## Cottus, Art.

Cottus bathybius (Pl. X. fig. C).

The præoperculum is very strongly armed; there are two spines arising from the same root at the angle, one in front of the other, the posterior being longer than the eye; three other shorter spines along the lower edge of the præoperculum; operculum with a small spine at its antero-inferior angle. A pair of spines on the occiput behind a deep depression occupying nearly the whole of the vertex. Eyes longer than the snout, close together. Minute teeth on the vomer, but none on the palatine bones. Tail much attenuated. Pectoral fin extending beyond the origin of the anal; ventrals not reaching the vent. Second dorsal fin higher than first; length of the caudal two-fifths of that of the body (without head). Muciferous system much developed, opening by wide pores along the lower jaw, the præoperculum, the infraorbital ring and the lateral line. Greyish-brown; throat and all the fins black.

Habitat.—South of Yeddo, Japan, Station 235; depth, 565 fathoms. One specimen,  $2\frac{1}{2}$  inches long.

It may appear matter for surprise to find a species of Cottus at so great a depth as 560 fathoms, and at first it did not seem to me improbable that the specimen accidentally entered the mouth of the dredge whilst it was near the surface. However, on further consideration these doubts disappeared, as it is not very likely that a fish living habitually at the bottom, as a Cottus must do, should be found floating far from land; moreover, the muciferous system is developed to an extraordinary degree, much more so than in the littoral species of the genus.

## Centridermichthys, Richards.

## Centridermichthys uncinatus.

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Cottus uncinatus, Reinh., Vid. Selsk. Natur. och Math. Afhandl., 1833, p. xliv.

" bicornis, Reinh., loc. cit., viii. p. lxxv.

Centridermichthys uncinatus (Günth.), Collett, Norsk. Nordh. Exped., Fisk., p. 29, tab. i. fig. 7; Forh. Vid. Selsk. Christian., 1880, p. 14; Nyt Mag. f. Naturvid., xviii., 1884, p. 54.

- " Lütken, Kara-Havets Fisk. in Dijmphna-Togtet., p. 124.
- " Lilljeb., Sverig. och Norg. Fisk., p. 161.

An Arctic littoral species, more or less common in the sea between Greenland, Spitzbergen, Nova Zembla, and Norway, extending in the western part of its range southwards to the coast of New England. The Norwegian North Atlantic expedition