

Studies in New Zealand Fishes.

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PLATE 34.

DURING the collecting season of 1928 I obtained at Deep Water Cove, Bay of Islands, three specimens of *Acanthoclinus* which differed from the usual form of *A. quadridactylus*.

Recently I received a similar specimen from Mr A. Blackwell, of Tryphena, Great Barrier Island, which confirms the specific distinction of these forms from the well-known "*taumaka*" of the Maoris, hitherto the only species of *Acanthoclinus* known in New Zealand.

The new species, which is named *Acanthoclinus trilineatus*, differs markedly from *A. quadridactylus* in the disposition of the lateral lines as set out in the key given below. I have also given a description with drawings of both species.

Family ACANTHOCLINIDAE.

Genus *Acanthoclinus* Jenyns, 1842, Orthotype, *A. fuscus*.

Key to Species.

- FIG. 1.—Lower lateral line system bifurcate extending over the abdomen to tips of ventrals. *quadridactylus*.
 FIG. 2.—Lower lateral lines not bifurcate. *trilineatus* n. sp.

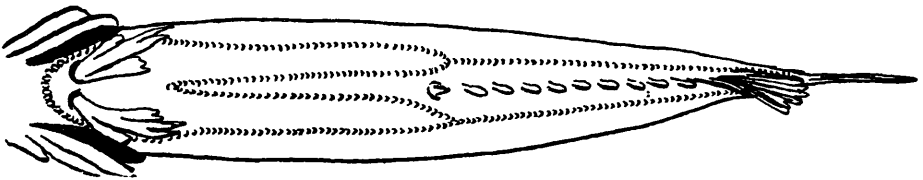


FIG. 1.—Ventral surface of *Acanthoclinus quadridactylus*, showing system of the lower lateral lines.

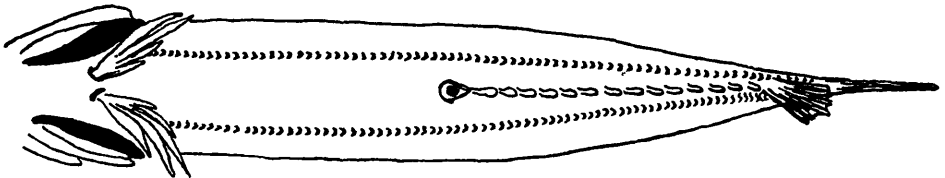


FIG. 2.—Ventral surface of *Acanthoclinus trilineatus* n. sp., showing lower lateral lines.

***Acanthoclinus quadridactylus* (Bloch & Schn.)**

Maori, Taumaka. Plate 34.

1801. *Blennius quadridactylus*, Forster, in Bloch & Schn., *Syst. Ichth.*, p. 177.
1872. *Acanthoclinus littoreus*, Forster; Hutton, *Cat. Fish. N.Zeal.*, p. 34.
1879. *Acanthoclinus taumaka* Clarke, *Trans. N.Z. Inst.*, 11, p. 293, pl. 15.
1889. *Acanthoclinus fasciolatus* Ogilby, *Aust. Mus. Mem.*, 2, p. 63.
1923. *Acanthoclinus littoreus* Oliver, *Trans. N.Z. Inst.*, 54, p. 510, pl. 42.
1927. *Acanthoclinus quadridactylus* Phillipps, *Marine Dept. Fish. Bull.*, No. 1, p. 49.

Br. 6; D. xx/IV; A. ix/IV; V. IV; P. XVI; C. XVI.

Depth at centre of body 4.92; head 3.5; pectoral 6.28; in the length to base of middle caudal rays. Eye subequal with the inter-orbital space, and 7.43 in the head. Upper lateral line with 85 scales, middle lateral line with 64, and the lower with 42 not counting those extending on to the abdomen.

Body elongate, rather robust and rounded anteriorly, becoming gradually depressed towards the peduncle, where it is greatly so. Whole of body and nape covered with small closely set fleshy scales, but the head and throat are scaleless. Numerous open pores are present behind the eyes, extending over the top of the head.

The upper lateral line passes close to the base of the dorsal fin and reaches the caudal; it is connected anteriorly with a short branch line which surrounds the first dorsal spine. The middle lateral line commences at the margin of the pectoral, when the latter is adpressed, and continues straight to the base of the middle caudal rays. It is of uniform width throughout, and only slightly narrower than the upper line, but subequal with the lower.

The third lateral line surrounds the ventrals, then passing along the lower side of body, it bends slightly at the first anal spine, from thence it is straight to the caudal. There is an abdominal branch line connected to the above commencing above the first anal spine, which extends forward up the middle line of belly to the tips of ventrals, where it turns sharply to form the same connection on the other side of the fish.

Head covered with very tough skin; eye moderate, nearly cutting the profile. Two nostrils, one situated on the anterior margin of the orbit surrounded with a low rim, the anterior nostril is near the margin of the preorbital, and is provided with flaps which can be completely closed.

Maxillary nearly reaches the vertical of the posterior margin of the eye. Preorbital narrow. Mouth oblique, the lips thickened with tough skin. Minute villiform teeth in both jaws forming a broad

band in front, among which are some slightly longer ones. Teeth are also present on the vomer and palatine bones, while the tongue has a triangular elongated patch in the centre.

Gills 4; gill-rakers 10 on the lower half of the anterior limb. Pseudobranchiae present. Dorsal fin commencing above the base of pectoral covered with thickened membrane, the terminating membranes of the spines being produced into small fleshy lobes. The anal fin is in every way similar to the dorsal. Caudal and pectoral rounded and otherwise similar to each other. Ventrals thoracic, fleshy.

Colour: Brownish to dull slate grey, paler on the ventral surface, sometimes showing a trace of pink. Some specimens are covered with irregular dark mottlings on the body while others appear quite plain—dark markings are also present on the membrane of all fins except the pectoral. The lobe-like tips of the spines in the dorsal and anal pinkish. Ventrals and pectorals dusky grey. Eye dark brown. Head same as body colour, and with two broad blackish streaks, one reaching from the lower margin of the orbit across the cheek, the other at top of cheek. There is also a dark blotch on the operculum.

Described and figured from a specimen which is 177 mm. long from the tip of the lower jaw to the base of the middle caudal rays. The head is 51 mm.; eye 7 mm.; depth of body 36 mm.

Altogether over 40 specimens of this fish have been critically examined, ranging in size from 20 mm. to as much as 205 mm. long, and I can find no variation whatever. In every case the fin formula was identical with the specimen here described, and all other characters are comparative.

Locality: Common throughout the Auckland Provincial District; living under stones, in rock pools, also on tidal flats wherever seaweed and boulders occur.

Specimens in the Auckland Museum.

***Acanthoclinus trilineatus* n. sp. Plate 34.**

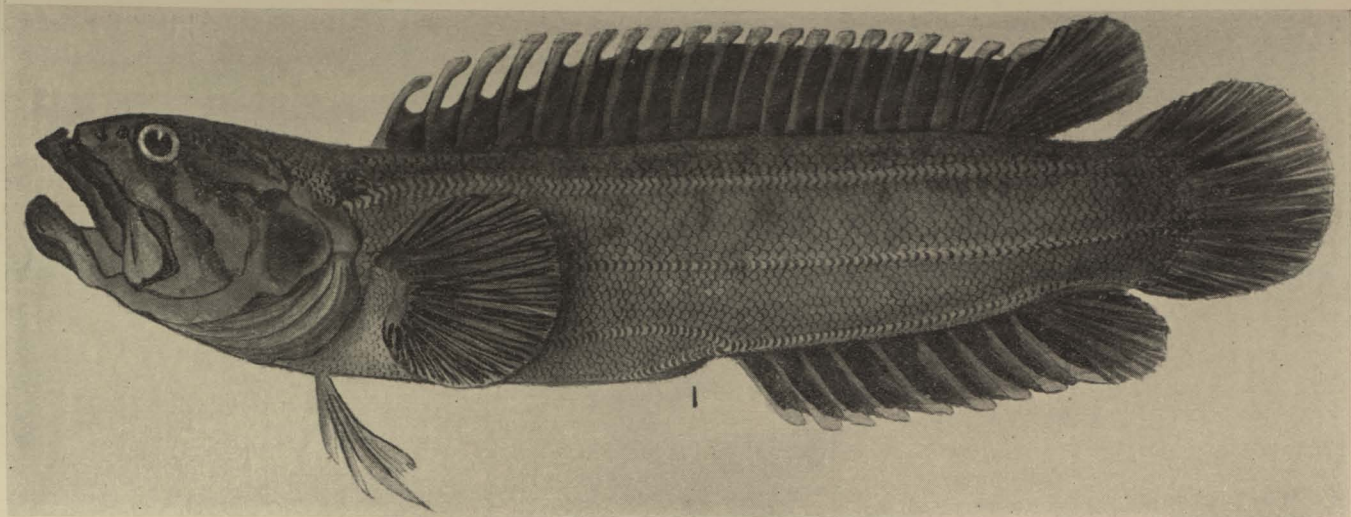
Br. 6; D. xxv/IV; A. xiv/IV; V. IV.; P. XIX; C. XV/ $\frac{2}{3}$.

Depth at centre of body 6.06; head 4.22; pectoral 6.47 in the length to the base of the middle caudal rays. Eye subequal with the interorbital space and 7.67 in the head. Dorsal lateral line with about 88 series of scales; middle line 70; and the ventral line 86-88.

Body elongate, moderately robust anteriorly, becoming depressed very gradually towards the peduncle.

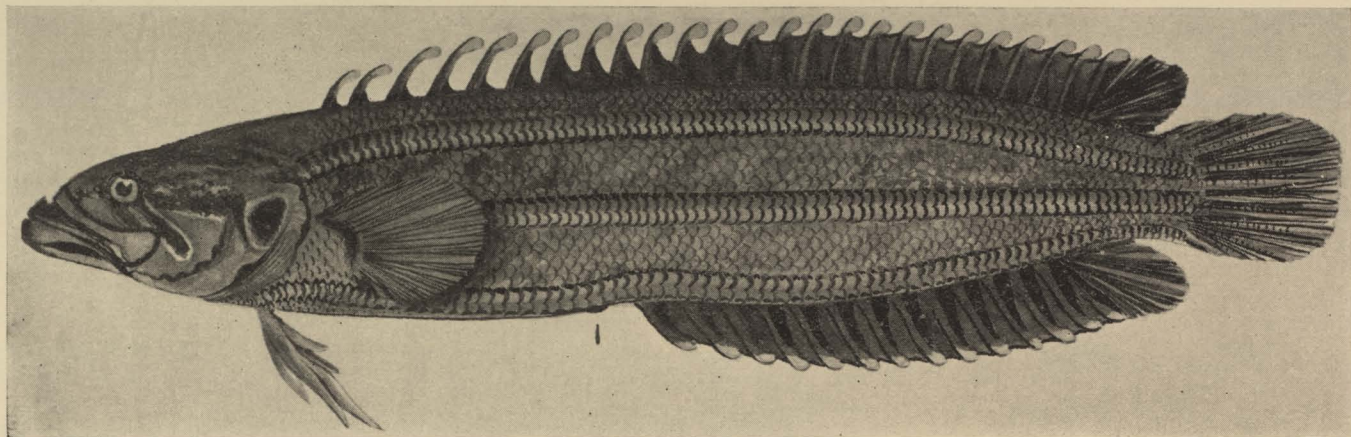
Whole of body including the throat covered in very small fleshy scales, but the head and nape are entirely naked. A number of small open pores are present behind the eyes and distributed about the top of the head.

Dorsal lateral line commencing at the upper angle of the operculum, passes along the back close to the base of the dorsal fin, and reaches the procurrent rays of the caudal. The middle lateral line



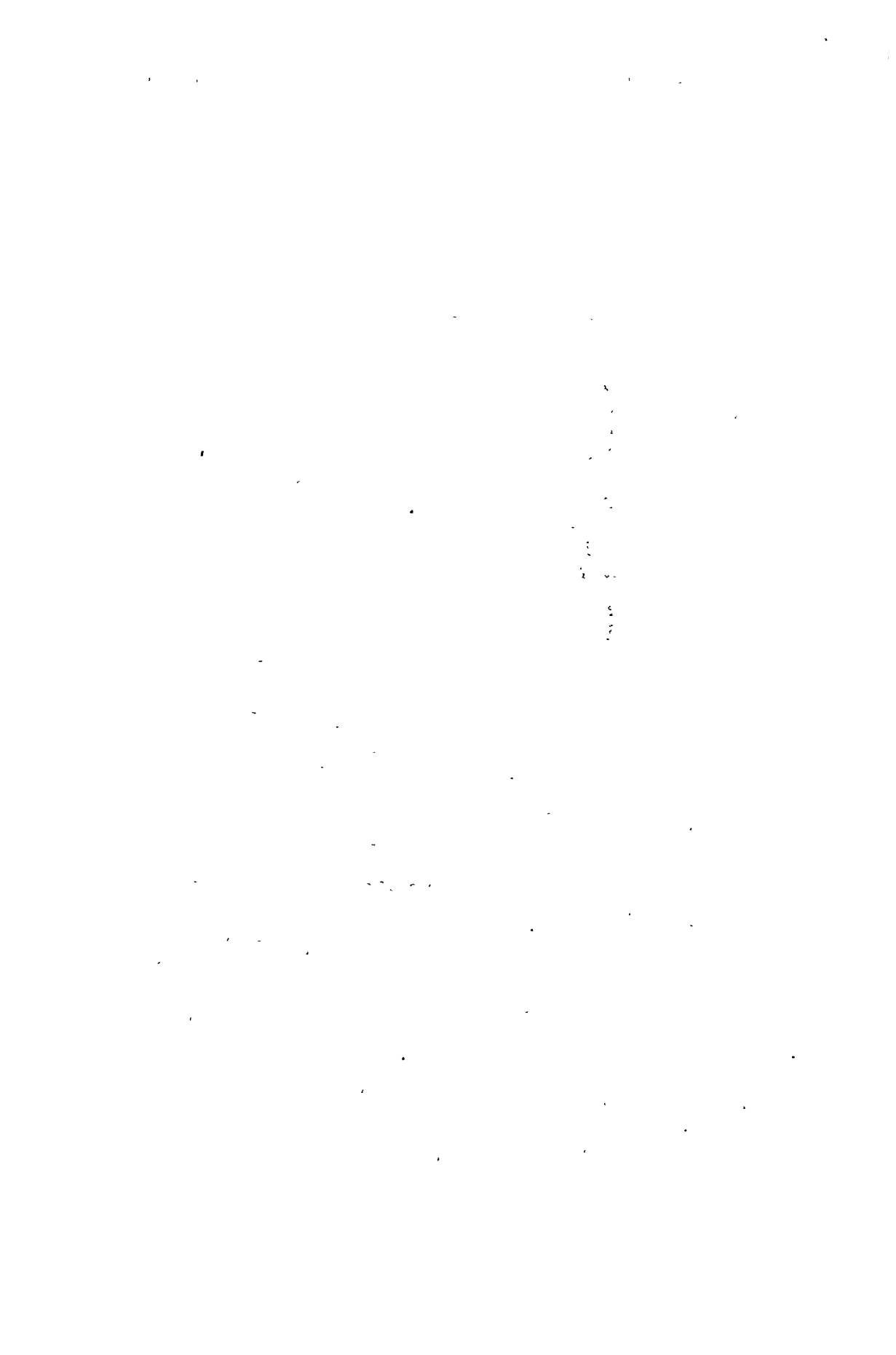
Acanthoclinus quadridactylus (Bloch & Schn.).

L. T. Griffin del.



Acanthoclinus trilineatus n. sp.

L. T. Griffin del.



is broadest, its origin is the middle of the pectoral, from thence it continues straight to the base of the middle caudal rays.

The ventral lateral line is about the same width as the dorsal one. Its origin is at the angle of the first ventral ray. It then follows the margin of the abdomen, rising slightly above the first three anal spines, then passes in a gradual curve to the lower procurent rays of the caudal.

Head covered with tough skin. Eye rather small, subequal with the interorbital space, and barely cutting the profile. Two nostrils, the anterior, situated about the middle of the snout, is provided with a flap. The posterior nostril is divided into two low orifices resembling pores, and is situated on the anterior margin of the orbit.

Maxillary reaches backwards a considerable distance behind the eye. Margin of the cheek crenated. Margin of operculum with a transparent crenated fringe. Mouth oblique, the lower jaw longest. Minute villiform teeth in both jaws—forming a fairly uniform band in front. Teeth are also present on the vomer and palatine bones, but the tongue is smooth. Gills 4; gill-rakers 7 on the lower half of the anterior limb. Pseudobranchiae present.

Dorsal fin origin above base of pectoral, the first five spines with very low membrane, the membrane increases from the sixth to the tenth spine, where it reaches the produced fleshy lobes, and continues so to the end of the fin.

The anal is similar to the dorsal except that the membrane fills all the spaces between the spines. Pectoral and caudal are much alike in form. Ventrals thoracic, the rays split at tips.

Colour: Body purple brown with darker mottling between the lateral lines. Dorsal and anal with the fleshy lobes pinkish orange. Caudal same as body colour, pectoral clear slate with a dark band round the base. Ventrals dull orange, the tips white. Ground colour of the head same as the body, but with a conspicuous blue-black streak from the eye to the maxillary, another from the eye to the operculum, and there is a very large blue-black spot on the latter. All the streaks and the opercular spot are broadly margined with white. Eye brown, the pupil blue.

Described and figured from a specimen which is 98 mm. long from tip of lower jaw to base of caudal. The head is 25 mm.; eye 3 mm.; greatest depth of body 17 mm.

Locality: Only four specimens of this fish have so far been procured, three of which I took myself from rock-pools at Deep Water Cove, Bay of Islands, while the fourth has just been sent to the Museum from the Great Barrier Island. Those which I obtained I found living in the same rock-pools as *A. quadridactylus*, but *A. trilineatus* appears to be a much rarer species. A very critical examination discloses no variation whatever in the specimens obtained.

Holotype and paratypes in the Auckland Museum.