

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 a 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 on 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 23d 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, New-

foundland. On the 3d 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.

fleshy prolongation upon each side of the labial fold extending backward beyond the angle of the mouth. For this genus we propose the name *Lophotilus*" (G. Brown Goode and Tarleton H. Bean, "Proceeding of U. S. National Museum.")

Fish Fodder for Cows.

Travelers in the country about North Cape, Norway, are apt to be amazed to see the natives eking out the scanty fodder for their cattle by giving their cows rations of dried fish. According to Captain Atwood, of Provincetown, Mass., the Cape Cod cows used to do better—or worse—and feed heartily upon raw fish. According to a statement by him, communicated to the Fish Commission by Isaac Hinckley, and printed in the *Bulletin*, the Provincetown cows being "kept up" have lost the fish-eating practice; but prior to the passage of the Massachusetts statute forbidding owners of cows to allow them to roam at will (which statute was enacted to protect directly the beach grass which checked the drifting of sand), the cows flocked to the shore while the fishermen were cleaning their catch. These cows sought with avidity the entrails and swallowed them. They seemed willing to eat the heads also, but lacked the ability to reduce their bulk sufficiently to allow of this.

A species of ling or blenny, weighing three pounds or more, and discarded by the fishermen, was freely eaten also by the cows.

Cows when first arriving at Provincetown from the rural districts refused fish; but their owners, by adding minced fish to their cows' rations, soon taught the cows to imitate their neighbors in respect to eating entrails.

JERBOAS, OR LEAPING MICE.

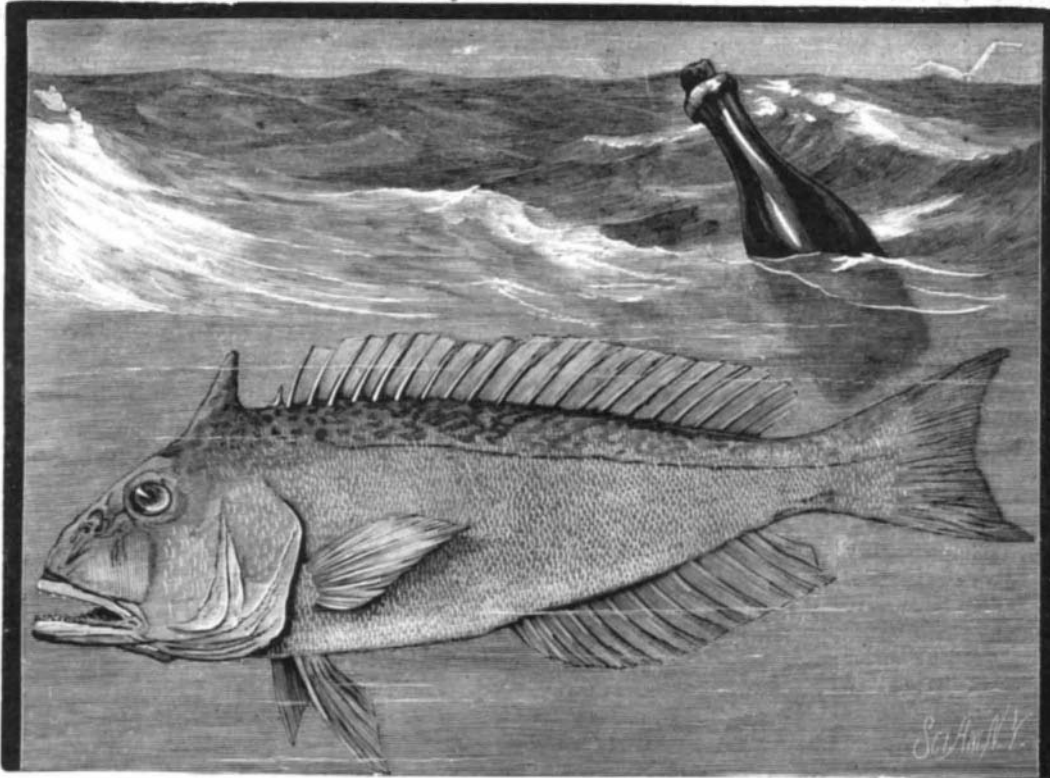
The jerboa is a small rodent, or gnawer, with very long hind legs and diminutive fore ones, and is the principal representative in the Old World of the rodent sub-family *dipodena*. Its general form and habits have some striking resemblance to a bird's. His body, like that of a bird, is supported on two long legs, and, in both, the length of the leg is caused by the excessive prolongation of that part of the foot called the tarsus or metatarsus, so that, when standing, the heel is elevated much above the ground. The bones of the metatarsus, which are normally fine among the vertebrata, are, in this instance, reduced to three, and occasionally even to one single bone in that part of the foot that extends from the heel to the toes. The folded fore legs of the jerboas are as unnoticeable as the folded wings of a bird, and its skull is large and spare, like that of many birds.

These resemblances might be greatly increased, but though they are very curious they are merely accidental, and do not at all prove that the jerboas are related to the bird family.

The jerboa has a large head, ending in a little muzzle, long moustaches, enormous soft black eyes, and long sharp ears. His tail is long and cylindrical, enlarged at the end, so that it can be used, like the kangaroo's, to support the body while jumping, and has a little tuft of black hairs tipped with white. The foot is protected under the toes by elastic cushions of flesh covered with stiff bristles. The body is generally about the size of

a rat, but in one species found in Middle Africa, the *Pedetes cafer*, or jumping hare, the body is as large as a rabbit. The fur is soft and fine, a charming fawn color above and underneath a brilliant white.

These little animals belong almost exclusively to the Old World, and are found in the deserts of Africa, Asia, and Eastern Europe. One single species is known in America as the *Jacules hudsonian*, or jumping mouse, as it is popularly called. It is found as far north as latitude 61°; its body is about five inches in length, its tail a little longer, ending

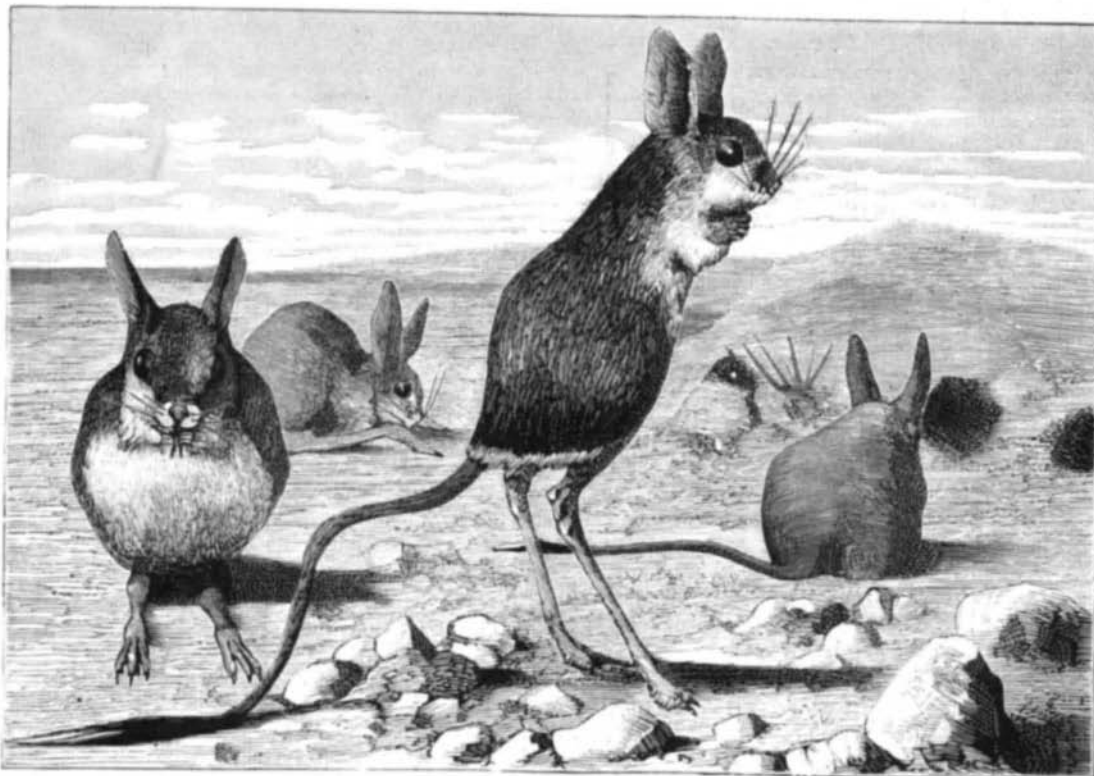


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The following technical description of this fish is from Washington:

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 long 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



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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 Latilidæ, 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 Salmonidæ, and by a