

Beak rather less than one-third of the gape. Pectorals equal to the distance between the muzzle and the eye. Teeth,  $\frac{2}{2}^2-\frac{2}{2}^3$ . Above and upper jaw, dark slate-blue, passing gradually into white below; fins, slate-blue; length, seven to ten feet; teeth, two to three in an inch.

*Habitat*: West Coast Sounds to Cook Strait.

This species was founded by Dr. Gray on a skull brought home by the Antarctic expedition of the "*Erebus*" and "*Terror*," without a *habitat*. Subsequently in his supplement to the "Catalogue of Seals and Whales," he gave West Africa as its *habitat*, probably by mistake. In 1872 Dr. Hector determined a skull found in Dusky Bay as belonging to this species, and the subsequent capture of specimens by Captain Fairchild showed that he was right, and that the skull had been correctly referred by Dr. Gray to *Tursio*.

ELECTRA CLANCULA.

*Lagenorhynchus clanculus*, Gray, "P.Z.S.," 1849, p. 2. *Electra clancula*, Gray, "Synopsis of Whales and Dolphins," p. 7, Pl. 35 (skull), Hector, "Trans. N.Z. Inst.," Vol. V., p. 160, Pl. (not good).

Head not beaked; dorsal fin truncated; pectorals slightly longer than the distance from muzzle to eye. Teeth,  $\frac{3}{3}^1-\frac{3}{3}^2$ . Above, pale grey. Lower jaw, throat, and belly white, the white on the belly being divided by a transverse band of grey just behind the pectoral fins; nose and forehead white; a white band from beneath the dorsal sloping obliquely upwards and backwards towards the tail; sides of the head, a transverse band just behind the blow-hole, and pectorals, dark slate-gray; the dark band behind the blow-hole shading off gradually behind; length, four to five feet; teeth, five in an inch.

*Habitat*: Abundant all round the coasts of New Zealand; South Pacific Ocean.—(Gray.)

In the "Trans. N.Z. Inst." Vol VI., p. 89, Dr. Gray gives *D. superciliosus*, Lesson, as a synonym of this species. Previously, in his "Catalogue of Seals and Whales," he had given it doubtfully as a synonym of *Clymenia obscura*. But it is evidently quite distinct from either *C. obscura* or *E. clancula*, for it is a beaked species, and looks like a *Tursio*. It was observed by Lesson off Cape Horn.

ART. XL.—On the New Zealand Earth-worms in the Otago Museum.

By Captain F. W. Hutton, C.M.Z.S.

[Read before the Otago Institute, June 6th, 1876]

Plate VII.

I am not aware that any earth-worms have been as yet described from New Zealand, except *Megasolex antarctica*, Baird ("Pro. Lin. Soc.," Vol. XI.,

p. 96), a large species seven inches long, and I offer the following as a contribution towards a better knowledge of them.

**LUMBRICUS ULIGINOSUS, sp. nov.**

Plate, Fig. A.

Length, eight or nine inches; colour reddish; body thick, cylindrical, and slightly tapering in front; quadrilateral behind. Setæ rather short and thick, in four rows, each row consisting of an approximated pair of bristles. Segments from 180 to 200; clitellum large, but not very distinct, composed of six segments, from fifteen to twenty. Male genital openings in two pairs, situated on the ninth and tenth segments respectively. Vulvæ large, on the three last segments of the clitellum. Cephalic lobe large and rounded, completely dividing the buccal segment superiorly into two parts, and with a transverse sulcus on the posterior superior portion, between the divided halves of the buccal segment. Anterior margin of buccal segment deeply emarginate inferiorly.

*Habitat*: Dunedin, in peaty ground.

**LUMBRICUS CAMPESTRIS, sp. nov.**

Plate, Fig. B

Length, two to three inches. Colour reddish, or olivaceous-green, paler below. Clitellum red, or reddish-brown. Body cylindrical and tapering in front, subquadrate, and tapering behind. Setæ in four double rows, each row consisting of a rather distant pair of bristles. Segments, 100 to 140. Clitellum generally conspicuous, of five or six segments; its position irregular, commencing on any segment between ten and twenty. Male genital openings on the ninth segment. Vulvæ on the two last segments of the clitellum. Cephalic lobe large, sub-conical, completely dividing the buccal segment superiorly into two parts. Anterior margin of buccal segment entire, or slightly eroded inferiorly.

*Habitat*: Dunedin and Wellington. Common. A very variable species. The olivaceous specimens occur in the bush.

**LUMBRICUS LEVIS, sp. nov.**

Plate, Fig. C.

Length, three to four inches. Pale flesh colour. Body cylindrical, tapering in front. Setæ feeble, in four rows behind the clitellum, absent before the clitellum. Segments, 130 to 150; the first thirteen simple or bi-annulate, the remainder tri-annulate. Clitellum conspicuous, brownish-red, composed of six or seven segments, commencing between the fifteenth to twenty-fifth. Male genital openings on the tenth to fifteenth segment. Vulvæ on the two last segments of the clitellum. Cephalic lobe, small, conical, simple. Anterior border of buccal segment slightly emarginate superiorly, entire inferiorly.

*Habitat*: Dunedin and Hampden, in gardens and fields. This species differs from *L. communis* in having no setæ before the clitellum, and in not having any tubercles on the sides of the clitellum.

A variable species, sometimes of a greenish hue. In the young the setæ are often found in front of the clitellum.

**LUMBRICUS ANNULATUS, sp. nov.**

Plate, Fig. D.

Length, about three inches. Colour, pale brownish-red; each segment with a dark reddish-brown transverse band in the centre; inferior aspect much lighter. Body cylindrical in front, sub-pentagonal behind, tapering to both ends. Setæ in four rows. Segments, 70 to 100, bi or tri-annulate. Clitellum, well marked, smooth, and shining, consisting of five or six segments, commencing at the twenty-sixth; not tuberculated inferiorly. Male genital openings in the sixteenth segment. Cephalic lobe, small and flattened, divided into anterior and posterior divisions inferiorly. Anterior border of buccal segment emarginate superiorly, entire inferiorly.

*Habitat*: Dunedin, in gardens.

In colour this species much resembles *L. fetidus* of Europe, but is distinguished by the shape of the cephalic lobe, the position of the male genital openings, and the well-marked clitellum.

**MEGASOLEX SYLVESTRIS, sp. nov.**

Plate, Fig. E.

Length one and a half to two inches. Colour, dark red-brown. Body, cylindrical, tapering before and behind. Setæ, numerous, arranged in about thirty double rows all round the body. Segments, 70 to 80; bi-annulate. Clitellum, inconspicuous, composed of three segments, from fifteen to seventeen.

Male genital openings on the second segment behind the clitellum, and with a pair of elongated curved setæ in front of each. Cephalic lobe, small, flattened, with a deep transverse groove superiorly, and divided into anterior and posterior portions inferiorly. Anterior border of buccal segment, deeply excavated superiorly, entire inferiorly.

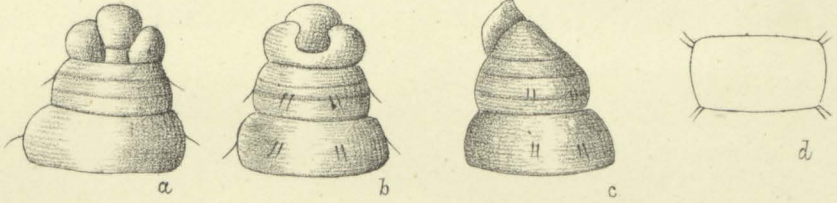
*Habitat*: Dunedin, in rotten wood in the bush.

**MEGASOLEX LINEATUS, sp. nov.**

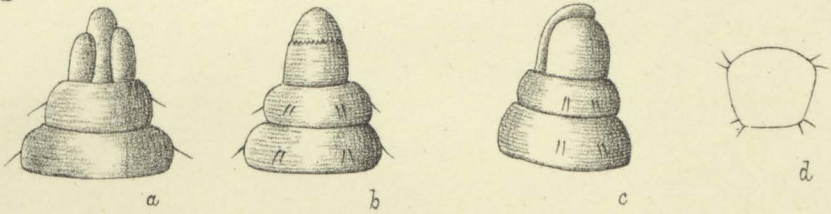
Plate, Fig. F.

Length, two inches. Colour, reddish-brown, finely longitudinally striated with lighter. Body, cylindrical, tapering before and behind. Setæ, very minute, in simple rows all round the body. Segments 70 to 80. Clitellum inconspicuous, composed of four segments, from the fourteenth to seventeenth.

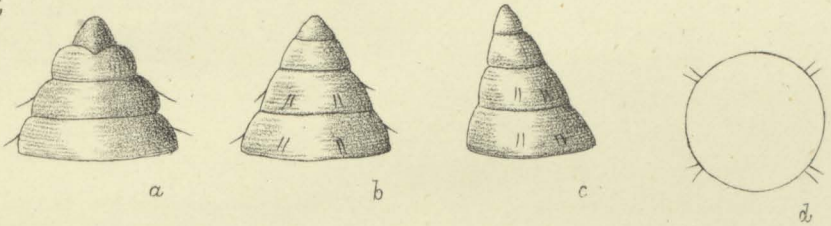
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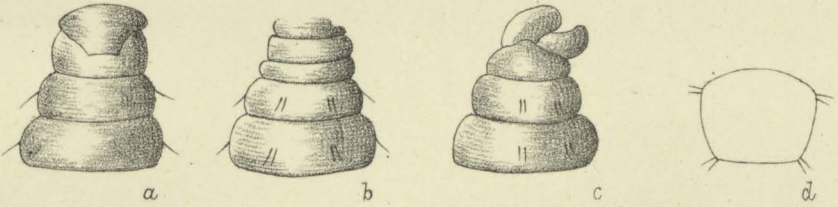
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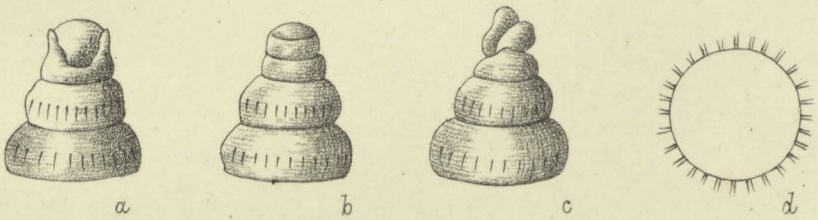
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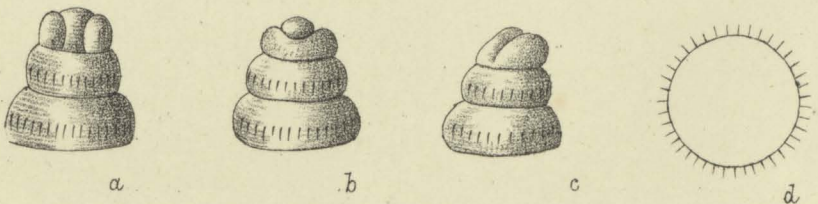
D



E



F





Male genital openings on the second segment behind the clitellum, without any specialised setæ in front of them. Cephalic lobe, small, rounded, completely dividing the buccal segment superiorly into two parts. Anterior border of buccal segment, slightly emarginate inferiorly.

*Habitat* : Queenstown, under dead leaves.

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EXPLANATION OF PLATE.

First four segments of New Zealand Earth-worms:—*a*, viewed from above; *b*, viewed from below; *c*, viewed from the right side; *d*, transverse section behind clitellum.

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ART. XLI.—*Contributions to the Ichthyology of New Zealand.* By Captain F. W. HUTTON, Director of the Otago Museum.

[*Read before the Otago Institute, 5th September, 1876.*]

SCORPIS HECTORI, Hutton.

Dr. Günther has identified this fish with his *Anthias richardsoni*, and it is also certainly the same as *Perca lepidoptera*, Forster ("Desc. Anim.," p. 138); so its name will have to stand *Anthias lepidoptera*. I agree with Dr. Hector in separating *A. fairchildi*; I should have done so, but was doubtful of the true form of the original specimen of *S. hectori*, which had been preserved in carbolic acid and dried.

PAGRUS UNICOLOR, Quoy and Gaim.

To this species belongs *Sciæna aurata*, Forster.

MENDOSOMA LINEATA.

*Sciæna lineata*, Forster, is identical with *Latris hecateia*, Richardson; so that this species should stand, *Mendosoma lineatum*, Gay.

LATRIS ÆROSA, sp. nov.

B. 6, D. 15 |  $\frac{1}{12}$ ; A.  $\frac{3}{5}$ ; L. Lat. 116; L. Trans. 10/32.

Length, three times the height, or three and three-quarter times the length of the head. No teeth on the vomer or palatine bones. Top of the head and cheeks, scaly; snout, naked. Nine simple pectoral rays. Above, coppery. Lateral line, and one or two irregular narrow streaks above it, lead-blue. Pectoral, anal, dorsal, and caudal fins, reddish-brown; blackish at the tops. Belly, silvery.

*Habitat* : Otago Heads.

Type stuffed in the Otago Museum. This fish has the same fin formula as *L. bilineata*, Castlenau, but it differs both in form and colour, and has no prolonged filament from the fourth anal ray.

SEBASTES PERCOIDES, Solander.

To this species belongs *Scorpena cottorides*, Forster.

GASTEROSTEUS PUNCTATUS, Forster. (*Scomber punctatus*, Bl. Schn.)