

Modern Pearl Fishing.

WRITTEN AND ILLUSTRATED BY H. PHELPS WHITMARSH.



WITH the name of "pearl diver," many of us will associate much that is romantic. Our minds readily conjure up visions of priceless pearls, naked divers, stone-sinkers, and sharks. Our imagination builds, very naturally, upon the foundation which has been laid for us by tradition; and as the structure arises, as we add story upon story, we find it an interesting, charming edifice. Unfortunately, it needs the cement of truth to hold it together.

There was a time, of course, when the limited demand for pearls and pearl-shell was easily supplied by a few native divers. These toilers of the sea carried on their occupation by very primitive methods.

The islanders of the Malayan Archipelago were "beach-combers," merely walking in the water at low tide, and feeling for the pearl-shells with their feet. The Australian aborigines were taught to drop, feet first, from an open boat and swim to the bottom. Again, in Ceylon, the natives dived with the aid of a stone-sinker, and, until comparatively recently, the latter way was the best known, inasmuch as it effected a saving of time and exertion in going down, and thus gave the divers more time in which to do the actual work of gathering.

To-day the native diver is practically a thing of the past; for, as the demand increased, the shallow waters were rapidly "skinned," and methods that would enable a man to dive at greater depths were sought. This brought about the introduction of the well-known diving dress. It was first tried in Australia, and, when proved a success, was quickly taken up by the pearl-fishing communities of the world.

Pearls are found in most tropical waters. The market, however, is principally supplied from the gulfs of California and Mexico, the northern coast of Australia, Ceylon, and the islands of the Pacific.

Though pearls are found in almost all molluscs, the true pearls of fashion are only produced by the pearl oyster or mother-of-pearl shell. And here let me say that pearl diving means not only fishing for pearls, but also the shells which contain them. The commercial "M.-O.-P." shell is in reality the bread-and-butter of the diver. In size they are about as large as an ordinary dinner-plate, and their weight, when cleaned, averages 2lb. When sold in the London market they bring from £100 to £130 per ton. On the spot they are reckoned roughly at 2s. a pair.

The much-mooted question as to the origin of the pearl and the fantastic imaginings of the poets concerning the same are



MAKING READY.

now solved and settled. It is generally accepted that pearls are formed by the intrusion of some foreign substance between the mouth of the mollusc and its shell. This becoming an irritation, is coated with the same nacreous secretion with which the pearl oyster lines the interior of its home, and in time is completely encysted. As pearl fishers well know that shells infested with living parasites are most likely to yield pearls, it is very probable that to this same parasite we are indebted for the only gem Old Ocean affords.

From Torres Straits, good pearling grounds extend far east and west. Here (and it is representative of nearly all other fisheries) diving is carried on by means of lugger-rigged boats, ranging in size from five to twenty tons. This style of craft has proved to be most suitable, as they are easy to handle and can be shifted quickly. They are built with a certain regard for speed, for the reason that the better the sailing qualities of the boat, the more time the diver has for work below. The boats are fitted with air-pumps, and carry a crew of five Malays and a diver; the latter being also the captain. Many of the boats are owned by the divers themselves, but the majority are the property of companies, each with a fleet of twenty luggers or more, and a schooner to tend them.

There is a scattering of Europeans among the divers — principally English and Germans; but Kanakas, Malays, East Indians, Japanese, and Chinese make up the greater number.

Next to a good diver and apparatus, a reliable "tender" is the

most necessary adjunct to a pearling lugger's outfit. He it is who holds the life or signal line, and looks after the general welfare of the diver when below. The "tender" is the second in command. He must keep his weather eye "lifting" for squalls, the movements of other boats, and should be a wide-awake fellow; quick to act in an emergency, and constantly alert.

With the exception of the "willy-willy," or cyclone season, which lasts about three months, work continues throughout the year. At spring tides, however, the water becomes too "riled up" to dive with any degree of success, and during that period the boats run into the nearest creek to replenish their supplies of wood and water.

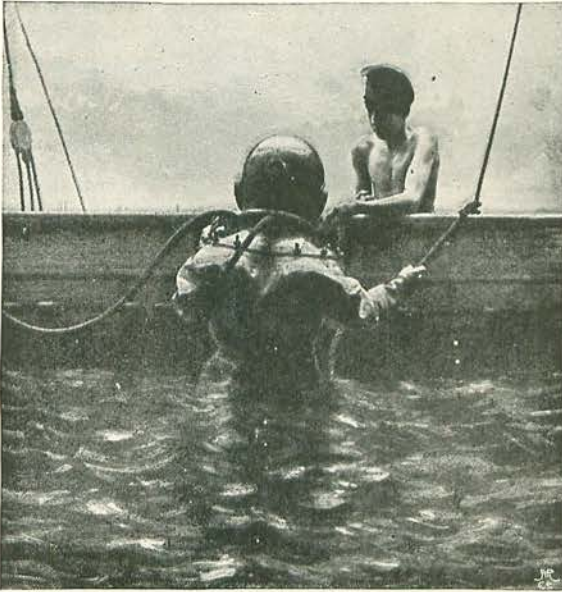
The northern coasts of Australia, being for the most part inhabited only by "black fellows," have few ports, and, as a result, the pearling fleet is often two or three hundred miles from a township. Their wants are supplied by the coastwise steamers, which not only furnish the pearl-ers with provisions and men, but also act as agents in shipping the accumulations of shells to the London market.

On the pearling grounds, with the first streaks of dawn, blue wreaths of smoke arise from every boat. The cooks are busy preparing the everlasting fish and rice for the Mohammedan crews. The divers have, perforce, to content themselves with a cup of coffee and a piece of bread, as it is impossible to do good work under water with a full stomach.

The diving dress is a waterproof combination of coat, vest, trousers, and stockings all



READY TO GO OVER THE SIDE.



GOING DOWN.

in one. The only inlets or outlets are the wide collar and the wristlets. Dressed in a double set of heavy flannels (to absorb the perspiration), the diver, with the "tender's" aid, works his way, feet first, into the dress; his hands are soaped, so that they may slip through the tight-fitting rubber wristlets, and then the boots are buckled on. The latter are leaden-soled, and weigh 32lb. Next the corselet or shoulder-piece is added, and screwed tightly to the collar of the dress. Then the life-line and pipe are attached, the 80lb. back and chest weights suspended from the shoulders, the helmet screwed on, and the diver is ready to step over the side.

On the ladder, the order to "pump" away is given, the face-glass is screwed up, there is a great splash, a few bubbles, a rapid paying out of life and pipe lines, and the day's work has begun.

The descent is made by means of a rope called the plumper line, and the mode of working is as follows: a patch of shell having been discovered, the boats beat up to the windward edge and drift over it with a fouled anchor. This means that the anchor is turned upside down, a close hitch taken round the crown with the chain, so that when dropped it does not catch on the bottom, but drags over it. By this means a boat can be regulated to drift at any rate of speed the diver may desire. If much chain is paid out the boat drifts slowly. As it is hauled in, the friction is lessened and the speed increased.

When the diver finds that he is off the "patch" he comes up; the boat tacks to windward again, and drifts across it as before. In this way, it will be seen that a diver travels over a good deal of ground during the course of the day, often covering twenty miles or more before four o'clock, which is "knock off" time. The reason for this is that the pearl oyster, unlike others of its kind, does not grow in clusters or in beds, but is found singly, each one being attached to the bottom by a small cable of its own. Sometimes a diver may be fortunate enough to find a bagful within the radius of his life-line; at other times, the shells will be half a mile apart. As a rule, the diver ascends each time his bag is full, and while the bag is being emptied, gets a breath of fresh air; but if shells are plentiful and the water shallow, he sends it up by the life-line.

Pearl diving is carried on at a depth of 60ft. to 108ft. At the latter depth a diver cannot remain under more than ten minutes on account of the pressure. In 40ft. or 50ft. of water it is possible to remain below two hours without suffering much inconvenience. As to the distance one can see when below, it is governed entirely by the state of the water. If clear, objects can be distinctly seen 40ft. or 50ft.; but if dirty, that is, stirred up by strong tides or rough weather, it is necessary to go on all-fours to find bottom. A good day's work is anything over 200 pairs of shells, although I have known as many as 1,000 to be picked up in that time. Pearls can never be reckoned on as certainties. Finding them is altogether a matter of luck. One diver may open ton after ton of shells without securing anything

but a few seed pearls, while another may take a fortune out of a day's gathering.

The most famous pearl discovered in Australia of late years is that known as the Southern Cross. It consists of a cluster of nine pearls in the shape of a crucifix, and is almost perfect in proportion. This



THE SOUTHERN CROSS.

freak of Nature was picked up at low water on the Lacipede Islands, by a beach-comber named Clark, who, after burying it for some time, on account of superstitious reasons, sold it for a small sum. Although several of the pearls in the cluster are decidedly "off colour," it was last sold for a little over £10,000.

Diving, and particularly pearl diving, is an exceedingly dangerous occupation, and accidents on the pearling grounds are of common occurrence. There are so many things about a diver's work that cannot be foreseen, and, therefore, guarded against, and there is so much uncertainty as to where one is when below, or in what direction one is moving, that it is to be wondered at that accidents are not more frequent.

A diver runs the risk of losing his life by ripping or tearing his dress upon sharp rocks or corals, through which he must often pick his way. Then, again, an accident may happen to the air-pump, in which case he is suffocated; or the air-pipe may become uncoupled or burst, with the same fatal result. A crew of Malays, moreover, is never to be



DIVER WITH BAG OF PEARL SHELLS.



PICKING UP A MOTHER-OF-PEARL SHELL.

depended upon. They are treacherous to a degree, and constantly giving trouble. But perhaps the greatest danger which besets a diver when below is that of fouling on the bottom, and to explain how easily this may happen, I will relate an experience of my own.

I had been working all day, and about "knock off" time, having a full bag of shells, I screwed up the escape valve in order to fill the dress with air and make myself lighter, and gave the customary signal to ascend. The life-line tautened, and I was soon lifted from my feet and being drawn toward the lighter water above. The angry frame of mind that usually attends the diver at work gradually passed away as I was raised to the surface, and I was just getting good-tempered at the thought of a mouthful of fresh air, when I felt a sudden jerk under my left arm, and at the same instant my progress was stopped.

Before I realized what was the matter, the air-pipe was torn from the check that held it under my

arm, slipped over it, and pulled my head downward; while the hauling of the "tender" above on the life-line round my waist raised the lower part of my body and left me suspended heels up.

In the first few moments of my surprise and terror I did not stop to consider what had happened. My presence of mind deserted me, and I struggled and screamed like a madman.

After a little while, having kicked myself into a state of exhaustion and common-sense, I reasoned out the cause of my dilemma. As the strain of the air-pipe was downward, and that of the life-line upward, I concluded that the pipe must be fast below, and that the only thing to be done was to go down and clear it. First, I regulated the air in the dress, letting out as much as I could spare, for in my present position all the air went into my legs, and kept them floating straight upwards, and then I tried to make the "boys" understand that I wanted them to lower me.

All my shakes and jerks on the life-line, however, were without avail. By that time all hands, except those pumping, had tailed on, and were doing their level best to pull me in halves. Fortunately, all my gear was in good shape, or they might have accomplished it. Finally, after hanging betwixt the top and the bottom about half an hour, my "tender" had sense enough to signal for another diver, and I was at last released and hauled up, more dead than alive. The cause of this accident was simply that the careless



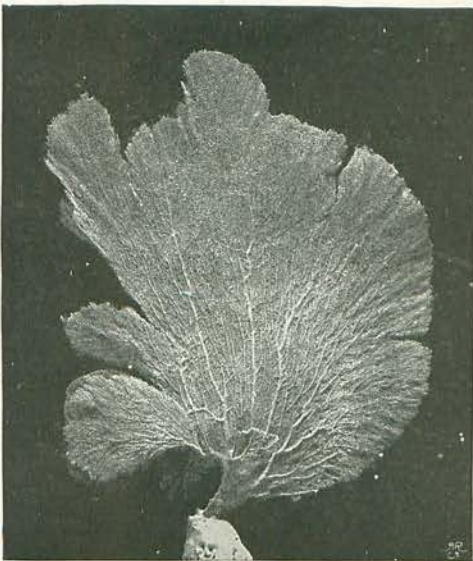
A SPECIMEN OF CORAL.

holder of the pipe, instead of keeping it taut, had allowed it to drag on the bottom until it fouled around the base of a coral cup. Had the tide not been slack at the time, the weight of the boat, which was practically anchored by the air-pipe, would have torn the helmet from my shoulders, and the result would have been different.

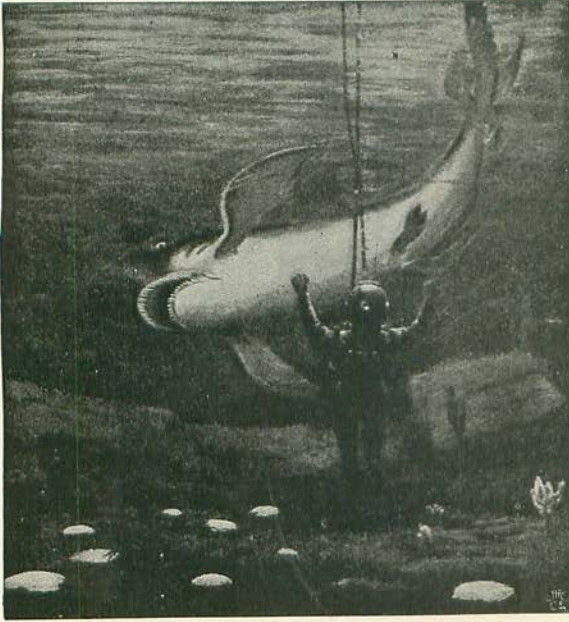
The quality that a diver needs more than any other is presence of mind. Without a man possesses this, he should never enter a diving-suit; for if there is any place in the world where one wants a clear head, it is under water.

There is an uncanny feeling about the bottom of the sea, a lonesomeness that causes one to start at the sudden appearance of a dark mass of rock, or the unexpected touch of a sea-finger, and a vague feeling of apprehension that something may come out of the blue of the distance. Far removed from actual communication with other human beings, in a vast, strange world, where every form is so different from earthly conditions that it seems unnatural; living under an abnormally high pressure, which in itself alters the aspect of things, the sense of loneliness, combined with a certain dread, is at times awful.

The timid man on earth may keep up his spirits with a lively whistle, but a diver cannot even do that; as, for some reason, it is not possible to whistle inside a diving dress. He may hum or sing, to be sure, only that takes too much breath, and in the end he settles down to listening to his own quick breathing and the distant thump of the pump above.



A SEA-FAN.



A SHARK.

Neither can diving be called a healthy occupation. Deafness, incipient paralysis, and rheumatism are common features; while divers with any inclination towards lung or heart disease live but a few months.

The *bête-noir* of the Australian pearl fisheries, however, are the terrible cyclones that yearly visit the coast. To these is due the loss of more property and the death of more divers than all the other causes combined.

Sharks are not nearly so black as they are painted. Though plentiful, and with a decided liking for native divers, they have never been known to attack a man in a dress.

In spite of this fact, one cannot help feeling frightened when one comes face to face with this tiger of the sea; particularly when, through the magnification of the water and the face-glass, the fish is almost doubled in size. One's first thought upon seeing a shark is to be pulled up or to take to your heels; but, as fish have sufficient human nature about them to want a thing as soon as they see it being taken away, it is safer to stand perfectly still. In fear that my bare hands might attract the man-eating propensity

that sharks are supposed to have, I invariably tucked them carefully under my breast weight, and when the fish had disappeared, gave the signal to ascend, kicking violently all the way up.

If a diver remains quiet, he is quickly surrounded by an admiring crowd of fish, opening their eyes and mouths like curious countrymen. The smaller ones have assurance enough to nibble at his fingers; but let him throw up his arms, and with a flourish of tails they vanish.

As the pearling fleet is dependent to a certain extent upon fish for food, the diver never misses an opportunity to bag anything edible. Crayfish are easily caught, and make quite an agreeable addition to the ordinary diet. Turtles, too, are plentiful, and being fresh meat are valued more than fish.

The memory of my first tussle with one of these animals is impressed very vividly on my mind. I had been told to approach the creature quietly from behind, grasp the edges of the shell,



DIVER SURROUNDED BY CURIOUS FISHES.



TACKLING A TURTLE.

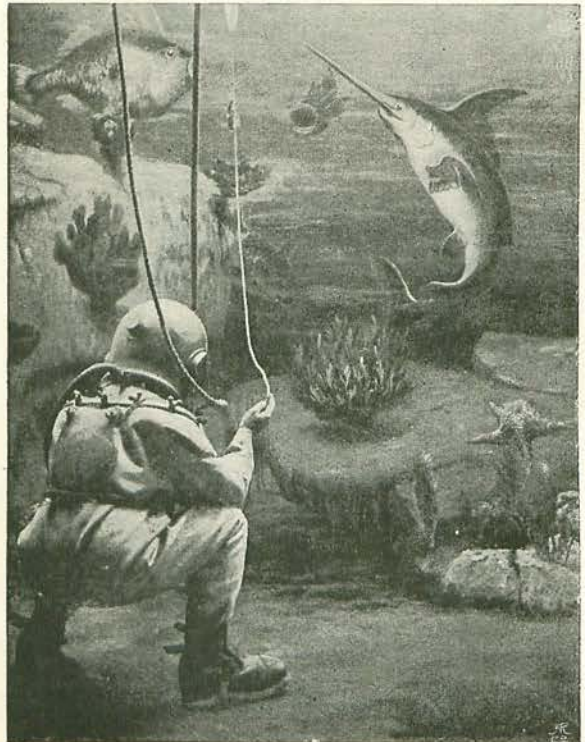
lift it quickly to my chest, and give the signal to be pulled up. By so doing, I was given to understand that the turtle's head, being pointed upward, could not move in any other direction; and that, therefore, the journey to the surface would be a short one, as the turtle's flippers would be powerful enough to take me up without any other aid.

Accordingly, when I saw my first turtle, feeding quietly on a patch of sea-grass some distance ahead, I made a circuitous path and crept cautiously up behind it. By the size of the barnacles on its back I knew it was an old one, and it looked tremendous; but I put that down to the face-glass. When I was within a few yards of the game, whether it was the bubbles from my escape valve or the heavy tread of my 32-pounders that scared it, is a question; but suddenly up shot the turtle's head. I ducked immediately behind a sponge-growth, and crouched there with beating heart, fearing that my opportunity was gone. In a few

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moments he resumed eating, and without waiting for further developments, I made a run and a jump and landed fairly on the turtle's back. In stretching out my hands to get under the shell I must have fumbled. Before I had a chance to raise the monster I felt my feet being dragged over the bottom, and a moment later I awoke to the fact that my intended capture had captured me, and was swimming away with me at astonishing speed.

Away we went, the turtle trying to leave me behind and I hanging on with might and main. In vain I tried to point the old fellow's head towards the boat—he would have none of it. Drop, I dare not; for the bottom was out of sight, and I feared I should fall heavily. Signal I could not; my hands were very much engaged. While in this state of uncertainty we came to the end of our tether—the limit of the life-line. Then there was a sudden jerk, and we parted company. The turtle continued on his way and I fell headlong down. Luckily I struck

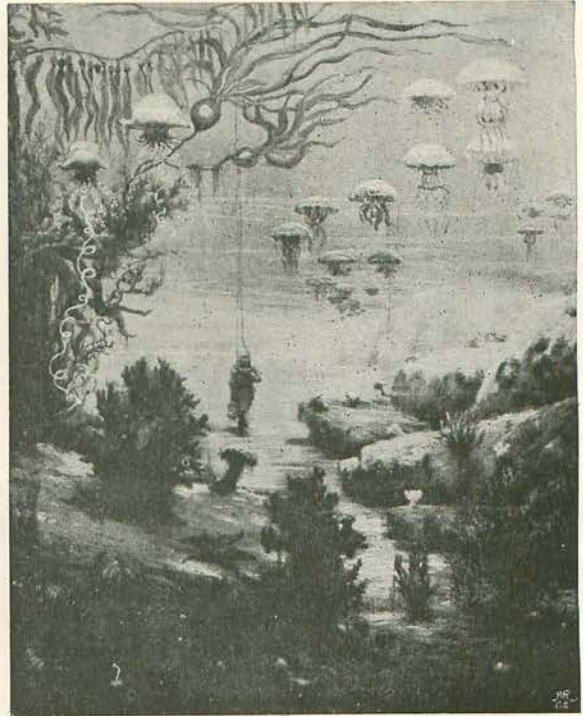


FISHING UNDER WATER.

on a large sponge-growth, and thus broke my fall; but I was a good deal shaken up, and was hauled up looking very seedy and feeling sure that it would be a long time before I tackled another turtle.

Fishing on the bottom is carried on to quite an extent. Leaving one end of the line in charge of a "boy" on deck, the diver descends with hook and bait and conceals himself among the rocks or sea-growths. Instead of dropping his hook, after the usual method of fishermen, he floats it a few feet above his head, by means of a piece of wood brought down for the purpose. If a shark or other objectionable fish heaves in sight, he hauls down his colours in double-quick time; but if it be a rock cod, a schnapper, or any of the large edible fish which abound in those waters, he tightens up his escape-valve for a minute, lest a bubble frighten the fish, and hangs on to the line with both hands. As soon as the fish has the hook fairly in its mouth, a sharp pull hooks it, and at a signal to the "boy" above, the big fellow goes struggling to the surface.

Octopi are seldom met with in Australian waters, though there is always the possibility of such a thing, and occasionally one hears of an encounter. The deaths of many native



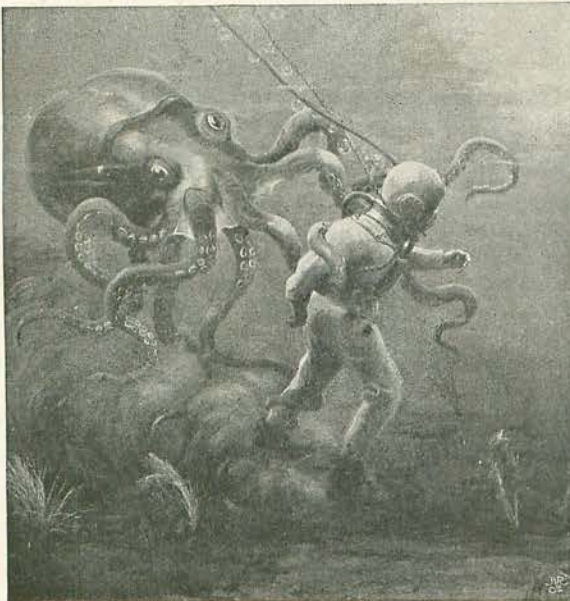
A SUBMARINE LANDSCAPE.

divers, who go down and never appear again, are attributed to the tridacna, a gigantic mollusc of the clam order; which closes with a vice-like grip upon anything that passes its lips.

Another fish that is unpleasant to meet is that known as the stone-fish. It is small, being only a few inches in length, but its bite is poisonous. Apparently, it makes its home under the pearl shell, for it is only when picking up a shell that a diver is bitten. After a bite from this spiteful little member of the finny tribe, it is wise to remain under water as long as possible. The pressure, causing much bleeding at the bitten part, expels the poison.

Black and yellow sea-snakes are constant companions of the diver, though quite harmless; also stingarees, blow-fish, mullet, and a hundred other varieties known among divers by names descriptive of some peculiarity the fish possesses, but which to the reader mean nothing. A few of them are known to science by names that mean less.

One of the most ludicrous and yet annoying things that happen to a diver is the discovery that a fly or



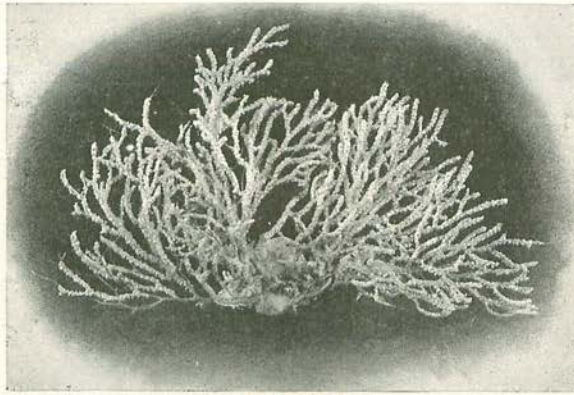
ATTACKED BY AN OCTOPUS.

other insect has been screwed up inside the dress. It is bad enough for his nose to itch, and be unable to scratch it, or for him to find something in his eye and be without means of taking it out; but when a fly that has been concealed in some part of the dress begins to crawl deliberately over his face, and play hide-and-peek up his nostrils, it is simply maddening. It is useless to butt the face-glass or wildly knock your head against the inside of the helmet, or to make hideous faces, for all this only tends to make the insect more lively, and hurries it, in its excitement, into your ear or elsewhere. The only thing to be done in such a case is to shut eyes and mouth as closely as can be, and give the signal to ascend.

As the surface of the earth changes under different climatic conditions, so the bed of the ocean varies according to the latitude and depth of water. The extreme depths of the sea, from all we can learn, are almost destitute of vegetable life, but the medium and shallow parts abound in flora.

Tropical waters, like tropical lands, are the home of luxuriant vegetation, most rich in colouring; and we find not only the birds and flowers remarkable because of their brilliant colours, but also the fish.

On our northern shores divers



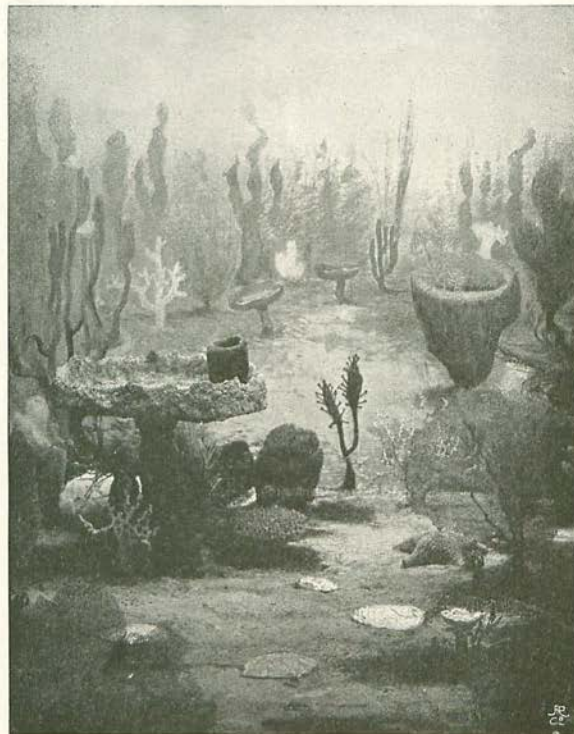
A SEA-GROWTH.

the bottom presents a very different view.

From the scorching rays of the southern sun above, the diver drops through a few fathoms of crystal water, into a vast cool conservatory of tropical sea-plants. Shelling ground is usually of coral structure and overgrown with coral cups and growths from minute size to four and five feet in diameter. Sponges (uncommercial varieties), as high as a man's head, sponge cups, graceful coral-lines, anemones and sea flowers, of new and beautiful forms, and tinted with all the

hues of the rainbow, wave gently to and fro; while, like butterflies, flitting and chasing one another in and out among them all, are hundreds of tiny fishes, so gay with colours that the historical coat of Joseph would have paled beside them.

Here flowers and ferns, sea-fans and shells, sponges and corals of curious structure and brightest hues lay undisturbed by surface storms, and make a perfect fairyland. Now it is a field of waving flowers, tall and graceful, and many-



A TYPICAL VIEW OF THE SEA DEPTHS.

coloured; now a cavern, its rocky entrance screened with scarlet creepers; now a clump of orchid-shaped plants with blood-red veins, sheltering a shoal of rainbow-fish beneath their opalescent leaves. At times the diver crosses a patch of whitest sand, spangled with blue star-fish; again he passes through

upon the fishes' dominion. For there is, indeed, a pleasure, strange and soul-stirring, in exploring old Neptune's halls, and beholding the mysteries of this no man's land; passing by ways untrod since worlds began, beneath a sunless sea.

Truly a wild, exciting life is this of the



THE AUTHOR--EXAMINING THE SHELLS FOR PEARLS WHEN THE DAY'S WORK IS OVER.

a grove of swaying corallines, or mermaid fans, pink and white. He sees the lustrous orange cowrie hiding within the bowl of a grass-green sponge cup—a living vase—and notes the vivid growths, the purple lichens, the blushing anemone.

To the beginner a first descent is like a page from the "Arabian Nights." So bright, so beautiful, and so novel withal, that he walks about with curious delight, forgetful of all the means that enable him to intrude

upon the fishes' dominion. For there is, indeed, a pleasure, strange and soul-stirring, in exploring old Neptune's halls, and beholding the mysteries of this no man's land; passing by ways untrod since worlds began, beneath a sunless sea. Truly a wild, exciting life is this of the pearl fisher, who, for the sake of a handful of pearls, must herd with a lawless crew of cosmopolite outcasts, and exile himself from all that makes life worth living. Lucrative it is, no doubt, if the fates are propitious, but the dangers are manifold. For whether it be cooped in a cockle-shell of a craft, braving the treacherous ocean's surface upon a stark and pitiless coast, or incased in submarine armour, probing the secrets of the underworld, in either case he tempts fate.