

## ART. XXV.—On some new Fishes. By F. E. CLARKE.

## Plates XIV. and XV.

[Read before the Westland Institute, 16th July, 1878.]

*Trypterigium dorsalis*. Pl. XV.

B.6, D.4-19-12, P. 8 branched, 7 simple, V.2, A.25, C.13.

Head is to total length as 4 is to 19.

Total length, 5.1 inches; length of caudal fin, .65 inch; length of head, 1.1 inch.

Length of 1st portion dorsal, .6 inch—extreme height, 3rd ray, .35 inch

" 2nd " " 1.9 " " " 12th " .6 "

" 3rd " " .9 " " " 4th " .63 "

" anal " " 1.9 " " " 22nd " .48 "

" pectoral, 9th ray 1.15 "

" ventrals, 1st ray .55 "

Longest diameter orbit of eye .3 "

Shortest do. .17 "

Distance from commencement ventrals to do. anal, 1.2 in.

Termination of bases 3rd portion of dorsal and anal fins in same vertical, and 0.4 in. from commencement of caudal fin; commencement of 1st portion of dorsal fin slightly behind vertical from posterior margin of preoperculum, at terminal portion fin-membrane connected half-way up 1st ray of 2nd dorsal; fin-membrane at termination of second dorsal connected with 1st ray of 3rd dorsal; gill openings very large, branchiostegous rays very strong; rays of ventral exceedingly fleshy; lower simple rays of pectorals also strong and fleshy; body covered with small ctenoidal scales, arranged in well-marked transverse series; lateral line running low down on side with concavity towards dorsal aspect, *plainly marked from commencement to caudal fin*. Head, throat, base of pectorals, gill-covers, and cheeks scaleless. Summit of head dotted with numerous papillæ; portion of back, of a breadth of 0.1 in. on each side of and along base of dorsal fins, devoid of scales, division between scaled and scaleless portion being very harshly marked; eyes, oval medium, with strong supra-orbicular ridges; portion of forehead between eyes, narrow and grooved; profile almost vertical, cheeks wide and deep, and slightly flattened; body broad, rounded, thick, and fleshy, but elongate; mouth small, underhung, with fleshy lips, upper protruding beyond lower; nostrils single, very minute, close below eye, and with tubular orifice; no crests; tongue fleshy. Female fish, ova fully developed.

Ground colour of body, head and fins, brownish; and sides with yellowish tinge, mottled and spotted with darker, verging into banded appearance near tail; pupil of eye black, iris brown, with yellow ring round pupil.

Captured at mouth of Hokitika, 26th January, 1871, and presented by Mr. Moss Levy.

*Trypterigium decemdigitatus*. Pl. XV.

B.6, D.3-19-14, P.3-6-9, V.2, A.29, C.13.

Scales: lin. lat., 43; lin. trans.  $\frac{3}{8}$ .

Lateral line, convex, very prominent and plainly marked to near caudal (over 34 scales), when it ends abruptly, it follows general slope of dorsal aspect, high up on body; head is to total length as 1 is to 5; depth is to body and tail as 5 is to 27.

Teeth recurved, small, with row of larger (cardiform) outside on upper and lower jaws; teeth on vomer; tongue thin, sharp-pointed; caudal fin large, rounded; scales large, ctenoid, continuous to base of dorsal fins; none on head, cheeks, gill-covers, bases of pectorals or throat; eyes large and round; orbicular ridges hidden in substance; a supra-orbital fringed palmiform, tentacle—decemfid—on simple base stalk; trifold tentacle at nostril; upper jaw protrudes slightly beyond lower when mouth is closed—when open, lower jaw is longest; head small, profile sharp and sloping, top of head and snout very much rounded, muzzle pointed; commencement of first portion of dorsal fin in vertical with margin of pre-operculum and base of ventrals, terminating membrane of same joins with second portion at base of first ray; commencement of second portion in vertical with base of pectoral fins, terminating membrane of same joins first ray of third portion a little distance up ray; ventral fin rays slight but long; a strong papilla at anus; bases of rays of first portion of dorsal fin very close together, and far separate from the commencement of second portion of dorsal; termination of third portion of dorsal in vertical with termination of anal fin; head and gill-covers with numerous pores; nostrils double, one close to edge of orbit, the second lower and with tentacle; back and belly rounded, sides and tail flattened.

Total length, 3.2 inches; depth, .42 inches; length of head, .65 inches; diameter of eye, .15 inches.

Length of 1st portion of dorsal	.35 inch—	extreme height of 3rd ray	.45 inch
„ 2nd „	1.1 „	„ 7th „	.35 „
„ 3rd „	.63 „	„ 4th „	.4 „
„ anal	1.35 „	„ 24th „	.35 „
„ caudal	.45	distance from snout to ventral fins	.5 „
„ pectorals (12th ray)	.65	ditto from ventrals to anal	.7 „
„ ventrals (2nd do.)	.5	{ ditto from end of anal and dorsal fins to the commencement of caudal }	.2 „

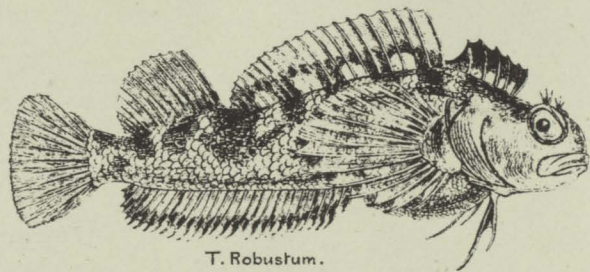
Colour (preserved in carbolic solution), sooty black; tips of anal fin rays and membranes between (central) caudal fin rays, almost immaculate.

Collected by Mr. Wm. Docherty, Dusky Sound, March 1877.

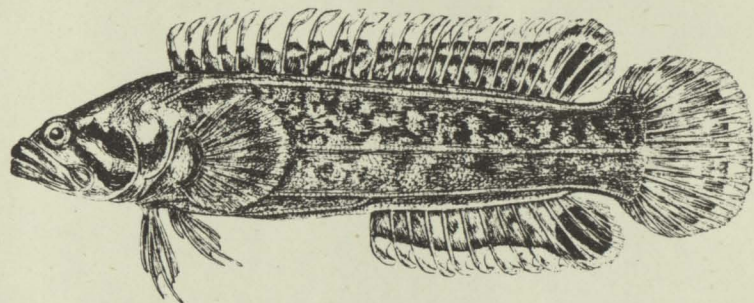
*Trypterigium robustum*. Pl. XV.

B.6, D.6-20-14, P.1-9-7, V.2, A. 28, C. 16.

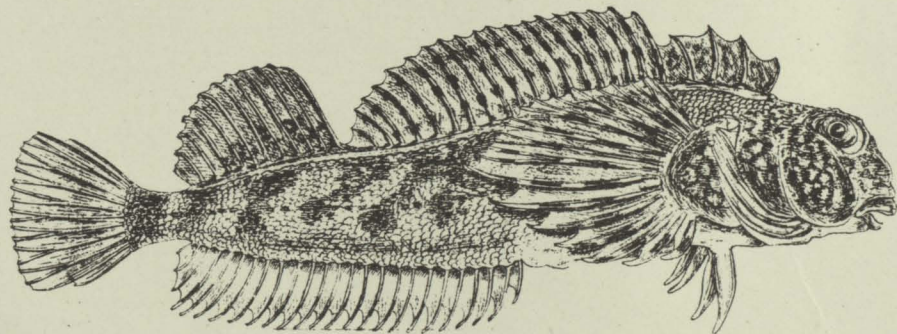
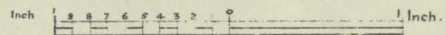
Head is to total length as 1 is to 4.



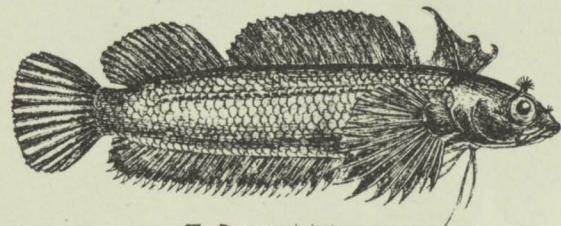
T. Robustum.



Acanthoelinus Taumaka.

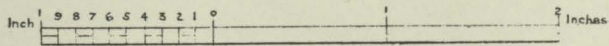


Trypterigium Dorsalis.



T. Decemdigitatus.

F.E. Clarke, del.





Scales large, ctenoidal ; head, cheeks, gill-covers, scaleless ; eyes, large, oval ; with trifold supra-orbital tentacle ; nostrils double, one close in front of eye, simple, the other lower down, tubular ; lips fleshy ; profile of head high, but round ; top of head round, nose round, blunt ; supra-orbital ridges not very prominent, but fleshy ; lateral line prominent, following dorsal profile, high up on sides, and terminating suddenly under last third of 2nd portion of dorsal ; 1st portion of dorsal, very low ; bases of 1st and 2nd rays close together, terminating portion of membrane joins 1st ray of 2nd portion of dorsal a little above base ; 2nd portion of dorsal high anteriorly ; membrane at termination does not reach to commencement of 3rd portion of dorsal ; 3rd portion of dorsal high ; belly tumid ; body, thick fleshy, sharp on back, rounded below :—

Total length, 3.35 inches ; length of head, .8 inch.	
Length, 1st part dorsal, .45 inch—extreme height,	4th ray, .25 inch.
„ 2nd „ „ 1.25 „ „ „	2nd „ .38 „
„ 3rd „ „ .55 „ „ „	3rd „ .4 „
„ anal, „ 1.27 „ „ „	17th „ .33 „
„ caudal, „ .45 „ ext. ht. of pectoral,	11th „ .76 „
Longest diameter eye,	.2 „
Shortest „ „	1.5 „
Distance from snout to ventral fin,	.55 inch
„ „ ventral fin to anal fin,	.8 inch
„ „ end of anal (in vertical with end of dorsal) to beginning of caudal fin,	.27 inch.
„ between 2nd and 3rd portion of dorsal fin,	.05 inch.

Ground colour (preserved in carbolic solution) brownish, with dark brown blotches on back, surrounding seven light patches or spots, four of which run up on to base of second portion of dorsal ; upper part of first portion of dorsal very dark, anal fin greyish, with dark brown free margin ; belly grey ; pupil of eye black, iris brown.

Collected at Jackson's Bay, December, 1874, and presented by J. S. Browning, Esq.

*Acanthoclinus taumaka*. Pl. XV.

B.6, D.20-4, P.1-17, V. 1-2, A.9-4, C.19.

Head is to total length as 5 is to 21.

Total length, 4.3 inches ; length of head, 1 inch ; depth of body, .8 inch	
Length of dorsal,	2.3 inches—extreme height, 21st ray, .55 inch
„ anal,	1.15 „ „ „ 11th „ .55 „
„ pectoral,	.5 „
„ ventral (2nd ray)	.65 „
„ caudal,	.6 „

Teeth on tongue, vomer, palatines upper and lower jaws.

Lateral lines as in generic distinctions. Head small and pointed, but with nose (in profile) slightly truncated, rounded above, flattish below ;

sides very flat; tail compressed flat; caudal fin large, rounded; eyes round; lips very thick and fleshy; cheeks fleshy; head, cheeks, gill-covers and throat, scaleless; body, sides and belly covered with small, smooth, close-set scales; fins thick; terminating membranes of spinous rays of dorsal and anal fins slightly produced in fleshy appendages; pectorals small, round; no simple rays to pectorals; anal with one spine and *two rays only*.

Ground colour, brownish-grey, mottled with black; dorsal and anal fins with large black spot on rayed portion; base of spinous portion of dorsal with irregular blackish bands, and both dorsal and anal margined with black; summits of spinous appendages pink, with lower membrane immaculate; two black streaks on cheeks.

Collected and presented (with 5 of the same species) by Mr. J. N. Smyth, Jackson's Bay, December, 1874.

*Lepidopus elongatus*. Pl. XIV.

B.6, D.155, P.12, V. {<sup>minute</sup><sub>rudimentary</sub>}, A.25, C.18.

Total length, 27·6 inches; greatest depth, ·7 inch; width (at vent), ·2 inch; vent, 9·6 inches from tip of snout; 6·5 inches from end of head; diameter of eye, ·5 inch.

Body scaleless, but covered with a delicate, deciduous, silvery pigment, adhering to fingers on handling; length of gape 1 in.; body long, narrow, and compressed; cheeks flat; dorsal fin long and low, extends from top of head above gill-opening to half an inch from base of caudal fin; extreme height, near termination, almost equals half the depth of body; pectoral fins with lower rays longest, length 1 in.; ventral fins, minute rudimentary, placed in vertical with posterior termination base of pectorals; length of anal 4·5 in., equals height of dorsal and terminates in vertical with end of same; caudal fin deeply forked; tail, before commencement of caudal, very slender and slightly carinated; nostrils situate ·2 in. in front of orbit, simple and single; gill-openings large; mouth large, gape extends to under nostril; teeth in single row (eight in number) on each intermaxillary bone (lancet-shaped and inclined slightly forwards), five long recurved fangs at extreme end of upper jaw, two on each side and one at symphysis; on lower jaws, single row of incurved lancet-shaped teeth (eleven in number on each side) with two small recurved fangs at end of jaw; no teeth on tongue palate or vomer; pharyngeal teeth very fine, brush-like; lower jaw (at symphysis) produced in a strong conical point, or quasi-barbel, ·5 in. in length; lateral line strongly but evenly marked—yellow.

Colour, a uniform bright metallic silver; fins, yellowish; caudal with pinkish hue,

Collected by self, Hokitika beach, 12th October, 1874, and the only perfect specimen of some eight or ten which have come under my observa-

tion. All were in the same proportion as the one above described, and varied but little in size; but were generally much mutilated by attrition on the sand and shingly beach.

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ART. XXVI.—*On a new Fish found at Hokitika.* By F. E. CLARKE.

Plate XIV.

[*Read before the Westland Institute, 8th January, 1879.*]

THE fish, hereafter described, and the occurrence of which on the West Coast of New Zealand I have the honour to bring under your notice this evening, is interesting on account of its being the first of its genus discovered in the seas of the southern hemisphere, or, in fact, in any other but European waters.

Hitherto they have been found off the coasts of Norway, Scotland and islands (very rarely), and the Mediterranean, in which sea a common variety occurs, which is notable as affording the silvery pigment formerly used in the manufacture of artificial pearls.

The first British specimen was noted by Yarrell in 1837, and was caught off Rothsay in the Isle of Bute, and British specimens have been but few in number since then. It is stated that all specimens obtained there, and off the coast of Norway, occur usually after severe and cold wintry weather, and this kind of weather ushered in the arrival of our species which was found washed on shore on the South Spit, Hokitika, 6th August, 1878, by W. Duncan, waterman, and was kindly brought under my notice by Capt. Turnbull, harbour master, under the impression that it was one of the young Californian salmon lately liberated in the river. It turned out to be one of the *Salmonidæ*, though not the one wished for.

As far as can be arrived at, by comparison with descriptions, etc., our specimen agrees very well, except some ill-defined peculiarities, with the Hebrides variety, and it would be of excessive interest to have more proof than mere imagination, that our antipodean species had gradually worked its way "sub mare" in those cold lower strata of water to our coasts.

The specimen has been forwarded as a "type" to the Colonial Museum, Wellington.

*Argentina.*

Scales rather large; cleft of mouth small; intermaxillaries and maxillaries very short, not extending to below the orbit; eye large; jaws without teeth, an arched series of minute teeth across the head of the vomer, and on the fore part of the palatines; tongue armed with a series of small curved teeth on each side (except in one species); dorsal fin short, in advance of the ventrals; caudal deeply forked.