

ART. XXVI.—Notes on New Zealand Fishes.

By Sir JAMES HECTOR, F.R.S.

[Read before the Wellington Philosophical Society, 11th February, 1902.]

Plates XIV. and XV.

1. *Chimæra monstrosa*, var. *australis*.

This remarkable fish is related to the sharks and the rays or skates, but is quite distinct from either of these groups. Only two generic forms are known—(1) *Chimæra*, which abounds in the Arctic seas; and (2) *Callorhynchus*, which, so far as known, is confined to the Antarctic seas.

In the northern seas this fish is known as the "king of the herrings," also as the "rabbit-fish." Its southern representative is popularly known as the "elephant-fish," on account of the proboscis-like appendage to its upper jaw. A few specimens of the northern genus *Chimæra* have been found off the Cape of Good Hope and off the coast of Chile, but so far as I know this is the first New Zealand example of the genus which has been found. It was obtained by the trawl on the Wairau bar, and presented to the Museum by Mr. Fernandos, of this city. The specimen is a female, both oviducts containing eggs in various stages of development. It is somewhat curious that the first specimen obtained in New Zealand should be a female, as the male fish is far more abundantly caught in the Northern Hemisphere than the female. In the case of the southern representative, or the elephant-fish, on the other hand, most of the specimens caught are females, and they are quite common at certain seasons. However, a few days after I obtained the female of the *Chimæra* a male elephant-fish was brought to the Museum, being the first of the sex I had ever seen. It has wonderful grippers armed with strong teeth on the forehead, and on each side of the body near the ventral fin, and has two extra lateral ventral fins involuted so as to form intromittent organs.

The following are the measurements of the female specimen of *Chimæra monstrosa*, var. *australis* :—

	Inches.
Total length	36
Greatest height	4
Snout to eye	2·5
Orbit	1·5
Snout to dorsal spine	6
Height of spine	3
Base of 1st dorsal	3·5

	Inches.
1st to 2nd dorsal, subcontinuous	... 3
Base of 2nd dorsal	... 16
Snout to mouth	... 2.5
Snout to pectoral	... 5
Base of pectoral	... 2
Branchial collar to vent	... 5.5
Snout to ventral fins	... 16
Pectoral fin, length	... 8
" width	... 4
" width at base of rays	... 2.5
Ventral fin, length	... 6
" width at base	... 2
Caudal fin	... 5
Filiform appendage	... 7

There are two genital orifices, one on each side and anterior to the vent, each with a distinct ovarian sac containing twelve to fifteen eggs in various stages of development, varying in size from a small pea to a nut. Each egg is enclosed in an elongated ovid membrane, the largest being on the right side 1.5 in. long.

Colour.—Olive-black above, silvery-white beneath the head, and dark-grey elsewhere. Head with small ocellated spots, and round the base of the dorsal five distinct white spots. As far back as the vent three rows of nine spots in each, and one broad but interrupted line of white. A pseudo-lateral line of forty-three pores marked by golden scales, which latter are also found on other parts. On the tail are thirteen bold white blotches, in continuation of the white lateral line on the body.

2. *Auchenopterus aysoni*, n. sp.

This elegant little fish is one of the blennies, a family fairly well represented in New Zealand waters, *Crysticeps australis* and *Trypterygium nigripenne* being close allies. Only one species of the genus is previously known, from the west coast of South America, but it differs in important respects from the specimen under consideration, which was presented to the Museum by Mr. Ayson, Inspector of Fisheries. Unfortunately, the spirit in which it was sent was too strong, so that the scales and many of the lateral pores were destroyed.

The following is a minute description of the fish :—

	Mm.
Total length, 5 in.	... 143
Height	... 30
Length of head	... 35
Base of 1st dorsal	... 12
Snout to 1st dorsal	... 10

	Mm.
Space of notch in dorsal	8
Continuous dorsal	80
To caudal	15
Extension of caudal rays	21
Snout to pectoral	23
" ventral	21
" vent	48
Length of pectoral	27
" ventral	20
Snout to eye	9
Diameter of eye	4

Fin Formula.—B., 4; D., 3-33; P., 8; V., 3 (but broken and indistinct); A., 10; LL., 22-3-5, interrupted.

Scales very minute.

Body compressed. Height one-quarter of length and one-sixth less than length of head.

Pair of branched tentacles from above the snout, not from the nostril.

Colour uniform light-brown, with four oval translucent spots on the dorsal fin.

Teeth minute on jaws and vorner.

Gill-opening wide.

Tail slightly unsymmetrical, and caudal distinctly separate from both dorsal and anal.

Loc. Bay of Islands; collected by Mr. Stephenson.

EXPLANATION OF PLATES XIV., XV.

PLATE XIV.

- A. Female of *Callorhynchus antarcticus*.
- B. Male of *Callorhynchus antarcticus*.
- C. Female of *Chimara colliei*.
- D. Male of *Chimara colliei*, L. (after Günther).

PLATE XV.

Auchenopterus aysoni.

ART. XXVII.—On a New Polynoid.

By W. MALCOLM THOMSON, M.A.

[Read before the Otago Institute, 8th October, 1901.]

Polynoe comma, n. sp.

Body slender, long, linear, tapering slightly at the hinder end. Average length 50 mm., and breadth 6 mm. (spirit specimens).