

43.—NOTES UPON OCTOPUS, FLYING-FISH, ETC., TAKEN DURING THE ALBATROSS CRUISE IN JANUARY, 1894.

By WILLARD NYE, Jr.

OCTOPUS, ROCK SQUID, OR SEA CAT CAUGHT AT ST. THOMAS.—When first seen it was on the shore side of a coral reef in water about one foot deep; the ends of its arms were coiled up nearly to the membrane between them, which membrane was well extended. It appeared to take very little notice of a person moving around in the water or on the reef within three or four feet of it, until it was touched, when it took hold of the bottom and moved slowly to the coral reef and fastened to it with its arms. On being poked with a stick it let go with two arms, extended them along the opposite sides of the stick, and took such a firm hold of it that a pull of from 100 to 150 pounds failed to get the stick away. If the pulling was kept up it soon seemed to become exhausted and suddenly let go of the stick, but on again being touched it would take hold once more. In no case did it use more than two arms for seizing the stick, the others all the while being attached to the reef. When first thoroughly aroused it ejected a black liquid, but although severely poked around in the water for five or six minutes, it did not again throw out any colored fluid.

FLYING-FISH—When flying they move their fins very rapidly, much like a bumble-bee. They seem rather to prefer flying to windward than the opposite; and sometimes, in a stiff breeze, they will rise and fly to windward from 30 to 40 yards. They do not seem to be attracted to any great extent by a light held a few feet from the water; but if the electric light is lowered beneath the surface a few inches and kept stationary they come around to investigate, and at times seem to become much excited about it. I do not think that their flying on board a vessel is because they are attracted by the lights, but rather because they get flurried, and not having that control of their course that a bird has they sometimes drop on deck rather than into the water.

FISHING AT ST. THOMAS.—Most of the fish are taken in traps or pots, some of which are nearly if not quite ten feet in diameter. They are mostly in the shallow bays and lagoons, where the water is from 5 to 15 feet deep, and also in the lee of the breakers on the numerous points. Many fish are taken by trolling with hook and line, baited with a small fish or a piece cut from a large one. Even the large fish do not seem to be much afraid of getting in shallow water, which may in part be due to the fact that the rise and fall of tide is very slight. The tackle used in fishing would be considered by us as rather coarse and clumsy.

OCTOPUS, OR SEA CAT, AT CURAÇOA.—During the day they remain in the cracks or under the coral and stones, but come out at night to

feed, when many may be captured in the shallow water along shore, often when it is not more than two or three inches deep. They have a peculiar translucent whitish appearance in the night-time. They can move themselves quickly over the stones either in or out of the water, but do not seem to be alarmed by a person moving around near them, either in the day or night, unless they are touched or otherwise disturbed.

PORT OF SPAIN, TRINIDAD.—Many of the fish for market are caught in seines on the flats off the mouth of the Caroni River. Some of these fish very nearly resemble our alewives. These flats extend half a mile or more from shore, the water being from a few inches to three or four feet deep. They are of mud near the shore, but gradually change to sand as you get farther out. Fish are very abundant over them, and it is also a great fishing ground for the herons, pelicans, &c. Many fish are also caught with hooks and lines along the shore, both by still-baiting and by trolling.

44.—PROPAGATING BUFFALO-FISH.

By A. A. MOSHER.

[Letter to Prof. S. F. Baird.]

In experimenting with the common buffalo-fish, (which is very common here and grows to weigh as much as 60 or 70 pounds,) I found no difficulty in propagating them. I took several of both sexes, when about ready to deposit their eggs, and put them in a small sunken place about 15 feet square and 18 or 20 inches deep, gravelly bottom, with cane grass growing all through it. I paid no attention to them except to take them out after spawning. In the fall I found thousands of small buffalo about 1½ inches long, notwithstanding there were two large black bass there all the time. I write this to show what can be done with this fish. I do not consider the buffalo a good edible fish, it being generally coarse and oily. They could be propagated advantageously, and serve as food to be given to game or edible fishes.

When the water begins to grow warm, after the ice goes out, these fish are around the shores in immense quantities; they are in bunches of from three to seven or eight, the female is in the center, and when she sinks to the bottom to deposit her eggs, the males crowd around and under her, pushing her to the top of the water, until their tails and fins are out, then they make a tremendous rush, causing the water to foam, and with a noise which can be heard on a still evening a mile. They go ahead for a few rods, then sink, and the same performance is done over. The people call it "tumbling;" in fact, it is a sight which once seen will never be forgotten.

SPIRIT LAKE, IOWA, April 24, 1885.