

ART. XXII.—Notes on New Zealand Chilopoda.

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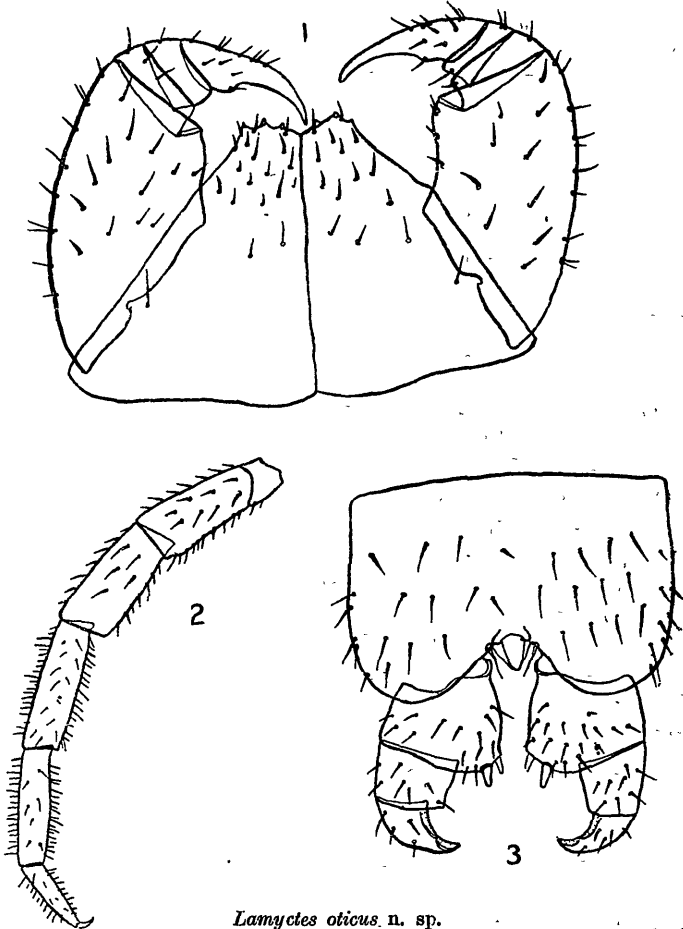
LITHOBIOMORPHA.

HENICOPIDAE.

Lamyctes oticus n. sp. (Figs. 1 to 3.)

Colour rich brown.

Major tergites with anterior and lateral raised margins, emarginate from the 8th caudad; minor tergites with broader, less distinct margin.



Lamyctes oticus n. sp.
 FIG. 1.—Prehorsers. FIG. 2.—Anal leg. FIG. 3.—Gonopod of ♀.

Antennae with 25 joints. Prehorsers (fig. 1) with long curved claw, prosternum 1.78 times as wide as long, teeth 3 + 3. Coxal pores $\frac{3333}{3333}$. First tarsal joint of 15th legs (fig. 2) four times as long as wide; tibial spur-

on legs 1 to 12. Gonopods of ♀ (fig. 3) with straight basal spurs and curved sharp terminal claw.

Length, 8 mm.

Loc.—Otekaike (type) and Queenstown. Types in the Canterbury Museum.

This species differs from *L. neozelanicus* Archey by its darker colouring, its much stouter anal legs, and by the form of the prosternal teeth.

Paralamyctes validus Archey.

Paralamyctes validus Archey, *Trans. N.Z. Inst.*, vol. 49, p. 314, 1917.

P. dubius Archey, *ibid.*, p. 314.

A series of these forms has now been examined, and it is clear that they are the same species, the differences previously noted as separating them being those normal between slightly immature and fully-grown forms. The South Island representatives of this species do, however, differ slightly from the North Island forms, but the differences are scarcely of specific rank. There are also small sex variations to be seen in each variety, which may be expressed as follows:—

| — | Sex | Length | Length of Antennae. | Coxal Pores. | Prosternal Teeth |
|-----------------|-----|--------|---------------------------|--|-------------------|
| North Island .. | ♂ | 18 mm. | $\frac{1}{2}$ body-length | $\frac{4444}{4444}$ or $\frac{4555}{4555}$ | 9 + 9 or 10 + 10. |
| „ .. | ♀ | 19 mm. | $\frac{1}{3}$ „ | $\frac{5666}{5666}$.. | „ |
| South Island .. | ♂ | 20 mm. | $\frac{1}{2}$ „ | $\frac{3444}{3444}$.. | 8 + 8 or 9 + 9. |
| „ .. | ♀ | 20 mm. | $\frac{1}{3}$ „ | $\frac{4555}{4555}$.. | „ |

P. dubius therefore forgoes its specific rank and is retained only as a variety of *P. validus*, differing from it by the reduction in the number of coxal pores and prosternal teeth. Small specimens (10–13 mm.) of both forms have coxal pores $\frac{2222}{2222}$, and 5 + 5 or 6 + 6 prosternal teeth, those of 15 mm. length having coxal pores $\frac{3333}{3333}$, and 6 + 6, 7 + 7, or 6 + 7 prosternal teeth.

It should be noted that normally there is a tibial spur on all the legs, but occasionally this is missing on the last pair. The type of *P. validus* has a very low, rounded projection at the end of the tibia, but in other specimens the spur is quite distinct and sharp.

I have to thank Mr. T. R. Harris, of Ohakune, for his kindness in sending me a series of specimens of this species.

Haasiella insularis (Haase), 1887.

Hemicops insularis Haase, *Abh. Zool. Mus. Dresden*, No 5, p. 36, 1887. *Haasiella insularis* Pocock, *Ann. Mag. Nat. Hist.*, ser. 7, vol. 8, p. 449, 1901; Archey, *Trans. N.Z. Inst.*, vol. 49, p. 316, 1917.

I am now able to give Haase's diagnosis of this species. The locality is Auckland Islands, not Auckland as stated by Pocock and myself.

“Colour greyish-brown, tergal plates with dark margins and a median black patch, head reddish, ventral surface greyish. Head emarginate anteriorly. Prosternum of prehensors armed with 5 + 5 teeth. Tergal plates, especially the anterior ones, margined. Single coxal pores round and large. Length of body, 12 mm.” (Haase.)

In addition, Haase describes the penultimate pair of legs as the longest, with 2-jointed metatarsus and 3-jointed tarsus; the last legs have an undivided metatarsus and a peculiar club-shaped tarsus, formed, it is thought, by the fusion of the terminal claw with the tarsus. Only a single much-mutilated specimen is known.

SCOLOPENDROMORPHA.

These notes on the Scolopendromorpha are intended as a preliminary revision of the New Zealand members of the order, and therefore descriptions of New Zealand species published in papers abroad are quoted in full. The species recorded herein are from very few localities, and many more areas must be searched before anything like a complete revision can be attempted. That the South Island is better represented than the North Island with regard to the new species of *Cryptops* described is due to the energetic collecting of Mr. T. Hall and Mr. T. B. Smith, to whom my thanks are due.

CRYPTOPIDAE.

Genus CRYPTOPS Leach, 1814.

Cryptops Leach, *Trans. Linn. Soc.*, vol. 11, p. 384, 1814; Newport, *Trans. Linn. Soc.*, vol. 19, p. 407, 1845; Kraepelin, *Mit. Mus. Hamburg*, vol. 20, p. 32, 1903.

KEY TO NEW ZEALAND SPECIES OF CRYPTOPS.

- I. First tergite with a transverse sulcus anteriorly, or with its anterior end overlapped by the head.
 - A. Coxopleural pores 50 or more, reaching to the hinder end of the coxopleura *C. spinipes* Poc.
 - B. Coxopleural pores 20 at most, not reaching to the hinder end of the coxopleura.
 - 1. Head with sulci. 1st tergite without transverse sulcus *C. zelandicus* Chamb.
 - 2. Head without sulci, 1st tergite with transverse sulcus *C. megalepora* Haase.
- II. First tergite without sharply defined transverse sulcus anteriorly, always with its anterior margin overlapping the hinder edge of the head.
 - A. Anal tibiae armed ventrally with many teeth arranged in several rows; 1st tergite with Y-shaped sulcus *C. polyodontus* Att.
 - B. Anal tibiae armed ventrally with only one row of at most 16 teeth; 1st tergite without sulcus.
 - 1. Coxopleurae with only 30 pores.
 - a. Anal femur bare dorsally *C. australis* Newp.
 - b. Anal femur dorsally with spinescent setae *C. galidus* n. sp.
 - 2. Coxopleurae with more than 30 pores.
 - a. Dental formula of anal legs approximately 1 + 9 + 4.
 - a¹. Anal metatarsus with ventral dilatation *C. ignivia* n. sp.
 - a². Anal metatarsus with straight ventral edge *C. algidus* n. sp.
 - b. Dental formula of anal legs approximately 1 + 12 + 7.
 - b¹. Coxal pores 40 to 50.
 - α Anal legs slender *C. dilagus* n. sp.
 - β Anal legs stout *C. akaroa* n. sp.
 - b². Coxal pores 100 or more *C. pelorus* n. sp.
 - c. Anal legs with 6 + 5 teeth *C. lamprethuis* Chamb.

Cryptops spinipes Pocock.

Cryptops spinipes Pocock, *Ann. Mag. Nat. Hist.*, ser. 6, vol. 8, p. 156, 1891. *C. setosus* Pocock, *ibid.*, p. 157. *C. spinipes* Kraepelin, *Mit. Mus. Hamburg*, vol. 20, p. 49, 1903; *Arkiv. Zool.*, vol. 10, No. 2, p. 2, 1916; Chamberlin, *Bull. Mus. Comp. Zool.* vol. 64, p. 4, 1920.

The following is a translation of Kraepelin's description (1903):—

"Hinder end of the head overlapped by the anterior end of the 1st tergite, or conversely with its hinder end overlapping the edge of the 1st tergite, more or less distinctly punctured, generally with two median longitudinal sulci. First tergite with curved outline, with the collar-sulcus parallel to the anterior border, punctured like the other tergites; often with a small median depression just behind the middle, without median longitudinal sulci. Median longitudinal sulci first beginning on the 3rd or 4th tergite, lateral sulci on the 4th. Median keel not prominent. Anterior margins of prosternum of toxicognaths lightly convex with 5 or 6 setae on either side. Sternites normally punctured. Spiracles slit-like, that of the last segment narrow-oval. Coxopleurae caudally roundly truncated, with scattered spines or setae, pores numerous, reaching to the hinder end. Legs, in the hinder segments, armed with spinescent setae. Ventral surface of the femur of the anal legs with bare longitudinal area between the spines, patella the same, dorsally without longitudinal groove, produced at the end into a small tubercle. Tibia ventrally with 8, 1st tarsal joint with 3 or 4 teeth, the end of the tibia dorsally with a distinct spine on each side. Colour ochraceous. Length, 24 mm. Australia (Sydney), New Zealand.

"*C. setosus* Poc. from New Zealand is only established through its greater hairiness and puncturing, both characters of such great variability that they cannot be considered specific."

I have only one specimen of this species, collected at Cheviot by Mr. J. B. Mayne.

Cryptops zelandicus Chamberlin.

Cryptops zelandicus Chamberlin, *Bull. Mus. Comp. Zool.*, vol. 64, p. 9, 1920.

"Type, M.C.Z. 1922. New Zealand: Wellington, 18th August, 1914 (W. M. Wheeler).

"Colour fulvous. Cephalic plate with caudal margin free, overlapping the 1st dorsal plate, a short median sulcus in frontal region and a pair of short submedian sulci in front of caudal margin. First dorsal plate without either transverse or longitudinal sulci. Second tergite with paired longitudinal sulci; much shorter than the first. Last dorsal plate with caudal portion triangular, the median angle narrowly rounded. Prosternum with anterior margin convex on each side, edge chitinous, bearing on each side 3 or 4 setae. Ventral plates not roughened; last one caudally truncate. Coxopleurae short, caudally rounded; caudal margin bearing several spinescent setae; pores few (near 20), partly covered, not reaching the caudal margin. Penult legs with 3rd and 4th joints beneath with numerous spines, corresponding ones on other legs becoming fewer and more slender in going cephalad. Anal legs with similar spinescent setae; metatarsus

armed beneath with 6 teeth, 1st tarsal with 2. Length, 13 mm." (Chamberlin.)

I have not seen this species.

Cryptops megalopora Haase.

Cryptops megalopora Haase, *Abh. Mus. Dresden*, vol. 5, p. 80, 1887; Kraepelin, *Mit. Mus. Hamburg*, vol. 20, p. 51, 1903; Chamberlin, *Bull. Mus. Comp. Zool.*, vol. 64, p. 4, 1920.

The following is a translation of Kraepelin's description (1903):—

"Head-plate with its free hinder end only slightly overlapping the 1st tergite, not sulcate, with very fine and leathery wrinkling, sparsely hairy. First tergite with distinct collar-sulcus near the anterior margin, scarcely produced posteriorly, without median longitudinal sulci. Median and lateral sulci beginning on the 3rd tergite, indistinct and distorted. Prosternum in the middle shallowly depressed, without hairs (?) Sternites with cross-sulci, last one shortly rounded posteriorly. Coxopleuræ with some reddish hairs posteriorly, also with 2 light inwardly-directed spinelets, with about 14 large pores scattered over the whole surface, but not reaching to the hinder end. Legs with short dark-brown spines and long reddish-yellow hairs. Femur and patella of anal legs provided ventrally with scattered hairs, without bare longitudinal area; tibia with 6, 1st tarsus with 3, teeth ventrally.

"Length, 18 mm.

"Loc.—Auckland Islands."

Cryptops polyodontus Attems.

Cryptops polyodontus Attems, *Zool. Jahrb. Syst.*, vol. 18, p. 106, 1903; Kraepelin, *Mit. Mus. Hamburg*, vol. 20, p. 53, 1903; Chamberlin, *Bull. Mus. Comp. Zool.*, vol. 64, p. 8, 1920.

The following is a translation of Kraepelin's description (1903):—

"Hinder end of the head overlapped by the anterior end of the 1st tergite, without sulci. The 1st tergite with Y-shaped impression. All tergites finely hairy, faintly punctured, median longitudinal sulci on the 5th to 7th segments developed only in the posterior third, complete from 8th segment onwards, lateral crescentic sulci beginning on 3rd (2nd) segment, on 19th segment all sulci indistinct, 20th and 21st tergites smooth. Prosternum with straight-truncated anterior end, without marginal setae. Sternites strongly hairy, not punctured, cruciform sulci to 19th segment (here indistinct), absent from 20th and 21st segments; last sternite narrowly trapezoid with convex rounded hinder end. Spiracles long oval. Femur of anal leg ventrally low-keeled, moderately provided with fine hairs and stouter setae; similarly the patella, which ventrally bears at the end a short thick tooth, tibia ventrally for the whole length set with numerous teeth in several rows (4 rows terminally, less at the base), 1st tarsus concave at the base, then club-shaped, with 6 pectinate teeth. Colour dark brown; head and 1st tergite, &c., red.

"Length, 28 mm.

"Chatham, Stephens Island."

I have two specimens, with the anal legs missing, which I have referred to this species. They are labelled "Chatham Islands."

Cryptops australis Newport.

Cryptops australis Newport, *Trans. Linn. Soc.*, vol. 19, p. 408, 1845 : Pocock, *Ann. Mag. Nat. Hist.*, ser. 6, vol. 11, p. 129, 1893 : Kraepelin, *Mit. Mus. Hamburg*, vol., 20, p. 58, 1903 : *Fauna sudw. Austr.*, vol. 2, p. 106, 1908 ; *Arkiv. Zool.*, vol. 10, No. 2, p. 2, 1916 : Chamberlin, *Bull. Mus. Comp. Zool.*, vol. 64, p. 8, 1920.

The following is a translation of Kraepelin's description (1903) :—

“Head posteriorly overlapped by the 1st tergite, punctured, without sulci. First tergite without sulci, punctured like the following ones, surface and sides somewhat wrinkled. Median longitudinal sulci extending from the 4th to the 18th segment, similarly the crescentic lateral sulci. Median keel scarcely raised. Prosternum of toxicognaths with slightly rounded anterior end, with only some diminutive hairs on the edge, the latter not swollen, without setae. Sternites with cruciform sulci, the longitudinal appearing shorter than the transverse (*i.e.*, the hinder arm short), disappearing completely on the 18th. Coxopleurae hairy around the edge, with only about 3 rows of altogether about 30 pores, scarcely reaching to the hinder end. Spiracles from slit-like to narrow-oval. Legs without ‘dornspicula,’ the penultimate pair with short white downy hairs. Femur and patella of anal leg ventrally narrowing out into a keel shape, dorsally altogether bare, ventrally on each side of the keel with numerous short setose hairs, without naked longitudinal area, and without deep longitudinal hollow ; dorso-terminally without furrow or spiny processes. Patella at the end usually with sharp tooth. Tibia ventrally with 8 to 11, tarsus with 4 to 5, pectinate teeth. Colour ochraceous, head somewhat reddish, sides sometimes with trace of green margining.

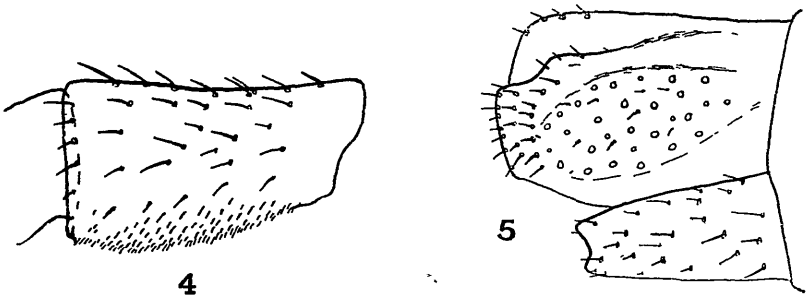
“Length, 30 mm.

“New Zealand.”

This species is known also from Western Australia and Queensland. I have not seen any specimens, but the following species resembles it closely.

Cryptops galidus n. sp. (Figs. 4 and 5.)

Pale straw-colour, head slightly darker. Head overlapped by the 1st tergite. Tergal sulci extending distinctly from 4th nearly to the caudal



Cryptops galidus.
FIG. 4.—Femur of anal leg. FIG. 5.—Coxopleura.

margin of the 20th segment. Anal tergite with caudal portion triangular, the apex broadly rounded. Prosternum with anterior margins slightly convex, meeting medianly in a gentle situation, 5 or 6 fine submarginal

hairs on each side. Sternites with cruciform sulci from 2nd to 18th segments, the transverse arm recurved and more deeply impressed than the longitudinal. Anal sternite with strongly convex lateral margins, merging by broadly rounded angles to the slightly emarginate caudal margin. Coxopleurae (fig. 5) with a slightly rounded caudal margin, bearing 3 irregular rows of short setae, pores fairly large, not more than 30 in number, leaving very broad pore-free margins. Femur of penult legs (fig. 4) with setae above and a dense downy pubescence below. Anal legs: femur and prefemur with numerous short sharp setae; femur 2.1 times, prefemur 2.2 times, and tibia 2.0 times as long as broad; dental formula 2 + 9 + 4; the tooth-bearing margins of tibia and 1st tarsal joint quite straight.

Length, 28.5 mm.

Loc.—Mount Algidus (T. Hall).

This species differs from *C. australis*, as described by Kraepelin, in possessing spinescent setae dorsally on the anal femur, and in the extension of the tergal sulci nearly to the end of the 20th segment.

Cryptops dilagus n. sp. (Fig. 6.)

Pale straw-colour, head slightly darker. Head without sulci, overlapped by the 1st tergite. Tergal sulci: a pair of incomplete sulci converging cephalad on 4th and 5th, complete from 6th to 19th, and extending half-way along 20th. Anal tergite with straight converging sides, triangular projection medianly rounded, lateral angles rounded. Prosternum with

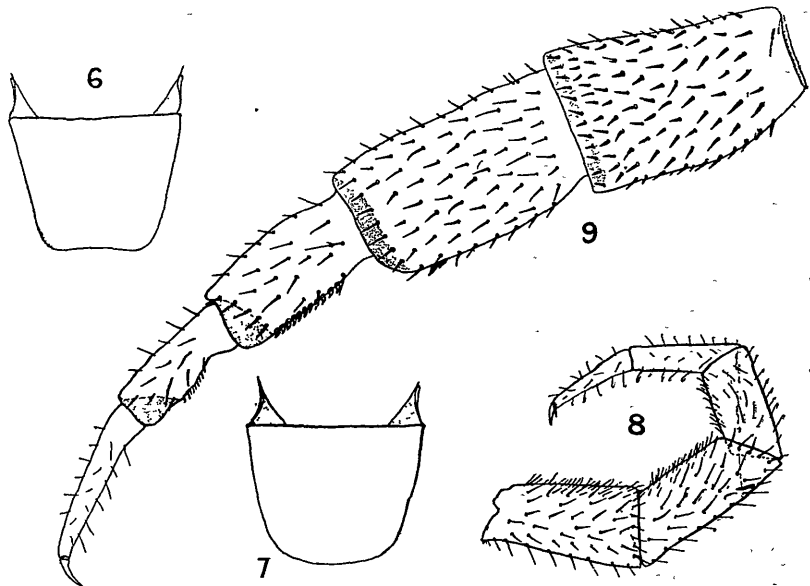


FIG. 6.—*Cryptops dilagus*. Anal sternite.
FIG. 7.—*Cryptops akaroa*. Anal sternite.

FIG. 8.—*Cryptops akaroa*. Penult leg.
FIG. 9.—*Cryptops akaroa*. Anal leg.

anterior margins slightly emphasized, vaguely convex, medianly gently sinuate, a few submarginal hairs but no strong setae. Sternites with cruciform sulci from 2nd to 18th; transverse arm recurved, longitudinal arm reaching to anterior margin, and half-way from transverse to posterior margin; posterior portion of the longitudinal arm less distinct. Anal

sternite (fig. 6) with only slightly convex sides, converging caudad, angles broadly rounded, caudal margin gently emarginate. Coxopleuræ with rounded caudal margin, pores large and small, about 50 in number, including a row of small pores partly concealed by the anal sternite, a broad pore-free margin bearing about a dozen setae. Femur of penult legs spinescent above and laterally, below with many short fine hairs, but not so finely pubescent as in the last species; 1.9 times as long as broad. Anal legs: femur 1.9 times as long as broad, covered with many spinescent setae, prefemur 2.0 times as long as broad, with less stout setae than the femur, tibia 1.8 times as long as broad; dental formula $1 + 13 + 7$ ($1 + 11 + 7$ in paratype), no special raised keel for the teeth on the tibia, a moderate keel bearing the teeth of the first tarsal joint, but not extending beyond the dentate area, as in *C. ignivia* n. sp.

Length, 27 mm.

Loc.—Mount Algidus (T. Hall).

Cryptops akaroa n. sp. (Figs. 7 to 9.)

Colour dull yellowish-brown, head orange. Head without sulci, overlapped by the 1st tergite. Tergal sulci complete from the 4th segment, extending two-thirds along the 20th. Anal tergite with straight sides, slightly converging caudad, caudal portion triangular with blunt median angle. Prothorax with chitinized gently convex anterior margins, medianly slightly emarginate, bearing a few submarginal hairs. Sternites with transverse arm of cruciform sulci visible from 2nd, longitudinal arm visible from 4th to 19th segment; transverse arm recurved and more distinct than longitudinal, which extends from the transverse arm half-way to the anterior and posterior margins of the sternites. Anal sternite (fig. 7) with distinctly convex sides converging caudad, and merging by broadly rounded angles to the slightly convex caudal margin. Coxopleuræ with 40 large and small pores, a wide pore-free margin with about 10 setae caudad. Femur of penult legs (fig. 8) 1.7 times as long as broad, with a few long sharp setae above and at the sides, and with numerous shorter more slender hairs below. Anal legs (fig. 9) very stout, femur 1.6 times as long as wide, covered with numerous stout spinescent setae, prefemur 1.75 times as long as wide, with longer setae than the femur, tibia 1.8 times as long as wide; dental formula $2 + 11 + 7$.

Length, 25 mm.

Loc.—Akaroa (G. A.).

This species differs from the last in its stouter penultimate and anal legs, the form of the anal sternite, and the fewer coxopleural pores.

Cryptops ignivia n. sp. (Fig. 10.)

Colour light yellowish-brown, head darker. Head overlapped by 1st tergite. Tergal sulci faint but nearly complete on 5th, complete from 6th nearly to caudal margin of 20th. Last tergite with sides slightly converging, triangular process with median angle rounded. Prothorax with anterior margins chitinized, almost straight, with a very slight edentation at their junction; one or two very small submarginal hairs. Sternal sulci not deeply impressed, transverse recurved and more distinct than longitudinal, which reaches only half-way to front and hind margins of the sternites. Anal sternite with slightly convex, posteriorly converging lateral margins; angles rounded, caudal margin with the slightest trace of a median emargination. Coxopleuræ truncated and setose caudally;

pores 60, a broad pore-free margin. Femur of penult legs with a few long strong setae above, with more numerous more slender setae below; 1.8 times as long as wide. Anal leg: femur with moderately long and fine.



FIG. 10.—*Cryptops ignivia*. Anal metatarsus.

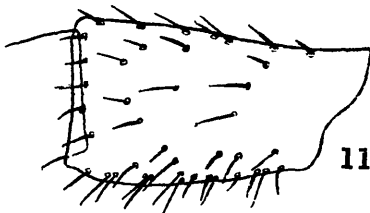
setae dorsally, changing to strong spinescent setae ventrally; prefemur with less spinescent setae; 1st tarsal joint (fig. 10) with a strongly developed rounded keel arising from the ventral surface distad of the teeth; dental formula 1 + 8 + 4. Femur 2.5 times, prefemur 2.3 times, and tibia 2.6 times as long as wide.

Length, 30 mm.

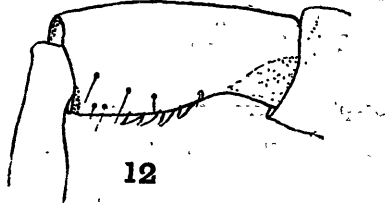
Loc.—Type, Routeburn (T. Hall); paratypes, The Remarkables (T. Hall).

Cryptops algidus n. sp. (Figs. 11 and 12.)

Colour yellowish-brown, head slightly darker. Head overlapped by 1st tergite. Tergal sulci complete from 7th to 18th segments, visible also on caudal half of 19th. Last tergite broadly triangular caudad, the apex rounded. Prosternum with anterior edges slightly thickened, slightly convex, a few (3 or 4) submarginal hairs. Sternites with transverse arm of cruciform sulci visible from 2nd, longitudinal arm visible from 3rd to 18th segment. Transverse arm wider and more strongly marked than longitudinal, and strongly recurved. Longitudinal arms reaching from



11



12

Cryptops algidus.

FIG. 11.—Femur of penult leg.

FIG. 12.—Anal metatarsus.

the transverse only half-way to the anterior and posterior margins of the sternites. Last sternite with convex converging sides, partly covering the coxopleurae, caudal margin gently emarginate, angles rounded. Coxopleurae caudally truncate, the margin bearing about 6 setae; pores large and small, 70 in number; a fairly wide pore-free margin. Femur of penult legs (fig. 11) with a few strong setae dorsally, and more numerous slightly slenderer spinescent setae below; 1.8 times as long as wide. Anal legs: femur 2.1 times, prefemur 2.0 times, and tibia 2.0 times as long as wide; femur covered with numerous stout setae, prefemur with less stout setae; dental formula 1 + 9 + 4. Metatarsus (fig. 12) without swollen ventral margin.

Length, 26 mm.

Loc.—Mount Algidus (T. Hall).

Subspecies *elidus* n. subsp. differs from the type in having more slender penult and anal legs (proportions, length to breadth, penul femur 2.0, anal femur 2.3, prefemur 2.4, tibia 2.3) and in having the tergal sulci continuous from the 7th to half-way along the 20th tergite.

Length, 33 mm.

Loc.—Cass (G. A.).

Cryptops pelorus n. sp.

Colour light orange, head darker. Head overlapped by 1st tergite. Tergal sulci complete from 6th to 19th segments, and extending a short distance along 20th. Anal tergite slightly narrowed posteriorly, caudal portion triangular with rounded apex. Prosternum with convex well-chitinized anterior margins, slightly inclined mesially, with 2 or 3 fine submarginal hairs. Sternites with cruciform sulci from 2nd to 18th segment, indistinct on 19th; transverse arm recurved and more distinct than longitudinal; the latter reaches the anterior margins of the sternites, but is only a short depression behind the transverse arm. Anal sternite with convex posteriorly converging sides, angles rounded, caudal border distinctly emarginate. Coxopleurae rounded posteriorly, pores 100, varying in size but not very large, about 10 short setae terminally, pore-free margin moderately wide. Femur of penult leg with a few spinescent setae above and at the sides, ventrally densely covered with rather short hairs; prefemur and tibia with a few long slender hairs above and dense short hairs below; femur twice as long as wide. Anal leg: femur 2.3 times as long as wide, moderately provided with spinescent setae at the sides and with rather long hairs above; prefemur 2.2 times as long as wide; tibia with straight dentate edge, 1st tarsal joint with strongly developed dentate keel; dental formula $2 + 10 + 7$ (6).

Length, 27 mm.

Loc.—Type, Pelorus Valley (T. B. Smith); Ohakune (T. R. Harris).

Cryptops lamprethus Chamberlin.

Cryptops lamprethus Chamberlin, *Bull. Mus. Comp. Zool.*, vol. 64, p. 4, 1920.

“Type, M.C.Z. 1925. Paratype, M.C.Z. 2034. New Zealand: Plimmerton, Taumarunui, August, 1914 (W. M. Wheeler).

“Colour ferruginous. Cephalic plate without sulci. Paired sulci complete first on 8th dorsal plate. Prosternum presenting a straight chitinous anterior edge which is not at all or but vaguely and very slightly angulate at middle, without hairs. Sternites each with a cruciform impression, of which the longitudinal furrow is wider and deeper and the transverse one curved with concavity cephalad; last 3 or 4 plates lacking this impression. Last ventral plate without sulci, narrowed caudad, caudal margin straight or slightly incurved. Spiracles large, longitudinally elliptic. Coxopleurae short, caudally subtruncate, pores large and small, numerous, in numerous rows, not reaching caudal margin. Anal legs missing. Penult legs clothed ventrally with dense very fine hairs, in striking contrast with the much longer and coarser hairs and setae laterally and above

“Length, 28 mm.

"The paratype does not show the peculiarity in hair of the penult legs. The anal legs have 6 teeth on the metatarsal and 5 on the 1st tarsal. Femur and tibia densely clothed beneath with spinescent setae." (Chamberlin).

I have not seen this species.

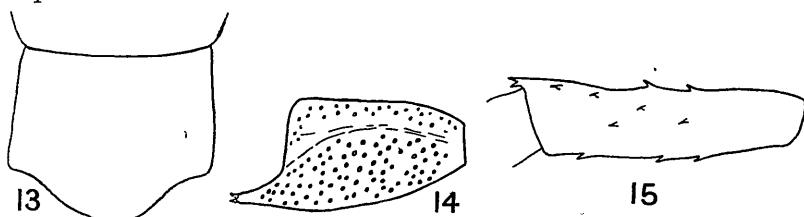
OTOSTIGMIDAE.

Genus OTOSTIGMUS Porath, 1876.

Otostigmus Porath, *Bihang Svensk. Ak. Handl.*, vol. 5, No. 7, p. 18, 1876; Kraepelin, *Mit. Mus. Hamburg*, vol. 20, p. 97, 1903.

Otostigmus chiltoni n. sp. (Figs. 13 to 15.)

Colour (in spirit) dull yellow. Antennae 17 joints, 3 basal joints comparatively bare dorsally, slightly more hairy ventrally. Head not punctured, with a slightly raised kidney-shaped lighter band between and slightly behind the eyes. Dental plates of prehensors armed with 4 + 4 teeth, the outer one on each side standing rather apart, femoral tooth simple and somewhat blunt.



Otostigmus chiltoni.

FIG. 13.—Anal tergite.

FIG. 14.—Coxopleura.

FIG. 15.—Inner surface of anal leg

Tergites: The 1st not punctured and without sulci, median keel on segments 2 to 20, the keel on each segment widening posteriorly and flattening out in front of the posterior border. A longitudinal sulcus on each side of the keel (about half-way to the edge), extending throughout from the front of the 2nd to the end of the 20th tergite. Margining beginning indistinctly on the 7th, distinctly on the 12th, tergites. Last tergite (fig. 13) sparsely punctured, produced and evenly rounded posteriorly.

Sternites with two submedian parallel depressions from 3rd to 19th, increasing in distinctness up to the 13th and then becoming less distinct again. Last sternite narrowed posteriorly, and with slightly rounded posterior end.

Spiracles oval, with crenulated border; on segments 3, 5, 8, 10, 12, 14, 16, 18, 20.

Coxopleurae (fig. 14) with long narrow process bearing two divergent terminal spines. Pores numerous and evenly distributed, pore-area extending to upper half of coxopleurae and reaching to the base of the process.

Legs from 1st to 20th with 2 tarsal spurs, tibiae and tarsi unspined. Anal legs with 1 tarsal spur, femur (fig. 15) dorsal inner with 2 spines and a bifid angular spine, inner surface with 5 spines, ventral outer with 3.

Length, 20 mm.

Loc.—Three Kings Island (Dr. C. Chilton). Types in the Canterbury Museum.

Genus ETHMOSTIGMUS Pocock, 1898.

Heterostoma (nom. praeocc.) Newport, *Trans. Linn. Soc.*, vol. 19, p. 275, 1844. *Dacetum* (nom. praeocc.) C. L. Koch, *Syst. Myr.* p. 156, 1847. *Ethmostigmus* Pocock, *Ann. Mag. Nat. Hist.*, ser. 7, vol. 1, p. 327, 1898; Kraepelin, *Mit. Mus. Hamburg*, vol. 20, p. 155, 1903.

Ethmostigmus platycephalus Newport.

Heterostoma platycephala Newport, *Trans. Linn. Soc.*, vol. 19, p. 415, 1845. *H. platycephala* + var. *lugubre* Haase, *Abhandl. Mus. Dresden*, vol. 5, p. 92, 1887. *H. brownii* + var. *gracile* Haase, *ibid.*, p. 94. ? *H. viridipes* Pocock, *Ann. Mag. Nat. Hist.*, ser. 6, vol. 7, p. 56, 1891. *H. loriae* Silvestri, *Ann. Mus. civ. Genova*, vol. 34, p. 631, 1894. *H. platycephalum* Attems, Semon's *Forschungreise*, vol. 5, p. 509, 1898. *Ethmostigmus platycephalus* Pocock, Willey's *Zool. Results*, pt. 1, p. 62, 1898; Pocock, *Ann. Mag. Nat. Hist.*, ser. 7, vol. 1, p. 327, 1898; Ribaut, *Abhandl. Senckenb. gesellsch.*, vol. 34, p. 284, 1912; Kraepelin, *Mit. Mus. Hamburg*, vol. 22, p. 162, 1903; Attems, *Bijdr. dierk.*, vol. 20, p. 4, 1915; Chamberlin, *Bull. Mus. Comp. Zool.*, vol. 64, p. 21, 1920.

There is a dried specimen of this species in the Canterbury Museum, with, however, no record of locality. It was probably on account of this specimen that Hutton included the species in the *Index Faunae Novae Zelandiae*, and it seems more likely that it was an immigrant than a native species. It differs from the typical *E. platycephalus* in the following details: Fifth leg with 2 tarsal spines (1st to 4th legs missing); the left coxopleura with 3 spines dorsally, the right with 2. (The coxopleurae extend beyond the last sternite by twice the length of that sternite, and meet together behind in the usual manner.)

Ethmostigmus rubripes (Brandt).

Scolopendra rubripes Brandt, *Bull. Sci. St. Petersb.*, 1840, p. 156. *Heterostoma sulcidens* Kohlrausch, *Archiv naturg.*, vol. 47, p. 59, 1881. ? *H. crassipes* Silvestri, *Ann. Mus. civ. Genova*, vol. 34, p. 632, 1894. *Ethmostigmus rubripes* Pocock, *Ann. Mag. Nat. Hist.*, ser. 7, vol. 8, p. 459, 1901; Kraepelin, *Mit. Mus. Hamburg*, vol. 22, p. 161, 1903; *Fauna sudw. Austr.*, vol. 2, p. 108, 1908; Brelemann, *Records Austr. Mus.*, vol. 9, p. 44, 1912; Kraepelin, *Arkiv. Zool.*, vol. 10, No. 2, p. 8, 1916; Chamberlin, *Bull. Mus. Comp. Zool.*, vol. 64, p. 22, 1920.

The Canterbury Museum has a specimen found at Christchurch in 1901 among timber imported from Australia. *E. platycephalus*, noted above, was probably introduced into this country in a similar manner.

SCOLOPENDRIDAE.

Genus CORMOCEPHALUS Newport, 1844.

Cormocephalus Newport, *Trans. Linn. Soc.*, vol. 19, p. 419, 1844; Kraepelin, *Mit. Mus. Hamburg*, vol. 20, p. 184, 1903.

KEY TO NEW ZEALAND SPECIES OF CORMOCEPHALUS.

Ventral spines of anal femur 3 in number, in a single row .. *C. rubriceps* Newp.
 Ventral spines of anal femur 4 in number, in two oblique rows.. *C. violascens* (Gerv.).

Cormocephalus rubriceps (Newport). (Figs. 16 to 18.)

Scolopendra rubriceps Newport, *Ann. Mag. Nat. Hist.*, vol. 13, p. 99, 1844. *Cormocephalus rubriceps* Newport, *Trans. Linn. Soc.*, vol. 19, p. 419, 1845; Pocock, *Ann. Mag. Nat. Hist.*, ser. 6, vol. 11, p. 128, 1893; Kraepelin, *Mit. Mus. Hamburg*, vol. 22, p. 198, 1903.

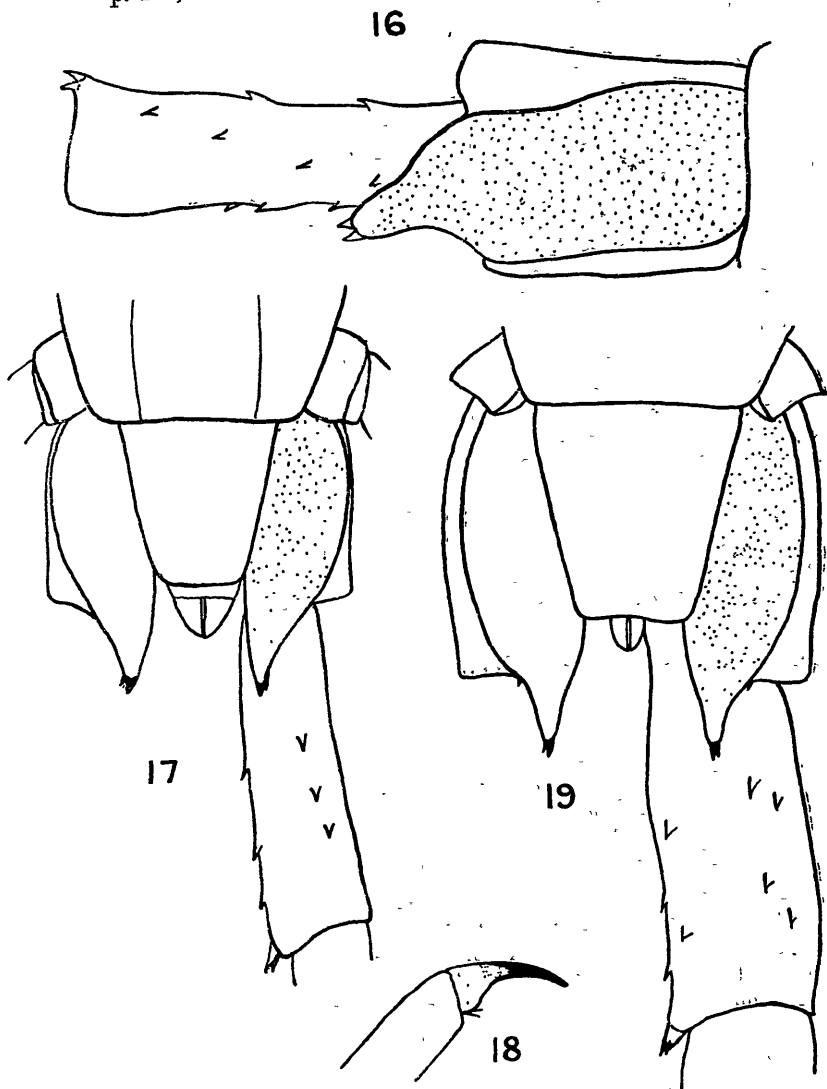


FIG. 16.—*Cormocephalus rubriceps*. Inner view of femur of left anal leg.
 FIG. 17.—*Cormocephalus rubriceps*. Ventral view of anal segment.
 FIG. 18.—*Cormocephalus rubriceps*. Terminal claw of anal leg.
 FIG. 19.—*Cormocephalus violascens*. Last sternite, coxopleura, and femur of anal leg.

Colour: Head and 1st tergite reddish-brown, remainder dark olive-brown; legs yellowish on proximal half to green distally, distal portion of anal legs light blue, the blue and green fading out in spirit.

Head smooth, sparsely punctured, with 2 median longitudinal anteriorly diverging sulci extending from the posterior border nearly to the middle of the head. Post-cephalic plates moderately large and quite distinct. Posterior border of the head angular, the tip engaged under the 1st tergite. Antennae 17 joints, the proximal 5 smooth, the remainder pubescent. Prosternum of prehensors smooth, sparsely punctured, with irregular transverse sulcus in anterior third. Dental plates very slightly narrowing cephalad, teeth 4 + 4, the outer one slightly apart.

Tergites: the 1st smooth and sparsely punctured, 2nd to 20th distinctly bisulcate. Margining beginning faintly on the 5th (6th), distinctly on the 7th. From 4th or 5th the posterior border is slightly wrinkled and somewhat darker. Last tergite without median sulcus and produced roundly backwards. Sternites bisulcate from 2nd to 20th, the 21st with a weak median sulcus or depression, and strongly narrowed posteriorly. Spiracles very narrowly triangular, slit-like.

Coxopleurae (figs. 16 and 17) with narrow 2-spined conical process, generally without small lateral spine,* pore-area extending partly along process, the pores very fine and close-set. Anal legs: femur (fig. 17) outer ventral with a single row of 3 spines, inner ventral with an oblique row of 3 spines leading to 2-spined angular spur, inner dorsal 2 spines. Terminal claw with basal spur (fig. 18).

Length, to 110 mm.

Loc.—Whangarei, Ruapekapeka, Gisborne; a specimen was caught in 1901 at Southbridge, in a railway-truck containing timber from the Kaipara district.

Hab.—New Zealand, Tasmania, New South Wales, and Queensland.

Cormocephalus violascens (Gervais). (Fig. 19.)

Scolopendra violascens Gervais, *Insect. Apt.*, vol. 4, p. 275, 1847.

Cormocephalus violaceus Newport (non Fabr.), *Trans. Linn. Soc.*, vol. 19, p. 424, 1845; Hutton, *Trans. N.Z. Inst.*, vol. 10, p. 289, 1878. *C. purpureus* Pocock, *Ann. Mag. Nat. Hist.*, ser. 6, vol. 8, p. 127, 1893. *C. huttoni* Pocock, *ibid.*, p. 128. *C. violascens* Pocock, Willey's *Zool. Results*, pt. 1, p. 60, 1898. *C. huttoni* Kraepelin, *Mit. Mus. Hamburg*, vol. 22, p. 202, 1903.

Colour uniform light brown, legs slightly lighter.

Head smooth, sparsely punctured, 2 median longitudinal anteriorly diverging sulci in posterior 3rd. Post-cephalic plates proportionally smaller than in *C. rubriceps*. Antennae 17 joints, the proximal 6 smooth, the remainder pubescent. Prosternum smooth, sparsely punctured, no irregular transverse sulcus in anterior 3rd. Dental plates and teeth as in *C. rubriceps*.

Tergites: 1st smooth and lightly punctured, 2nd to 20th distinctly bisulcate; margining beginning faintly on 7th and distinctly on 9th. No wrinkles on posterior border of tergites. Last tergite without median

* Kraepelin (1903) writes "zuweilen mit winzigem Seitendorn"; but I have not seen this small spine in the specimens I have examined.

sulcus, produced roundly backwards. Sternites bisulcate from 2nd to 20th 21st without median sulcus, and very strongly narrowed caudad. Spiracles narrowly triangular, scarcely slit-like.

Coxopleuræ (fig. 19) with narrow conical 2-spined process, and a small lateral spine, pore-area extending half-way along the process, pores fine and close together but not to such an extent as in *C. rubriceps*. Anal legs: femur (fig. 19) outer ventral with two obliquely set pairs of spines, inner ventral distally with 2 spines, basally with 1 small spine, inner dorsal 2 spines and bifid angular spine. A median depressed area on the ventral surface. Terminal claw without basal spur.

Length, to 60 mm.

Loc.—Kapiti Island, Wellington; Hanmer; Kaikoura.

ART. XXIII.—*A New Species of Shark.*

By GILBERT ARCHEY, M.A., Assistant Curator, Canterbury Museum.

[Read before the Philosophical Institute of Canterbury, 1st December, 1920; received by Editor, 31st December, 1920; issued separately, 20th July, 1921.]

Plate XXXIX.

ON the 12th June, 1920, Mr. C. W. Sherwood, of New Brighton, presented to the Canterbury Museum a small shark which he had found on the New Brighton beach. It is considered to be a new species of *Scymnodon*, a genus of small sharks living in deep water, and is named after its discoverer.

SCYMNODON Bocage and Capello, 1864.

Scymnodon Bocage and Capello, *Proc. Zool. Soc.*, 1864, p. 263.
Zameus Jordan and Fowler, *Proc. U.S. Nat. Mus.*, vol. 26, p. 633, 1903. *Scymnodon* Tate Regan, *Ann. Mag. Nat. Hist.*, ser. 8, vol. 2, p. 48, 1908.

Scymnodon sherwoodi n. sp. (Plate XXXIX, and text-figs. 1 and 2.)

Dermal denticles (fig. 1) pedunculate, with 3 parallel keels, each ending in a point, the central keel being the longest.

Distance from mouth to snout less than half the distance between snout and first gill-opening (proportion 9:23). Nostrils oblique, distance between them three-fifths of preoral length of snout. Length of anterior labial fold about equal to its distance from the symphysis.