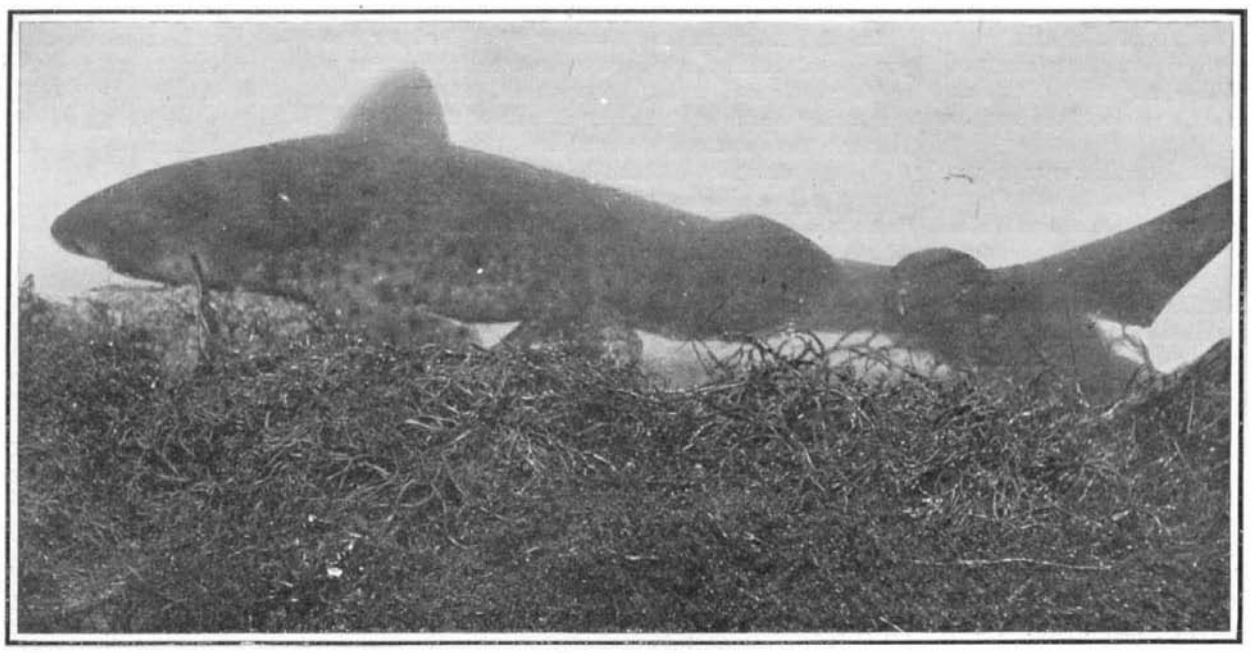
courts of the houses were paved with large flagstones, and this was done so as not to lose any of the precious fluid. A series of conduits led from the sewers to the immense reservoirs which were placed in the lower part of the city. When we dig down to some depth in the ground we can still find the flagstones in place under the layer of ashes coming from the time when Scipio's soldiers burned down the city.

One of the large reservoirs lies near the shore in the lower part of the city and not far from the old Turkish fort of Bordj-Djedid.

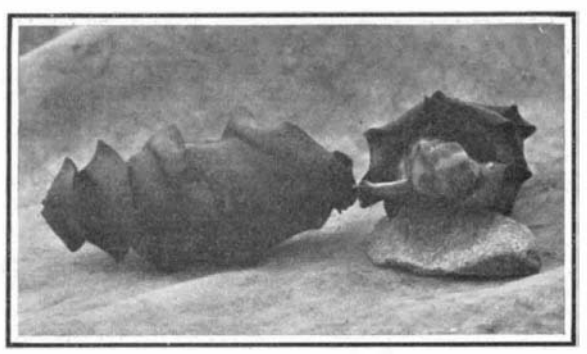
This remarkable construction is formed of eighteen parallel vaulted chambers of considerable length, which lie against each other and are separated by a dividing wall. They are built of masonry and covered with a very hard cement. The great size of the reservoirs may be judged from the fact that the total area covered by the water chambers is 440 feet in length and 125 feet in width, thus forming an oblong structure. Each of the chambers is about 100 feet long and 24 feet wide. The top of the reservoir lies just below the ground level, while the cement floor which forms the bottom is far below ground. Each chamber is covered with a semi-circular vaulting of masonry. From the floor to the top of the vault the height is some 30 feet. The water chambers are rounded off at the ends and they are separated by a strong wall which has a central opening so as to allow the rooms to connect with each other. Along each side of the main construction runs a long and narrow gallery which opens on to the ends of each basin. The floor of the gallery is 20 feet higher than the main floor. It is to be remarked that the two end basins and the middle one of the series have their ends occupied by round chambers in the form of large wells covered by a cupola at the top. These round wells are filled up and there seems to be no doubt that they were used as filters for the water before it passed into the main reservoirs. This fact was virtually proved at the time when the cisterns were restored for use a few years ago. During the work there were found a great number of conduits near the upper part and on all sides. These had been used to bring the water from different quarters into the cisterns. Further down, near the bottom, were seen another set of conduits which led the water off to various parts of the city. Our engraving shows the present appearance of the reservoirs. The main area is outlined by the stone wall which lies above ground, and we also observe the middle and end cupolas which top the filtering wells. The small, circular openings, of which each basin has three, lying flush with the ground, have been covered over with glass. In the background is the historic spot which the citadel of Carthage formerly occupied. It is now crowned by the Cathedral of St. Louis and the museum in which the Rev. P. Delattre is constantly placing new objects which come from the excavations. Another view shows the interior of one of the eighteen long chambers, which is nearly filled with water. The character of the vaulting and the openings in the roof will be noticed. The total volume of water which the whole reservoir contains is estimated at five million gallons.

Another set of great reservoirs is found at some distance from the preceding and nearer the top of the hill. These cisterns were no doubt as extensive as the first series, but they are now in a very dilapidated state and have nearly disappeared under the soil, which has gradually filled them up. When the Arab geographer, Edrisi, visited the spot in the eleventh century he was struck with admiration at the imposing form which they presented.



Swell Shark Photographed While Swimming.

At that time there were twenty-four reservoirs running parallel to each other, each one covered by a vaulting and measuring 330 feet long by 70 feet wide. At present the remains of only eighteen chambers are visible, and these are partially destroyed and filled up with alluvial earth which has sifted in during the ages. Our engraving shows a part of La Malga reservoirs in their present condition. The remains of an aqueduct which supplied the cisterns have been found to the northeast of the Arab village. The natives have found statuettes and other objects around the spot.



Spiral Egg of Port Jackson Shark.

Egg on the right shows the young shark protruding, or as it appears when about to escape.

AN INTERESTING SHARK.

BY CHARLES FREDERICK HOLDER.

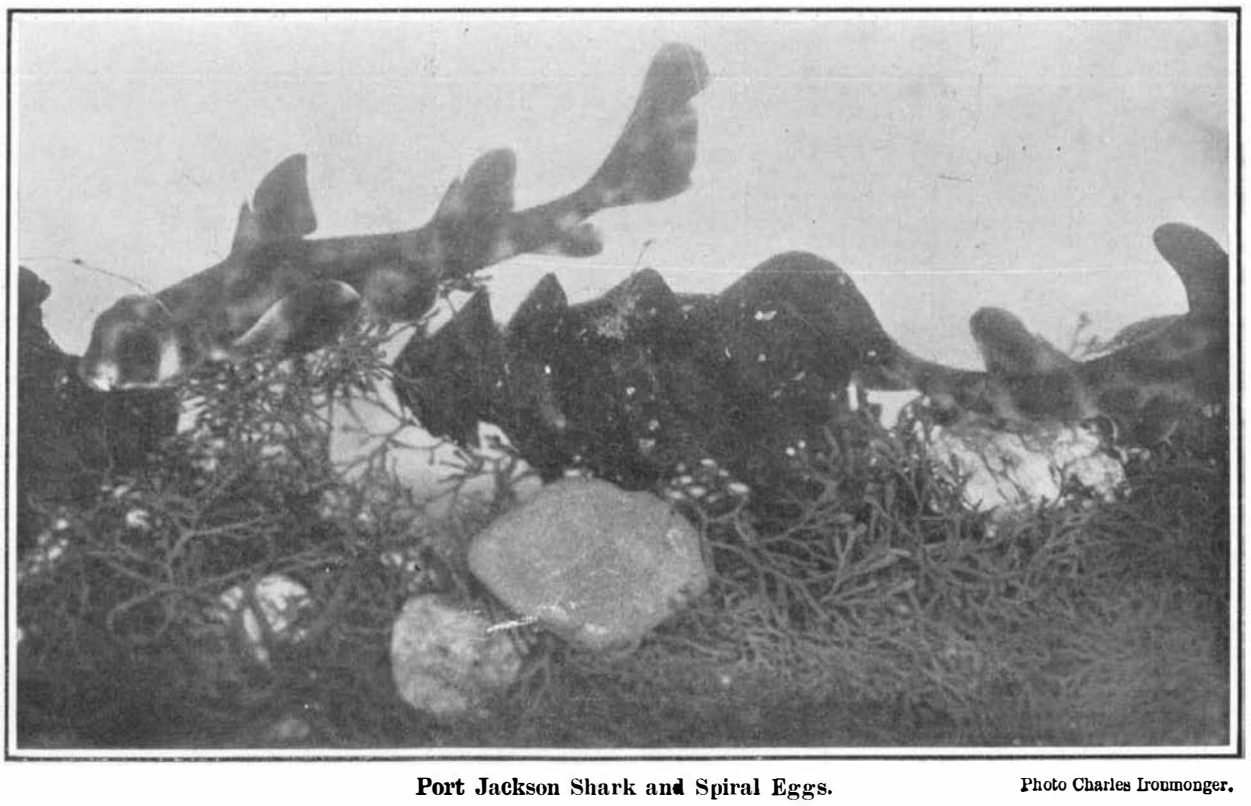
Up to within a few years the ctenoptychius shark was known only by its spines and bits of pavement-like teeth. From these geologists described it years ago, and supposed that like many other forms it had become extinct. As the various zoological expeditions were sent out by different governments one entered Port Jackson, New South Wales, and in dredging found a living Trigonia shell that was supposed to be extinct, as those known occurred only in the fossil secondary deposits in Europe. One of these expeditions found, with the Trigonia shells, spines almost identical with the fossil extinct Cestracionidæ; then a boatman told the zoologist that the fish itself was common there, and volunteered to produce specimens in any quantities.

The Cestraciont sharks are included in the family *Heterodontidæ*, and in the years following four species have been determined in the Pacific Ocean, *Gropleurodus Francisci* and *G. Quoyi* being the best known — the latter from the region of the Galapagos Islands, and the former from Southern California. The modern representatives of these sharks average about two feet in length. They are rendered conspicuous by two dorsal fins, each preceded by a large, powerful, and beautifully colored pink spine—a heritage of the ages. The body is long, tapering gracefully to the tail, which is large, broad, rising upward, with two notches. The shark appears to have a forehead, the head being blunt, and the peculiar nostrils are confluent with the mouth, which is small, narrow, and in the upper lip divided into seven curious lobes. The ridges above the eye are prominent, and the eyes are placed high in the head.

The most interesting feature of the shark is the egg, a somewhat conical-shaped spiral object four or five inches in length, and in form a perfect screw with wide flanges. Its color is a rich, dark mahogany, smooth and beautiful in texture. In the accompanying illustration a group of the young and eggs are shown, the shark being about two months old. The sharks shown were alive and the eggs unhatched. The photograph was taken by Charles Ironmonger under the writer's direction, and a difficult process, the dominating idea being to show the sharks alive but with a perfectly natural environment. The photograph represents a fairly perfect picture of the bottom, algæ, and rocks among which the writer has seen the sharks lying.

One might well wonder what object was attained in the production by Nature of such an egg. It is an almost perfect imitation, as regards color, of some of the weeds in which it is found; and it is very evident that the edges of the "screw" or spiral would prevent it from being washed ashore even in a heavy gale. So doubtless the peculiar shape may be a plan of resourceful Nature to afford protection to the egg, and that it is successful is evident as the shark has with some slight change survived the changes of ages.

I have often taken another shark in lobster pots with the Port Jackson variety, one that bears a close resemblance to it, especially in color and general shape. This is the swell shark, *Catulus uter*. It rarely exceeds two feet and a half in length, and has habits almost identical with the Port Jackson shark, lying in the hollows of the rocks, or hidden away in the dense masses of kelp found on this coast, possibly coming out only at night. Its color is gray below and with a burnt umber tint; the upper portions dark, with black and brown reddish spots, with here and there white patches. When kept in confinement, they lie on the bottom, never moving unless touched or forced from their position.



Port Jackson Shark and Spiral Eggs. Photo Charles Ironmonger.

A DESCENDANT OF A PREHISTORIC SHARK.