

TRICYCLE ROLLER SKATE.

The readers of this paper will remember the publication in these columns several years ago of a description and the illustration of an invention similar to the one represented herewith. The former was the subject of a patent in this country, but we believe the invention was not introduced to any successful extent. Recently the invention has been taken up in England, and several of our London contemporaries have spoken of it as a speedy and practical mode of locomotion. A speed of twenty miles an hour on a macadamized level road has been claimed for it. The construction of the skates, and the mode of attaching them to the operator, as well as his position in the act of their use, are so clearly shown in the engraving as to render unnecessary any detailed description.

GIANT HERRINGS AND HERRING PIKES.

BY C. F. HOLDER

One of the most remarkable as well as beautiful fish found upon the coast of Southern Florida is the tarpon or megalops. It is comparatively rare, the individual from which the accompanying illustration was made being the only one found during seven years. This was at the extreme southern point of the reef. At rare intervals they are caught on the upper reef and near the mainland. Scientifically it is included in the *Clupeidae* family, that includes our common herrings and the genera *Sardinella*, *Pellona*, *Rogenia*, *Harengula*, *Konala*, *Pristigaster*, *Clupeonia*, *Spratella*, *Meletta*, *Alausa*, *Engraulis*, *Coilia*, *Odontognathus* or *Gnathobolus*, *Chætæsus*, *Amblogaster*, and *Clupeichthys*.

The appearance of the tarpon is magnificent in the extreme; the immense scales, coated with a secretion that is exact in its resemblance to silver, flash and glisten in the sunlight seemingly bathed in a silvery radiance. They much resemble the ordinary herring, having a long attenuated spine extending from the dorsal fin, and another from the ventral. But it is their great size, perhaps, that is their most striking feature, attaining as they do a maximum length of ten or twelve feet. In the accompanying cut the relative size of one about nine feet long is shown; but nothing save the lavish use of silver could convey an idea of its wondrous appearance.

They are generally harpooned, seldom taking the line, when they make gamy resistance.

Equally striking for their great size are the herring pikes (*Clupeoides*). The butiriu of the West Indies, commonly known as banana fish, ten-pounder, and kakamby, is an interesting illustration; the *Studis*, however, is perhaps the most remarkable for its bulk. It was named by Sir Robert Schomburgk, and its skeleton is one of the most massive known among fishes. The scales are almost solid bone, sculptured in dendritic and mosaic shapes, portions of the skull presenting a similar appearance. Certain species of the genus are found in the Senegal and Niger rivers; the *Studis gigas*, however, is from South America. The hyoid bone is used as a file by the natives of those countries where the genus exists, and is often brought to Europe as a curiosity. The hyoid bones from the Amazon are named *Lingua de Paes*, and those from the Rio Negra de Para are called *Kuare*. As in the tarpon the scales are of great size and beauty. According to Schomburgk, the body is entirely covered with these large scales, round on their posterior edge, and the base of the dorsal and anal fins, thickened and muscular where they leave the line of the body, are scaled upward for two-thirds of their depth, or until the rays are given off with a separate dividing membrane; at their termination succeeds the small caudal extremity, with its very narrow web of rays continued round, appearing, in fact, as if the rayed part of the dorsal and anal fins had been continuous with it, and had formed one large broad extremity formed for powerful sculling. In color this fish is exceedingly brilliant; the head and dorsal part of the body are of a rich umber-brown, becoming paler as it reaches the central lateral line, and thence shading into a brilliant crimson lake, which occupies, also, the basal or scaled part of the dorsal and anal fins; each scale is darker at its base, and has a narrow line of deeper lake near its border. Near the caudal extremity the body and scaled part of the fins are blotched with dark umber-brown, the anal fin showing fourteen streaks of the same color in the direction of the rays. The pectoral and anal fins are gray, having the rays marked irregularly with dull blue. The membranous part of the dorsal, anal, and caudal fins is blackish-gray, the rays being reddish-brown. The *studis* is particularly interesting on account of its manner of breathing; the air bladder, as with *Erythrimus*, serving directly as lungs subsidiary to the gills, the air being inhaled through a connecting passage between the throat and air bladder. By this means the fish could live for a long time out of water.

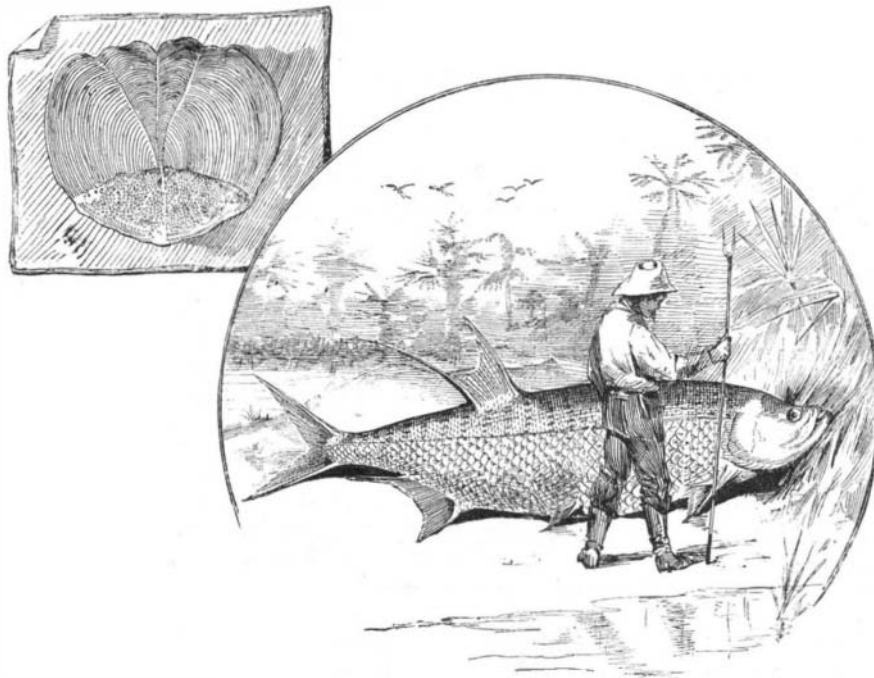
These fish are plentiful in the Rupununi, Rios Blancos, Negro, and Amazon. In the latter three rivers there are extensive fisheries for supplying the different towns, and great quantities are sent to Para, where it is preferred to the

fish salted on the North American coast, and commands a higher price. When fresh it is excellent, and the belly nearly all fat. They are taken generally with harpoons fastened on a long pole, which is thrown from the canoe, and to which is attached a long line to give the fish play, as they are so strong that they cannot be hauled in to be killed until they are weakened. This is generally performed with a club of hard wood, with which heavy strokes are inflicted upon the skull. The canoes which are used in these fisheries are sometimes very small, with only a fisherman and a boy to steer. After the fish is killed they sink the canoe,



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put it under the fish, and by shoving the canoe backward and forward, throw out as much water as allows it to float, the rest is bailed out with a calabash, and the fish is transported to the place of rendezvous; it is there skinned, and split to an inch thick the whole length of the fish, when a small quantity of salt is sprinkled over it, and it is put at once in the sun to dry, without being allowed to remain in the salt, as is generally done with other fish. In good weather it dries in three days, but it takes longer in the rainy season, when the fish then cured is not nearly so good or white. They are sometimes taken with the hook and line, baited with other fish. The intestines are short, form-



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ing only one flexure, which, together with the stomach, are entirely covered with fat. The liver is large, and not used for food, but would serve for oil, which it appears to contain in large quantities. In the stomach of one opened, several small fish and a quantity of mud were found. It has no air bag, but a curious process like the lungs of birds covers the spine inside, resembling the honeycombed inside of a bone. The roe is large, eggs small, and the membrane which contains them resembles in outward appearance the liver of a hog in size and shape. The young are protected

by the mother for some time after they leave the eggs, just as in the case of the lau-lau (*silurus*), and swim generally over her head. They delight in the *Kirahaghs*, as those inlets are called which many of the South American rivers form, and where the water is quite currentless. They are sometimes found in water scarcely so deep as to cover them, and the fishermen frequently attempt to drive them on shallow ground, where they fall an easy prey. They are more plentiful in the muddy than in the clear water. The Rupununi is the only river in British Guiana where they are to be found; and as during high floods this river is said to mingle its waters with those of the tributaries of the Rio Branco, they may have entered the latter river. They are occasionally carried by the flood during the inundations to the lower Essequibo, where it is known that they have been taken.

Schomburgk was assured by the inhabitants of the Rio Negro that they have caught some fifteen feet long, and of twelve to thirteen arrobas (410 pounds) weight. A specimen, the skin of which is now in the British Museum, measured, when taken, eight feet one inch in length, and three feet seven inches in girth. The caudal fin was only five inches long and eight inches broad when extended.

Sir William Jardine gives the following account of the capture of these fishes:

"Partly to serve us for economical purposes, but more to satisfy our curiosity of witnessing the Indian manner of hunting the arapaima, this giant of the fresh water fishes, Irai-i, the Carib chieftain at Curassawaka, induced his men to afford us an opportunity. We selected a sunny day, when there was more chance that at the heat of noontide one of these fishes would rise to the surface. Our party was distributed in five small corials, and we proceeded toward the mouth of the small stream Curassawaka, where it enters the Rupununi. Here we remained stationary, one of the corials being put on the watch, and no length of time had elapsed when the signal was given that an arapaima was in sight. All hands were hushed as death. Irai-i and his brother-in-law, Dabaero, who were considered the strongest and best shots, went forward with their corial and approached the fish as nearly as possible, the rest following softly to be within arrow shot. There stood the sinewy Carib, Dabaero, his foot firmly resting upon the bow of the corial, his left hand grasping the large bow of tough *uamaru*, his right the long arrow, upward of six feet in length, and armed with a formidable iron point. His position, although forced to the unpracticed, developed the symmetric forms of his figure, unadorned as it was by any art. Only those who have witnessed the Indian's eye when the bow is strung and he approaches his intended victim, can have any idea of that expression and that fire by which it appears lighted. Irai-i had adopted a similar position, when the crack of the bow string told us that Dabaero had discharged his arrow, and the chief followed his example, but missed, his arrow floating on the water, while the other disappeared with the monster. The corials pulled into the middle of the stream, the eyes of the Indians directed to all points to detect the arrow-feather appearing. Their quick eye saw it above the water, although it was only for a moment; away went all the corials in full chase, and just as it appeared a second time, a second arrow was sent into the fish. All was now excitement, and the yells of the Indian, the rushing of waters, harrowed up by the quick stroke of the paddles, was one of the most enlivening scenes I ever witnessed. Away we went

where the experienced hunters expected to see the fish reappear, and scarcely made the tops of the arrows their appearance, when others flew from their strings and pierced the arapaima; down he went again, but the period he remained below the surface was much shorter than previously, a proof that he got fatigued, and when he reappeared he allowed the first corial to come so near that one of the Indians was enabled to give him a stroke with a cutlass; a few more arrows were discharged at him, and he became an easy prey. The question was now how to get him into a corial, as we estimated his length at least six to seven feet, and his weight not less than a hundred and fifty pounds. He was floated into comparatively shallow water, and when one of the corials was got under him, the Indians who were wading in the water shuffled the corial with the fish and water in it to and fro, until the water had got mostly out and the craft commenced to float again; the rest was bailed out, and under the huzza of our Indians, we returned with our prize to Curassawaka, highly delighted with our sport of hunting the arapaima."

CALIFORNIA WINE. — The *California Demokrat* says that, notwithstanding the large dimensions which wine culture has attained in California, the American resident of that State has failed as yet to take to wine drinking as a habit. The Napa Valley is filled with luxuriant vineyards, but foreigners remark with surprise that on entering the inns of that section of the State they not only look about in vain to see wine drinkers, but are not always sure of being able to get wine to drink themselves. Strong liquors are still the staple beverages. Grapes are not much in demand, even for table use.