

THE GREAT SUNFISH.

BY A. W. ROBERTS.

An unusual number and variety of tropical fishes and reptiles have visited our coast this season. In the turtle family we have had the green turtle, the shell turtle, the logger-head, and the huge leather turtle.

Of free swimming fishes taken by fishermen there has been the jew fish, gray snapper, tarpon, chætodons (angel fish), and great numbers of the balloon or porcupine fish, real man-eaters of sharks, and, the most odd-looking of all, the great sunfish (*Orthogoriscus mola*).

The specimen from which I made the accompanying illustration was captured at Oak Island Beach, about thirty miles from New York, on the Atlantic, last August, and was exhibited at Fulton Market Slip, New York. The color of the sunfish is grayish-brown, darker on the back than on the sides of the abdomen. The skin is rough, it being covered with minute patches of small spines.

One of the curious features of this fish is the structure of the eye, which is embedded in a mass of soft and flexible folds, while behind the eye is a sac filled with a gelatinous fluid.

When the sunfish is alarmed, or is basking on the surface of the water, the eye is pressed against the sac, and the fluid contained therein is forced into the folds of the membrane, which distends them so as to nearly conceal the organ of vision.

The sunfish is armed with two powerful teeth, with which it feeds on the coarser seaweeds found growing at the bottom of the shallower ocean waters, and also on the gulf-weed of the Gulf Stream. Some years ago I was sent to Greenport, L. I., to bring on a large living specimen of the sunfish. This specimen was confined in a pound or trap; when not disturbed it swam near the surface, with its huge dorsal fin entirely out of water. Its favorite food consisted of tubularians, sertularians, and ascidians, on which I constantly fed it.

The sunfish often attains a very great size. One that was caught in Florida, and sold to the New York Aquarium, measured six feet.

According to Yarrell, the young of the sunfish or head fish are furnished with several dull pearl-like teeth of various sizes situated in the lower jaw, some thin and flat, presenting an edge, others behind being cylindrical, short, and rather pointed. These disappear with age, for we learn from Jenyns that in the adult the lamellated substance is undivided.

Various parasitical animals, such as *Pennella*, *Sigitta*, and *Tristoma coccineum*, are found frequently adhering to the body.

The head of the sunfish is not distinct from the trunk, but suggests that the entire fish consists of a head only, thence the name head-fish. The form of the body is oblong, subtruncated behind, and compressed. The caudal, anal, and dorsal fins are confluent. The body is scaleless and destitute of lateral lines.

A fisherman relates that when trolling not long since for bluefish, he came across a sunfish as large as a hoghead, which was asleep on the surface of the water, with his huge dorsal fin entirely out of the water. At first he was well clubbed with an oar, but he didn't seem to mind it much. Then a couple of bights were made in the sheet rope, which were passed over his head, hoping that his fins would prevent their slipping, but it was no go. He opened his eyes as if awakening out of a sound nap, and went slowly under the water in a vertical direction, apparently only slightly disturbed. This specimen was estimated to weigh at least 800 pounds, and was much larger than the one exhibited at Fulton Market Slip.

The flesh of the sunfish is white, and as well flavored as that of the sturgeon. Its liver is large and yields considerable oil, which is greatly prized by sailors for its supposed medicinal qualities. The specimen from which the accompanying illustration was made measured four feet in length.

The Ruffed Grouse.—“The Drumming Log.”

Having recent occasion to examine vol. xiv. of *Scribner's Monthly*, I came upon an illustrated article, August, 1877, No. 4, entitled “North American Grouse,” and on page 419, the following old and familiar story of my boyhood days:

“In the breeding season the cocks select some hollow fallen tree, and strutting up and down, beat it with their wings, making a muffled drumming sound that can be heard half a mile. The beat is at irregular intervals, beginning slowly and measuredly, and gradually increasing in quickness, until it ends in a roll. If the bird succeeds in finding a dry log perfectly hollow and well placed, his tattoo of

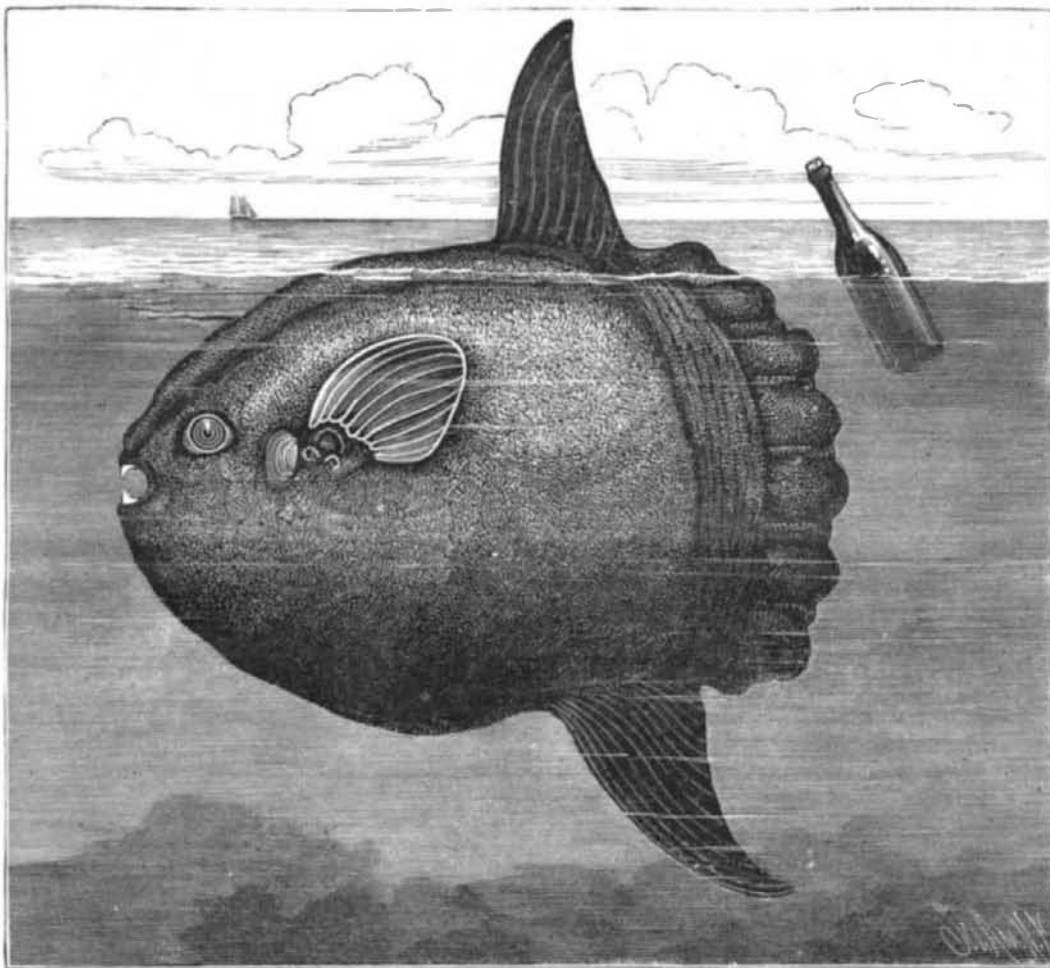
welcome can be heard a mile, and is one of the pleasantest of woodland sounds. It has the same accelerated pace, and is about the same duration as the call of the raccoon, and is only heard in the daytime, as the raccoon's is only heard at night.”

The grave doubts that would creep in to spoil the harmony of the little story are well remembered, though forty years must since have passed away. Somehow, from the first, it seemed a little beyond belief.

The idea that so small a bird could strike its wings upon a log with sufficient force to “be heard half a mile,” a sudden, moss covered one at that, seemed the more incredible the more I thought about it.

My fancy roamed over every glade, through all the thickets of pine, spruce, and hemlock, within the apparent range of the drumming, but no “dry, perfectly hollow log” occurred to me. Soft-sided, moss-covered ones were plenty enough. A mere lad, I determined upon an investigation at the first opportunity.

After several attempts, guided by the sound, creeping cautiously on hands and knees over the soft, thick carpet of pineleaves, or wriggling lizard-like over moss-covered green velvety rocks and fallen trees, peeping over a bit of a knoll between the thick growing pines, as fine a view as one could wish for greeted my hungry eyes, revealing the cock of the forest in all his pride and glory, perched, if you please, on one of those “soft-sided, moss-covered, half-hidden, fallen trees,” before alluded to. He repeated the operation of



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drumming several times, much to the amusement and gratification of his single auditor, so far as I was aware. The bird “strutted,” it is true, not “up and down,” but crosswise, much as the domesticated fowl do when they mount the topmost rail of their native barn-yard fence, flap their wings, and crow.

The domestic bird extends the wing more than the bird of the thicket, the latter seeming to elevate only the first joint next the body, the outer portion being extended but little beyond a vertical line, simply carried out from the body by the upward motion of the other part.

The whole outward movement for the first stroke is quite moderate, as are several of the succeeding ones in part, the wing apparently rebounding about half way, then extending moderately again, but “gradually increasing in quickness until it ends in a roll.” The first and all of the inward motions are very spiteful. The wings neither touch the log nor the body. The force of the stroke is expended on the air alone.

In the cut, on same page with the quoted paragraph, the posture of the female is very good; that of the male unnatural. The head is set back too much by far. The tail is set up and forward too much.

The posture of the breast, body, and wing is that of the bird at the instant of springing from the side of the log to the ground beside his mate. In the act of drumming (if my memory serves me correctly) the tail is extended laterally, quite close to the log, not in a circular arch like a cock turkey, as shown in the cut; the head erect on neck, a little forward. My ears don't seem to detect the similarity between the drumming of the male grouse and the trilled whistle of the raccoon.

The drumming is not confined to the breeding season, though it is not often heard in July and August, but in the

warm, clear, beautiful sunny days of September and first of October, this, “one of the pleasantest of woodland sounds,” is often heard; certainly so this season. These birds are not confined to logs either, I am sure, but have no doubt they drum on stumps, stones, and even on the ground, sometimes by moonlight. DE CAJAH.

Curious Specimens of Southern Woods.

One of the notable exhibits at the Cotton Fair is a fine display of Southern woods, both rough and polished. It includes the sweet gum (*Liquidambar styraciflua*), a light colored wood, often worked up for coffins; the tupelo, or sour gum (*Nyssa multiflora*), a tree that cuts like cheese, but cannot be split, used by the negroes for corks; the palmetto (*Sabal palmetto*); the Spanish bayonet, with stiff blades sharp as needles and serrated edges; the swamp cypress (*Taxodium distichum*), with its pointed excrescences three feet high springing from the root; and the curled pine, which takes a grain polish like the curled maple, but infinitely more vivid and beautiful. The Georgia sawmills—there are eight hundred of them in the State—have sent in some colossal pine logs, one of them a sylvan monarch, straight as a needle, seventy feet long, twenty inches in diameter at the smaller butt, and some four feet thick at the base.

Whales Cut in Two by a Steamer.

The steamship Newport, of Ward's Line, had an unusual experience during a recent outward trip to Havana. She sailed from this port on Thursday, October 27, and before daylight next morning she was off the Capes of Delaware. At about 8 o'clock, when she was steaming at the rate of fifteen miles per hour, she ran into an immense school of whales twenty miles long and a quarter of a mile wide. The animals were of all sizes, and disported themselves in the water as if enjoying it. Suddenly the ship shook from stem to stern, as she struck a monster about sixty feet long, which was attempting to cross her path. The whale was cut in halves, which passed astern on either side, while the water was dyed red with his blood. The steamer came to a standstill, and her stem was examined. It was found to have escaped injury, but the steering gear was slightly damaged. This was soon repaired, and the Newport proceeded, but the passengers were not so delighted with the whales as they had been before the shock. The sight of the monster's head as it shot upward from the water had been anything but pleasant to them. Ten minutes after the vessel started up there was another and a heavier shock, which almost threw the passengers from their feet. Another whale had been cut in two. The body of this animal passed under the vessel and struck the propeller with great violence.

The engineer rushed on deck, imagining that the ship had struck a submerged wreck. Capt. Sundberg ordered the course of the steamer changed, and she soon ran out of the troublesome whales.

Sweet-Flag Candy.

Sweet-flag candy is relished by all lovers of sweetmeats, and it is a valuable aid to digestion, as it will stop the disagreeable rising of gas, so annoying to dyspeptics. Being eaten greedily by children, it is often better than other medicine. A bit held in the mouth when one is caring for the sick will often counteract the effect of contagious germs. To prepare it, take fresh, healthy roots of sweet-flag, and after a careful washing, cut in slices one-eighth of an inch in thickness. Put them into a stewpan or bright basin, and pour a little more cold water over them than will cover them. Set on the stove and heat slowly; when the water boils turn it off. If the candy is desired for medicine, quite enough of the strength has been removed, but for a sweetmeat it is better if boiled up and the water turned off four or five times. Now measure the sliced roots, and to each two cupfuls allow one and a half cupfuls of white sugar, turn on water enough to cover, return to the stove and simmer slowly, stirring often until the water has quite boiled away; then turn out on buttered plates, and stir frequently until dry. The long simmering after the sugar is added makes the roots quite tender, and the candy will keep fresh and nice for years.—*Country Gentleman*.

Injunction against Hydraulic Mining.

The controversy between the citizens of Marysville, California, and the surrounding agricultural country and the hydraulic mines in the foot-hills above, has resulted in an order of Judge Mayhew, of the Superior Court at Marysville, enjoining all miners from further operations.