Descriptions of New South African Arachnida.

By JOHN HEWITT.

ORDER SOLIFUGAE.

Blossia maraisi, sp. nov. (Text fig. 1.)

Type: A single adult male specimen taken at Peddie by Mr. B. Marais. This species is closely related to B. karrooica, Purc. (Ann. S. Af. Mus. II p. 217), agreeing therewith very closely in the dentition but differing therefrom in the following characters: the distal dorsal bristle of the chelicera is not different in any way from the other bristles of the neighbourhood, being slender and quite devoid of granulation in any portion of its length and not reaching to the tip of the fang; the flagellum is somewhat different in shape, its distal portion being more slender than that of karrooica and not so suddenly acuminate at the apex. It also resembles B. echinata, Purc. from Hanover (Ann. S. Af Mus. III p. 16, pl. 1, fig. 10), but differs therefrom in the dentition of the upper jaw, in the absence of a dorsal tooth and in the form of the flagellum.

Flagellum seen from the side is slightly sigmoidly curved; it is broad at the base and slender in its apical half, eventually tapering to a point. The basal portion is a hollow capsule considerably compressed laterally, but with a convex surface on the mesial side and a more flattened surface on the side adjacent to the jaw; on this flattened surface there is an elongated slit-like opening. The slender distal portion of the flagellum has no lumen, being a slightly curved flattened rod, and is strongly twisted at its base so that the apex is directed upwards and towards the midline of the animal: it is not so long as the swollen basal portion. The greater portion of the flagellum in its natural position lies not lateral to the jaw but immediately above it.

Chelicerae: The first tooth is a thin lamina without chitinous thickening. The fourth tooth of the upper jaw is smallest, the sixth also small; the inner row of the double series is composed
of 2 very large teeth. There is a strong projecting tooth on the outer side of the jaw adjacent to the second tooth of the main row. In the lower jaw the strong projecting lamella on the inner surface is opposite to the distal tooth which is much nearer to the second tooth than to the tip of the jaw, which is apparently not the case in *karroovi*na.

![Diagram of chelicerae](image)

**Fig. 1.**
*Blasia maraisi*, sp. nov. Right chelicera of male viewed from inner side (the isolated tooth shown on the upper jaw occurs on the outer side of the jaw).

The fleshy hairs on the second abdominal segment inferiorly are in two clusters, one containing 3 hairs, the other only 2 hairs.

The spines and setae on the tergites are all notched at the tip, the spines of the anterior tergites more distinctly so.

**Colour**: Pale yellowish brown throughout without pronounced infuscation.

**Total Length**: 7.5 mm.

**Order Araneae.**

**Family Ctenizidae.**

*Idiops parvus*, sp. nov.

**Type**: A single female example, apparently quite adult, from Zonderhout, Holfontein, O.F.S. (Mr. T. F. Austin). This species is probably closely related to *I. freyi* (Purcell) [Ann. S. Af. Mus. III p. 91] from which I distinguish it by the following characters: The common tubercle carrying the frontal eyes is so low and the
median groove so deep that those eyes are practically situated on two separate tubercles: anteromedian eyes of moderate size, considerably larger than the posteromedians and scarcely more than a diameter apart: distance between posteromedians subequal, or only a little less than the distance between a posteromedian and posterolateral.

Other characters are: frontal eyes scarcely two-fifths of a diameter apart, their visual axes only slightly inclined to each other: area formed by frontal and anteromedian eyes sub-parallel sided, about twice as wide as long: posterolaterals long and reniform, the posterior margins of the posterior row about in the same transverse line: tibia II with 5 or 6 spines on its anterior side: patella IV with the band of spines on its anterior side only stretching three-fifths or two-thirds of the length of the segment: tibia IV without spines on its anterior surface or with only a single one on the lower half of that surface: chelicerae with 5 larger teeth and 4 smaller ones in the inner row of the fang groove and with 6 larger teeth and 1 or several smaller ones in the outer row: carapace only very slightly shorter than the tibia and metatarsus of the fourth leg.

Measurements: Total length 29 m.m., length of carapace 10.25 m.m., breadth of carapace 8.8 m.m.

Colour: Pale brown almost throughout, the chelicerae reddish, the abdomen only slightly infuscated anteriorly above.

This is the smallest species of Idiops known to me. Various South African species have been founded on much smaller specimens but I think such specimens must have been immature. It is, however, hardly possible in many cases to judge with certainty on the degree of maturity of single specimens casually collected: a dark colouration of the glabrous portion of the genital plate is probably a sign of sexual maturity.

Pelmatorycter crudeni, sp. nov.

Types: A series of 15 female examples, including several adults, from Alicedale, C.P., presented to the Albany Museum by Mr. F. Cruden.
**Arachnida**

**Colour:** Carapace castaneous, most deeply so just in front of the fovea: a paler area just behind and lateral to the eyes on each side and a still paler patch near the margin opposite the coxae of the third pair of legs. Chelicerae blackish brown. The patella and more distal segments, except the tarsi, of the palps and legs are pale, whilst the more basal segments of those appendages are castaneous: this is not so pronounced on the two posterior pairs of legs. Abdomen purplish above, paler below.

**Ocular area:** Posterior lateral eyes relatively small, their long diameter equal to or less than the distance between the anterior and posterior laterals. Anterior medians elevated on a rounded tubercle.

**Chelicerae** with 6 teeth in the inner row below. In two immature examples there are only 5 on one side but 6 on the other; another immature specimen has 7 on one side, the sixth being small. In several young examples with the normal number of teeth the fifth is small.

**Pedipalp:** Coxae without granules along the basal edge anteriorly (there may occasionally be 1 in the basal half but at some distance from the edge). A pair of basal spines on the tarsus inferiorly and 4 apical spines below on the tibia.

**Legs:** Tarsi and metatarsi of first two pairs of legs scopulate to the base (on metatarsus II the scopula is absent on the outer side of the midline in its basal third). Tarsus I with a single spine on its outer side, II with two short spines on the outer side, III with a group of spines in its distal half inferiorly mostly situated on the anterior side. Metatarsus I with 3 apical spines inferiorly and 4 or 5 on the lower surface, II with 3 apical and 6 or 7 on the lower surface, III with about 8 or 9 anterodorsal spines exclusive of those on the distal edge and 11 or 13 postero-dorsal spines, and with a few slender spines inferiorly, IV numerous spines along the anterior surface inferiorly and with 2 postero-dorsal spines. Tibia I and II, each with a single strong apical spine below, III with a single apical spine inferiorly or none at all, with 4-7 anterior spines, 3 very strong dorsal spines and 2
on the posterior side distally, IV with 2 apical spines inferiorly one being very weak and with a single spine on the posterior surface above. Patella III covered with short stout spines on its anterior surface, the dorsal surface with 1 or 2 spines, IV with several short spinules on its anterior side situated quite at the base of the segment. Claws of first pair of legs with about 6 teeth in each row: of fourth leg occasionally both muticus, more often only one is muticus, but often both are toothed in which case there are 2 outer and 3 inner, or 3 outer and 2 inner, or 3 outer and 4 inner teeth on each claw. The ventral surface of some of the coxae has a dense clothing of long setae: this is specially pronounced along the whole posteroventral border of coxa III where it is well marked distally, also to a less extent over the whole ventral surface of coxa IV.

Posterior sternal sigilla ovoid, about two-fifths to one-half of a long diameter distant from the sternal margin and about two-thirds or scarcely more than half a diameter apart, their distance apart at any rate greater than their distance from the sternal margin.

Apical segment of Posterior Spinners about \( \frac{1}{2} \) times the length of the penultimate segment.

Measurements: Total length 23 mm., length of carapace 6·8, breadth of same 4·8.

Remarks: This species occurs at Alicedale along with a smaller one which I refer to \( P. lateralis \) Purc. (Trans. S. Af. Phil. Soc. XI p. 357) described from Dunbrody. The two can at once be distinguished by the description of the chelicerae, the smaller species having 8 in the inner row margining the fang groove: the posterior sternal sigilla are also quite different in the two species. The only other species described from this part of S. Africa are \( P. coloniae \) Poc. (Ann. Mag. Nat. Hist. 7.X. p. 12) from Jansenville and \( P. o‘nelli \) Purc. (Trans. S. A. Phil. Soc. XI. p. 357) from Dunbrody, species which are only known to me through the descriptions: from \( o‘nelli \) I distinguish this species in the absence of granules along the basal inferior edge of the coxa of the pedipalps and in the size of the posterior lateral eye: from
in the dentition of the chelicerae, that species having 7 teeth on the fang groove (according to Mr. A. S. Hirst in lit.).

Very few characters found in this genus can be regarded as of specific importance. I think that the degree of development of the setae along the posteroventral border of coxa III will prove useful in this respect.

The two species of *Pelmatorycer* found at Alicedale make quite different types of nests. *P. lateralis*, according to Mr. Cruden, has the tube of the nest bifurcated, both arms projecting upwards out of the ground; *P. crudeni* also has the tube bifurcated, but one arm ends blindly below the surface of the ground and only one projects above ground.

**Genus STASIMOPSIS.**

The females of the South African genus Stasimopus are the largest of our trap-door spiders. They are abundant in most parts of the subcontinent, south of the Limpopo, and are referable to many forms, here called species. The great majority of the known species are confined to the Cape Province, a fact which is perhaps connected with the greater diversity of physical environment found in that area: it should be added however that the Transvaal and Free State species have not been so carefully collected as those of the Cape Province.

For the most part these species seem to have each a separate and distinct area of distribution but we do not know the limits of any of those areas nor to what extent they overlap. As a rule only one species occurs in any limited geographical area: the Grahamstown Stasimopis, for instance, are all referable to *schönländi*, those of Victoria West and neighbourhood all to *maraisi*, and the Alicedale individuals seem to belong to a single species. Nevertheless in some localities two species are known to occur. Dr. T. F. Dreyer has pointed out the occurrence of two quite distinct species at Bloemfontein, two species are known from Debe Nek and I believe that two occur at Kroonstad. In such cases it seems probable that the two species will prove to be topographically separated from each other but on this point I have obtained
very little data: Dr. Dreyer writes that one of the Bloemfontein species, *S. oculatus*, is very local in that neighbourhood, being known to him only from a very small area where the soil is exceedingly hard, whilst another species is more generally distributed.

On the other hand I believe that two forms of the same species may occur together without such topographical separation: for instance, the specimens of *S. insculptus* collected by Mr. Pym indiscriminately at Kingwilliamstown may or may not have spines at the apex of the third metatarsus inferiorly—a character sometimes of specific value in this genus but not so in this species as various grades of intermediates between the two conditions are met with. An intensive study might conceivably show that these are instances of the true-breeding homozygous forms described by Prof. Bateson as the only definable units of classification (Presid. Address Brit. Ass. Adv. Sci. 1914), yet even if such be the case the existence of the numerous grades of intermediates, mongrels as they are termed by Bateson, must make it impossible in practice to utilise them as units of classification.

The characters employed in distinguishing the various species are all somewhat variable even in specimens taken from the same locality and with the advent of more material from different parts of the country it becomes increasingly difficult in certain cases to draw a hard and fast line between the various species. The group *insculptus, artifex, unitalicus* and *konlanicus* is one which I think will ultimately have to be regarded as a single species unless it is found that the several forms can be maintained on the male characters. Judged by the female characters, *schönlandi, astinus* and *patersoniae* can only be regarded as varieties of a single species for they intergrade somewhat, yet the adult males of *astinus* and *schönlandi* seem to be very distinct. Another group of closely related forms is constituted by the species, *schreineri, paupiger, lepoldi* and *maraisi*.

One is inclined to suspect that the genus will prove to be composed of a very great number of local forms: whether those forms grade throughout the genus or whether they can be arranged
into natural groups of a strictly specific value is not yet known. At any rate what we now distinguish under the name of species are probably to be regarded as the most marked of such local forms. Unfortunately, the finer problems of variation and distribution cannot be attempted merely through a study of female characters.

Various species of Stasimopus have been founded on adult male examples alone, and it has not been possible in all cases to match them with known females. The adult males afford more systematic characters than do the females and it is possible that the structural differentiation into distinct forms has been carried on still further in the males than in the females, as is the case in the related order Solifugae.

greater length of the palp. Since describing the type specimen I have received another example from Bloemfontein (Dr. Dreyer) in which the anteromedian eyes are only about a diameter apart so that the wide separation of these eyes is perhaps not a character which can be utilised in distinguishing the species from nigellus Poc.) : S. steynsburgensis Hewitt (Annals Natal Mus. III pt. 2) female unknown.

A key to the Cape Colony species of this genus, based on female characters, was given by Dr. Purcell in Annals S. Af. Mus. Vol III p. 85 but its value was somewhat impaired from the fact that the author was unacquainted with the species previously described by Mr. Pocock. In the following key the species are arranged somewhat arbitrarily under three sections which again have several subdivisions: these sections, however, are not sharply defined and in using the key due allowance should be made for some degree of variation within a species.

Key to the species of the genus Stasimopus based on the characters of adult females.

(a) Tibia I shorter than the metatarsus, armed with 5–9 spines on its inner surface. Tibia of palp with a small distal group of stout spinules above. Posterior median eyes small, smaller than the anterior medians, a diameter or more distant from the posterior laterals. (Worcester).

S. cryrogenalis, Purc.

(b) Tibia I slightly longer than the metatarsus, armed with 8–11 spines on its inner surface. Tibia of palp with a tiny distal patch of spinules above. Posteroomedian eyes slightly larger than the anteromedians and about ½ their own diameter distant from the posterior laterals. Metatarsus III with 15–16 spines on the anterior surface. (Willowmore).

S. bimaculatus, Purc.
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(c) Tibia I subequal to the metatarsus, armed with 11-15 spines on its inner surface. Tibia of palp with a large distal group of spines above extending over at least \( \frac{1}{3} \) of the length of the segment. Posteromedian eyes very much larger than the anteromediocans and almost touching the posterolaterals. Metatarsus III with 10-12 spines on its anterior surface. (Steinkopf.)

\( S. \text{schultzei}, \text{Purc.} \)

(d) Tibia I subequal to the metatarsus, armed with 20-23 spines on its inner surface. Tibia of palp with 8 or 9 minute apical spines above. Metatarsus III with 22-24 spines on its anterior surface. Posterior median eyes a little larger than the posterior laterals and distant about \( \frac{1}{2} \) a long diameter from them. Patch of red spines on anterior side of patella IV occupying over \( \frac{2}{3} \) of the length of the anterior surface. (Little Namaqualand?)

\( S. \text{obscurus}, \text{Purc.} \)

(e) Tibia I subequal to the metatarsus, armed with about 24 spines on its inner surface. Tibia of palp with only a few spinules distally and only very few or none are stout. Posteromedian eyes as long as or longer than the anteromediocans, slightly more than \( \frac{1}{2} \) a diameter distant from the posterolaterals. Metatarsus III with about 24 or more spines on its anterior surface. Patch of red spinules on anterior side of patella IV not occupying over \( \frac{2}{3} \) of the length of the anterior surface. (Pretoria.)

\( S. \text{robertsi}, \text{Hewitt.} \)

*According to the description, this seems very much like the female of my \( S. \text{robertsi} \) from Pretoria. Probably the spinulation on the dorsal surface of the tarsus of the palp will distinguish them, though the character is not fully described in \( \text{obscurus} \). In \( \text{robertsi} \) the spinules are not numerous but are very stout and strong, the patch extending quite 2-3ths of the length of the segment.

+\( S. \text{dubius} \) mihi, founded on a single specimen from Pretoria, is very closely related to \( \text{robertsi} \) and may prove identical therewith; it has somewhat fewer spines (19) on the anterior surface of metatarsus III.
B

Group of short spinules at base of tarsus of palp superiorly usually short and composed of only a few spinules, sometimes however extending about \( \frac{1}{2} \) of the length of the segment or even a trifle more.

Band of spinules on upper surface of metatarsus I long, extending over \( \frac{1}{4} \) to \( \frac{1}{2} \) or even more of the length of the dorsal surface.

(f) Inferoposterior apical tuft of metatarsus IV composed of a single large stout spine, usually flanked on one side or both by 1–3 more slender spines or spiniform setae. Metatarsus III with a group of apical spines below. (Hanover, also known to me from De Aar and Hopetown.)

*S. muispinosus*, Parc.

(g) Apical tuft of metatarsus IV composed of about 5 or 6 subequal setiform spines. Metatarsus III without a group of apical spines below. Tibia of palp with some short stout spinules distally above. (Kroonstad.)

*S. coroninus*, sp. nov.

(h) Some stout spinules at apex of tibia of palp above and a cluster of spines at apex of metatarsus III inferiorly: distal patch of spines on dorsal surface of tibia I extending about \( \frac{1}{2} \) or \( \frac{1}{3} \) of the length of the segment. (Bloemfontein, O.F.S.)

*S. oculatus*, Poc.

(i) A cluster of spines at apex of metatarsus III inferiorly but no stout spinules at apex of tibia of palp above: distal patch of spines on dorsal surface of tibia I extending about \( \frac{3}{4} \) of the length of the segment. (Middledrift, C.P.)

*S. spinosus*, Hewitt.

(= *S. schönlaudi* var. *spinosus*.)

The following species have no spines at the apex of metatarsus III inferiorly and with rare exceptions no stout spinules at the apex of the tibia of the palp above: the distal patch of spines on dorsal surface of Tibia I extends about \( \frac{1}{2} \) of the length of the segment:

(j) About 9–20 spinules in the basal patch on the

*A single specimen from Mafeking (Bro. J. H. Power) agrees closely with this species.*
B—Cont.
tarsus of the palp above: tibia I with a band of 5-10 spines on its inner surface; ocular area wider than the length of tibia I, post-lateral eyes small, subequal to or only slightly larger than the post-medians. (Swellendam and Robertson div.)

*S. brevipalpis* Purc.

(4) Like the preceding but post-lateral eyes much larger than the post-medians: width of ocular area equalling or slightly less than (rarely greater than) the length of tibia I. (Montagu, C.P.)

*S. quadrimaculatus* Purc.

(4) Basal patch of stout spinules on tarsus of palp above almost obsolete: tibia I with a band of 17-23 short spines on its inner surface: width of ocular area subequal to the length of tibia I. (Moeder Riv., C.P.).

*S. poweri* Hewitt.

Some specimens of *S. schöllandi* Purc. might be included in this column; see B II.

II.

**Band of spinules on upper surface of metatarsus I of moderate length, extending over about 1/4 to 1/3 of the dorsal length of the segment.**

(1) Ocular area very wide, its width behind equal to the length of metatarsus I together with 1/2 or more of the tarsus. See B III for *S. leipoldtii*.

(2) Width of ocular area equal to length of metatarsus I together with 1/3 or more of the tarsus; posterior lateral eyes very small.

See B III for *S. naraisi*.

*The characters of the palp are unknown to me, being omitted from the original description.

†Specimens from Bloemfontein and from Vaal Riv. near Kroonstad, are barely distinguishable from this species except in size.
B—Cont.

(3) Width of ocular area barely or not exceeding the length of metatarsus I; posterior laterals at least as large as the posterior median eyes. *(m)—*(p).

*(m)* Some spinules at the apex of the tibia of the palp (Kroonstad, O.F.S.).  
*S. dreyeri*, Hewitt.

The following species are without spinules at the apex of the tibia of the palp.

*(a)* Distance between the two lateral eyes on each side at least twice the long diameter of the posterior, and that between the anterior median and lateral about twice the diameter of the median. No spines at apex of metatarsus III inferiorly. (Grahamstown, C.P.)  
*S. schönlandi*, Poc.

*(b)* Distance between the two lateral eyes on each side about equal to the long diameter of the posterior; anterior laterals much larger than anterior medians, the space between them less than the diameter of the medians. Spinosus areas on palp and first two pairs of legs slightly shorter than in *schönlandi*.  
(Pearston and Jansenville, C.P.)  
*S. estatus*, Poc.

*(p)* Metatarsus III with a group of spines or spiniform setae at the apex inferiorly. Distance between anterior median and anterior lateral eyes greater than the diameter of the medians but not equal to twice the diameter of the medians. (Perseverance, C.P.)  
†S. patersonae, Hewitt.

III.

**Band of spinules on upper surface of metatarsus I short, extending over about \( \frac{1}{3} \) or less of the dorsal length of the segment.**

Ocular area very wide, its width behind equal to the length of metatarsus I together with \( \frac{1}{3} \) or more

*This species may sometimes fall under B III.
†A very closely related form, which in some respects connects together *schönlandi, estatus* and *patersonae*, occurs at Alledale, C.P.
of the tarsus; posterior row of eyes strongly recurved.

(q) Patella III with a number of slender dorsal spines at the apex in addition to the stout ones along the anterior surface. Tibia of palp with spinules at the apex above. (Hanover). [This or a very closely related species is also known to me from Somerset East Dist. and from Redhouse.] *S. schreineri, Purc.

(r) Patella III without any slender dorsal spines at the apex. (Clanwilliam.) *S. leipoldtii, Purc.

Ocular area as wide as length of metatarsus I together with about \( \frac{1}{3} \) of tarsus; posterior lateral eyes always considerably smaller than the posterior medians.

(s) Patella III without any slender dorsal spines at the apex. (Victoria West.) *S. maraisi, Hewitt.

Ocular area about as wide as or slightly narrower than the length of metatarsus I; posterior lateral eyes usually about as large as or even larger than the posterior medians. (l)—(z).

1. No spinules at apex of tibia of palp above, not spinules at apex of metatarsus III inferiorly.

(l) Metatarsus IV spined along the middle below. (Pt. Elizabeth.) *S. castlanus, Purc.

(n) Metatarsus IV not spined along the middle below; patch of spinules at apex of tibia I dorsally subequal in length to the patch at the base of metatarsus I. (Quinbu, C.P.) †S. quinbu, Hewitt.

*This species sometimes falls under B II. All our specimens of *S. maraisi* have only 4 teeth in the outer row of the fang groove, whereas most species of the genus have five or more teeth thus situated. The character is not constant in most species, for whereas normally the row is composed of 5 or 6 teeth of more or less equal size, not infrequently there are more, large and small ones being interspersed in the row; often the tooth nearest to the base of the fang is small. Juvenile examples of various species have only 4 teeth in that row.

†This species also occurs at Ngqeleni (H. L. Bulcock).
(r) Patch of spinules at apex of tibia I dorsally only about half the length of that at the base of the metatarsus. (Vredefort Rd.) *S. gigas, Hewitt.

3. No spinies at apex of metatarsus III inferiorly, but tibia of palp with spinules at the apex above.

(u) Patella III with a number of short stout red spinules at apex above similar to those on the tibia. (Untata, C.P.) †S. unilatens, Purc.

(r) Patella III with the distal dorsal spines black and finely pointed at the apex or setiform. (Kentani, C.P.) †S. kentani, Purc.

3. Tibia of palp with spinules at the apex above, and metatarsus III with a cluster of spinules at apex inferiorly (latter character sometimes wanting in insculpus).

(y) Long diameter of anterolateral eyes less than distance between anterolateral and anteromedian eyes. (Kingwilliamstown, C.P.) S. insculpus, Poc.

(z) Long diameter of anterolateral eyes greater than distance between anterolateral and anteromedian eyes. (Rokey Park, near Grahamstown, C.P.) ‡S. arifex, Poc.

Ocular area only 2½ times as wide as long.

(z') Tibia of palp with spinules at the apex above but no spinies at apex of metatarsus III inferiorly. (Kentani dist., C.P.) S. kolbei, Purc.

*S. astatus may sometimes fall in this section but is easily distinguished from gigas by its ocular characters.
†S. kentani, Purc., seems hardly distinguishable from S. insculpus, Poc., if we include under the latter specimens which have no spinies at the apex of metatarsus III inferiorly.
‡At Peddie there is a closely related form lacking the cluster of spinules at the apex of metatarsus III. This connects together arifex and insculpus.
Stasimopus poweri, sp. nov.

Types: Five female examples collected at Modder River near Kimberley by Bro. J. H. Power who presented them to the Albany Museum.

Colour: Carapace and appendages castaneous; abdomen more or less infuscated above.

Carapace: Ocular area not so wide as the length of Metatarsus I but subequal in width to the length of Tibia I. Distance between anterior lateral and anterior median eyes slightly less than the long diameter of the former, between anterior and posterior lateral eyes subequal to or greater than the long diameter of the former and considerably greater than the long diameter of the latter. Posterior median oval, their distance from the posterior laterals greater than their long diameter. A longitudinal line touching the outer margin of the anterior lateral would pass through the interspace between posterior median and posterior lateral.

Pedipalp: Band of spines on inner side of tarsus extending to near the base and including about 9 or 10 strong spines. Basal patch of spines on tarsus above almost or quite obsolete, being composed of a few spines usually more or less elongated and not very stout, or even none at all. No spinules at the distal end
of the tibia above (except in one specimen where there are a couple of weak ones).

Legs : Inner surface of Tibia I with 17-23 short spines, the upper surface with a small apical patch of spinules scarcely extending over one-eighth of the length of the dorsal surface. Basal patch of spinules on Metatarsus I above extending over about two-fifths of the length of the dorsal surface (in the smallest specimen only one-fourth). Basal patch of spinules on Metatarsus II above about twice as long as that at the apex of the tibia. Inner surface of tibia II with 6-10 spines. Anterior surface of metatarsus III with a band of 16-25 spines. Patella III with about 10-15 short spines on its anterior surface: some very weak short spines at the distal end above. Metatarsus III without an apical tuft of spines below: a few long more or less spiniform setae may be present. Infero-posterior apical tuft on Metatarsus IV composed of about 8-10 spiniform setae arranged in a transverse row.

Tibia I shorter than Metatarsus I.

MEASUREMENTS : Total length 41.3 m.m.; length of carapace 15.7; breadth of same 12.6; length of metatarsus I 5.9.

This is a particularly large species rivalling in size *S. rufidens* of Natal. A very closely related form is known to me from various localities in the Free State [Bloemfontein (Dr. T. F. Dreyer), Valsch Riv. near Kroonstad (Prof. H. H. W. Pearson) and from Winburg (Miss S. Brown).]

Stastmopus dreyeri, sp. nov.

TYPE: A single female example from Kroonstad presented to the Albany Museum by Dr. T. F. Dreyer.

COLOUR: Carapace castaneous, appendages dark castaneous, abdomen somewhat infuscated over the median area above.

CARAPACE: Ocular area subequal in width to the length of the first metatarsus. Distance between anterior and posterior lateral eyes very slightly greater than the long diameter of the former and about 1½ times the long diameter of the latter, between anterior lateral and anterior median eyes subequal to or very
slightly less than the long diameter of the former. Posterior medians oval, their distance from the posterior laterals subequal to their long diameter.

**Pedipalp**: Band of spines on inner side of tarsus extending to the base, including about 16–18 spines, tibia with 2 or 3 spines and patella with none on the inner side. Basal patch of stout spines on tarsus above extending about one-fifth or one-sixth of the length of the segment. A small patch of spines at the distal end of the tibia above.

**Legs**: Inner surface of tibia I with 24–26 short spines, the upper surface with a small apical patch of spinules extending over about one-sixth or one-seventh of the length of the dorsal surface. Basal patch of spinules on metatarsus I above extending over about one-fourth of the length of the dorsal surface. Basal patch of spinules on metatarsus II above scarcely longer than that at the apex of the tibia. Inner surface of tibia II with 12 spines. Anterior surface of metatarsus III with a band of about 27 or 28 short strong spines. Patella III with about 15 short spines on its anterior surface and a small patch of weak spinules at the distal end above. Metatarsus III without apical tuft of spiniform setae below. Infero posterior apical tuft on metatarsus IV composed of 5 spiniform setae arranged in a transverse row. Patch of red spinules on anterior surface of patella IV extending over about two-thirds of the length of the anterior surface. Tibia I subequal to metatarsus I in length.

**Measurements**: Total length 36 m.m.; length of carapace 11.75; breadth of carapace 10.3; length of metatarsus I 4.3 m.m.

A closely related form, differing however in the ocular characters, is known to me from Beerbungle, Heidelberg Dist. (Transvaal Mus.).

**Stasimopus coronatus, sp. nov.**

**Types**: Two female examples from Kroonstad presented to the Albany Museum by Dr. T. F. Dreyer.

**Colour**: Carapace and appendages dark castaneous. Abdomen pale above, only infuscated mesially behind, and dorsally over a comparatively narrow median area.
Carapace: Ocular area subequal in width to the length of the first metatarsus. Distance between anterior lateral and anterior median eyes about equal to the long diameter of the former; between anterior and posterior laterals a little greater than the long diameter of the former and nearly twice as long as the long diameter of the latter; posterior medians rounded, their distance from the posterior laterals slightly greater than or subequal to their long diameter. [These ocular characters apply to the larger specimen only.]

Pedipalp: Band of spines on inner side of tarsus extending almost to the base, including 9–12 spines: tibia with 2 spines; patella with none on the inner side. Basal patch of stout spinules on tarsus above extending about 1 or very slightly more of the length of the tarsus. A small patch of spinules at the distal end of the tibia above.

Legs: Inner surface of tibia I with 16–19 short spines, the upper surface with a small apical patch of spinules extending over about one-sixth of the length of the dorsal surface. Basal patch of spinules on metatarsus I above extending over about three-fifths of the length of the dorsal surface. Basal patch of spinules on metatarsus II above about twice as long as that at the apex of the tibia. Inner surface of tibia II with 6–9 spines. Anterior surface of metatarsus III with a band of 17–20 spines. Patella III with about 15 short spines on its anterior surface and a small patch of spinules at the distal end above. Metatarsus III without an apical tuft of spiniform setae below. Infero posterior apical tuft on metatarsus IV composed of 5 or 6 spiniform setae arranged in a transverse row. Patch of red spinules on anterior surface of patella IV extending over about 3 of the length of the anterior surface. Tibia I very slightly shorter than Metatarsus I.

Measurements: Total length 37 mm, length of carapace 11.8 mm, breadth of carapace 10.3, length of metatarsus of first leg 4.25.

Assuming the validity of this species as distinct from dreyeri, it may be noted that three species have been recognised in a very
limited amount of material collected in the immediate neighbourhood of Kroonstad.

This species is very closely related to my S. dabius from Potchefstroom and S. robertsi from Pretoria. I distinguish it therefrom in the shorter length of the band of spinules on the upper surface of the tarsus of the palp.

Stasimopus gigas, Hewitt (?) sp. (Annals Natal Mus. III pl. 2.)

The following description is based on a large female specimen in the British Museum collection taken at Vredefort Rd. by Capt. Barrett Hamilton. It is possible, however, that this specimen should be referred to nigellus Poc:—

Ocular Area: Very slightly narrower than the length of metatarsus I. Posterior laterals small, smaller than the posterior medians, their distance from the anterior laterals about twice their long diameter. Posterior medians and posterior laterals rather widely separated, their distance apart equal to the long diameter of the former. Distance between anterior laterals and anterior medians appreciably greater than the diameter of the median, subequal to the diameter of the lateral.

Pedipalp: Tibia without spinules at apex above. Tarsus with a small basal group of spinules above. Band of spinules on inner side of tarsus extending to the base and including about 20–24 strong spinules.

Lgrs: Metatarsus I with basal patch of spinules on its upper surface extending over about one-fifth to one-sixth of the length of that surface, nearly twice as long as the patch at apex of tibia I above. Basal patch of spinules on metatarsus II above about 1½ times as long as that at apex of tibia II above. No spinules at apex of metatarsus III inferiorly. Comb on metatarsus IV composed of about 5 strong spines and several weaker ones. Anterior surface of metatarsus III with a band of about 34 spines. Metatarsus IV not spined along the middle below. Tibia I measured dorsally slightly shorter than metatarsus I. Inner surface of tibia I with about 30 or 32 spines. Inner surface of tibia II with 14–17
spines. Patella III with 10–12 spines on its anterior surface but no spinules at the distal end above, only relatively long spiniform setae.

**Measurements:** Total length 36 m.m., length of carapace 14.8, breadth of carapace 12.5, length of metatarsus I 5.6.

**Fam. OONOPIDAE.**

Section O. Loricata.

**Gamasomorpha australis, sp. nov.** *(Text fig. 2.)*

The types of this species were taken by myself during November, 1914, in Gowie's Kloof, Grahamstown, where the species is common.

Carapace finely striolated at the sides, with a broad smooth mesial area. A few hairs arise from each side of this area but the strongest hairs are 4 or 6 arising from rather conspicuous bases arranged in a transverse line which constitutes the ill-defined boundary between the upper surface and the sloping posterior surface of the carapace. Clypeus broader than the width of the anterior row of eyes. Anterior eyes separated from each other by a distance about equal to one-half of their long diameter. The four posterior eyes in a very slightly recurved line, the medians appreciably larger than the laterals and slightly separated therefrom.

Dorsal abdominal scute in the female large, subovate, broadest behind, the hind margin rounded; the surface very lightly convex, hairy and rather coarsely punctured throughout; it covers the abdomen entirely though the spinners may or may not be visible in dorsal view. That of the male is similar but narrower and more elongated. Ventral scute of female smaller than the dorsal but the general outline of its shape is similar; posteriorly however it is shallowly emarginate. It is clearly composed of two portions, an epigastric shield anteriorly and an abdominal shield posteriorly; it is separated from the inframammillary scute. The tracheal stigmata are widely separated. The surface is beset with numerous short hairs and is punctured, but not so coarsely as the dorsal
scute. The ventral shield of the male is narrower and longer, reaching as far as the infra-mamillary scute, but not fusing therewith: moreover the two halves are completely fused and there is no thickening nor groove to mark the division between epigastric and abdominal portions. Surface hairy and finely punctured, but anteriorly at the sides roughened and more coarsely punctured. Tracheal stigmata as in the female.

Maxillae very obliquely inclined, thickened along their inner margin, similar in the two sexes. Labium with a concave anterior margin.

Legs muticus. Anterior tarsi about three-fifths as long as the metatarsi. Tarsi and metatarsi of legs and tarsi of palps armed with stout hairs which are finely ciliated, some of them only along one side. Tarsal claws of fourth leg with only a single row of
well-developed teeth, the distal row of reduced teeth distinct
though small in the male, apparently quite absent in the female.
The well-developed row includes 6 long and strong teeth in the
female, the row reaching nearly to the apex of the claw: in the
male there are only 4 strong teeth and the row reaches about half
way along the claw.

Tarsus of palp in the female not terminating in a sharp point.
In the male, the patella of the palp is swollen and elongated, the
femur being attached at a point about two-fifths of the distance
along one side. Tibia small and rounded. Tarsus elongated,
about three-fourths to four-fifths as long as the patella, but not
nearly so stout, carrying on its upper surface a number of
stiff ciliated hairs which however do not occur near the apex
of the segment: the bulb is very small, situated at the distal end
of the tarsus and only discernible under high magnifications
(one-eighth ins. obj.) and even then is easily overlooked as its
walls are transparent whilst both bulb and style are closely
adpressed to the tarsus: the style is short and does not project
outwards.

Total length 2 mm.

The genus Gamasomorpha is recorded in Simon's "Histoire
naturelle des Araignées" from various parts of the old and new
worlds, but not from Africa and there are no subsequent records
of the genus in S. Africa at any rate. Mr. Simon has however
described a closely related genus, Nephrochirus,* from Walfish Bay.
G. australis differs from any of the species mentioned by Simon
(i.e.) in the peculiarly modified male palp which resembles that of
some species of the genus Opopaea excepting in the very small
size of the bulb.

**Australoonops, gen. nov.**

The spider now described under the name of *Australoonops
granulatus* sp. nov., falls under the section "Oonopidae mollis" but
does not seem to be referable to any of the genera hitherto
included therein. The ocular arrangement is much more like that

*Jenaische Denkschriften XVI, p. 178.
of the "Oonopidae loricata" than of the typical genera of the unarmed section, and one is inclined to suspect that when the various genera are better known it will not seem advisable to arrange them under sections differing only in the presence or absence of a shield. The ocular characters, the absence of spines on the legs, and the shape of the labium, furnish the characteristic features of this genus.

**Australoonops granulatus, sp. nov.** (Text. Fig 3.)

**Type:** A single adult male example from Grahamstown, July 1913 (R. Godfrey and J. Hewitt).

**Carapace:** High, strongly convex, obliquely sloping behind, nearly one-third longer than broad: surface closely granulated throughout, and bearing dorsolaterally a number of scattered hairs which, however, are not found on the lower portions of the lateral surfaces nor on the posterior obliquely sloping surface. Ocular area occupying the greater portion of the frontal width, wider than the clypeus. Eyes rather large; posterior row in a very slightly recurved line, the medians, which are larger, being contiguous and only narrowly separated from the laterals. Anterior laterals considerably separated from each other.

**Sternum:** Elongated, considerably longer than broad, subovate, its surface marked with numerous elongated pale spots: the posterior coxae are well separated.
Labium: This appears to be continued anteriorly as a very narrow median colourless process, the margins of which are obscured by downwardly directed stiffish hairs; including its process the labium is much longer than broad.

Legs: The two anterior tarsi and tibiae are not spined but scattered stout setae occur on all the legs. Anterior patellae about two-thirds as long as the tibiae. The fourth femora are appreciably longer than the femora of the other legs but are not stout.

Pedipalps: The maxillae are obliquely inclined to each other. None of the segments of the palp are swollen with the exception of the tarsus. The femur is about as long as the patella and tibia together but not quite so long as the tarsus. The bulb is not distinct from the tarsus: from a lateral protuberance of the tarsus the spine arises and passes more or less parallel with the long axis of the segment, terminating just beyond the end of the tarsus: it is fairly stout and straight, but hooked near the tip. Numerous hairs arise from the tarsus on the side away from the bulbous region.

Total length: 2 m.m.

Fam. DRASSIDAE.
Gen. XEROPHARUS Purcell.

X. poweri, sp. nov. (Text fig. 4).

Types: An adult male and female from Kimberley collected by Bro. J. H. Power.

Colour: Carapace in both sexes and abdominal scute in male castaneous, chelicerae dark reddish brown; surfaces of body and appendages covered with silky hairs, pale, yellowish on the carapace, pale brown on the abdomen.

Male: Carapace narrowed in front. Anterior row of eyes moderately procurred, the medians large and almost touching the laterals; posterior row a little wider and rather more strongly procurred, the medians about one-third of a diameter, or less, apart and very slightly more than a diameter distant from the
Arachnida

smaller lateral eyes. Lateral eyes on each side about a diameter or slightly less apart.

Chelicera with 3 superior teeth, the middle one largest, but only 1 minute inferior tooth.

Legs: All the tarsi and the two anterior pairs of metatarsi scopulate to the base except the fourth tarsus where scopulae are absent in the basal sixth; the third metatarsus also has a thin scopular strip on each side, anteriorly extending the whole length of the segment, posteriorly only in the distal half: fourth metatarsus with a row of scopular hairs distally on each side. The fourth tarsal scopula is broadly divided, the third only narrowly so. Tibia I with 2 apical spines below, metatarsus I with a pair of basal spines below.

Fig. 4.—Xerophanes powari, sp. nov. Palpal organ of male and epigyne of female.

Pedipalps: The tibia and its process together slightly longer than the patella but much shorter than the tarsus. Tibial process very much shorter than in X. capensis Purcell: it is moderately stout at the base, tapering gradually distally and ending in a claw-like extension which is broad and flattened at its base where it is
marked off by a slight constriction from the rest of the process, quickly tapering towards its apex which is strongly hooked and dark castaneous in colour. The claw is not quite so long as the rest of the process.

Tarsus large, acuminate, the distal portion projecting less than one-third of the total length beyond the cavity containing the palpal organ. On the exposed surface of the palpal organ in its distal half there is a brown well marked S shaped chitinous band which basally margins a deep groove on the surface of the palpal organ and at its distal end tapers to a fine point and terminates freely not far from the apex of the tarsus, beyond the bulbal excavation. Another process also arises from the bulbal organ: this is whitish, very delicate and is apparently a thin-walled tube; it arises near the distal loop of the S, and though in its basal half is quite separated from that chitinous band yet distally the two become associated and terminate together.

**FEMALE:** All the tarsal and metatarsal scopulae are divided. Tibia I with a scopula on each side in its distal half. Tibia I and Metatarsus I spined as in the male.

Epigyne with a broad shallow mesial longitudinal groove, terminating anteriorly in a small pocket, and bounded on each side by dark brown convexities, the groove being whitish. The mesial area is not grooved throughout, being raised and convex near its posterior end. The convexities of either side consist of a small prominent one anteriorly and a much larger one posteriorly connected together by a narrow bridge.

**MEASUREMENTS:** Total length of male 11 m.m. of female 14 m.m.

This seems to be a very distinct species. It is probably more closely related to *X. spiralifer* Purce from Hanover than to any other described species. It approaches the genus Scotophaeus in that the anterior row of eyes is not strongly procurred, but it clearly belongs to Dr. Purcell's section I of his genus Xerophaeus (Ann. Mag. Nat. Hist. 7.20, p. 314).
Xerophaeus gordonicus, sp. nov. (Text fig. 5.)

Type: A single adult female from N.W. Gordonia collected by Mr. C. A. Anderson. This species is related to X. poweri from which it differs in the following respects:

Epigyne: with the median area not marked off into a continuous well defined tract but broken into two isolated parts, a short anterior portion which is grooved and ends in front in a small pocket and a pale quadrilateral posterior portion which is strongly raised and is almost entirely surrounded, except medially in front and behind, by deeply pigmented areas. Between these two portions the mesial area is not marked off in any way from the lateral parts of the plate. The dark brown convexities, confined to the posterior half of the epigyne, present anteriorly on each side a deep pit from which a groove passes posteriorly towards the genital cleft.

![Epigyne of Female](image)

Eyes: Anterior row in a very slightly procurred line: posterior row slightly procurred, the medians about \( \frac{1}{2} \) a diameter apart.

Cheliceræ: With no inferior tooth: 3 superior teeth, the middle one large, distal one of moderate size, basal one very small.

Legs: Metatarsus I with 2 basal spines; tibia I with 3 spines in the inferior row, the distal half with a narrow scopular band on the inner side.

Total Length: 12.75 mm.
This species is perhaps very near to *X. holleniatus* Purc. from Steinkopf (Jena. Denkschr. XIII p. 236 Pl. XI fig. 17). In that species the genital plate is described as densely granular at the sides whereas such is not the case in *gordanius* where, however, the sides of the epigyne are beset with numerous hair pits.

**Xerophaeus anomalus, sp. nov.** (Text fig. 6.)

**Type.** An adult female example from Grahamstown collected by Mr. K. Graham (Jan. 1910).

**Ocular area.** Anterior row of eyes slightly recurved in dorsal view, posterior row practically straight. The posterior medians are about 1|1 diameters apart and nearly 2 diameters distant from the postero-laterals. Distance between anterior lateral eyes and anterior margin of carapace about 1|1 times the diameter of an eye.

**Chelicera** with an inferior tooth of moderate size.

**Tibia** of first leg with 3 strong spines below, 1 at the base, 1 at the apex and one about the middle of its length.

**Epigyne** somewhat resembling that of *X. spirifer*, Purc., from Hanover (Ann. Mag. Nat. Hist. 7. 20, p. 319, Pl. XIV, fig. 25) but differing in that the pale median area is not grooved, the anterior pocket is wider, and the two anterior convexities do not exist as such in this species whilst the posterior ones are not very pronounced: further, the epigynal plate extends considerably in advance of the anterior pocket, which apparently is not the case in *spirifer*. The median portion in the hind half of the epigyne is convexly raised: in the anterior half it is flat.

**Fig. 6. Xerophaeus anomalus, sp. nov.** Epigyne of female.
COLOUR. Carapace and appendages brownish black but bearing ashy grey hairs: abdomen pale brown being thickly covered with pale silky hairs. Patella of fourth leg reddish brown, and the patellae and more distal segments of the preceding legs have a reddish brown tinge.

**TOTAL LENGTH 7.5 mm.**

But for the fact that the epigyne agrees with the type found in Dr. Purcell's section I of his genus Xerophaeus, I might have hesitated to include this species in that genus, for the ocular area differs from that of any other Xerophaeus in our collection or of any of the described species apparently.

**Diaphractus kalaharicus, sp. nov. (Text fig. 7.)**

**Type.** A single adult female from N. W. Gordonia presented to the Albany Museum by Mr. C. A. Anderson. This species differs from *D. leiophidi*, Purc. (Ann. Mag. Nat. Hist. 7. 20, p. 313), from the Clanwilliam dist., in the following respects:—

![Figure 7: Diaphractus kalaharicus, sp. nov. Epigyne of female.](image)

Carapace not depressed. Distance between posterior median eye and posterior lateral quite 24 times the diameter of the former. Metatarsus I without basal spines below. Tibia I without spines inferiorly or with only 1 at the apex. Tibia I scopulate in its distal half on the inner side and to a slightly less extent also on the outer side. Epigyne with a well-marked convex mesial area, broader behind, narrower and strongly raised in front, and on each side a shallow excavation bounded laterally by a well defined
curved and strongly projecting ridge: anteriorly, near the constricted portion of the median area, the lateral excavation leads into a deeper pocket with well defined inner and anterior walls. The convex mesial area shows no trace of a keel, but there is an unpigmented median strip in its hinder half.

Total length 12.5 mm.

Melanophora albanicus, sp. nov.  (Text fig. 8 b)

Type: A single adult female collected in the neighbourhood of Grahamstown by Master C. Sole (July, 1901). This species seems to be closely related to M. gooldi Purc. from Malmesbury Div. and to M. cronerighti Purc. from Hanover and Worcester (Ann. Mag. Nat. Hist. 7.20. p 330. Pl. XV figs 53 and 54) but differs therefrom in the epigyne. In albanicus the mesial area marked out by the curved groove of the epigyne is very much narrower than the lateral areas, the mesial area in its narrowest part, posteriorly being scarcely more than half as wide as the lateral area: whereas in the abovementioned species the mesial area appears to be at least as broad as the lateral area.

Colour: Blackish almost throughout, the ventral surface of the abdomen being quite black: lung opercula yellow, and greater portion of epigyne yellowish.

Chelicera with only 1 inferior tooth.

Total length: 7.25 mm.
Melanophora fuliginoides, sp. nov. (Text fig. 8a.)

The type of this species is a single adult specimen from Grahamstown (J. Hewitt). It is closely related to *M. redunca* Purc. and *M. montana* Purc. differing therefrom in the epigyne (see fig.). The most obvious difference lies in the form of the curved groove which crosses the epigyne from side to side and which laterally is more or less parallel to the sides of the plate but medially is bent into a well marked acute angle. *M. fuliginosa* Purc. (Ann. Mag. Nat. Hist. 7. 20. Pl. XV fig. 44) is somewhat similar in this character but differs in details, the epigynal plate in that species being bifid posteriorly, and broadest anteriorly. The anterior lateral eyes are very much larger than the anterior median eyes, the distance between the lateral eye and the anterior margin of the carapace being slightly less than the long diameter of the eye: the posterior lateral eyes are slightly larger than the posterior medians, and moreover the posterior median eyes of *fuliginoides*, are convex and very slightly nearer to the laterals than to one another whereas those of *fuliginosa* are flat and at any rate not nearer to the laterals than to one another. Viewed from above, the anterior row of eyes is in a slightly recurved line: they are said to be strongly procurred in *fuliginosa* but presumably this can only be when viewed from in front.

Chelicera with 2 small inferior teeth.
First metatarsus with 1 weak spine near the base below.
General Colour: Brownish black.
Total Length: 5.5 mm.

Fam. Zodariidae.

Cydrula spinifrons, sp. nov.

Type. A single adult female example collected recently in the neighbourhood of Kuruman by Sergeant F. A. O. Pym, Curator of the Kingwilliamstown Museum.

Colour: Carapace and appendages pale yellowish brown; abdomen blackish brown with pale markings as follows: a shallow A-shaped band arranged transversely on its upper surface in the
middle portion of its length, followed by four somewhat indistinct transverse stripes; laterally and inferiorly in the posterior half of the abdomen is a pale broad band which in front is directed towards the A-shaped mark on the dorsal surface whilst posteriorly the bands of each side unite just in front of the vent.

**Carapace.** Eyes rather large and closely spaced. Antero-median eyes largest, a trifle more than half a diameter apart, about four-fifths of a diameter distant from the anterolaterals and about one and a half diameters distant from the posteromedians; posteromedians a trifle less than a diameter apart and about one and a half diameters distant from the posterolaterals. Hind margins of the posterior row of eyes in a slightly recurved line. Surface of carapace quite smooth. Seen from above, the carapace on its supero-anterior margin presents a distinct fringe of rather short spines which project forwards horizontally: this fringe lies above the anterolateral eyes but below the anteromedians. Short sub-spiniform setae occur over the whole of the clypeus.

**Abdomen.** The hairs on its surface are slender.

**Legs.** Tarsus IV almost two thirds as long as the metatarsus. Patella IV with 8—10 spines on its anterior surface, 5—6 spines on its dorsal surface, and 3—5 spines on its posterior surface. At the distal end of femur IV superiorly is a transverse row of about 5 strong spines, and similarly situated on all the preceding femora there are several somewhat weaker spines. Tibia II with 6 spines on its anterior surface.

**Total Length:** 11 mm.; length of carapace 5 mm.

This species is different from any known to me in the spinous anterior fringe of the carapace: the ocular arrangement is distinctive in the close approximation of the eyes to each other.

Order SCORPIONES.

**Parabuthus scobinifer, sp. nov.**

**Type:** A single male example from N. W. Rhodesia in the British Museum collection presented by Dr. L. Colyer. The specimen is perhaps immature,
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Cor.Ol'I!: Yellowish through out, except the vesicle which is dark brown and the fifth caudal segment which is brown: also the ocular tubercle and the lateral eyes on each side are infuscated.

CARAPACE: Posterior breadth considerably greater than its length. The surface rather coarsely granular throughout, very closely so in the cephalic portion anterior to the median eyes. Ocular tubercle granulated above except on the superciliary ridge which is smooth.

ABDOMINAL TERTITIES: The anterior six are finely granular anteriorly, coarsely so posteriorly: The seventh is rather coarsely shagreened in its mesial area between the median keels but the shagreen does not fuse into long transverse ridges and the area presents no trace of a median groove. The anterior portion of the mesial area is granulated and so are the sides of the tergite, the granules between the median and lateral keels of either side being considerably smaller than the shagreen on the mesial area.

LAST ABDOMINAL Sternal with no trace of median keels, the mesial area entirely smooth but a few granules occur on the mesial side of the lateral keel: the position of the lost median keels is marked by two coarse pits on each side. Lateral keels crenulated between each keel and the lateral margin of the sternite the surface is fairly closely granulated.

TAIL: First segment wider than the fourth. Middle lateral keel of fourth segment strong and well developed in its posterior half but weak in its anterior half where it almost merges in the general granulation of the lateral surface. Middle portion of superior crest of fifth caudal segment quite obliterated but posterior as well as anterior portions of this keel are present: accessory crest weak, composed of three rather widely separated small low tubercles, the anterior one being smallest. Posterior segments thickly granular at the sides and below. Vesicle appreciably narrower than the fifth caudal segment, excavated at its base above, but not very deeply, and the margins of the excavation are not defined.

Upper surface of first caudal segment broadly but not deeply excavated from side to side, the shagreened area extending to the
posterior end of the segment: the area is coarsely shagreened posteriorly and along the whole length mesially except just in front, but the sides of this area in its anterior half and the anterior margin are rather coarsely granulated: in no place does the shagreen fuse into continuous transverse ridges: the area is narrowest at a point about one-fourth of its length distant from the posterior margin. At the anterior margin of this area the upper surface of the segment suddenly descends almost perpendicularly. The second segment is also excavated above, the median groove being a trifle deeper and distinctly narrower than that on the first segment: the granulated area is composed of moderately fine granules, the area being triangular in shape and terminating at a point distant from the posterior margin of the segment about half the length of the granulated area.

Hand short and stout, wider than the brachium which latter is about two and a half times its greatest width.

PECTINES with 36-37 teeth.

MEASUREMENTS: Total length 68 mm. Length of carapace 6.6, of hand 11.3, of fifth caudal segment 7.5; breadth of carapace 8, of hand 3.

This species connects the section including *P. flavidus* Poc., *P. irruptentus* Hirst, etc., with that including *P. transvaalicus* Purcell.

ADDENDUM.

Whilst this paper was being printed a third species of Pelmatorycter was received from Alicedale. This may be described as follows:—

**Pelmatorycter flavidofusulus, sp. nov.**

The specific name assigned to this form has reference to the yellow colouration of the numerous small projecting papillae on the ventral surfaces of the spinners. The type is a female specimen collected at Alicedale by Mr. F. Cruden (March, 1915).

**COLOUR.** Carapace and appendages pale olive brown.
Abdomen pale with several faint dark cross-stripes above, and anteriorly near the waist with a dark dorsal blotch.

**Ocular area.** Posterior laterals oblique, decidedly longer than the distance between an anterior lateral and posterior lateral. Distance between an anterior median and anterior lateral scarcely equal to the diameter of a median. Posterior row distinctly wider than anterior row; anterior margins of posterior row in a straight line.

**Chelicerae** with 10 teeth in the inner row below; the basal tooth is comparatively large, but the next one is small and the remainder show a successive increase in size in passing from the basal to the distal end of the row.

**Pediae.** Coxae without spinules on the antero-inferior edge. Tarsus with a spine on each side inferiorly in its basal half, also a pair inferiorly situated in the distal half. Tibia with 4 apical spines below, and 2 elongated spines on each side inferiorly.

**Legs:** Metatarsus I thinly scupulate, the scopula absent from the basal half on the posterior side and not continued quite to the base on the anterior side: Scopula of metatarsus II almost absolute on the posterior side and present only in the distal third on the anterior side. Tarsus I with a single weak spine near the apex inferiorly; II with 1 or 2 spines inferiorly on the posterior side near the apex; III with 3 spines inferiorly in the distal half, also 1 on the anterior side and 1 dorsally. Metatarsus I with 3 apical spines inferiorly and 2 on the lower surface; II with 3 apical spines and 2 or 3 on the lower surface; III with 7 anterodorsal spines, 8 posterodorsal spines, 3 at the apex inferiorly and 2 along the anterior edge; IV with 4 spines at the apex inferiorly, also 8 on the lower surfaces and 2 postero dorsal spines. Tibia I without an apical spine below or with only a very weak elongated spine; II with a distinct spine at the apex inferiorly; III and IV with a pair of apical spines inferiorly; III also with 3-5 spines on its anterior surface, 3 on the dorsal surface and 2 near the supero posterior edge near the apex; IV also with several elongated setiform spines on the inferior surface. Patella III with about 14 stout spines on its anterior surface, the dorsal surface with 2 spines
on its posterior edge; IV without short spinules at the base on its anterior side but stout spiniform setae occur there, some of them being comparatively short though all gradually taper to a fine point. Coxa III without a dense clothing of setae on its posteroventral border.

**Posterior spinners:** Apical segment very slightly shorter than the penultimate segment. The small papillae on the ventral surface of the spinners are translucent and amber coloured, looking at first sight like innumerable glistening drops of liquid; they are best seen under a compound microscope but can be just distinguished through a strong hand lens. Each of these papillae carries a hair.

**Posterior sternal sigilla** pear-shaped, about six-fifths of a diameter apart and from half to three-fifths of a diameter distant from the sternal margin.

**Measurements:** Total length 16.5, length of carapace 5.5, breadth of carapace 4 m. m.

This species is at once distinguished from that provisionally referred to *P. lateralis* Purc. or from *P. crumeni* sp. nov. in the dentition of the chelicerae, also in the shortness of the apical segment of the spinners. The cross striping of the abdomen, though faint, may also prove a distinctive character.