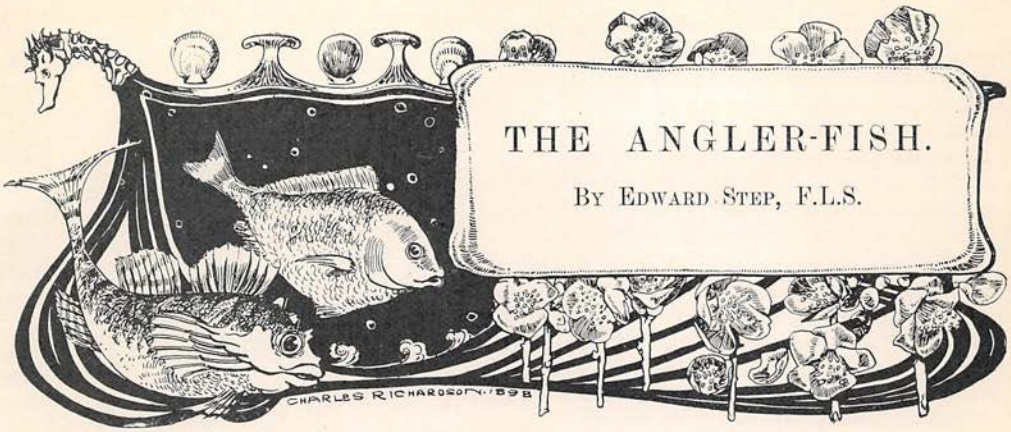


THE ANGLER-FISH.

By Edward Step, F.L.S.

MY tame cormorant was short of provisions. The weather had been wild, and little fish had been brought in that day. To-morrow would be Sunday, and there was consequently no prospect of supplies till Monday; so I sauntered down to the Porth to see if there was any surplus bait hanging up which I could beg or borrow. When the fishermen caught more wrasse or rays than they needed to bait their crab-pots to-day, they cleaned it, split it open, and hung it in a certain place to dry until needed. Alas! the customary hooks were empty this evening, but on going lower down I came across three or four small anglers or monks that a fisherman had hauled in his trammel and brought ashore. Finding out to whom they belonged I inquired if he had any use for them. Yes, he was going to get some crab-pot bait out of them. "Did you want them?" he added. I explained that Charlie was on short commons, and if he could spare me the part that would be of no use as bait I should be glad. "Well," said he, "after I have done with them, I don't think as how they'll be any use to you; but if it's for Charlie, why, you're welcome to one or two. I've heard a lot about your cormorant, but never heard of taming one before, though I have heard of tame gulls. How will this do?"

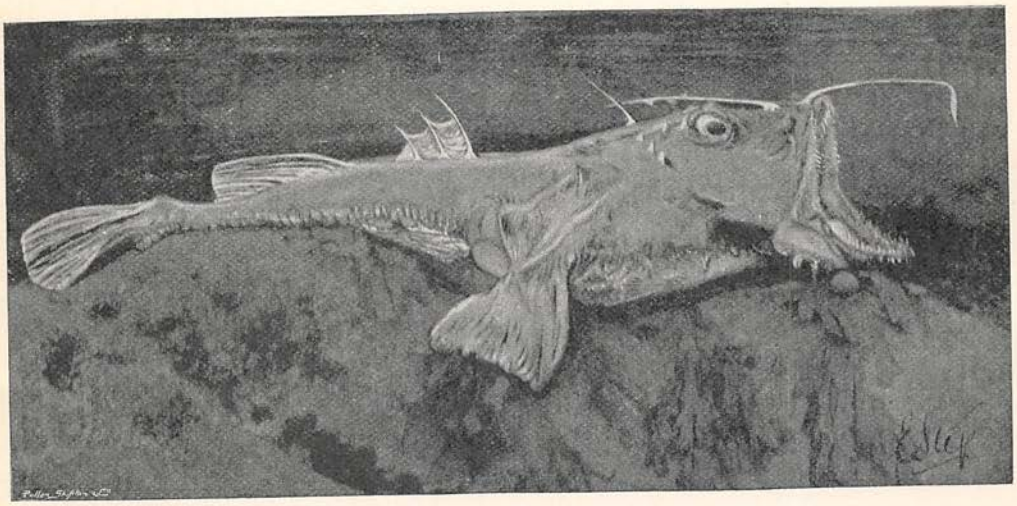
With two or three experienced slashes with his knife he had severed the huge bag-like head from the small but solid trunk, stripped off the skin, and with it the entrails, and presented me with a thick mass of flesh about a foot long and four or five inches thick. He said it was unfit for food—at least, he had never eaten it because he had never been absolutely starving; but I fancy a London fishmonger would have little difficulty in getting a good price for it, if he dressed it as my friend did and kept the hideous head out of sight. I cut it into long strips about a couple of inches thick, and Charlie rushed at it, putting away three lengths and screaming for more. He finished the whole in about twenty-four hours. Now this implied that it was really the good stuff it appeared to be, and so bore out the assertions of Couch, Donovan, and Parnell as to its excellence. I understand that this fish, minus the head, is always sold at Grimsby and some other ports, where, to avoid arousing prejudice, it is spoken of as croan and John Dory, though, of course, nobody who had seen the real dory could be deceived by the latter name, the thickness quite preventing that.

Look at the angler, handle him, and you will readily conclude that he has not been built for a life of activity. He is a heavy, flabby mass, and as you turn him over you might be pardoned for supposing that he possessed no skeleton, and a very poor muscular system. His *rôle* is to lie among the rubbish of the sea-bottom, to flatten himself out as much as possible, and to give his dirty-brown back a close resemblance to a mud-imbedded stone. His fins and tail are likewise soft and flabby, and offer no contrast to the general roundness and softness of outline. His underside is white, but he takes care to keep this out of sight, and along his side all around he has a fringe of fleshy lobed lappets, which harmonise with the brown seaweeds around him. Oppian says, "This fish is all one vast extended mouth," and for a poet that is, I suppose, a sufficiently accurate statement, but for a naturalist it is not. If we exclude the tail from our reckoning of the creature's longitude, about two-thirds of the remainder is

a "vast extended mouth"—extended to the width of a foot in specimens of three feet long. The lips are fringed by the fleshy lappets and the jaws are set with a double—in parts treble—row of long, conical, curved teeth, many of them exceeding an inch in length. There are other teeth set upon the palate and about the entrance to the throat, and all these are so arranged that it is no easy matter for anything to escape when once the jaws have closed upon it.

On the back of the angler are two fins (*dorsal fins*), but the first is apparently very short, owing to the fact that three of the six long rays are separated from the others and greatly lengthened. The foremost of the series is placed just above the front of the upper jaw; it is long and flexible, and ends in a narrow piece of greyish skin, like a bait at the end of a fishing-rod. The succeeding rays are without any such appendage, the second close behind the first, the third behind the angler's eyes, and the remaining three about half way along the back. The great breast-fins are developed more like arms, and remind one of the flappers of seals and whales. They are used more as arms, and the pelvic-fins as feet, to enable the creature to crawl along the bottom.

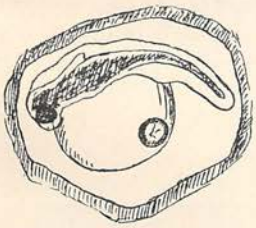
The angler has gotten this one of his many names from the rod-like first ray of his back-fins, and imaginative writers have made good use of this organ. They picture the angler lying quietly among the rocks and weeds, invisible by reason of its resemblance to its environment, and deftly waving its rod to impart a life-like movement to the "glittering" bait, "the little membrane of a brilliant metallic lustre," and so forth. Of course, those who thus write have never seen the fish at close quarters, for the so-called bait is of no attractive hue, being dull grey; nor is it at all worm-like, as some have pretended. Misled by the name of the fish, and the similarity between this first ray and a fishing-rod, these writers have relied upon Nature not doing things by halves, and have therefore fancied that the appendage to act as a bait must be worm-like and glittering. They further "give themselves away" by referring to the apparatus as a fishing-*line*. What is the real use of this contrivance may only be conjectured, for the angler's habitat is in deeper water than will allow its ways to be carefully studied; but probably the most reasonable suggestion is that the appendage is a very delicate instrument for the purpose of indicating that some other denizen of the deep is in the right position to be grabbed by the jaws. These rays may be touched by a fish in passing, under the impression that they are but the decaying stems of seaweeds, which they much resemble. Colour is given to this view by certain experiments undertaken by Mr. Lane in connection with the Irish Fisheries Survey. He found that on touching the loose appendage with a stick, the angler's jaws instantly closed upon the stick with a snap, just as though it were a spring-trap operated by a hair-trigger. Several repetitions of the experiment had precisely the same effect, and serve to show that contact with the "bait" is communi-



THE ANGLER READY FOR BUSINESS.

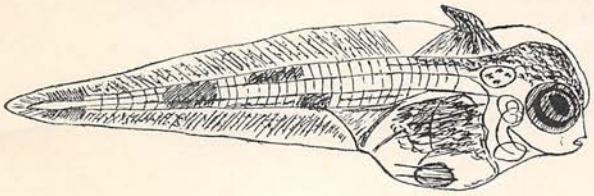
cated to the muscles of the jaws by means of very sensitive nerves.

From the large number of fishes that have been found uninjured in the angler's stomach, it is highly probable that digestion is a slow process with it. Sometimes these are sufficiently fresh to be sold without arousing any suspicion as to the method by which they were obtained. Nothing is too large, too hard, or too tough for the angler. Anything touching the hair-trigger causes the machinery of the jaws to act, without any pause to enable the brain to consider whether the substance grabbed at is digestible or not. Thus it has been known to seize the keg-buoy attached to a pilchard-sean, the mass of corks attached to crab-pot lines to mark their location—in this case it choked the glutton—an iron grapnel, a large gull, a northern diver, and the head of a mop.



EMBRYO ANGLER IN EGG.

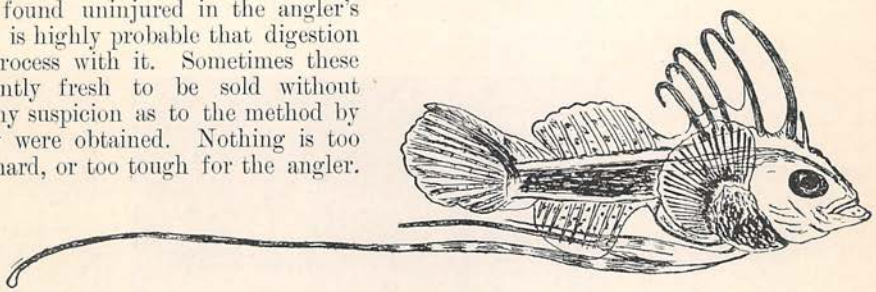
There is no doubt that at times it leaves the bottom and takes heavy and short upward flights, as is proved by its acquisition of the keg-buoy, the crab-pot floats, and the gull. Such an explanation is not needed in the case of the diver, which probably touched the angler's trigger in the course of its dive; and no doubt the angler sometimes gets a puffin or a guillemot in the same manner. A funny story is told of a conger that had swallowed a baited hook, and in its efforts to get away from it fell into the maw of an angler; but being there imprisoned, instead of going down the angler's throat, as its captor desired, it made its way out by the gill opening, carrying



LARVÆ ANGLER.

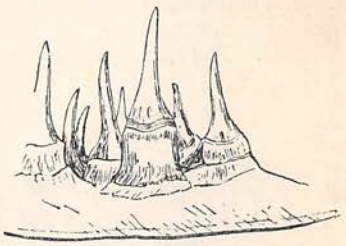
with it, of course, the fisherman's line. When the fisherman landed his conger he was astonished to find an angler also, not hooked, but threaded, as it were, upon the line above the hook.

Another illustration of its readiness to



POST-LARVAL ANGLER.

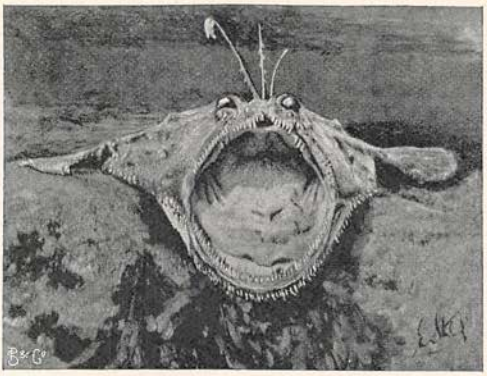
snap at anything is furnished by the story of the angler that became stranded on the beach and was left by the receding tide. A fox sauntering that way, probably in the hope of finding a few crabs, came sniffing around the strange object, and happened to touch the sensitive process with his muzzle. In an instant his head was caught in the gin-like jaws, and in this situation the pair were found by passers by.



A FEW OF THE ANGLER'S TEETH.

The angler that is not caught early grows to a length of six or seven feet, but the average size of those that blunder into the trammels is between three and four feet long. Small specimens appear to be rare, though, of course, they must be really more plentiful than the large ones, for the number of eggs produced by one is computed to be considerably over a million. These eggs are sticky and jelly-like, measuring about one line in diameter, and adhering together in great sheets, which float on the surface of the sea, though, strange to say, these egg-sheets are not often seen. They appear to vary in length between twenty-five and forty feet, and in breadth from a foot to eighteen inches, but are only one egg thick. The young angler leaves the egg with an open mouth—in which respect he is in advance of most larval fishes—and it already shows the beginning of its distinguishing feature of mature life, in a thick process from the back, behind the

head, although later development shows this to be the hinder five of the six dorsal fin-rays, the most important not being produced so soon. In these early stages the angler is an active swimming fish, inhabiting the upper waters, and being thicker from back to belly than from side to side. The breast-fins have not yet become thick paddles, but are more obviously formed for swimming purposes, whilst the throat-fins, which ultimately become short and leg-like, are now of considerable length and produced backwards into long streamers, one of which is at one period twice the length of the entire body. By and by, however, the young angler has had enough of roving about in the upper waters, and settles down at an early age to a quiet life among the rocks and weeds at the bottom. The accompanying figures illustrate stages in the early development of the species, but the entire series has not yet been made out. Soon after it takes to the sluggish life it flattens out sideways, and its eyes come to the top of its head, the first dorsal ray lengthens and develops the loose membrane that is in future to betray any luckless fish that touches it.



"ONE VAST EXTENDED MOUTH."

Many names have been bestowed upon this fish, which is plentiful all around our coasts, the names being invariably local in their use, but all more or less expressive of its habits or appearance. It is the toad-fish, frog-fish, fishing-frog, sea-devil, monk-fish, and wide-gab. Monk-fish properly belongs to a species of dog-fish, the *Rhina squatina*, also known as angel-fish. The name by which naturalists know the angler is *Lophius piscatorius*.