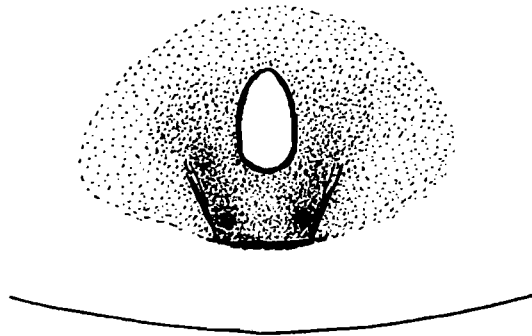
Dimensions.—Length of carapace 3·7, total length 7·5 mm.

Thomisus natalensis n. sp. Text-fig. 11.

Types.—2 ♀♀, Umhlali, North Coast, Natal (N.M. 2923).

Colour.—Specimens in general uniform light yellow, the legs a little darker towards their apices; carapace, especially at the sides, a little darker than the

TEXT-FIG. 11.



Thomisus natalensis n. sp. ♀. Vulva.

rest of the body; clypeus and the dorsal surface of carapace along its anterior margin tinged with brown, the edge formed by the junction of the anterior margin and the vertical clypeus white, sharply demarcated from the rest of the carapace, and appearing as a well-defined transverse white line. Carapace with a vase-shaped marking at the posterior apex of cephalic area a little lighter than the rest of the carapace. Abdomen yellow white with a faint brown transverse line connecting the lateral tubercles.

Carapace, clypeus, chelicerae, abdomen and the legs above and below uniformly covered with minute spicules. On the abdomen these are less numerous posterior to the abdominal tubercles than anterior to them; in the anterior half of abdomen they are more numerous along the upper anterior and lateral edges (where they tend to form rows) than in the middle. On the carapace these spicules are more numerous on the vase-shaped marking than elsewhere. They are absent on the sternum, coxae, and ventral surface of abdomen.

Eyes.—Anterior row fairly recurved, the medians distinctly smaller than the laterals and about $1\frac{1}{3}$ times as far from them as from each other; posterior row slightly recurved, equal, the medians $1\frac{1}{3}$ times as far from each other as from the laterals; median quadrangle much wider behind than in front, wider in front than long; clypeus equal to the distance between the anterior median eyes or a little more; lateral tubercles directed more laterally than upwards, 2–3 times the diameter of an anterior lateral eye; seen from in front the area between the tubercles level or very slightly concave.

Abdomen seen from above distinctly wider than long, forming a pentagon with regular, almost straight sides, the antero-lateral and postero-lateral sides forming almost a right angle, the apices of the angles being the lateral tubercles, which are, however, not strongly developed; lateral tubercles nearer the posterior than the anterior end of the body.

Vulva as in fig. 11.

Legs.—Tibia I below with 2 anterior, 1 posterior spine, or 2 pairs of spines in distal half; II similarly with a pair of spines or 2 anterior and 1 posterior spine; metatarsi I and II with 5 or 6 pairs of strong inferior spines.

Dimensions.—Length of carapace 4·7, width 5; length of abdomen 5·3, width 6·3, total length 9·3 mm.

This species is related to *T. caffer* E. Simon (22), but differs from it in colouring, spination and the form of the vulva.

Thomisus malevolus O. P. Cambridge.

1 ♀, Pietermaritzburg, Natal (N.M. 2886).

2 ♀♀, Natal (N.M. 1962).

Thomisus caffer E. Simon.

2 ♀♀, Umhlali, North Coast, Natal (N.M. 2919).

1 ♀, Pietermaritzburg, Natal (N.M. 2458).

1 ♀, Umhlali, North Coast, Natal (N.M. 2925).

Gen. *Runcinia* E. Simon.

Runcinia littorina n. sp. Text-fig. 12.

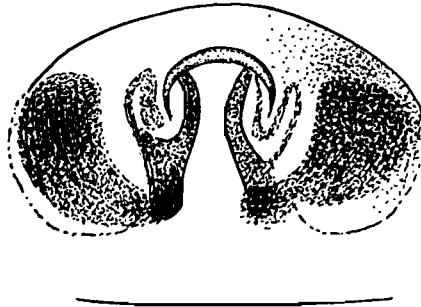
Types.—3 ♀♀, Umhlali, North Coast, Natal (N.M. 2439).

Colour.—Carapace with a yellow-white margin and broad dark submarginal

bands, in the middle three longitudinal parallel yellowish stripes running the whole length of carapace, the lateral ones twice as wide as the middle one; ocular area and chelicerae whitish, the latter with a subtriangular darkened area on the outer side at their bases; abdomen above with a dark stripe at each side running its whole length; between these some yellowish, rather broken stripes; whole of under surface yellow white; legs light yellow, with some longitudinal whitish stripes.

The portion of the ocular area containing the anterior row of eyes vertical, anterior edge of clypeus with a strong black spine on each side at a point just lateral to each anterior median eye.

TEXT-FIG. 12.



Runcinia littorina n. sp. ♀. Vulva.

Eyes.—Anterior row recurved; a line touching the upper margins of the medians would just touch the laterals; medians a little smaller than laterals, twice their own diameter apart, and about $2\frac{1}{2}$ diameters from the laterals; posterior row recurved, the eyes considerably smaller than those of anterior row, equidistant, the medians smaller than the laterals; clypeus equal to the anterior width of median quadrangle, less the diameter of an anterior median eye.

Chelicerae.—Anterior surfaces with a strong black spine at their basal third, which is nearer to the inner than to the outer margin; inferior margin without teeth, superior margin with a row of 8–10 stout curved hairs.

Legs.—Tibia I below with 6 outer and 7 or 8 inner spines, II with a double row of 5–6 spines; metatarsus I with 6, II with 5 pairs of inferior spines; legs otherwise unspined.

Vulva as in fig. 12.

Dimensions.—Carapace 2.8, length of abdomen 6, total length 8.4 mm.

Additional specimens.—3 adult ♀♀, 5 immature, Umhlali, Natal (N.M. 3310, 2926, 1545).

This species seems to be most nearly related to *R. proxima* Lessert (5).

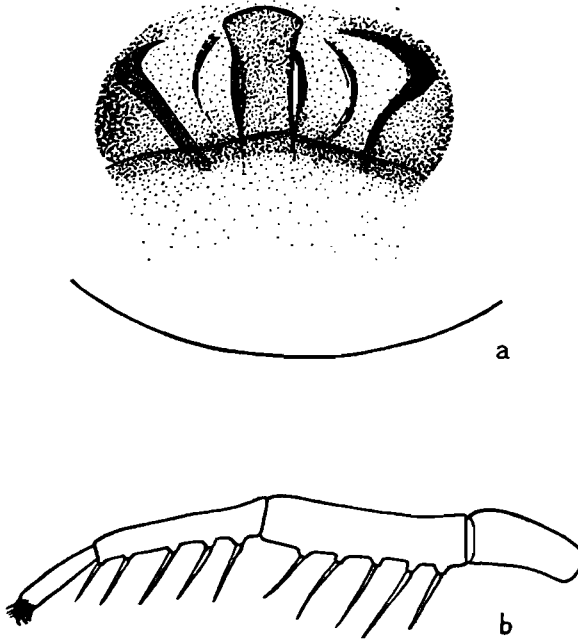
Gen. *Heriæus* E. Simon.

Heriæus crassispinus n. sp. Text-fig. 13a, b.

Type.—1 ♀, Ingwavuma, Zululand (N.M. 2420).

Colour.—Carapace yellow, two fairly wide blackish-brown bands in the middle separated by their own width; these bands with crenulated sides, not reaching the posterior margin of carapace, joined in the middle of the cephalic portion by an irregular cross band; ocular area and clypeus blackish-brown (ocular tubercles white); chelicerae yellow-brown with more or less symmetrical

TEXT-FIG. 13.



Heriæus crassispinus n. sp. ♀. a, Vulva; b, leg 1 seen from the side.

blackish-brown markings; abdomen below with a brown quadrate marking in the middle between the spinners and epigastric area, 4 or 5 oblique parallel black stripes anteriorly at the sides, a black dot at the base of the spinners; coxæ, sternum and mouthparts entirely yellow. Legs yellow, distal segments a little darker, mottled for the most part with brown spots and flecks; femora III and IV with a black ring in their distal halves, broken above, femur II with a black dot on each side in distal half, femur I with 2 black dots, one in the distal, the other in the proximal half, the distal one larger than the proximal one.

Carapace narrowing suddenly anteriorly, its anterior width but little more than that of ocular area, a number of long stout black spines on its dorsal surface and a row of 6 black spines near the edge of the clypeus; a black spine in the middle of clypeus halfway between its anterior edge and the anterior median eyes; a black spine above and mesial to each anterior median eye, one between the tubercles of the posterior and anterior lateral eyes, and one between each posterior lateral and posterior median eye; all these spines springing from well-defined conical tubercles; chelicerae with 2 forwardly projecting black spines near the middle of their inner margins.

Eyes.—Anterior row well recurved, the laterals twice as large as the medians, which are $2\frac{1}{2}$ times their diameter from each other and $1\frac{1}{2}$ diameters from the laterals; posterior row less recurved than anterior row (a line touching the upper surfaces of the medians would pass just below the inferior surfaces of the laterals); medians about $\frac{2}{3}$ the diameter of the laterals, $1\frac{1}{2}$ –2 their own diameter apart and twice as far from the laterals; median quadrangle a little wider in front than behind; posterior laterals distinctly smaller than anterior laterals; clypeus a little less than the length of the median quadrangle. Abdomen wider than long, its greatest width near the posterior apex, more or less polygonal, without tubercles; dorsal surface with long, strong, black, erect spine-like setae, not numerous but uniformly distributed.

Legs.—Femora with irregular spines, tibia and metatarsus of legs I and II with 5 pairs of long spines, these very stout at their bases, tapering off towards their apices, much stouter than any of the other spines of the legs, their length $1\frac{1}{2}$ times the width of the segment on the tibia, twice the width of segment on the metatarsus; the spines of leg II less regular than those of I. All spines of the legs mounted on conical tubercles (fig. 13*b*).

Vulva as in fig. 13*a*, rather ill-defined and not entirely symmetrical, the posterior portion covered by a semi-transparent chitinous plate through which the underlying structures of the vulva are partly visible.

Dimensions.—Length of carapace 2.1, total length 4.8 mm.

This species appears to differ from most African species of *Hericeus* in having the carapace and abdomen ornamented with black instead of white setae; it agrees well with Simon's description of *H. melanotrichus* (21) from Spanish Guinea in this character, and in having the posterior median eyes half the size of the posterior laterals. *H. transvaalicus* Simon (18) is the only other South African species hitherto described.

Hericeus fimbriatus n. sp. Text-fig. 14*a-c*.

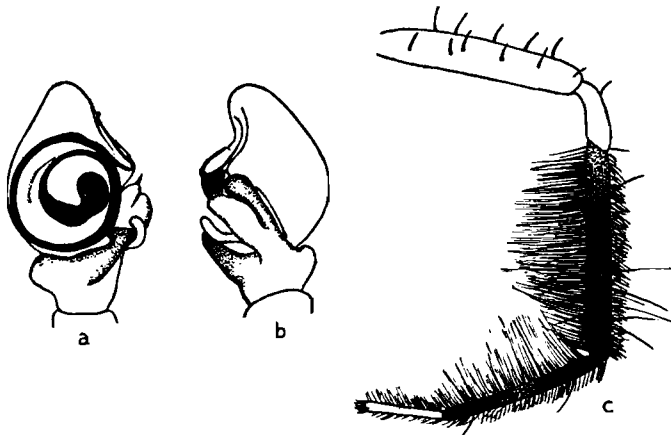
Type.—1 adult ♂, Umhlali, North Coast, Natal (N.M. 3318).

Colour.—Carapace and abdomen with markings as in the ♀ of *H. crassispinus*. Metatarsi and tibiae of legs I and II blackish-brown, I more so than II, metatarsi in the middle and tibiae at their bases a little lighter (fig. 14*c*);

femora with some irregular black dots above and below. Femora III and IV with a distinct black ring in the distal half, a less distinct black spot or annulation at the bases and apices of tibiae and metatarsi III and IV. Abdomen below with a black spot on each side of the spinners and a fine black transverse bar near the lung-books.

Carapace.—A row of 4 stout black spines on the anterior edge of clypeus and a slenderer one at each antero-lateral angle, the row of 4 spines a little wider than that formed by the anterior median eyes; 1 spine in the middle of the clypeus half-way between anterior margin and the anterior median eyes; 2 black spines between and just above the anterior median eyes, one on the anterior face of the posterior lateral tubercle, and one on the outer side of each posterior median eye. In addition to these a considerable number of long stout black spines on the dorsal surface of carapace.

TEXT-FIG. 14.



Heriæus fimbriatus n. sp. ♂. a, Pedipalp seen from below; b, from outer side; c, leg I from the side.

Eyes.—Seen from above posterior row a little less strongly recurved than anterior row; anterior medians a little more than twice their diameter apart, half as large as the laterals and their diameter or a little less from them; posterior medians $1\frac{1}{4}$ times their diameter apart and a little more than twice as far from the laterals, $\frac{2}{3}$ – $\frac{3}{4}$ as large as the laterals; median quadrangle considerably longer than wide, a little wider in front than behind; posterior medians a little smaller than anterior laterals, clypeus equal to anterior width of median quadrangle.

Spination.—Dorsal surface of abdomen and carapace with long black setose spines, these not numerous but arranged at regular intervals, those on the abdomen longest. Femur of legs I and II with some black spines on the dorsal surface similar to but shorter than those on the abdomen; tibia and

metatarsus of legs I and II with a conspicuous fringe of long fine black hairs (fig. 14c), among which are a few distinct black setæ, this fringe decidedly longer on the ventral than on the dorsal surface. The anterior legs slender and much longer than those of the female of *H. crassispinus* (fig. 13b), the large stout spines carried on the anterior legs of the latter entirely absent. Legs III and IV with irregular black setose spines.

Pedipalp as in fig. 14a seen from below, and fig. 14b seen from the outer side.

Dimensions.—Total length 4.2, leg I 9.3 mm.

Two subadult males from the same locality differ from the adult male in the following respects. These males represent the pre-adult stage prior to the final moult, the tarsi of the palps being large and swollen, but no processes or structures being developed, though these are indistinctly visible through the transparent skin on the under surface of the tarsus. Carapace almost entirely black, the femora as well as the tibia and metatarsus of the anterior legs darkened, the posterior legs darker than in the adult male. Five long stout spines with their conical bases are well-developed on the anterior tibiæ and metatarsi, almost exactly resembling the adult female of *H. crassispinus* in this respect (fig. 13b), and thus differing strikingly from the adult male. The anterior legs of these specimens also resemble the adult in being of normal length, and thus much shorter and comparatively stouter than those of the adult male.

Gen. *Xysticus* C. L. Koch.

Xysticus tugelanus n. sp. Text-fig. 15.

Type.—1 ♀, Tugela Valley, Cathkin Peak, Natal (N.M. 2140).

Colour.—Carapace with a narrow white marginal band at the sides, disappearing anteriorly; clypeus yellow-white, contrasting with the upper surface of carapace, which is dark brown with a broad median subparallel lighter area; this lighter area with a blackish median stripe from just behind the fovea to the posterior median eyes; chelicerae yellow, darker at their bases and along their outer margins, a transverse black stripe near their apices; abdomen above grey-brown, variegated with blackish spots and some transverse bars posteriorly, below a little lighter, mottled with some blackish markings; sternum for the most part yellowish white, its margin black; coxæ yellow in the middle, edged with black. Anterior and inferior surfaces of femora I and II yellow, the remainder black; patellæ and tibiæ of anterior legs for the most part blackish-brown with some light longitudinal stripes, especially below; tarsi and metatarsi yellow-brown; femora III and IV yellow, a black band at the apices above, patellæ black, tibiæ yellow with two longitudinal black stripes above, tarsi and metatarsi yellow.

Eyes.—Anterior row moderately recurved, medians a little less than half

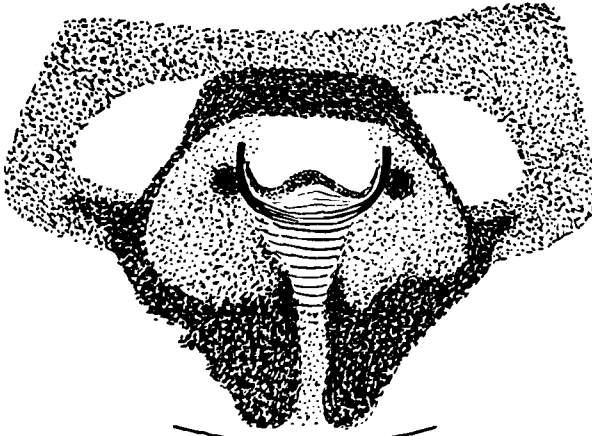
the diameter of the laterals, $1\frac{1}{2}$ times as far from each other as from them ; posterior row strongly recurved, medians half as large as the laterals and a little nearer to them than to each other ; median quadrangle subequal (or anterior eyes a little larger), wider than long, and a little wider behind than in front ; clypeus twice (or a little more) the diameter of an anterior median eye.

Chelicerae.—Inferior margin toothless, superior margin with a comb-like row of 9–11 short pointed and stiff setae.

Vulva as in fig. 15.

Legs.—Tibiae I and II with 4 anterior, 3 posterior spines below, no lateral spines ; metatarsus I with 4 anterior, 3 posterior spines below, and 2 lateral

TEXT-FIG. 15.



Xysticus tugelanus n. sp. ♀. Vulva.

spines on each side, II with 3 pairs of spines below and 3 lateral spines on each side.

Dimensions.—Length of carapace 3.4, total length 8 mm.

Xysticus havilandi n. sp. Text-fig. 16.

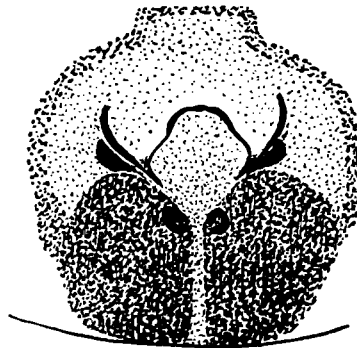
Type.—1 ♀, Natal, collected A. E. Haviland (N.M. 1893).

Colour.—Carapace with a narrow white lateral margin widening a little posteriorly, and a submarginal blackish-brown band, remainder of dorsal surface brown with a large subtriangular white area behind the fovea dividing anteriorly, a blackish sub-quadrangle marking on each side of this area, anterior face and clypeus yellow ; chelicerae yellow-brown with markings as in *tugelanus* ; abdomen above for the most part brown and white. *Legs* : Inferior surfaces of anterior femora yellow, mottled with brown spots, superior surfaces uniform brown, a black band at their apices ; patellae and tibiae light brown, with some whitish spots and stripes ; metatarsi and tarsi yellow ; posterior femora

yellow, a clearly defined black apical ring above, patellæ and tibiæ brown with some narrow longitudinal white stripes above, tarsi and metatarsi yellow.

Eyes.—Anterior row moderately recurved; a line touching the upper surfaces of the medians would pass between the centres and lower boundaries of the laterals; medians a little less than half the diameter of the laterals, a little less than $1\frac{1}{2}$ times as far from them as from each other; posterior row strongly recurved, laterals twice as large as medians, which are a little further from them than from each other; median quadrangle considerably wider than long (about $1\frac{1}{2}$ times) and a fraction wider in front than behind, anterior medians a very little larger than posterior medians; clypeus a little less than twice the diameter of an anterior median eye.

TEXT-FIG. 16.

*Xysticus havilandi* n. sp. ♀. Vulva.

Vulva as in fig. 16.

Legs.—Tibiæ I and II with 4 anterior, 3 posterior spines below; metatarsi I and II with 4 pairs of spines below, 3 anterior and 2 posterior lateral spines (in distal half).

Dimensions.—Length of carapace 3.3, length of abdomen 4.3 mm.

Additional specimens.—1 ♀, Krantzkop, Natal (N.M. 2880).

This species seems to be fairly closely related to *X. fagei* Lessert (5), which is again allied to *X. natalensis* Lawrence (4).

Gen. *Synœma* E. Simon.

Synœma diana (Audouin).

2 ♂♂, 1 ♀, Umhlali, North Coast, Natal (N.M. 2927).

Gen. *Dicea* Thorell.

Dicea puncta Karsch.

2 ♂♂ from Hlatikulu, Swaziland (N.M. 2463), agree well with Lessert's figure of the pedipalp (5).

Body and legs yellow, abdomen above with 16–18 small, brown, more or less equal-sized spots arranged as follows: In anterior half 2, followed by a transverse row of 4; in posterior half on each side an inner longitudinal row of 3 (2), and an outer parallel row of 2; a spot on each side just anterior to the spinners.

Gen. *Trichopagis* E. Simon.

Trichopagis manicata E. Simon.

T. manicata E. Simon, Act. Soc. Linn. Bordeaux (4), vol. x, p. 185 (1886): Hist. Nat. des Araignées, vol. i, p. 1043, figs. 1088, 1089 (1892).

1 ♀ (immature ?) Kosi Bay, Zululand (N.M. 1994).

The example in the Museum's collection, taken 34 years ago, is presumably a ♀ as the peculiar flattened tarsus of the pedipalp agrees exactly with Simon's presentation of it (*loc. cit.*, fig. 1089). The colour of the specimen is much faded after prolonged immersion in alcohol.

Colour.—Ocular area defined at the back and sides by a narrow reddish-brown stripe, the distal half of anterior metatarsi and distal third of anterior tarsi blackish brown, contrasting sharply with the remainder of the legs. Dorsal surface of abdomen grey-brown, darker than the under surface. Remainder of body and legs entirely white or pale yellow.

Eyes.—These agree closely with Simon's figure 1088, the anterior medians however distinctly larger than the posterior medians, while the reverse seems to be the case in the type specimen, judging from Simon's figure. The flattened hairs between the anterior median eyes, of which there appear to have been two, are broken off in our specimen; the flattened hairs rising from the conical tubercle at the edge of the clypeus and below each anterior lateral eye have also been broken; on the inner side of these conical tubercles there is a long slender seta, only a little shorter than the distance between the conical tubercles themselves, and therefore much longer than those figured by Simon, *loc. cit.* fig. 1088. Abdomen not much longer than wide, trapezoidal, considerably wider behind than in front, and with a moderate-sized blunt tubercle at each of the posterior and anterior lateral angles. In the centre of the posterior margin of abdomen two groups, each consisting of a short transverse row of 4 flattened hairs, similar to the modified hairs of the ocular area, the one group placed a little above the other, the more ventral of the two groups thus not far from the spinners; these modified hairs long, erect and strikingly different from any of the other hairs of the abdomen, which are numerous, fine, soft and silky.

Legs with numerous very fine, soft, semi-erect hairs; anterior metatarsi and tibiae with enormously long prone spines rising from stout conical tubercles, both tibiae and metatarsi being provided with 5 pairs on their ventral surfaces.

No genital opening visible.

Dimensions.—Length of carapace 2·3, total length 5·3 mm.

Though our specimen appears to differ in detail from the type, I have no doubt that it should be referred to this widespread species. Several tropical species of Thomisidæ, such as *Thomisops pupa*, *Camaricus nigrotessellatus*, *Synœma diana*, *Diœa puncta*, and no doubt a number of others, find their way as far south as Zululand and even Natal.

Trichopagis manicata has been hitherto known from the West and East coasts of tropical Africa, and from Madagascar.

Gen. *Suemus* E. Simon.

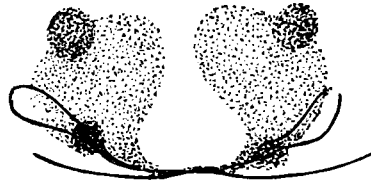
Suemus punctatus Lawrence. Text-fig. 17.

S. punctatus Lawrence, Ann. Natal Mus., vol. viii, pt. 3, p. 490, fig 20a-c, 1938.

The type was based on a ♂ specimen and the following is a description of an adult ♀ from Umhlali, North Coast, Natal (N.M. 2922).

Colour showing considerable variation in different specimens but in general

TEXT-FIG. 17.



Suemus punctatus Lawrence. ♀. Vulva.

resembling that of the ♂. The median and lateral bands of the carapace, composed of numerous minute black specks, may be strong or weak. Dorsal surface of abdomen with markings as in the figure given of the ♂ (*loc. cit.* fig. 20c), except that instead of a single black spot posteriorly, there are two such, separated by about half the width of the abdomen, these much larger than the two minute anterior dots; in some specimens the anterior or posterior dots may be missing. Leg IV with the patella and tibia usually blackish-brown (except on their inferior surfaces), and much darker than any segments of the remaining legs; on the other hand these segments may resemble those of the other legs, and in this case all four legs have a black dot on each side at the base of the tibiæ. In other specimens none of the leg segments may have special markings; in all cases, however, the legs are covered with minute black specks, the posterior less strongly punctate than the anterior ones.

Vulva as in fig. 17, small and rather vaguely defined.

Dimensions.—Length of carapace 2·4, total length 6·8 mm.

Total length of a larger ♀ specimen from Pietermaritzburg, 7·5 mm.

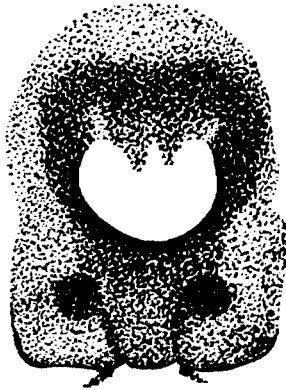
Family CLUBIONIDÆ.

Gen. *Selenops* Latr.*Selenops tugelanus* n. sp. Text-fig. 18.

Type.—1 ♀, Middeldrift, Tugela River, Natal (N.M. 3297).

Colour.—Carapace with irregular indistinct spots and radiating stripes, those at the lateral margins more distinct, 3 short brown longitudinal bars behind the posterior median eyes; chelicerae yellow, a darker spot at their anterior apices and one basally at their sides; femora of legs with indistinct annulations, tibiae and metatarsi with 2 distinct but not very dark bands, ventral surfaces of legs uniformly yellow.

TEXT-FIG. 18.

*Selenops tugelanus* n. sp. ♀. Vulva.

Eyes.—Medians strongly recurved; a line touching the upper surfaces of the anterior medians would cut the bases of the posterior medians; anterior medians half the diameter of the posterior medians, about $\frac{3}{4}$ their own diameter apart and almost touching the posterior medians; posterior medians a little more than twice their diameter apart and $\frac{3}{4}$ the diameter of the posterior laterals. Anterior medians less than their diameter from the edge of the clypeus than the apical one and separated from it by twice its width.

Legs.—Tibiae I and II with 7 pairs of inferior spines, the apical pair smaller than the others; metatarsi I and II with 3 pairs of inferior spines.

Vulva as in fig. 18.

Dimensions.—Length of carapace 5.6, total length 13 mm.

This species belongs to the *Selenops* group, which is distinguished by having 7 pairs of spines on the anterior tibiae. It is allied to *S. spenceri* Poc. and *S. whiteæ* Poc. in having the vulva situated on a dark quadratiform plate, which in this species however is only a little longer than wide (in *spenceri* and *whiteæ*

it is markedly so); it also differs from these species in the shape of the vulval opening.

Gen. *Pseudomicrommata* Jarvi.

Pseudomicrommata vittigerum (E. Simon).

Micrommata vittigerum E. Simon, Ann. Soc. Ent. France, vol. lxxv, p. 490, 1896.

M. ovambica Lawrence, Ann. S.A. Mus., vol. xxv, Pt. 1, p. 43, fig. 30, 1927.

The Natal Museum has 1 ♀ from Pietermaritzburg, Natal (N.M. 2044), and 1 ♀ from Kosi Bay, Zululand (N.M. 1160).

The colour pattern of this widely distributed species is very well-defined and constant. *M. ovambica* described from Ovamboland, South West Africa, by the writer (3), agrees in the detailed structure of the vulva with specimens from the Transvaal in the South African Museum, Cape Town, and with a number of other specimens from various parts of South Africa. I have no doubt that all these forms can be referred to Simon's *M. vittigerum*, which was originally described from near Pretoria in the Transvaal. According to Jarvi (2) *Micrommata vittigerum* Simon should be separated as the type of a new genus, *Pseudomicrommata* Jarvi.

Gen. *Clubiona* Latr.

Clubiona revilliodi Lessert.

C. revilliodi Lessert, Rev. Suisse Zool., vol. xliii, p. 273, figs. 70-72, 1936.

We have 1 ♂ specimen from Gollel, Zululand (N.M. 2386).

Clubiona collinita Lawrence. Text-fig. 19a-c.

C. collinita Lawrence, Ann. Natal Mus., vol. viii, pt. 3, p. 495, fig. 22, 1938.

The type was based on a ♀ specimen; the following is a description of the ♂ from Umhlali, North Coast, Natal (N.M. 2943):

Colour.—Carapace, mandible, sternum and mouthparts light yellow; abdomen ashy grey, dorsal surface in the posterior half with a paired row of 5 oblique blackish bars; superior spinners blackish.

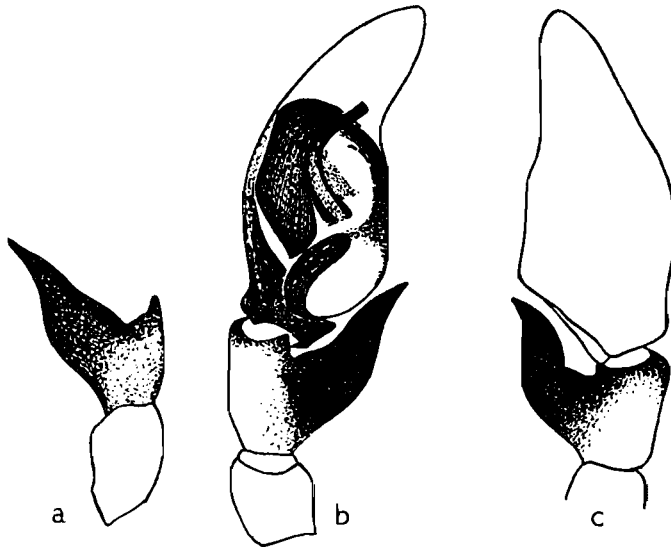
Eyes.—Anterior row very slightly procurved, medians distinctly larger than the laterals, their diameter apart and a little further from the laterals; posterior row slightly procurved, medians a little larger than the laterals, $1\frac{1}{2}$ times their own diameter apart, and a little further from the laterals; median quadrangle a little wider behind than in front and considerably wider behind than long (by about the diameter of a posterior median eye); laterals on each side less than the radius of an anterior median eye.

Chelicerae.—Inferior margin with 5 minute equal-sized teeth.

Legs long with weak spines; tibia I with 2 pairs of inferior spines, one sub-basal and one just distal to the middle, tibia II with a pair of inferior spines in the middle; metatarsus I below with a sub-basal and apical pair and 2 unpaired spines in the middle, II with a basal, middle, and apical pair of spines, and a lateral spine on each side. Legs I, IV, II, III; I long and slender, almost twice as long as leg II.

Pedipalp as in fig. 19*b*, seen from in front, and fig. 19*c*, seen from behind;

TEXT-FIG. 19.



Clubiona collinita Lawrence. ♂. *a*, Tibia of palp from outer side; *b*, pedipalp from in front; *c*, pedipalp from behind.

process of tibia as in fig. 19*a*, seen from the outer side. Patella and tibia subequal, both less than half the length of tarsus.

Dimensions.—Length of carapace 2.4, total length 5.2 mm.

We have 2 ♀♀ from Pietermaritzburg (N.M. 2899 and 1481), 1 ♀ from Drummond, Natal (N.M. 2631), 2 ♀♀ and a ♂ from Umhlali, North Coast, Natal (N.M. 2432, 2942, 2943), and 1 ♀, 1 ♂, from Mazongwaan Forest near Greytown (N.M. 3321).

Clubiona hilaris n. sp. Text-fig. 20.

Type.—1 ♀, Merrivale, near Howick, Natal (N.M. 1690).

Colour.—Carapace dark reddish-brown, becoming darker anteriorly, mandibles the same colour as anterior margin of carapace; abdomen above

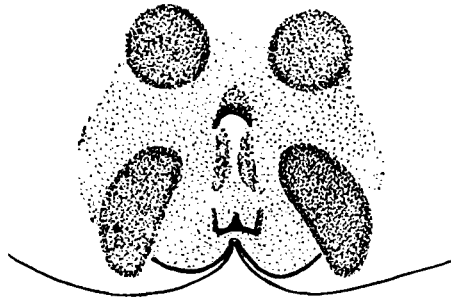
uniformly yellow, ventral surface a little darker; sternum orange, its margins light reddish-brown, mouthparts dark reddish-brown; legs orange, a little darker than abdomen, tarsi and metatarsi light reddish-brown.

Eyes.—Anterior row slightly procurved, medians distinctly larger than the laterals, their own diameter apart and $1\frac{1}{2}$ diameters from the laterals; posterior row straight to very slightly procurved, subequal, medians 4–5 times their diameter apart and a little less than 4 diameters from the laterals; median quadrangle much wider behind than in front, as long as anteriorly wide; anterior medians less than a radius from the edge of the clypeus.

Chelicerae.—Inferior margin with 2 large teeth near the base of the fang, the distal one a little larger.

Vulva as in fig. 20.

TEXT-FIG. 20.



Clubiona hilaris n. sp. ♀. Vulva.

Legs.—Leg I not much longer or stouter than leg II. Tibiæ I and II with 2 pairs of inferior spines, no lateral spines but a row of scopular hairs at each side of the under surface; metatarsi I and II without spines below, thickly scopulated below and at the sides along their entire length. Femora I and II with 1 anterior (subapical), 3 superior, and 0 posterior spines.

Dimensions.—Length of carapace 6, total length 15.4 mm.

This is an unusually large species of *Clubiona*.

Additional specimens.—3 ♀♀ from Durban (N.M. 1775).

Gen. *Chiracanthium* C. Koch.

Chiracanthium akermani n. sp. Text-fig. 21a, b.

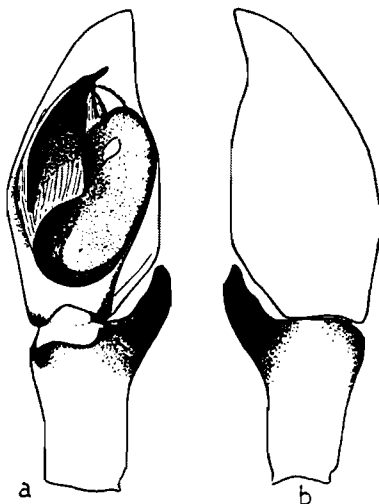
Type.—1 ♂, Pietermaritzburg, Natal (N.M. 2076).

Colour.—Carapace and mandibles light reddish-brown; abdomen above yellow with some indistinct markings which have probably become faded in alcohol, the whole of ventral surface purplish-brown, becoming darker posteriorly, the spinners encircled by an almost black ring; sternum and mouth-

parts a little darker than the legs, a little lighter than the chelicerae ; legs and palps orange.

Eyes.—Anterior row straight, medians the largest of all the eyes, a little larger than the laterals, $1\frac{1}{2}$ times their own diameter apart and a little more than twice their diameter from the laterals ; posterior row slightly procurved, subequal, medians $2\frac{1}{2}$ –3 times their diameter apart and about 3 times their diameter from the laterals (or a little more) ; median quadrangle distinctly wider behind than in front (by the diameter of a posterior median eye), its anterior width exceeding its length by the diameter of an anterior median eye ; laterals on each side subequal, subcontiguous, less than a radius apart.

TEXT-FIG. 21.



Chiracanthium akermani n. sp. ♂. a, Pedipalp from in front ; b, pedipalp from behind.

Chelicerae very long and subparallel, superior margin with 4–5 ? teeth ; inferior margin with about 6 teeth, the distal one largest, the two proximal ones minute.

Legs.—Leg I long and slender, especially metatarsus, much longer than leg II ; tibia I below with a pair of spines in the middle, II below with 1 inner spine in the middle ; metatarsus I below with a sub-basal and apical pair of spines and 2 unpaired spines in the middle, II below with 3 pairs of spines and 1 inner lateral spine.

Pedipalp as in fig. 21a, seen from in front ; tibial process as in fig. 21b seen from behind ; patella and tibia subequal, a little more than half the length of tarsus, femur and patella unspined.

Dimensions.—Length of carapace 4.2, total length 8.4, total length with extended mandible 11.5 mm.

This species belongs to the group which includes *C. hewitti* Lessert (6) and *C. filipes* Simon (10, 17), and in which the tibial process is blunt, not pointed, and does not cross the basal process of the tarsus.

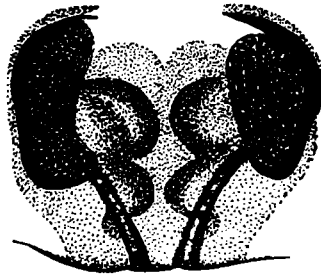
Gen. *Ceto* E. Simon.

Ceto simoni n. sp. Text-fig. 22.

Type.—1 ♀, Umhlabi, North Coast, Natal (N.M. 2983).

Colour.—Carapace blackish-brown, with indistinct blackish variegations, chelicerae blackish-brown; abdomen above olive green, a little lighter in the middle but with a darker lanceolate marking in the middle of anterior half; ventral surface yellow, sides and posterior apex olive green, spinners dark brown; sternum brown with a darker narrow border, coxæ II–IV yellow, I orange to light brown, mouthparts dark brown; femora I and II blackish-

TEXT-FIG. 22.



Ceto simoni n. sp. ♀. Vulva.

brown, a lighter stripe on their antero-inferior surfaces, III and IV yellow in proximal, blackish in distal half; patellæ to tarsi of anterior legs light brown with an olive-green tinge, upper surfaces lighter; these segments in the posterior legs a little lighter than the anterior legs, appearing to be indistinctly banded, especially metatarsus III.

Eyes.—Anterior row, seen from the front, very slightly procurved, medians larger than the laterals, their radius or a little more apart and almost touching the laterals; posterior row slightly recurved, medians subquadrate, larger than the laterals, their own diameter apart and a little more from the laterals; median quadrangle a little wider behind than in front, as long as anteriorly wide; laterals on each side subequal (or the posterior a very little larger), separated by $1\frac{1}{2}$ times the diameter of a posterior lateral; anterior medians their diameter or a little less from the edge of the clypeus. Carapace finely granular, more so at the sides, chelicerae uniformly granular.

Chelicerae.—Inferior margin with 2 well separated, subequal, moderately large teeth.

Vulva as in fig. 22.

Legs.—Leg I spined almost exactly as in Simon's figure of *Ceto martini*, 'Hist. nat. des Araignées,' vol. ii, p. 179, fig. 184*h*. Femur I with a short apical spine on inner side, tibia I with 3-4 long setæ on each side below and a double row of shorter, stouter, and more numerous spines; metatarsus I with a double row of minute black spicules. Leg II similar to I but without long setæ on the tibia; metatarsus I with a few scopular hairs in distal half, II with scopular hairs along its entire length, these however sparse. Posterior legs with a few normal spines.

Dimensions.—Length of carapace 2·8, total length 6·3 mm. This species seems to agree closely with *Ceto martini* Simon (19) in the spination of the anterior legs, but differs in the colour, the posterior median eyes, and possibly the vulva. It may perhaps be the female of *C. tridentata* Lessert (7) described from Umbilo, Natal.

Gen. *Lessertina* n. gen. Text-fig. 23*a-c*.

Carapace much raised anteriorly, sloping sharply posteriorly, both rows of eyes procurved, and occupying the greater part of the anterior width of carapace; chelicerae very strong, their length subequal to that of carapace, their anterior surfaces strongly swollen at the base, their inferior margins with 3 teeth, far removed from the base of the fang; labium longer than wide, not reaching the inner apices of maxillæ; maxillæ curved inwards at their distal apices, less wide at their apices than in the middle.

Leg I longer and more slender than posterior legs, quite smooth and unspined, leg II also unspined. Abdomen without a dorsal scute; superior and inferior spinners of the same thickness, of moderate length, the superior a very little longer than the inferior ones.

This genus resembles *Trachelas* in the form of the carapace but differs from it in the slender anterior legs and the arrangement of the eyes; it also resembles *Brachyphæa* in the arrangement of the eyes, but differs from it in the slender and unspined anterior legs. From both of these genera it differs in having 3 instead of 2 teeth on the inferior margin of the chelicerae. It also resembles *Corinna* in having the posterior row of eyes procurved, and in the chelicerae and carapace, but differs in having 3 instead of 4-6 teeth on the inferior margin of chelicerae. In these last two characters it approaches *Megalostrata* from South America.

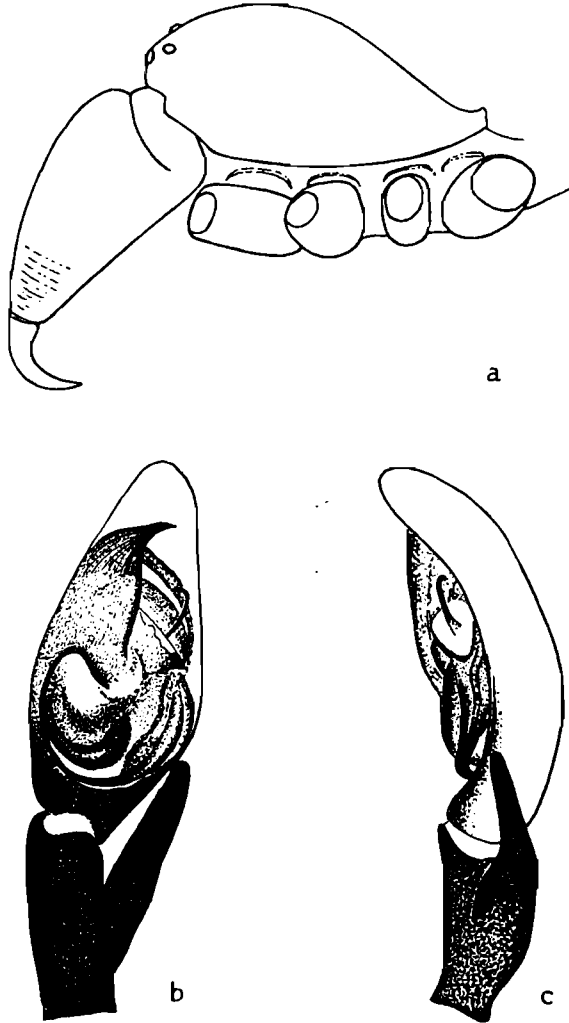
Lessertina mutica n. sp. Text-fig. 23*a-c*.

Type.—1 ♂, Umhlali, North Coast, Natal (N.M. 2940).

Colour.—Carapace and chelicerae black; abdomen above black, with 4 white markings consisting of a pair of rounded white dots near anterior margin

and in the middle a pair of comma-shaped transverse bars ; ventral surface a little lighter than dorsal surface, a pair of white subtriangular markings below the epigastric furrow tapering to a point posteriorly ; spinners white with a

TEXT-FIG. 23.



Lessertina mutica n. sp. ♂. a, Carapace from the side ; b, pedipalp from in front ; c, from the outer side.

minute blackish dot on their dorsal surfaces ; coxæ becoming progressively darker from I to IV, I dark brown, II orange, III and IV yellow, II-IV blackish along their margins ; sternum dark reddish-brown, mouthparts a little lighter. Legs : Anterior legs olive green, becoming lighter apically ; femur II yellowish

at its base, femora III and IV blackish, with a broad yellow basal band; tibiæ III and IV more or less yellow with a black band in the middle; metatarsi III and IV yellow, with brown apical and basal bands, tarsi yellow-brown.

Eyes.—Anterior row seen from in front procurved, subequal, medians a little less than their diameter apart and $2\frac{1}{2}$ –3 times their diameter from the laterals; posterior row, seen from above, very slightly recurved, subequal, medians $1\frac{1}{2}$ times their diameter apart and nearly 4 times their diameter from the laterals; median quadrangle considerably wider behind than in front, wider in front than long, posterior medians a little smaller than anterior medians and less than their own diameter from them; laterals on each side subequal, and a little less than their diameter apart.

Carapace as in fig. 23a seen from the side, longer than wide, covered with fine regular granules; sternum granular, with raised border.

Abdomen oval, considerably longer than wide.

Chelicerae with larger but less numerous granules than the carapace, the sides and under surfaces with coarse corrugation (fig. 23a). Inferior margin with 3 well-separated blunt teeth, the middle one a little nearer to the basal than to the apical one; superior margin with 4 teeth, the second from the base larger than the others.

Pedipalp as in fig. 23b seen from in front, and fig. 23c seen from the outer side; patella subequal to tibia, about half the length of tarsus; femur and patella without spines, femur with a row of fine setæ on its ventral surface.

Legs.—I, IV, II, III. Anterior legs more slender than posterior legs, quite unspined except for a small black spine at the inferior apex of metatarsi I and II; tibia IV below with a pair of apical spines, and a middle and sub-basal spine on the outer side; metatarsi III and IV with a sub-basal ventral spine on the outer side.

Dimensions.—Length of carapace 3.5, total length 8 mm.

Gen. *Austrachelas* Lawrence.

Austrachelas natalensis n. sp. Text-fig. 24.

Type.—1 ♀, Estcourt, Natal (N.M. 1725).

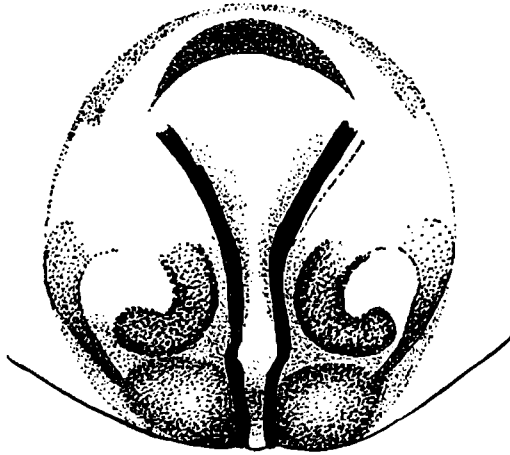
Colour.—Carapace rich reddish-brown, divided in the middle by a lighter band extending from the posterior row of eyes to the posterior margin of carapace; anteriorly this band a little narrower than the posterior median eyes, widening progressively posteriorly; abdomen with a pattern-marking on its dorsal surface similar to that of *A. incertus* (4), ventral surface much lighter than dorsal surface, with 2 dark spots above the spinners; sternum brown, its margin darker; legs light brown.

Eyes.—Anterior row slightly recurved; medians smaller than the laterals, a

little less than their own diameter apart and nearly touching the laterals; posterior row straight, medians their radius or a little less apart, their diameter from the laterals, than which they are a little smaller; median quadrangle a little wider behind than in front, and a little longer than posteriorly wide, anterior and posterior medians subequal; posterior laterals slightly smaller than anterior laterals, separated from them by a little more than the radius of an anterior lateral; anterior medians their diameter from the edge of the clypeus.

Chelicerae.—Superior margin with 4 teeth, the second from the base largest; inferior margin without teeth or with 1 minute denticle.

TEXT-FIG. 24.



Austrachelas natalensis n. sp. ♀. Vulva.

Vulva as in fig. 24.

Legs.—Armed as in *A. incertus*, anterior femora with a single inner spine near their apices, other segments of anterior legs unspined; posterior legs with numerous spines.

Dimensions.—Length of carapace 3.1, total length 7.3 mm.

Family AGELENIDÆ.

Gen. *Campostichomma* E. Simon.

Campostichomma urbense n. sp. Text-fig. 25.

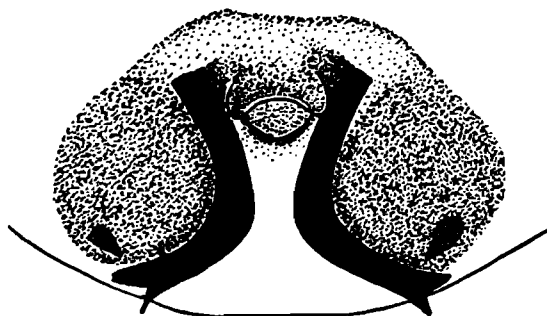
Type.—1 ♀, Pietermaritzburg, Natal (N.M. 2898).

Colour.—Carapace for the most part blackish, its margin with a narrow black band and some black cuneiform dots, the submarginal band lighter than

the prevailing black markings of the carapace ; a large light brown band in the middle contrasting strongly with the rest of the carapace and enclosing two brown cuneiform dots at its widest portion, a light patch at the side of each anterior lateral eye ; chelicerae reddish-brown, with some longitudinal dark brown stripes ; abdomen above uniform brown, a lighter subcircular patch at its anterior apex, below yellow, becoming darker posteriorly (blackish-brown round the spinners), no isolated black spots. Legs reddish-brown, femora with some distinct black spots and bands, remaining segments only faintly mottled with brown.

Eyes.—Anterior row weakly recurved ; a line touching the upper surfaces of the medians would pass far above the centres of the laterals ; medians half as large as the laterals, $\frac{2}{3}$ their own diameter apart, and a very little further

TEXT-FIG. 25.

*Campostichomma urbense* n. sp. ♀. Vulva.

from the laterals ; posterior row moderately recurved, the medians a little larger than the laterals, $\frac{2}{3}$ their own radius apart and $1\frac{1}{2}$ times their own diameter from the laterals ; posterior row moderately recurved, the medians a little larger than the laterals, $\frac{2}{3}$ their own radius apart and $1\frac{1}{2}$ times their own diameter from the laterals ; median quadrangle a fraction wider behind than long ; clypeus about $1\frac{1}{2}$ times the diameter of an anterior median eye.

Chelicerae.—The 3 teeth of inferior margin equally spaced and subequal, or the basal one a fraction smaller than the others.

Vulva as in fig. 25.

Legs.—Anterior tibiae with 4 pairs of inferior spines or 4 outer and 5 inner spines, no lateral spines ; anterior metatarsi with 3 pairs of inferior spines, no lateral spines.

Dimensions.—Length of carapace 4.4, total length 10 mm.

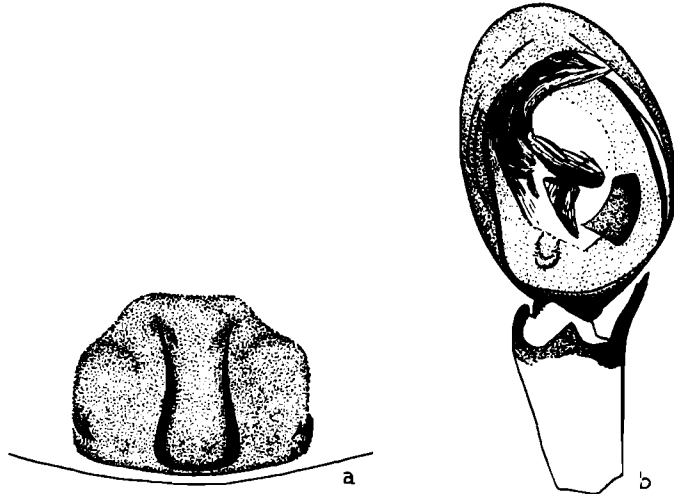
Campostichomma punctatum n. sp. Text-fig. 26a, b.

Types.—6 ♀♀, 1 ♂, York, near New Hanover, Natal (N.M. 2960).

♀. *Colour*.—Carapace brown with a yellow submarginal band at the sides

and a large yellow median marking in the middle, the submarginal lateral bands with crenulated borders, reaching a little beyond the anterior coxæ; median yellow marking with a lateral angular expansion near its anterior end and enclosing (anterior to the fovea) a symmetrical pattern-marking which is a little less dark than the prevailing colour of the carapace; chelicerae coloured as in darker portions of carapace; abdomen above dark brown, with a row of black dots on each side connected by transverse bars, below light brown with fairly numerous minute black dots, these more numerous posteriorly. Femora of legs light with olive-green bands, remaining segments dark brown with indistinct bands, patellæ a little lighter than the other segments.

TEXT-FIG. 26.



Campostichomma punctatum n. sp. a, Vulva of ♀; b, pedipalp of ♂ from in front.

Eyes.—Anterior row slightly recurved; a line touching the upper surfaces of the medians would pass above the centres of the laterals; medians $\frac{2}{3}$ as large as the laterals, a little less than their own diameter apart and the same distance from the laterals as from each other; eyes of posterior row considerably larger than those of the anterior row, subequal, a little recurved, medians their radius apart and $1\frac{1}{4}$ times their diameter from the laterals; median quadrangle much wider behind than in front and about as long as posteriorly wide; clypeus about $1\frac{1}{2}$ times the diameter of an anterior median eye.

Chelicerae.—Inferior margin with 3 teeth, the middle one a little nearer the apical than the basal one, the two distal ones equal in size and a little larger than the basal one.

Vulva as in fig. 26a, consisting of a strongly chitinized reddish-brown plate sparsely covered with long, sweeping, posteriorly directed hairs.

Legs.—Tibiæ I and II with 4 pairs of inferior spines, the apical pair much smaller than the others; metatarsi I and II with 3 pairs of inferior spines.

Dimensions.—Length of carapace 4·1, total length 9 mm.

♂. Colour as in ♀, but lighter, the legs with only faint bands on the femora, remaining segments uniform brown.

Eyes.—Anterior medians their radius apart; posterior row distinctly more recurved than anterior row, subequal, medians distinctly less than their radius apart, a diameter from the laterals; clypeus a little less than the diameter of an anterior median eye. Eyes otherwise as in ♀.

Chelicerae longer and more slender than in the ♀, the dentition of the inferior margin, however, similar.

Legs.—Tibiæ I and II with 2 anterior and 3 posterior lateral spines in addition to the 4 pairs of inferior spines; metatarsi I and II with 1 lateral spine on each side in addition to the 3 inferior pairs.

Pedipalp as in fig. 26*b*, seen from in front.

Dimensions.—Length of carapace 3·6, total length 6·6 mm.

Additional specimens.—1 ♀, Giant's Castle Reserve, Drakensberg Mts., Natal (N.M. 2619); 1 ♀, Estcourt, Natal (N.M. 1715); 1 ♀, Little Tugela River, Drakensberg Mts. (N.M. 2146); 1 ♀, Pietermaritzburg (N.M. 69); 1 ♀, Otto's Bluff, near Pietermaritzburg (N.M. 1465). Five species of *Campostichomma* are known from Natal and Zululand, one from Cape Town and its surroundings (20).

Family PISAURIDÆ.

Gen. *Cispus* E. Simon.

Cispus atomarius n. sp. Text-fig. 27*a-c*.

Types.—3 ♂♂, 10 ♀♀, Umhlali, North Coast, Natal (N.M. 2932, 2933).

♀. *Colour* in general yellow, carapace with faint and not very well-defined symmetrical variegations in the middle, a pair of blackish cuneiform markings at the posterior apex of the cephalic area, these markings darker than the others on the carapace; cephalic area itself divided by a light longitudinal stripe narrowing anteriorly; a faint wavy submarginal band; eyes situated on black spots; clypeus with a faint oblique stripe from below the anterior lateral eyes to the margin of the clypeus; anterior surfaces of chelicerae with a black spot or narrow bar (nearer to the inner than the outer margin) in its basal third; the dorsal pattern of the abdomen rather variable, a large blackish foliform median marking running its entire length, this, again, enclosing a yellow marking consisting of a large irregular anterior portion followed by one or two smaller patches; sides with a few ill-defined spots, inferior surface yellow; coxæ, mouth parts and sternum yellow. Legs with numerous small but distinct black spots, most of them at the bases of long spines; a narrow

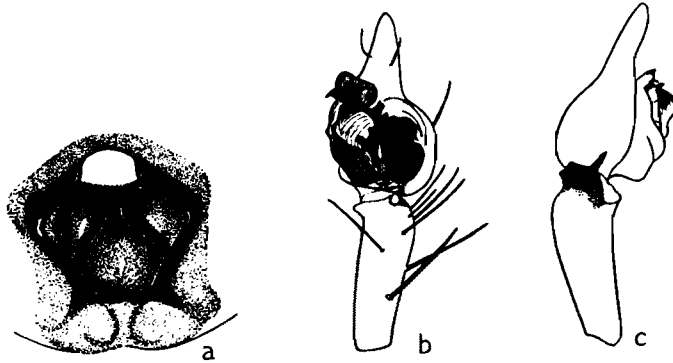
black band at the apices of tibiae and metatarsi of anterior legs, these faint or indistinguishable in the posterior legs.

Eyes.—Anterior row seen from in front straight, equal-sized, medians their own diameter apart, about $\frac{3}{4}$ their diameter from the laterals; posterior row strongly recurved, subequal, or the laterals a fraction larger, medians a little more than their diameter apart and $1\frac{1}{2}$ times their diameter from the laterals; median quadrangle much wider behind than in front, a little wider behind than long, anterior medians $\frac{2}{3}$ as large as posterior medians; clypeus about $3\frac{1}{2}$ times the diameter of an anterior median eye.

Chelicerae.—Inferior margin with 3 equally spaced and equal-sized teeth, a little smaller than the middle tooth of superior margin.

Legs.—Anterior legs with long, black, irregularly arranged spines, consist-

TEXT-FIG. 27.



Cispius atomarius n. sp. a, Vulva of ♀; b, pedipalp of ♂ from in front; c, from the outer side.

ing of at least 4 inferior pairs with lateral and superior ones in addition; all patellæ with an apical superior spine.

Vulva as in fig. 27a; a very dark, rather shallow quadratiform opening, the lower half much obscured by white hairs.

Dimensions.—Length of carapace 3.6, total length 10 mm.

♂. *Colour*.—General background light orange, not yellow as in ♀; markings of carapace and abdomen similar to those of the ♀, but much fainter; legs with far fewer black dots and no black bands at the apices of the anterior tibiae and metatarsi; all tibiae with a black dot at the base of their anterior surfaces.

Eyes.—Anterior row straight, equal, the medians $\frac{2}{3}$ their diameter apart and a radius from the laterals; median quadrangle a little wider behind than long; posterior medians their own diameter apart, subequal to the laterals and $1\frac{1}{4}$ – $1\frac{1}{2}$ times their diameter from them.

Chelicerae as in the ♀.

Legs.—Anterior tibiae with 4 pairs of inferior spines, 3 anterior lateral, 2 posterior lateral, and 2 superior spines; anterior metatarsi with 3 pairs of inferior spines and 2 or 3 lateral spines on each side.

Pedipalp.—Tibia subequal to tarsus or a little longer, patella $\frac{3}{4}$ the length of tibia; tibia and tarsus as in fig. 27*b* seen from in front; the lateral process of tibia (fig. 27*c* seen from outer side) not visible when the pedipalp is viewed from in front; tibia with spines along its inner margin as in fig. 27*b*; no spines on its outer margin; patella without spines.

Dimensions.—Length of carapace 3.6, total length 8 mm.

Other specimens.—1 ♂, Pietermaritzburg, Natal (N.M. 2887).

This species, with the long and numerous spines of the legs, strongly resembles a large form of Oxyopid, such as *Peucetia*, in general appearance. The specimens described above were all captured in the early part of the morning while the grass was still wet with dew; they run through and over the grass with great rapidity, taking tremendous leaps, but disappear during the warmer parts of the day.

It is probable that a number of species of *Cispius* occur in Natal; *C. atomarius* is most closely related to *C. ambiguus* Lessert, described from Umbilo, Natal (8), and to a less extent to *C. bidentatus* Lessert from Portuguese E. Africa (12).

Family SALTICIDÆ.

PLURIDENTATI.

Gen. *Myrmarchne* MacLeay.

Myrmarachne akermani n. sp. Text-figs. 28*a, b*; 29*a, b*.

Types.—1 ♂, 2 ♀♀, Winklespruit, Natal (N.M. 1714). Collected by Dr. C. Akerman.

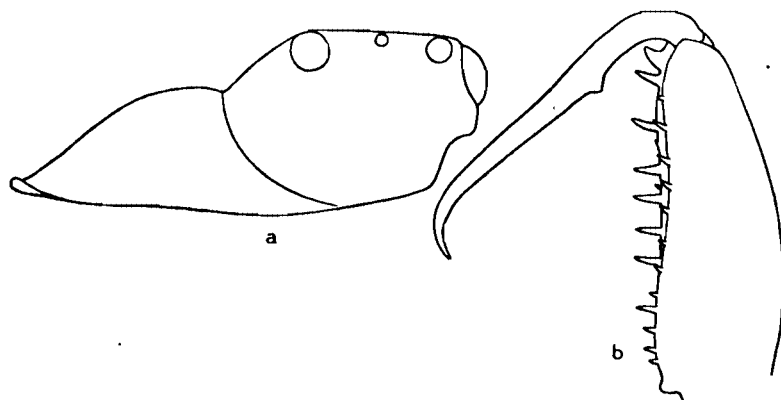
♂. *Colour*.—Carapace black, an indistinct white stripe defining the posterior and lateral boundaries of the cephalic region; chelicerae brown; abdomen above black, a lighter transverse stripe behind the anterior scute, below blackish, a little lighter in the middle; sternum brown, labium black, maxillae brown, yellow along their inner margins; coxae I and II yellow, III brown, IV yellow, brown at the sides. Femora of legs dark brown, II with a broad yellow stripe above and below, remaining segments of legs I–III yellow, with brown lateral stripes; leg IV with trochanter yellow, patella below and in the proximal half above yellow, dorsal distal half of patella and remaining segments dark brown; pedipalp dark brown.

Eyes.—Anterior row with their centres recurved, medians a little more than twice the diameter of the laterals, subcontiguous, as near to the edge of clypeus as to each other and a little further from the laterals; seen from above

anterior row well recurved; eyes of the middle row considerably nearer to the anterior laterals than to those of the posterior row; eyes of posterior row a little larger than the anterior laterals, standing out prominently on the carapace; ocular quadrangle a little wider behind than in front, not very much wider than long.

Chelicerae.—Seen from below as in fig. 28*b*; superior margin with a stout triangular tooth at its apex followed proximally by 6 long sharp teeth and 4 much smaller ones; anterior (upper) surfaces of chelicerae flat, keeled on their inner and outer margins, no teeth on these surfaces; fang with a tubercle near the end of its basal third, this sometimes more conspicuous and pointed than it appears in fig. 28*b*, depending on the angle from which it is viewed.

TEXT-FIG. 28.



Myrmarachne akermani n. sp. ♂. *a*, Carapace from the side; *b*, chelicera from below.

Carapace.—Seen from above, the cephalic a little wider than the thoracic region, both regions subparallel; seen from the side in profile as in fig. 28*a*.

Abdomen above with two scutes, the anterior one subquadrate and much smaller than the posterior one, which is oval and covers the posterior $\frac{2}{3}$ of the abdomen; seen from the side there is a slight depression between the two scutes.

Pedipalp as in fig. 29*b* seen from in front.

Legs.—Tibia I with 4 pairs of strong inferior spines, II with only 2 inferior spines on the outer side; metatarsi I and II with 2 pairs of inferior spines.

Dimensions.—Length of carapace 2.4, total length 4.8, chelicerae 1.9 mm.

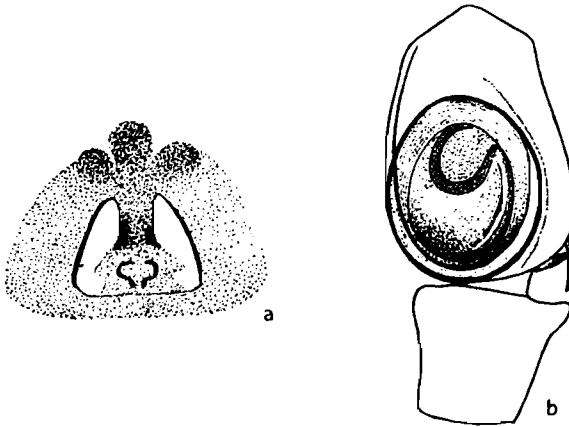
♀. *Colour*.—Carapace blackish-brown a light bar at the posterior apex of cephalic portion; chelicerae a little lighter; abdomen above light olive green with some ill-defined whitish chevron-markings, the anterior of which is broken in the middle; under surface lighter than upper surface, the sides with a fairly wide continuation of the anterior chevron-marking of the dorsal

surface ; sternum, mouthparts and coxa III brown, coxæ I, II and IV yellow. Leg I yellow except for a broad blackish stripe on the whole of outer surface and proximal half of inner surface of the femur, and a narrow blackish stripe at the sides of patella and tibia ; leg II yellow except for a black stripe along the inner inferior surface of femur and narrow black lateral stripes on patella and tibia ; femur of leg III and anterior surface of patella dark brown, remaining segments yellow, the tibia with black lateral stripes ; whole of leg IV dark brown, except trochanter and ventral surface and proximal half of dorsal surface of patella, which are yellow ; palps blackish-brown.

Eyes as in the description of the ♂.

Chelicerae of normal form ; inferior margin with 8, superior margin with 7

TEXT-FIG. 29.



Myrmarachne akermani n. sp. a, Vulva of ♀ ; b, pedipalp of ♂ from in front.

teeth ; teeth of the inferior margin subequal to those of the superior margin but closer together.

Vulva as in fig. 29a.

Legs.—Tibia I with 6, II with 3 pairs of inferior spines ; metatarsus I and II with 2 pairs of inferior spines.

Dimensions.—Length of carapace 2.8, total length 6.9 mm.

Other specimens.—2 ♂♂, Winklespruit, Natal (N.M. 1735) ; 4 ♀♀, 2 immature ♀♀, Pietermaritzburg, Natal N.M. 1496, 1723, 1695) ; 1 ♂, Umhlali, North Coast, Natal (N.M. 2917).

In some of our specimens from Winklespruit and Pietermaritzburg the carapace is reddish-brown with large black circles round the eyes, and the legs entirely yellow. The number of large teeth on the superior margin of the chelicerae varies from 6–8, the number of small teeth on the inferior margin

from 8-12. The female of *Myrmarachne akermani* resembles that of *M. natalica* Lessert (8) in the vulva, but the vertical bar dividing it into two portions is considerably wider than in that species; it also differs from this species in having the depression behind the cephalic area of the carapace more shallow. It differs from *M. kiboschensis* Lessert (9) in the structure of the palp, the tibial process being differently formed; the vulvæ of these two species are, however, fairly similar.

The structure of the palp in *akermani*, *mærens*, *kiboschensis* and *marshalli*, as well as the chelicerae of the ♂, conform to the same general plan but differ from each other in detail. *M. akermani* seems most closely related to *marshalli* Peckham from Mashonaland (14), but the female of this species differs from it in the shape of the vulva. It is markedly different from *forelii* Lessert (8) and *lesserti* Lawrence (4).

UNIDENTATI.

Gen. *Menemerus* E. Simon.

Menemerus bivittatus (Dufour).

7 ♀♀, from Umhlali, North Coast, Natal (N.M. 2934).

Gen. *Cosmophasis* E. Simon.

The following two species I refer with some doubt to this genus:

Cosmophasis natalensis n. sp. Text-fig. 30a-c.

Type.—2 ♀♀, 1 ♂, Umhlali, North Coast, Natal (N.M. 2935).

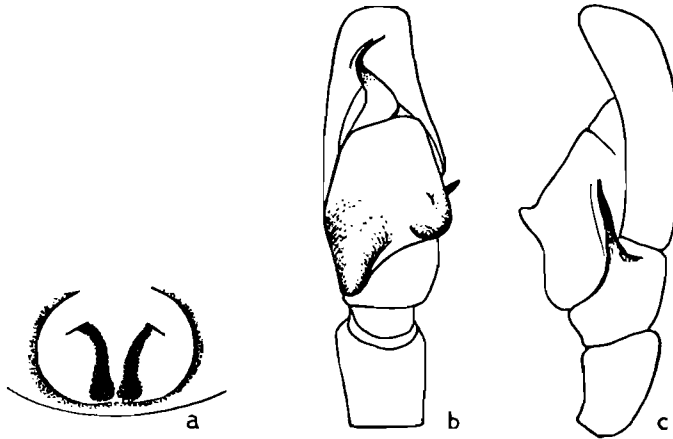
♀. *Colour*.—Carapace black; abdomen above with a slightly recurved narrow transverse yellow stripe near anterior margin and behind it 4 large yellow spots, the anterior pair more or less transversely comma-shaped and fading out anteriorly, the posterior pair triangular and well-defined; sides black; ventral surface with a wide light olive-green band in the middle, bordered by fairly broad white lateral stripes, neither the median band nor the lateral stripes reaching the spinners, which though olive green are surrounded by black; the white lateral stripes joined at their anterior apices by the yellow transverse stripe of the dorsal surface. Sternum, coxæ and mouth-parts blackish, with a bronze tint. Legs: Anterior femora black with some narrow white longitudinal stripes above; patellæ to tarsi dark brown, a narrow yellow stripe on each side above and a broader yellow ventral stripe; posterior legs similar to anterior legs, tibiæ, metatarsi and tarsi however with a single yellow stripe above; pedipalp femur black, remaining segments yellow with a narrow black dorsal stripe.

Carapace covered for the most part with flattened scale-like iridescent

hairs, abdomen with mixed flattened and simple hairs, the coloured portions composed entirely of flattened hairs; ventral surface entirely covered with flattened hairs mixed with a few fine black simple hairs; sternum and coxæ with a number of scattered white rice-like flattened hairs, those of the coxæ more numerous.

Eyes.—Anterior row seen from in front a little recurved, their upper margins straight, medians more than twice as large as laterals, subcontiguous, but a little further from the laterals; eyes of middle row very small, considerably nearer to the posterior row than to the anterior laterals; eyes of posterior row subequal to anterior laterals; ocular area parallel, considerably wider than long; anterior medians $\frac{1}{3}$ their radius from the edge of clypeus.

TEXT-FIG. 30.



Cosmophasis natalensis n. sp. a, Vulva of ♀; b, pedipalp of ♂ from in front; c, from the outer side.

Chelicerae.—Superior margin with 2 teeth at the internal angle of the lamella, the proximal considerably larger than the distal one; inferior margin with 1 large pointed tooth considerably larger than the larger of the two superior teeth, and nearer to the base of the fang.

Vulva as in fig. 30a.

Legs.—Tibiae I and II with 3 pairs of inferior spines, metatarsi I and II with a submedian pair and 3 subapical inferior spines.

Dimensions.—Length of carapace 3·4, total length 9·7 mm.

♂. *Colour*.—Carapace black; abdomen above black, with two broad dull yellow transverse bands separated by a wider black band, the anterior of the yellow bands with a narrow lighter anterior margin; ventral surface black, with a large, oval, light olive-green patch in the middle, not quite reaching the

epigastric region or the spinners; pedipalp blackish, tarsus reddish-yellow on its dorsal surface, especially at apex. Seen dry the carapace with a few white hairs round the eyes and along the edge of clypeus, a subquadrate patch of white hairs in the middle of its posterior apex; chelicerae with some scattered yellowish hairs in basal half; anterior legs on their dorsal surfaces with 2 narrow stripes of snow-white hairs from patella to metatarsus, tarsus I, except at its base, covered with snow-white hairs; most of the anterior and posterior surfaces of femora II-IV with snow-white hairs, I with a small cluster at its inner apex; patellae of legs III and IV with a double stripe, tibia to tarsus of legs III and IV with a single stripe of white or yellow hairs; dorsal surface of tarsus, tibia, and most of patella of palp, with snow-white hairs; coxae, sternum, and parts of the ventral surface of abdomen above the epigastric region and at the sides, with scattered white hairs.

Eyes.—Seen from in front the anterior row with their centres moderately recurved, their upper margins forming a slightly recurved line; eyes of middle row only a little nearer to the posterior than to the anterior row of eyes; otherwise as in description of ♀.

Chelicerae as in ♀, the two teeth of the superior margin very close together, the apical one very small.

Legs spined as in the ♀.

Pedipalp as in fig. 30*b* seen from in front, fig. 30*c* seen from outer side; femur with 2 spines on its dorsal surface, patella unspined, longer than tibia.

Dimensions.—Length of carapace 3.4, total length 7.6 mm.

Cosmophasis quadrimaculatus n. sp. Text-fig. 31.

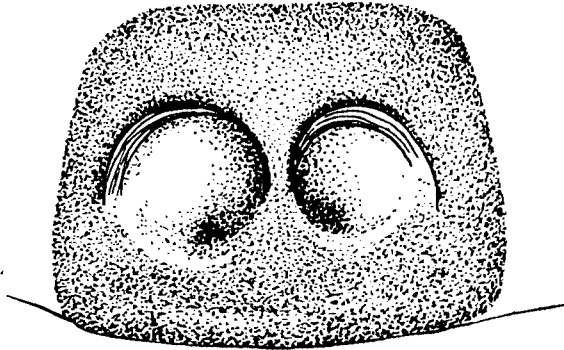
Type.—1 ♀, Njele River, North Transvaal. Collected by H. K. Munro (N.M. 2527).

Colour.—Seen in liquid. Carapace and chelicerae black; abdomen above black with a narrow transverse yellow line near anterior margin and 4 very conspicuous yellow spots; these of nondescript form, the anterior a little larger than the posterior pair, the latter a little nearer to each other than are the anterior pair; ventral surface black, a conspicuous white stripe on each side from epigastric furrow to just before the spinners, tapering posteriorly; coxae and mouthparts blackish-brown, sternum black. Legs: Femora black, patellae to metatarsi yellow-brown with a blackish stripe at the sides and above, tarsus I snow-white, a black ring at apex and base; palpi blackish, patella to tarsus with a yellow dorsal stripe. Seen dry. Carapace with a number of flattened rice-like white hairs scattered over its whole area; ventral surface of abdomen in the middle with metallic grey-green flattened hairs, the white lateral stripes composed of snow-white hairs; femur I with a patch of white hairs at its inner apex, femora II-IV with their inner and outer surfaces covered with white hairs; patella and tibia of legs I and II with 2

narrow dorsal stripes and a fairly broad ventral stripe of silvery white hairs, tarsus I with snow-white hairs except at the base, which is black; patella of posterior legs with 2, tibia to tarsus with 1, narrow dorsal stripe of yellowish hairs; patella and tibia of pedipalp with 2 dorsal white stripes, tarsus covered with white hairs above. Coxæ and sternum with scattered white hairs.

Eyes.—Anterior row with their centres recurved, upper margins only slightly recurved, medians a little less than twice as large as laterals, subcontiguous, and a very little further from the laterals than from each other; eyes of the middle row small, a very little nearer the posterior than the anterior eyes; eyes of posterior row subequal to anterior laterals; ocular quadrangle much wider than long, subparallel, or a little wider behind than in front.

TEXT-FIG. 31.

*Cosmophasis quadrimaculatus* n. sp. ♀. Vulva.

Chelicerae as in *Cosmophasis natalensis*.

Vulva in fig. 31.

Legs.—Tibiae I and II with 3 inferior pairs of spines, and a lateral subapical spine on outer side; metatarsi I and II below with a submedian pair and 3 apical spines.

Dimensions.—Length of carapace 4.3, total length 9.8 mm.

According to Mr. H. K. Munro, of the Division of Entomology, Pretoria, who sent me the specimen, this species of Attid mimics a Carabid beetle of the genus *Eudema* in its coloration and movements. *Eudema* also has 4 large golden spots on the dorsal surface of the flattened abdomen.

Gen. *Cyllobelus*.

Cyllobelus rufopictus E. Simon. Text-fig. 32a-d.

C. rufopictus E. Simon, Ann. Mus. civ. Genova (3), vol. iv, p. 420 (1908-10).

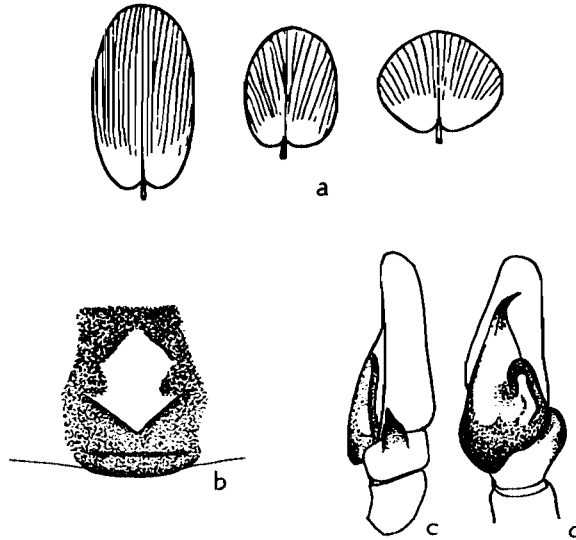
7 ♀♀, 1 ♂, Umhlali, North Coast, Natal (N.M. 2946).

Simon's description omitted various interesting details of this species and

was not accompanied by figures ; I therefore give a re-description of both sexes of a form which I have little doubt can be assigned to this characteristically marked species.

♀. *Colour*.—Carapace blackish, a narrow white band along the lateral and anterior margins, narrowest at the clypeus ; eyes with a ring of red hairs, some white ones on the margin of clypeus ; chelicerae light brown ; abdomen above black, with 11–13 small, more or less equal-sized bright red dots, a single white dot just above the spinners ; sides of abdomen with a white dot or short bar anterior to, but a little distant from the spinners, this larger than

TEXT-FIG. 32.



Cyllobelus rufopictus E. Simon. *a*, Hairs from the abdomen, enlarged ; *b*, vulva of ♀ ; *c*, pedipalp of ♂ from outer side ; *d*, from the front.

the white dot above the spinners ; ventral surface silvery, with a white lateral margin extending from pedicel to just anterior to the spinners ; sternum yellow to light brown with a darker margin, coxæ yellow, mouthparts brown to blackish-brown, their apices white. Leg I black, a white dot on each side at the apex of patella and tibia ; tarsus white, black at its base ; legs II–IV yellow to light brown, with black stripes along their sides. Pedipalp light brown to blackish, tarsus white.

Eyes.—Anterior row recurved, equidistant, and subcontiguous, medians more than twice as large as laterals ; clypeus with 3 pairs of long and stout setæ, one pair in the middle and one on each side, anterior median eyes less than their radius from the edge of clypeus ; eyes of middle row very small, a

little nearer the posterior than the anterior row ; posterior eyes subequal to the anterior laterals ; ocular quadrangle much wider than long.

Chelicerae.—Tooth of inferior margin large, a little nearer the base of the fang than the 2 teeth of the superior margin.

Abdomen with large, flat, scale-like hairs, some of those on the inferior surface of abdomen broader than long, others longer than broad (fig. 32a).

Vulva as in fig. 32b, rather ill-defined.

Legs.—Femur I with a short fringe of stiff black hairs at the outer apex of its inferior surface ; tibia I without a fringe below but with 3 pairs of very long prone spines ; metatarsus I with 2 pairs of long inferior spines, the basal pair as long as the segment.

Dimensions.—Length of carapace 2·3, total length 5·3 mm.

♂. *Colour* similar to that of the ♀, the red dots of the dorsal surface of abdomen however very indistinct ; surface of abdomen shiny blue-black, iridescent, the white dot at the sides of abdomen smaller ; white lateral bands of ventral surface ill-defined or absent ; mouthparts entirely black ; whole of leg I black, except tarsus, which is white ; apex of femur and whole of tibia with a thick fringe of stiff black hairs, the dorsal fringe of tibia considerably shorter than the ventral fringe. *Chelicerae* long and oblique, rather wider towards their apices, the teeth situated much further from the fang than in the ♀, those of the superior margin sharp and saw-like ; anterior surfaces with an indistinct ridge running along their outer margins.

Legs.—Tibia I without spines, legs otherwise as in the ♀.

Pedipalp as in fig. 32d seen from in front, fig. 32c seen from the outer side.

Dimensions.—Length of carapace 2, total length 4·2 mm.

This species is common at Umhlali, where it was seen hunting on the walls of houses during the warmer parts of the day together with *Menemerus bivittatus*. The red flecks of the abdomen are very bright in the living spider. When more specimens of this small Attid are collected it will probably be found to have a wide distribution in South Africa.

Gen. *Baryphas* E. Simon.

Baryphas ahenus E. Simon.

9 ♀♀ and immature specimens, Umhlali, North Coast, Natal (N.M. 2948).

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