

pt. iv. no. 7, p. 5, 1893), recorded recently from Cape Town, resembles *P. Spenceri* in the emargination of the tergites, but differs in having only six maxillary denticles and as many as thirty-six antennal segments.

Genus HENICOPS, Newport.

Henicops, Newport, Tr. Linn. Soc. xix. p. 372.

Differing from *Lamyctes* in having the tarsi of the legs segmented, those of the anterior thirteen pairs indistinctly, but certainly, trisegmented, those of the fourteenth and fifteenth pairs with the protarsus bisegmented and the tarsus quadri-segmented.

Type *H. maculatus*, Newport.

The genus *Henicops* was based upon two species, *H. maculatus* and *H. emarginatus*. The former may be regarded as the type; the latter, judging by the mutilated type from New Zealand and preserved in the British Museum, being referable to the genus *Lamyctes*.

LVIII.—*The Chilopoda or Centipedes of the Australian Continent.* By R. I. POCKOCK.

CONSIDERABLE additions have been made to our knowledge of the Australian Centipedes since Haase published his treatise on the subject in 1887. The species known up to the present time are briefly recorded in the following pages, the account of them being intended rather as a "student's guide" to the subject than as a complete monograph.

Order SCUTIGEROMORPHA.

Genus SCUTIGERA, Lamarck.

Scutigera maculata (Newport).

Cermatia maculata, Newport, Ann. & Mag. Nat. Hist. xiii. p. 96 (1844);
id. Tr. Linn. Soc. xix. p. 359 (1845).

Cermatia australiana, Newport, *loc. cit.*

Scutigera maculata, Meinert, Vid. Medd. 1886, p. 103; Haase, Abh. Mus. Dresden, v. p. 23 (1887).

? *Cermatia Latreillei*, Newport, Ann. & Mag. Nat. Hist. xix. pp. 359, 845.

This prettily marked species appears to be the only member of the genus met with in Southern Australia. Newport's specimens were from the Swan River, and Haase has recorded examples from Peak Downs.

The British Museum also has examples from the following localities, which attest the wide range of the species:—Perth (*H. W. J. Turner*); Narre Warren, Loch, Walhalla, Warragul (*Prof. Baldwin Spencer*), and Warburton (*H. R. Hogg*), in Victoria; New South Wales (*J. Macpherson*); South Queensland (*Prof. B. Spencer*).

The description of *Scutigera simplex*, Haase (*Abh. Mus. Dresden*, no. 5, p. 26, 1887), is probably based upon a specimen conspecific with those above referred to *S. maculata*. The locality is given as Adelaide.

Haase also recognizes the following as a valid species:—*Scutigera Lesueurii* (Lucas, *Anim. Artic. Crust. &c.* p. 538, 1840; Gervais, *Ins. Apt.* iv. p. 223, 1847), with which *S. strabo*, Wood (*Journ. Ac. Sci. Philad.* (2) v. p. 11, 1863), is given as synonymous. Gervais describes the type, which is vaguely ticketed "New Holland," as "brown, with a paler median dorsal band and yellow legs and antennæ." The specimen from Rockhampton identified by Haase as this species, and the type of *S. strabo* from Oahu, must be considered doubtfully identical with *Lesueurii*. If the description of the latter is taken from a specimen showing the colours of life, no doubt *S. Lesueurii* is a species distinct from *S. maculata*, which has the legs banded and an irregular pale dorsal longitudinal stripe on each side of the middle line.

Scutigera Latreillei, Newport (*Tr. Linn. Soc.* xix. p. 357), labelled "New Holland," may be nothing but a dark form of *S. maculata*. The prevailing colour of the dried type in the Hope Museum at Oxford is black, with the stomata orange-yellow, some spots of the same colour on the head, and the legs banded with black. Haase considers *S. violacea*, L. Koch (*Verh. zool.-bot. Ges. Wien*, xv. p. 890, 1865), from Wollongong, to be identical with *S. Latreillei*, on the strength of the black colour of the dorsal plates and the presence of a pair of reddish-brown spots on the hinder border of each. At present, however, we have not sufficient material to unravel the difficult questions of synonymy here involved.

Order LITHOBIOMORPHA.

The three genera of this order may be diagnosed as follows:—

- a. A single eye on each side of the head and a pair of stigmata on the first leg-bearing somite.
- a¹. Tarsi of anterior legs three-segmented, of fourteenth and fifteenth pairs six-segmented *Henicops*.

- b*¹. Tarsi of anterior legs undivided, of fourteenth and fifteenth pairs bisegmented, *i. e.* with tarsal and pretarsal segments *Lamyctes* *.
- b*. A cluster of ocelli on each side of the head; no stigmata on the first leg-bearing somite *Lithobius*.

Genus HENICOPS.

Henicops maculatus, Newport.

Henicops maculatus, Newport, *op. cit.* p. 372, pl. xxxiii. fig. 27, and pl. xl. fig. 3.

♀. *Colour* yellowish brown, with an indistinct median dorsal dark stripe.

Antennæ long, composed of 37 segments.

Coxæ of toxicognath with præcoxal processes broad, convex, and armed with 3 + 3 teeth.

The posterior *terga* sparsely bristly; the anterior with rounded angles and scarcely emarginate posterior borders; the posterior borders becoming gradually more and more emarginate from before backwards, those of the minor tergites more deeply so than of the major, the emargination perfectly evenly convex.

Legs long, hairy, and beset with short spinules; the tarsi with 2 + 2 spinules beneath, set at the distal end of the sub-segments. Coxal pores small, 4, 5, 5, 5; gonopods of female with 2 short spurs and a simple claw.

Total length 15 millim.; length of antennæ 8, of posterior leg 9.

Loc. Tasmania; also Australia and New Zealand.

The above-given description is taken from a specimen from Wellington, New Zealand (*H.M.S. 'Challenger'*), which is apparently conspecific with the type originally recorded from Tasmania. The British Museum also has damaged specimens of apparently the same species from Tasmania and from Fern Tree Gully, Wood's Point Road, and Loch in Gippsland, Victoria, presented by Prof. Baldwin Spencer, F.R.S. Some of these specimens are mottled with black spots, two of them have 44 antennal segments, and one of them 4-5 coxal teeth; but the material is not sufficient to justify the separation of the Australian from the Tasmanian or New Zealand type.

Henicops impressus, Hutton (Tr. N. Z. Inst. x. p. 288,

* *Lamyctes* is represented in New Zealand by *L. emarginatus*, Newport. The genus will probably turn up in Australia, seeing that it occurs both in S. Africa, S. America, Sumatra, &c., and Europe, as well as in New Zealand.

1807), from Dunedin and Queenstown, probably belongs to the same genus as *H. maculatus*. It is not, however, possible from the description to settle the point.

Henicops dentatus, sp. n.

Closely allied to the preceding species, but with the legs more spiny, the tarsi being armed beneath with five pairs of spines and the emargination of the terga deeper. Moreover, the seventh, ninth, eleventh, and thirteenth terga are subquadrately and not evenly and convexly emarginate. Antennæ and posterior legs fractured; the former, however, had at least 30 segments.

Total length 15 millim.

Loc. W. Australia, Perth (*H. W. J. Turner*).

Genus LITHOBIUS, Leach.

Lithobius sydneyensis, Pocock.

Lithobius sydneyensis, Pocock, Ann. & Mag. Nat. Hist. viii. p. 153 (1891).

Loc. Sydney (*J. Brazier*).

Order SCOLOPENDROMORPHA.

Synopsis of the Genera.

- a. Without eyes *Cryptops*.
- b. With four eyes on each side of the head.
 - a¹. Seventh somite with a pair of stigmata.
 - a². Stigmata very large, "sieve-like"; no tooth on femur of toxicognaths *Ethmostignus*.
 - b². Stigmata small; a tooth on femur of toxicognaths *Rhysida*.
 - b¹. Seventh somite without stigmata.
 - a³. Head not overlapping the first tergite.
 - a⁴. A pair of sclerites on the posterior-lateral angles of the head *Cormocephalus*.
 - b⁴. No sclerites on the posterior-lateral angles of the head *Otostigmus*.
 - b³. Head overlapping the first tergite *Rhombocephalus*.

Genus RHOMBOCEPHALUS *, Newp.

Rhombocephalus lætus (Haase).

Scolopendra læta, Haase, Abh. Mus. Dresden, no. 5, p. 51, pl. iii. fig. 51 (1887).

Colour. Head and terga deep green, the latter with a longi-

* I restrict the term *Scolopendra* to the species with the first tergite sulcate. The type of *Rhombocephalus* is *ungulatus*, Latr.

tudinal lateral yellow stripe lying midway between the lateral border and the sulcus, the margin of each tergum and the upper portion of the pleural membrane being green; sometimes this yellow stripe is broad and extends right to the margin, in which case there is no green on the pleura; at other times the median green stripe spreads laterally and almost obliterates the yellow, and it is always a little wider than the space between the furrows; it begins either upon the second or first tergum; the latter, however, is, like the head, generally uniformly deep green; antennæ green, indistinctly banded with yellow basally; toxicognaths, legs, and sternum reddish or greenish yellow; anal legs prettily banded with green and yellow, being green with a broad transverse yellow band on the basal half of each segment.

In structural features this species resembles the form that passes as *R. morsicans* of Linnæus, of which it is, perhaps, a descendant, modified since artificial introduction into Australia, where it appears to be the only indigenous species of the genus *Rhombcephalus*.

Total length up to 56 millim.

Loc. Perth (*H. W. J. Turner*); New South Wales (*W. W. Froggatt*). Haase's specimen was recorded as doubtfully from Adelaide.

The two New South Wales specimens have the yellow bands broader and more sharply defined than in the examples from Perth. More material, however, must be examined before the question as to the racial value of this feature can be established.

Genus CORMOCEPHALUS, Newp.

Representatives of this genus are the prevalent forms of Scolopendroids met with in South Australia. The genus occurs also in New Zealand and other islands adjacent to Australia, in Madagascar, in South Africa (where it is abundant), with a few outlying species in Ceylon and India.

The Australian species fall into two sections. The first, typified by *C. aurantiipes*, has three spines in a single series on the outer side of the under surface of the femur of the anal leg, whereas in the second, typified by *Westwoodii*, the spines in question are four in number and biserial.

Cormocephalus aurantiipes, Newp.

Scolopendra aurantiipes, Newport, Ann. & Mag. Nat. Hist. xiii. p. 99 (1844).

Cormocephalus aurantiipes, Newp. Tr. Linn. Soc. xix. p. 421 (1845).

Cormocephalus obscurus, id. ibid.

Cormocephalus subminiatus, Newp. Ann. & Mag. Nat. Hist. xiii. p. 100; id. Tr. Linn. Soc. xix. p. 423 (1845).

Cormocephalus miniatus, id. ibid.

Cormocephalus aurantiipes, *aurantiipes* var. *obscurus*, and *subminiatus*, Haase, Abh. Mus. Dresden, no. 5, pp. 57-62 (1887) (where other synonyms may be found).

The types of Newport's species cited above, namely *aurantiipes* from the Swan River*, *obscurus* from Sydney, *miniatus* from Adelaide, and *subminiatus* from the Swan River, are preserved in the British Museum and are, I believe, specifically identical.

Moreover, according to Haase, *C. gracilis*, Kohlrausch, from Gayndah, is based upon the young of this species, and *C. marginatus*, Porat, from Sydney, upon a variety without median sulcus on the anal tergum; also Meinert's type of *exiguus* from Brisbane was referred by Haase to the species he identified as *subminiatus*, Newp., of which he had seen examples from Adelaide.

In addition to the types of Newport's species above referred to, the British Museum has specimens from South Queensland (*B. Spencer*); Bendigo in Victoria and Sydney (*W. Froggatt*); Queensland (*J. Macpherson*), and New South Wales; Melbourne (*Degen*); Mt. Lofty (*B. Spencer*); Perth (*Turner*) and the Darling Range (*B. H. Woodward*); and Toowoomba.

Haase separated *subminiatus* from this species on the strength, as he believed, of its having thinner and more strongly spined anal legs; but this feature, like the presence or absence of a sulcus on the anal tergite, appears to be quite inconstant, the sulcus being sometimes strong, sometimes faint, and sometimes absent, irrespective of locality.

Hence I find it impossible to maintain *obscurus* as a subspecies or variety.

Another variety instituted by Haase has from 11-14, instead of 9, spines on the anal femora. The specimens exhibiting this abnormality were from Adelaide.

Judging from dried and alcohol-preserved material, the colour in this species varies from a uniform chestnut to olive-brown or green, with dark green bands across the terga, deep bluish-green antennæ, red head and anal somite. The last is, I suspect, the true colour of the species.

Cormocephalus Turneri, sp. n.

♂ (adult). Prevailing colour greenish, with the anal somite and legs paler. Head more convex than in *C. aurantiipes*;

* Not Port Essington, as Newport asserts.

antennæ short, not reaching beyond the second tergite, with 17 segments. Anal tergum without trace of median groove, more convex than in *C. aurantiipes*; anal legs very short and thick, the femur with a much stronger basal notch than in *C. aurantiipes*, only about one fourth longer than wide, its width equal to the length of the third segment, typically armed with 2, 1, 2, 2 spines.

♀. Anal legs much thinner; femur armed with 2, 2, 2, 2 or 3 spines, at least twice as long as wide, and much narrower than the length of the third segment.

Total length 55 millim.; anal leg 9.5; antennæ 8.5; length of head 4.

Loc. Perth (*H. W. J. Turner*).

In most respects this species resembles *C. distinguendus* of Haase, but the latter is said to have no spines beneath the claw on the anal leg. The only known specimen was from Adelaide (*Abh. Mus. Dresden*, no. 5, p. 61, pl. iv. fig. 61, 1887).

Cormocephalus Westwoodii, Newp.

Cormocephalus Westwoodii, Newport, *Ann. & Mag. Nat. Hist.* xiii. p. 100 (1844); id. *Tr. Linn. Soc.* xix. p. 422 (1845); Kohlrausch, *Arch. Nat.* xlvii. p. 85 (1881); Haase, *Abh. Mus. Dresden*, no. 5, p. 62 (1887).

Cormocephalus fæcundus, Newport, *Tr. Linn. Soc.* xix. p. 421 (1844).

Cormocephalus pallipes, Newport, *loc. cit.* p. 424.

Cormocephalus monilicornis, Porat, *Bih. Sv. Vet.-Akad. Handl.* iv. no. vii. p. 16 (1876) (sec. Haase).

Cormocephalus rugulosus, id. *ibid.* (sec. Haase).

Cormocephalus lanatipes, Kohl. *Arch. f. Naturg.* xlvii. p. 85 (1881) (sec. Haase).

This species is apparently confined more to the eastern parts of Australia than *C. aurantiipes*. The type of *C. Westwoodii* is ticketed merely "Australia"; other specimens named by Newport were from near Sydney; the types of *fæcundus* from Parramatta, and of *pallipes* from Van Diemen's Land. The type of *rugulosus* of Porat was also from Sydney. According to Haase the form he identified as *fæcundus* has been obtained at Twofold Bay in New South Wales and at Elphinstone, and the typical *Westwoodii* at Gayndah and Peak Downs in Queensland and at Elphinstone.

In addition to Newport's specimen, the British Museum has examples from Sydney and Parramatta, as well as from localities near these last, *e. g.* Ashfield, Bondi, Rose Bay, &c. on the Parramatta River (*J. Macpherson*), from Fern Tree Gully in Victoria (*Prof. Baldwin Spencer*), and from Tasmania and Mt. Rumsay, Hobart (*E. M. Thomson*).

Haase separated *fæcundus* from *Westwoodii* on the strength

of a greater thickness of the anal legs in the former; but this seems to be a feature subject to variation. In well-preserved examples the colour of this species is much like that of *C. aurantiipes*, the anterior and posterior extremities being blood-red, the antennæ bluish, and the body greenish with darker bands. No trace of this coloration is observable in many dried or alcohol-preserved specimens.

Cormocephalus esulcatus, sp. n.

Closely related to *C. Westwoodii*, but differing in a character which appears to be constant, namely, the entire absence of a median sulcus on the anal tergite; this plate also is not so wide and transversely oblong as in that species, being distinctly narrower posteriorly than across the middle, with its sides convex; the anal legs, too, are much weaker than in the adults of *C. Westwoodii* and the young of corresponding size. The prevailing colour is greenish or olive-brown, with bluish antennæ and greenish legs.

Length up to 56 millim.; length of head 3, of antenna 8, of anal leg 8.5.

Loc. Fern Tree Gully in Victoria (*Prof. Baldwin Spencer*).

It is interesting to observe that both this species and *C. Westwoodii* are found in Fern Tree Gully, where the two were taken together by Prof. Baldwin Spencer. The specimens of *Westwoodii* may be immediately recognized by their coloration, the tergites being paler, more distinctly banded, and the head and anal legs redder than in those of *C. esulcatus*.

Genus OTOSTIGMUS, Porat.

Otostigma tuberculatus (Kohl.).

Branchiotrema tuberculatum, Kohlrausch, Journ. Mus. Godeff. 1878, pt. 14, p. 71, pl. vi. fig. 4 (1878); id. Arch. Naturg. xlvii. p. 74, pl. v. fig. 11 (1881).

Otostigma tuberculatum, Haase, Abh. Mus. Dresden, no. 5, p. 76, pl. iv. fig. 79 (1887).

Slender in front, expanded behind. Olive-green in colour, with the terga laterally ferruginous; legs ferruginous, the posterior pairs banded with green. Antennæ 18-jointed. Præcoxal plates of toxicognaths with 3+3 teeth. Terga from the fifth sulcate, from the ninth marginate; subrugulose, the last rough. Sterna shining, from the ninth tubercular; the last smooth. Anal pleuræ long, acute, apically trispinose, and with one upper and two lateral large spines. Legs of twentieth pair with protarsal spine, of twenty-first pair

slender, the femur armed with 4, 2, 3, 6 spines, the protarsus unspined.

Length 38 millim., of anal leg 12 millim.

Loc. Rockhampton.

Genus RHYSIDA, Wood.

Rhysida carinulata, subsp. *australica* (Haase).

Branchiostoma carinulata, subsp. *australica*, Haase, Abh. Mus. Dresden, no. 8, pp. 82-83 (1887).

Loc. Cape York.

Rhysida longipes (Newport).

Branchiostoma longipes, Newport, Tr. Linn. Soc. xix. p. 411 (1845); Haase, Abh. Mus. Dresden, no. 5, p. 83, pl. vi. fig. 86 (for synonymy).

Loc. Melbourne (according to Haase).

Widely distributed in the tropics of the eastern and western hemispheres.

Rhysida nuda (Newport).

Branchiostoma nudum, Newport, Tr. Linn. Soc. xix. p. 412 (1845); Haase, Abh. Mus. Dresden, no. 5, p. 84, pl. v. fig. 88 (1887).

Loc. Parramatta, Port Mackay, Bowen, Brisbane, and Elphinstone.

Key to the Species of Rhysida.

- a. Terga with finely toothed keels; anal pleuræ with 5 spines. *australica*.
- b. Terga without keels; anal pleuræ with four spines.
 - a¹. Antennæ with 18 segments; three rows of spines on the femora of anal legs *longipes*.
 - b¹. Antennæ with 21 segments; anal femora weakly spined *nuda*.

Genus ETHMOSTIGMUS, Poc.

(= *Heterostoma*, Newp., and *Dacetum*, Koch, preoccupied, the latter as *Daceton*.)

Ethmostigmus rubripes (Brandt).

Scolopendra rubripes, Brandt, Recueil &c. p. 65 (1840).

Heterostoma sulcidens, *squalidens*, *scabriventris*, *sulcicornis*, *megacephala*, Newport, Ann. & Mag. Nat. Hist. xiii. p. 99 (1844), and Tr. Linn. Soc. xix. pp. 416-417; *fasciata* and *flava*, id. op. cit. pp. 415-417.

Heterostoma rubripes, Haase, Abh. Mus. Dresden, no. 5, p. 89 (1887).

This, the largest Australian Centipede, is also wide-ranging. Newport's types of *sulcidens*, *squalidens*, and *scabriventris* were from Parramatta; those of *megacephala* and *sulcicornis* from Port Essington; and of *flava* from the Swan River.

The British Museum also has examples from Adelaide, Sydney, Parramatta (*J. Macpherson*) ; Cooran, in Queensland (*Prof. Baldwin Spencer*) ; Cape York and some of the Australian islands—Fitzroy Island, Baudin Island, &c. From Australia the species is said to extend in a north-westerly direction as far as Java.

The colour varies considerably and perhaps in accordance with locality. *Prof. Baldwin Spencer's* examples from Cooran all belong to the *fasciata* type, being remarkably yellow, with a narrow transverse stripe on the posterior border of the terga, whereas in examples from New South Wales (Sydney) and Adelaide the green, especially at the anterior end of the body, predominates. In some cases the terga and head are quite green.

Genus CRYPTOPS, Leach.

Cryptops sulcata, Haase.

Cryptops australis, Kohlrausch, Arch. Naturg. xlvii. p. 127, pl. v. figs. 21, 22 (1881) (not *australis*, Newp.).

Cryptops sulcata, Haase, Abh. Mus. Dresden, no. 5, p. 80, pl. v. fig. 83 (1887).

Loc. Rockhampton.

Cryptops spinipes, Pocock.

Cryptops spinipes, Pocock, Ann. & Mag. Nat. Hist. viii. p. 156 (1891).

Loc. Sydney (*J. Brazier*).

This species at least differs from *C. sulcatus*, which is unknown to me, in having the first and second tergites devoid of longitudinal sulci.

Order GEOPHILOMORPHA.

Key to the Australian Genera.

- a. Basal plate broad, quite covering the pleuræ of the toxicognaths at the sides ; a row of pleural scutes above the stigmata *Orphnæus*.
- b. Basal plate narrow ; the pleuræ of the toxicognaths not covered from above.
 - a¹. Upper edges of the pleuræ of the toxicognaths forming a sharp ridge on each side of the very narrow basal plate *Mecistocephalus*.
 - b¹. Upper edges of the pleuræ not forming a ridge on each side of the basal plate *Necrophlæophagus*.

Genus MECISTOCEPHALUS, Newp.

Mecistocephalus tahitiensis, Wood.

Mecistocephalus tahitiensis, Wood, Journ. Acad. Nat. Sci. Philad. (2) v. p. 43 (1863) ; Haase, Abh. Mus. Dresden, no. 5, p. 101 (1887), pl. vi. fig. 108 (1887).

With 47 pairs of legs and only about 12 pores on the anal pleuræ.

Loc. Gayndah and Rockhampton (according to Haase); also Olinda, Viti, and Otahiti.

Genus NECROPHLÆOPHAGUS, Newp., emend. Pocock.

Necrophlæophagus concolor (Gervais).

Geophilus concolor, Gervais, Ins. Apt. iv. p. 320 (1847); Haase, Abh. Mus. Dresden, no. 5, p. 108, pl. vi. fig. 113 (1887).

Widely distributed in Australia. Gervais's type was from Port Jackson; Haase records specimens from Rockhampton and Sydney. The British Museum has examples from New England in New South Wales (*J. Macpherson*) and Perth (*H. W. J. Turner*).

This species may be at once recognized from *G. antipodum* by its strongly hirsute head, antennæ, and legs, very long antennæ, of which some of the segments are nearly or quite three times as long as wide, by the strong and thick punctuation of the head and toxicognaths, the fewer pores on the anal pleuræ, broader sternites, &c., and lastly by the number of pairs of legs attaining 69 or 71.

Length up to 48 millim.

Necrophlæophagus antipodum (Pocock).

Geophilus antipodum, Pocock, Ann. & Mag. Nat. Hist. viii. p. 222, pl. xii. fig. 8 (1891).

Loc. Fern Tree Gully, in Victoria (*Prof. Baldwin Spencer*).

This species has previously been recorded only from Maungatua and Wellington in New Zealand. Its occurrence in Australia is of much interest.

Necrophlæophagus sydneyensis (Pocock).

Geophilus sydneyensis, Pocock, Ann. & Mag. Nat. Hist. viii. p. 219 (1891).

A small species based upon examples from Inner Double Bay, Port Jackson (*J. Brazier*).

Necrophlæophagus opinatus (Newport).

Arthronomalus opinatus, Newport, Tr. Linn. Soc. xix. p. 433 (1845).

Geophilus opinatus, Haase, Abh. Mus. Dresden, no. 5, p. 108 (1887).

Colour deep ochre-yellow, darker anteriorly.

Head-plate a little longer than wide, narrowed in front, with lightly convex margins, sparsely punctured, and with two shallow longitudinal impressions; frontal sulcus obsolete.

Antennæ clothed with short hairs, the segments subcylindrical, mostly about twice as long as wide.

Basal plate almost as wide as the first tergite posteriorly, narrowed anteriorly to the width of the head.

Toxicognath largely overlapping the head laterally; coxal plate with median groove, complete chitinous lines, narrowed laterally, not parallel-sided; femur short, wider than long, unarmed; a small tooth at base of fang; when the fangs are folded the toxicognaths are about as wide as long.

Terga smooth, shallowly bisulcate, the anterior with a faint median sulcus as well. Anterior twenty-five *sterna* with an anterior median pit, which is deep from the second to about the twelfth somite, then gradually fades away; posterior *sterna* shortly hirsute, the hairs giving the appearance of granulation. Last somite as wide as the penultimate; the pleuræ largely visible at the sides of the tergal and prætergal plates, furnished above, below, and laterally with about 30 pores; the tergite a little longer than wide; the sternite small, triangular, much narrower in front than one of the pleural plates and not half the length. 69 pairs of legs.

Posterior *legs* scarcely longer than penultimate, slender, the segments progressively becoming thinner and longer distally; claw large.

Gonopods represented by a pair of triangular bisegmented lobes.

Anal pores large.

Total length 54 millim.

Loc. Narre Warren, Gippsland.

The above-given description is taken from a specimen sent to the British Museum by Prof. Baldwin Spencer.

The two specimens, ticketed "Australia," upon which Newport based his description are imperfect in the case of the antennæ and of the posterior end of the body. The latter imperfection was overlooked by Newport, who gives the number of pairs of legs as 52 and 54 (the actual numbers are 50 and 53). In reality, as the example from Narre Warren indicates, the species possesses at least as many as 69. Haase, in his monograph, falls into the error of assigning 49 pairs to the species*.

* I take this opportunity of characterizing a new species of the genus closely related to *N. opinatus* :—

Necrophlæophagus Spenceri, sp. n.

Closely allied in most structural points to *G. opinatus*, but with only 39 pairs of legs and the pleuræ less inflated, their anterior portion being covered on the dorsal side by the prætergal sclerite of this

Necrophlæophagus laticeps (Pocock).

Geophilus laticeps, Pocock, Ann. & Mag. Nat. Hist. viii. p. 220, pl. xii. figs. 6, 6a (1891).

Loc. King's Island, in Bass Strait (*Arthur Dendy*).

Key to the Australian Species of Necrophlæophagus.

- a. Head long and narrow; toxicognaths largely overlapping it laterally and partially so in front, with large quadrate coxal plate, which has no sutural lines and long subcylindrical femur.
 - a¹. Pairs of legs 39 in number..... *antipodum*, Poc.
 - b¹. Pairs of legs about 70 in number.
 - a². Anal legs composed of 5 segments; the pleuræ with many pores above and below.. *curtipes*, Haase.
 - b². Anal leg with 6 segments; the pleuræ with only a few pores below..... *concolor*, Gerv.
- b. Head short and broader; the toxicognaths not overlapping it in front; the coxal plate not large and quadrate, with distinct sutural line; femur short, especially along its inner edge.
 - a³. Anal pleuræ with many pores; anal sternum very small and triangular; toxicognaths largely overlapping the head-plate at the sides..... *opinatus*, Newp.
 - b³. Anal pleuræ without pores, small; anal sternum large; head-plate almost entirely overlapping the toxicognaths at the sides.
 - a⁴. With 59 pairs of legs; anterior sterna with a deep oval pit; basal plate wide and short, four times as wide as long..... *laticeps*, Poc.
 - b⁴. With 43 pairs of legs; anterior sterna without distinct oval impression in front; basal plate not four times as wide as long..... *sydneyensis*, Poc.

Genus ORPHNÆUS, Meinert.

Orphnæus phosphoreus (Linn.).

Scolopendra phosphorea, Linn. Syst. Nat. ed. x. p. 368 (1758).

Geophilus brevilabiatus, Newport, Tr. Linn. Soc. xix. p. 436 (1845).

Orphnæus brevilabiatus, Meinert, Haase, &c.

Loc. Perth (*H. W. J. Turner*).

Widely distributed in the tropics.

somite; the pores, moreover, of which about twenty are visible, are considerably larger, those lying near the genital border of the pleura being less than their own diameter from this edge; sternite wider, less narrowed, its posterior width about half its anterior width, which exceeds the width of the pleura adjacent to it externally.

Total length 19 millim.

Loc. The Bluff, South Island, New Zealand (*Baldwin Spencer*).



Pocock, R. I. 1901. "The Chilopoda or centipedes of the Australian continent." *The Annals and magazine of natural history; zoology, botany, and geology* 8, 451–463.

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