

Natural History.

THE TILE FISH.

BY DANIEL C. BEARD.

How little is really known, even by our most learned scientists, of that wonderful country that lies hidden beneath the waves! What we know of its geography, aside from the summits of the mountains and highlands that are high enough to rear their heads into our world of air, is barely sufficient to mark out safe routes for vessels from point to point. Of the creatures that dwell in this unknown region our knowledge is limited to such specimens as accident may cast up, or the fisher's net gather along its outer edge, or the dredge of the scientific explorer capture in its depths.

We can scarcely imagine creatures more hideously monstrous or more wonderfully beautiful than some of the known denizens of this immense world of the sea. For aught we know to the contrary the great sea-serpent may yet prove to be a living reality, for has there not been within the last few years discovered, captured, classified, measured, and publicly exhibited a sea monster as horribly strange and terrible as the fiery dragon of fairy tale? What was once called the fabulous devil-fish is now known to every school boy as the giant squid.

The discovery of a new and strange food fish need, then, be no surprising matter. Some three years since a Yankee fisherman caught a number of fish whose odd triangular crest, or adipose fin on the nape of their neck, at once marked them as strangers, and created a stir among savants and naturalists; but if they were surprised at this sudden appearance of a new fish, they were more surprised and puzzled last month when the commanders of two vessels brought in reports of sailing through miles of dead carcasses of this newly discovered fish, the *Lopholatilus chamaeleonticeps*, or tile fish. Whence these mysterious strangers came, or what caused their wholesale slaughter, are questions we know not how to answer, but of the facts we have sufficient proof.

A specimen of the tile fish that was sent to the U. S. National Museum measured thirty-three inches in length; the illustration accompanying this article was drawn from the Washington specimen.

We first hear of the "tile fish" from the report of Capt. William H. Kirby, of Gloucester, Mass., who took five hundred pounds of a remarkable fish, new to both fishermen and scientists, and forming a type of new genus and species. These fish were caught on a codfish trawl eighty miles S. by E. of Noman's Land lat. 40° N., long. 70° W in eighty-four fathoms of water. According to Capt. Kirby the largest fish weighed fifty pounds.

We next learn of this fish from Capt. Wm. Dempsey also of Gloucester, Mass., who, in July, 1879, caught some with menhaden bait at a point fifty miles S. by E. of Noman's Land, in seventy-five fathoms of water, bottom hard clay; two miles inside there is nothing but a "green ooze in which no fish will live." Capt. Dempsey gives the following particulars of this *Lopholatilus*: "Liver small, somewhat like that of a mackerel, and contains no oil. Flesh oily, and soon rusts after splitting and drying. The stomach and intestines are small, the latter resembling those of an eel. The swim bladder is similar to that of the cod, and he adds that "the fish were very abundant and bit freely." The largest fish caught by Capt. Dempsey had a bifid nuclear crest.

Some of the first tile fish that were brought into Gloucester were sent by Prof. Baird to Fish Commissioner Blackford, of Fulton Market. These fish were cooked and served at the Windsor, and their qualities as a food-fish tested by Mr. Phillips, Secretary Fish Culturist Society, Mr. John Foord, President of the Ichthyophagous Club, and Mr. Blackford. We next hear of this mysterious denizen of the deep from several of the daily papers. In their issue of the 23rd of March, there appeared accounts of immense numbers of dead fish that were seen by people aboard vessels that passed the southern end of St. George's Bank, Newfoundland. On the 3rd of last month Capt. Henry Lawrence, of the bark Plymouth, from Antwerp, and Capt. George Coalfleet, of the bark Dunkirk, witnessed this phenomenon.

When a drawing of the *Lopholatilus* was shown by Mr. Blackford to several of the sailors of the above named vessels they at once declared it to be a drawing of the same fish whose dead bodies had so astonished them off "The Banks." These sailors had cooked and eaten some of the dead fish. The

meat was fresh and hard, and according to their account very good eating.

The following technical description of this fish is from Washington:

Radial Formula.—B. VI.; D. VII. 15; A. III., 13; C. 18; P. II., 15; VI., 5; L. Lat. 93 L. Trans. 8+30.

Color.—"The operculum, preoperculum, upper surface of head, and major portion of body have numerous greenish yellow spots, the largest of which are about one third as large as the eye. Upon the caudal rays are about eight stripes of the same color, some of them connected by cross blotches. The upper part of the body has a violaceous tint, and the lower parts are whitish, with some areas of yellow. The anal and ventral fins are whitish; the pectorals have the tint of the upper surface of the body, with some yellow upon their posterior surfaces; the soft dorsal has an upper broad band of violaceous and a narrow basal portion of whitish. Many of the rays have upon them a yellow stripe; there are some spots of the same color, especially upon the anterior portion of the fin.

"The species appears to be generically distinct from the already described species of the family Latilidae, Gill. It is related by its few rayed vertical fins and other characters to the genus *Latilus*, as restricted by Gill, but is distinguished by the presence of a large adipose appendage upon the nape resembling the adipose fin of the Salmonidae, and by a fleshy prolongation upon each side of the labial fold extending backward beyond the angle of the mouth. For this genus we propose the name *Lopholatilus*." (G. Brown Goode and Tarleton H. Bean, "Proceeding of U. S. National Museum.")

A REDISCOVERY.—"THE BLACK WHALE."

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The recent occurrence of the capture of an adult baleen whale off our shores offered excellent facilities for familiar examination of the wonderful features characteristic of such great sea beasts. But an unusual interest attaches to this specimen from its being what naturalists are wont to term a rediscovery.

In brief, the history of this species is as follows: It is the black whale, so called in the early days of the settlement of this country, and is the one that for many years was so numerous south of Cape Cod, and along the shores southward to the Delaware River. William Penn, in the year 1683, mentions the capture of eleven off that river. For many years it gave employment to a large number of whalers in Nantucket and New Bedford. The creatures were chased in boats, not far from shore, and small vessels were fitted out for the business from various points along the coast of Long Island and near the Capes of Delaware. This whale fishing became so vigorous and was pushed to such extremes that ere long the creatures were either all captured or the few that may have escaped possibly sought other waters. The species then so numerous was lost sight of, and as in those early days little attention was given to important details referring to systematic descriptions of such animals, it was lost to science until, in the year 1868, Professor Cope noticed that this whale was occasionally making visits to the waters near its old feeding grounds—its range formerly being from the Gulf of St. Lawrence to the Carolinas. The circumstance of its habitat being away from the Arctic regions, the favorite home of the two great Right whales of commerce, suggested to Professor Cope the specific name, *Cisarctica*; its generic affinities being the same as of the two larger species just mentioned, *Balena*.

The Right whale of the North Atlantic, formerly chased by the Basque whalers, according to Eschricht, is the species *B. biscayensis* which has also some affinity with the Right whale of the Southern Hemisphere, the *B. Australis*. After closer investigation, it is found that in all probability the first mentioned is one and the same with the present, now called *B. Cisarctica*, though Gray, of the British Museum, stoutly maintains the contrary.

The immense size of these creatures and the few opportunities offered for examination, and also the difficulties attending a proper measurement of parts, render the task of the cetologist one of considerable uncertainty. This is seen in the glaring errors extant in all works on this subject. Though this species must have been examined many times since its reappearance, yet no account is on record that gives the characteristic external features. The anatomical differences are very marked. The American Museum of Natural History, Central Park, has a skeleton of this species of adult size. Now that we have a fine