

## APPENDIX.

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### A SUPPOSED DEEP-SEA FISH.

OUR fish was found at Cole Harbor Dyke, east of Halifax, early in January, and exhibited in the city on the 16th and for some time after. It had been thrown ashore during a storm. Unfortunately, the fish was not preserved in the form in which it was found. It was roughly skinned and the carcass was thrown away, so that a great part of its scientific interest is gone. Having never seen any fish like it, I was puzzled to characterise and name it. It was taken away and I never expected to see it again. In the meantime its general form, with the tentacles on its head, suggested an affinity with the *Lophius piscatorius*.

A description of it given by the owner, Mr. Main, in the Halifax newspapers, led Prof. Baird to make enquiry after it with a view to purchase it. He suggested that it might be a *Himantolophus*.

On referring to "Gunther's Introduction to the Study of Fishes," I found the description of this deep-sea fish. It seemed to agree in many points with the appearance of the fish, while at the same it differed. It is now a specimen in the collection of the Provincial Museum. I have set it up in better form. In doing so I have at the same time studied its character, and come to the conclusion that it is more nearly allied to *Ceratias* than *Himantolophus*. I quote "Gunther's" definitions of both:

"Twelfth Family—PEDICULATI.

"LOPHIUS—*Lophius piscatorius*.

"CERATIAS: Head and body much compressed and elevated; cleft of the mouth wide, subvertical; eyes very small; teeth in the jaws rasp-like, depressible; palate toothless; skin covered with numerous prickles. The spinous dorsal is reduced to two long isolated spines—the first on the middle of the head, the second on the back. The soft dorsal and anal short; caudal very long; ventral, none; pectorals very short; two and a half gills; skeleton soft and fibrous.

"*Ceratias holbolli*"—a deep-sea fish. Only a few examples have been found near the coast of Greenland and from the mid-Atlantic, the latter at a depth of 2,400 fathoms. Deep black.

"HIMANTOLOPHUS.—Head and body compressed and elevated; cleft of the mouth wide, oblique; eyes very small; teeth of the jaws rasp-like, depressible; palate toothless; skin covered with conical tubercles. The spinal dorsal is reduced to a single tentacle on head. The soft dorsal and caudal and pectoral short. Ventrals, none. Three and a half gills. Skeleton soft and fibrous.

"This is another deep-sea form, hitherto found in very few examples in Arctic and mid-Atlantic ocean. The single tentacle is beset with many long filaments at its extremity, thus answering the same purposes which is attained by a greater number of tentacles. Deep black."

I now give the dimensions of our fish, with remarks:

	feet. in.
The length from snout to caudal fin is.....	3
The depth of the body is.....	9
The girth is.....	2
Head—from snout to gill opening, the length is..	9
The mouth is open. Its vertical measurement...	$3\frac{1}{2}$
Its width is.....	$2\frac{1}{2}$
The eyes are small. Interorbital space is.....	4

Teeth in the jaws rasp-like, depressible. Skin covered with numerous prickles (conical tubercles), a few pointed, the greater number truncated with perforations in the tops. The sides of the head and its inferior part have only a few. The spinal dorsal is reduced apparently to one long isolated spine on the head. On the back is a space without tubercles, having the skin, so as it might have accommodated another spine of some sort.

The <i>dorsal fin</i> has a width of .....	6 in.
It has four rays—the length of the 3rd and 4th is	4 "
The <i>anal fin</i> has a width of .....	$2\frac{1}{2}$ "
It has four rays—the largest is.....	4 "
The caudal fin is long and broad; the length of	
the upper ray is .....	9 "
of the lower.....	8 "

It has eight rays, the four middle ones are *dichotomous*. They are broad and coated with flesh, etc. Skin having prickles and

tubercles. It is sometimes hard to convince our fishermen that the tubercles are not *barnacles*. The fin rays have, not unaptly, been compared to coral branches.

The width of the *caudal fin* is from 7 to 8 inches.

There are no *ventral fins*.

The pectorals are very small, being  $1\frac{1}{2}$  x 1 inch each.

The number of rays is 18.

They are situate *above* (not after) the gill openings. They thus *seem* to have an anomalous position.

These pectorals are so widely different from those of the *Lophius piscatorius* and seem to exclude our fish from the family *Pediculati*.

What remains of the integument of the fins is black.

There is a spiracle at the back of the tentacle. The gill openings are two in number. If they had opercles these have been destroyed.

Shrinkage may have reduced the original dimensions.

The color now is blackish brown. It was much darker when I first saw it.

March 25, 1884.

D. HONEYMAN,  
*Curator of Provincial Museum.*