

ART. VIII.—NOVA SCOTIAN ICHTHYOLOGY.—ADDITION TO JONES'
CATALOGUE OF 1879 TRANS. BY REV. D.
HONEYMAN, D. C. L.

(Read May 11, 1885.)

SINCE the above catalogue was published, some fishes of interesting character, not to be found in that list, have been added to the collection of the Provincial Museum. To these I now propose to direct attention.

I.

Black Pilot,—*Palinurus perciformis*. Fam. *Scombridae*.
DeRoy.

Black Rudder-fish,—*Palinurichthys perciformis*. Fam. *Stromateidae*. Gill.

Rudder-fish or Perch Coryphene,—*Coryphaena perciformis*.
Mitchell, *Trachynotus argenteus*. Storer.

Two specimens were brought to the Museum some years ago by a fisherman of Devil's Island. I identified them by consulting DeKay. They were in a state of decay. Last autumn the same brought me two other specimens. These are of larger size than two preceding, and are now in pretty fair condition preserved in alcohol. The first were of the same size as that described by DeKay,—9 inches. The last are of larger size, one being 11 inches, the other 13. They are, probably, male and female.

I give from DeKay's description, the leading characteristics applicable to our specimens. "Colour black, body oblong, elliptical compressed. Height nearly equal to one-third of length. Lateral line commences at the upper angle of the branchial aperture, is arched, and nearly concurrent with the back, from which it is little distant. Head declivous somewhat rounded. Opercle with a pointed membrane. Pre-opercle, with sub-equal short spines, gives the bone on its outer surface a plaited appearance.

Jaws sub-equal, the lower shutting within the upper. A series of small sub-conical, slightly recurved teeth. The dorsal fin is compound; the anterior portion consists of seven short acute spinous rays, connected with each other by a low membrane, and the whole lodged in a deep groove," &c. "Maine to Hatteras,"—Gill. *Halifax Banks.*

II.

Banded Seriole. Sp. *Seriolo Zonata*. Gen. *Seriola* (Cuvier and Valenciennes), and Fam *Scombridae*.—DeKay.

The prominent characteristic of our specimen is its six broad vertical bands. The body is fusiform compressed. The first dorsal fin is spinous. It has no finlets. Its length is eight inches. In other respects also it agrees with DeKay's description.

The same fisherman brought this specimen to the Museum. It also was caught on the banks, south of Devil's Island.

III.

INCERTÆ SEDIS.

In this category I place the strange fish that was found at Cole Harbor. A description of it is to be found in the Appendix to Transactions 1882-3. It is in our Museum. I had it photographed and submitted, with said description, to the Biological section of the British Association, at its meeting in Montreal, 1884. I expected in so doing to get some light in reference to its name and zoological relations. It appears from the reports that no opinion was expressed in reference to its character. There was some discussion regarding the title of my note—"A supposed Deep-sea Fish." I meant by this that it was *supposed* to belong to what Gunther calls "Deep-sea Fishes"—introduction pages 296 to 311. I unintentionally omitted (?). I have sent copies of the photo to Washington and London. As no opinion has since been given, I conclude that our specimen is a "strange fish," and consequently *incertae sedis*.

IV.

Bluish sea lamprey. *Petromyzon nigricans* Family *Petromyzontidae*. Black lamprey. *Ammocetetes nigricans* (Lesueur). Fam *Petromyzontidae*, class *Marsipobranchia*. 1st family *Petromyzontidae* III sub-class.

Of this we have three specimens, one is *bluish* and two are *black*. The first is eight inches in length, the other two are between six and seven.

“Body eel-shaped, naked—subject to metamorphosis; in the perfect stage with a suctorial mouth armed with teeth, horny sitting on a soft papilla; lingual and suctorial teeth may be distinguished. Eyes present (in mature animals). External nasal aperture in the middle of the upper side of the head. The nasal duct terminates without perforating the palate. Seven branchial sacs and apertures on each side, behind the head. The inner branchial ducts terminate in a separate common tube. They feed on fishes to which they suck themselves fast, scraping off the flesh with their teeth. Whilst thus engaged they are carried about with their victim.”—Gunther.

They are found attached to mackerel, haddock and cod.—“Cape Cod to Cape Hatteras.”—Gill, Halifax.

These are altogether different from the *Petromyzon marinus* of our *Catalogue*.—*Trans.* 1879

V.

Hag-fish. *Myxine Glutinosa*. Family *Myxinidae* III sub-class. *Cyclostomata*.—*Gunther*.

Hags. Family *Myxinidae*. Ord. *Marsipobranchii*. Class *Pisces*.—*Huxley*.

Hag-fish. Sucker. Slime-fish. *Myxine glutinosa* (Linn). Family *Myxinidae*. Ord. 12 *Hyperotreta*. Class C. *Marsipobranchii*.—*Gill*.

“Body eel-shaped, naked. The single nasal aperture is above the mouth, quite at the extremity of the head, which is provided with four pairs of barbels. Mouth without lips. Nasal duct

without cartilaginous rings penetrating the palate. One medium tooth on the palate, and two comb-like series of teeth on the tongue. Branchial apertures at a great distance from the head. The inner branchial ducts lead into the œsophagus. A series of mucous sacs along each side of the abdomen. Intestines without special value.”—*Gunther*.

In the naturalist's library it is called *Gasterobranchus cæcus*. It is so named as its gills are on the belly, and as it is blind. Huxley places in the order *Marsipobranchii*—*Marsipos* a pouch *branchia gills*, as its “gills are sac-like, not ciliated.”—(*Introduction to the Classification of Animals*—London, 1869. *Gunther* says—“Its eyes are rudimentary, and are covered with the muscles and skin.” Linnæus at first classed it among his order *Vermes*. Worms—*Nat. Lib.*

One specimen was brought to the Museum by another Devil's Island fisherman. He caught it at a distance of 70 miles from the island, and in depth of 54 fathoms. It was twisted round a trawl hook. When brought it was living, and very active. It had secreted a large quantity of slime in the tin can. Its lamprey affinities were readily recognized from its eel-shape and the form of its mouth. I put it into a large glass jar, and filled it with fresh sea-water, that I might keep it alive and study its movements. It lay quiet at the bottom for nearly an hour, during this time it secreted a large quantity of slime. Lifting it up in the vessel, it became quite active, wriggling and moving its barbels. On referring to Gillis' Catalogue of Fishes, I readily identified it as *Myxine Glutinosa* slime-fish. Referring also to vol. 37 of the Naturalist's Library, I found a picture of myxine, which, in its main features, depicts our specimen. Consulting *Gunther*, the identification was complete.

Next morning I found it dead and suspended in the water.

It is 18 inches in length. Its girth near the two branchial apertures is two inches. The nostril at the extremity of the head has two pairs of barbels; two pairs are at the mouth. The distance of the branchial apertures from the nostril is $5\frac{1}{2}$ inches. Its colour is light brown,—lighter on the abdomen. On either

side there is a line of mucous sacs. The vent is two inches from the caudal extremity. It is blind. "The eight barbels, or cirri, are, there is no doubt, delicate organs of touch, by which the myxine obtains cognizance of the nature and quality of the substances with which they are in contact, and the single-hooked tooth on the palate enables it to retain its hold until the double row of lingual teeth are brought into action to aid the desire to obtain a good meal. Distribution. "Polar Regions to Cape Cod."—*Gill*.

"They are marine fishes, with a similar distribution as the *Gadidae*, being most plentiful in the higher latitudes of the temperate zones of the northern and southern hemispheres.

They are frequently found buried in the abdominal cavity of other fishes, especially gadoids, into which they penetrate to feed on their flesh. They secrete a thick gelatinous slime in incredible quantities, and are therefore considered by fishermen a great nuisance, seriously damaging the fisheries, and interfering with the fishing in localities where they abound.

Myxine descends to a depth of 345 fathoms, and is generally met with in the Norwegian Fjords at 70 fathoms, sometimes in great abundance."—*Gunther*.

PALÆONTOLOGICAL.

Some zoologists and palæontologists consider that myxine, on account of its low organization and habits, must have been among the first fishes that appeared in our world, and that its lingual teeth, as the only parts that could survive, may yet be found in Silurian or Devonian strata.