



DRAWN BY O. H. BACHER.

SHELLS OF THE PEARL-OYSTER.

FISHING FOR PEARLS IN AUSTRALIA:

EXPERIENCES OF A DIVER.

THAT the pearl was well known and valued as an article of personal adornment in ancient times is amply proved by the frequent references to it in the Bible. Indeed, a Chinese dictionary dating back one thousand years before Christ gives the word and its meaning.

In the days of pagan Rome Pliny writes of pearls as "the most excellent of precious stones." Caligula wore sandals wrought with them, and adorned his wife with strings of the same; and who has not heard of Cleopatra's wondrous pearls, one of which, at a banquet given in Antony's honor, she dissolved in vinegar and drank to her lover's health? Pearls were evidently fashionable in those days, and that the unassuming, modest little gem is still in demand is shown by the thousands engaged in the pearl-fishing industry in tropical waters.

Although pearls are formed in many mollusks, the true pearls of fashion are yielded only by the so-called pearl-oyster, or mother-of-pearl shell, and are found either in the mollusk itself or attached to, or embedded within, the shell. It is believed that most pearls are formed by the intrusion of some foreign substance between the mantle of the mollusk and its shell, which, becoming an irritation, causes the deposit of nacreous¹ matter in concentric layers until the substance is completely encysted. In all probability it is a minute parasite, as pearl-fishers well know that the shells honeycombed by boring parasites are more likely to yield pearls.

¹ Nacre is a beautiful iridescent substance found lining the interior of the mother-of-pearl shells.

The principal market for pearls is Paris. It is supplied by the East and the West Indies, the gulfs of California and Mexico, and Australia, of late years a great number having come from the latter country.

Around the northern and western coasts of Australia the mother-of-pearl shell has been found in great quantities, and it was on these coasts, which are still unexplored, and inhabited only by natives, that the writer gained what knowledge he possesses of pearl-diving as it is followed to-day.

Formerly it was carried on in two ways, by native divers and by dress-divers. A few years ago the aborigines were easily induced to sign a contract binding them to their employer for the diving season, and in remuneration for their labor received the usual pay—food, tobacco, clothing from the neck to the knees, and a blanket. They lived aboard a schooner on the fishing-grounds during the five summer months, diving from small boats without the aid of sinker or other appendage, and in water from twenty to sixty feet deep. Each boat was in charge of a white man, who sculled the boat along and kept his "boys" up to the mark. Excepting an hour for dinner, they remained away from the schooner from sunrise to sunset. A good native diver, if shells were moderately plentiful, would get from sixty to one hundred pairs per day.

A curious feature among the native divers is that toward the end of the season their long, curly, jet-black hair becomes a straw color,

presumably through the action of the salt water and the sun, and forms a ludicrous contrast to their intensely black faces and bodies. Since bleaching the hair has become a "fad" among civilized nations, perhaps the above recipe may prove useful to some of my readers.

Native divers are not in much request at this time, owing to the shell being pretty well worked out in shallow waters, and it has been found by long practical experience that naked

an hour or two if he chooses, can dive much deeper than the natives, and is able to work all the year round. The style of boat universally used for this work is the lugger, which is a good sea-boat and easy to handle. It ranges in size from ten to twenty tons, is filled with air-pumps, and carries a crew of six men and a diver.

The crews are almost entirely Malays, who are brought down from Singapore by the reg-



DRAWN BY W. TABER.

NATIVE DIVERS.

ENGRAVED BY J. W. EVANS.

native divers can not work with any degree of success beyond a depth of ten fathoms. For this reason it will be readily understood that, as the greater part of the shells now found have to be searched for at a depth of water exceeding ten fathoms, they can be obtained only by means of the well-known diving-dress.

During three years spent on the coast of Western Australia I never knew an instance where an aborigine had been broken in to work in a diving-dress, their objection to it arising from some superstition. The greatest depth at which pearl-shells were found in payable quantities when I left, in 1888, was eighteen fathoms, and the main portion of the diving is now done by white men and a few Mongolians.

Dress-diving is by far the most approved method, as the diver can remain under water

ular steamer *Australind*, owned by C. Bethel of London, which runs up and down the coast and supplies the pearlers with provisions, etc., and by which the shells are shipped for the London market. I should mention here that pearl-fishing means not only fishing for pearls, but also for the shells in which they are found, the latter being really the "bread and butter" of the diver, and worth from £100 to £150 per ton. In a ton of shells there is always a quantity of seed-pearls, probably a hundred or more; but good pearls are not to be reckoned on as certainties, as one man may open ten tons and not find a stone worth \$10, while another man may take a small fortune out of a day's gathering. The average weight of a pair of shells is two pounds.

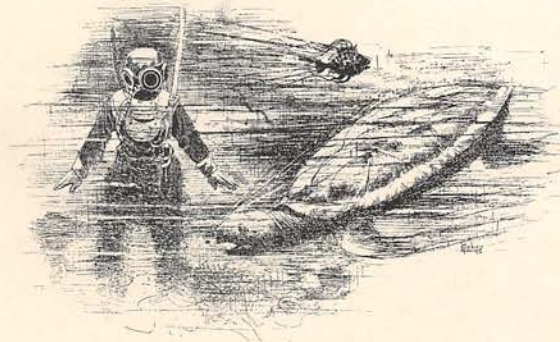
One of the most essential adjuncts to a dress-diver's outfit is a good "tender." It is he who manages the boat, holds the life-line, and looks

DRAWN BY W. TABER.
EXAMINING THE CATCH.

after the general safety of the diver when below. A tender must keep his weather-eye open for squalls and collisions, must attend to signals, and must not get his man mixed up with a diver from another boat. He should so hold the line that he just feels the movements of the worker below, never so tight as to retard free action, and never so slack as to drag on the bottom and probably get foul round a coral-cup's base, and so condemn the diver to a watery grave. Indeed, he should be a wide-awake fellow, quick to act in an emergency and constantly alert.

The mode of working is as follows: A "patch" of shell having been discovered, the boats beat up to the windward edge, and then drift down over it with a fouled anchor; that is, with the anchor upside down, so that it does not catch, but allows the boat to drag slowly over the ground, the speed of drifting being regulated by paying out more or less chain. When the diver finds that he is off the patch he comes up, the boat tacks to windward again, and drifts over it as before. A patch being often one or two square miles in area, it is next to impossible to go over the same ground twice, though the entire fleet of 150 boats often work on the same patch.

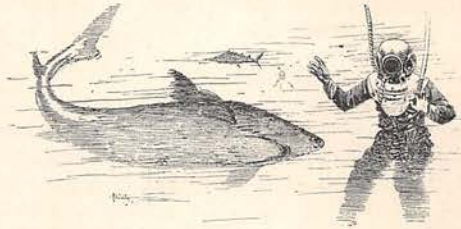
In the year 1885, fortune and a little bark named the *Day Dawn* stranded me in the

DRAWN BY W. TABER.
DIVER AND TURTLE.

almost unknown port of Cossack, Northwest Australia, at that time the headquarters of the pearling-fleet. Cossack was by no means an imposing place. A barren sand-hill, which was an island at high water, with three hotels, a post-office, one general store, and a few shanties along the beach, comprised the city.

It was here that I first became interested in pearling, and a visit to the grounds so infatuated me that I determined to go into the business. After a good deal of haggling I bought a smart little boat named the *Norma* from a diver who had made a pile and was in a great hurry to spend it. After putting the diving-apparatus, provisions, and crew aboard, I cast around for a good diver, and was esteemed fortunate in securing the services of one Joe, a genuine cockney, noted for his luck in getting shell and for the atmosphere of oaths with which he surrounded himself. The adjectives used by Joe were certainly the most emphatic and original that I ever heard. I engaged him on his own terms, which were, \$100 per month, and \$100 per ton of shell collected.

With everything aboard, and a fair wind, it

DRAWN BY W. TABER.
DIVER AND SHARK.

was with a light heart and visions of pearls that I hoisted the sails of my little craft, and steered for the "grounds," some two hundred miles up the coast, where, three days later, we dropped our anchor and became one among many white sails which, in the stillness of the evening air, were reflected in old Father Neptune's mirror.

Next morning we began work, and for a few days all went as well as could be expected. We were on a good patch, and Joe was sending up the shells in a pretty lively fashion; I was tending his life-line, and to supply him with the requisite air the pump was worked by the Malay boys in turns. But suddenly we had to suspend operations, as the boat started to leak so badly that there was nothing for it but to run for the nearest creek and to make repairs. I found that the *Norma* required calking fore and aft, and a couple of bolts put through her keelson; and to get this done I had to borrow a carpenter from one of the schooners, taking a week to finish the



work. In the mean time Joe, his occupation gone for the nonce, had found one that evidently suited him better—that of drinking. Hollands gin (familiarly known as “square face,” on account of the large square bottles in which it is put up) is the favorite beverage among the members of the pearling fraternity, and as Joe was stowing away a bottle a day he was constantly in a “pickled” condition.

Once again we were ready to start, all except Joe, who, knowing I could do nothing without him, wanted a few more days to finish his spree. I coaxed and entreated, but to no purpose; expenses were going on, and nothing coming in, and, after two days of impatience and chafing under my own helplessness, I made up my mind to try to dive myself, and the next tide I left the creek with that intent. The following day I made my first descent, and it is impressed very vividly on my memory.

Long before old Sol had made his appearance above the horizon that morning I crept up on deck to take a survey of my surroundings. The first streaks of dawn were lighting up the eastern sky, and in the distance I could see the dim outline of the “ninety-mile” beach, ninety miles without a hill or tree, creek or habitation—nothing but white, glistening sand. Beneath, the “mighty liquid metronome” lay calm and peaceful, unruffled as yet by the morning breeze, and all around were anchored the pearlers. At sunrise I called the boys, told them of my plans, and chose one named Ketchee for my tender. After partaking of our morning coffee I proceeded, with Ketchee’s help, to don the ponderous diving-dress. The rubber suit, all in one piece, and which one gets into through the neck, was the first article to put on; then the leaden-soled boots and the corselet, to which the helmet is screwed, and

the chest- and back-weights—in all weighing some fifty or sixty pounds. I stepped on the ladder hanging over the boat’s side, and had the lifeline, air-pipe, and helmet attached; then the order to pump was given, and, last of all, the face-glass was screwed up. Oh, that there had been a wrench with which to screw up my courage as well! It had sunk to the bottom of those leaden-soled boots, and though Ketchee tapped the helmet, intimating that all was ready, I felt loath to let go. Thoughts of sharks, octopi, and other monsters of the deep flew through my brain, and I felt sure that the pipe would burst, or the boys stop pumping, or some unforeseen accident would occur.

As I hesitated, thinking of some excuse to have that face-glass taken off again, I glanced up at Ketchee, still undecided what to do, and saw him grinning all over his yellow face at my discomforture. That decided me; I could n’t stand being laughed at

DRAWN BY W. TABER.

ENGRAVED BY GEO. P. BARTLE.

A DIVER AT A DEPTH OF 100 FEET.

by a Malay; so without more ado I grasped the guiding-line firmly, and dropped.

Splash! The water closed over me with a

buzzing sound, and the air whistled in at the top of the helmet with a weird noise, and I saw the bottom of the boat just above me. My ears began to ache, and the pain increased as I slid down and down, until I fairly yelled with the agony caused by the unusual pressure of air on the ear-drums. Still swiftly down I went — would the bottom never touch my kicking feet? At last I reached it with a thud, and instantly all pain ceased, and I scrambled to my feet, full of curiosity.

My first thought was, how foolish I had been to dread leaving the monotonous sea and sky above, when, only ten fathoms below, lay an everchanging scene of beauty — a paradise, although a watery one. The ground I stood upon was rock of coral structure, grown over with coral-cups from minute size to four and five feet in diameter. Sponges as high as one's head, sponge-cups, graceful coral-lines, and sea-flowers of new and beautiful forms, and tinted with all the hues of the rainbow, waved gently to and fro; while, like butterflies, flitting and chasing one another in and out among them all, were hundreds of tiny fishes, so gay with colors that the historical coat of Joseph would have paled beside them.

Truly it was an enchanting scene, so bright, so beautiful, and so novel withal, that I walked about with curious delight, forgetful of all the means which enabled me to intrude upon the fishes' dominion until I was brought to my senses by a sharp jerk on the life-line. This being an interrogation from Ketchee as to whether I was all right, I answered it in a similar way, and, as I did so, a familiar object caught my eye in the shape of an empty beer-bottle. It stood upright on a little ledge of rock, and I could read its flaming yellow label of world-wide reputation. "Ye Gods!" I cried, "what vulgarity! An advertisement even here! Is there no place on the earth or under the waters where one can escape the odious advertiser?" And then for the first time I began to realize my position: my head was aching, and I was breathing in quick, short gasps; I was oppressed, and an uncanny, eery feeling crept over me as I tried to pierce the dim azure of the distance beyond, where the shadowy sea-fans moved so languidly, and my imagination conjured up huge forms in the distance.

I was getting nervous, and had therefore been down long enough; so I gave the signal to pull up, and in a few moments was greedily drinking in the pure, fresh air of heaven through the open face-glass. My nose and ears were bleeding profusely, and I spat a good deal of blood also, but as I had been told that this would happen the first time, I was not alarmed. The pressure had opened a communication between

the mouth and the ears, and I could now perform the extraordinary feat of blowing a mouthful of smoke through my ears, which all divers can do. After this I experienced no pain whatever when descending, and soon became a fairly good diver.

It was on my third descent that I found the first shell. It contained three pearls, which I had set in a ring as a memento, and wore until quite lately, when I discovered that it showed to better advantage on a whiter and more delicate hand than mine, and in the cause of art transferred it thither.

My largest day's work was three hundred and ten pairs of shells; this is rather over a quarter of a ton. The greatest number on record collected in one day is one thousand and five. These were picked up by "Japanese Charley," a little Jap about five feet high, who was al-



DRAWN BY W. TABER.

FINDING THE BOTTLE.

ways tended by his wife, and whose boat was the prettiest model and the smartest sailer in the fleet. The most valuable pearl discovered on this coast is that known as the "Southern Cross" — a cluster of six pearls in the shape of a crucifix which was exhibited at the Indian and Colonial Exhibition, London, in 1886, and was valued at \$50,000. This pearl was found at low water by an old beach-comber, and was sold by him for £10.

The diver, as the reader may imagine, gets many scares when below. A fifteen-foot shark, magnified by the water, and making a bee-line for one, is sufficient to make the stoutest heart quake, in spite of the assertion that sharks have never been known to attack a man in dress. Neither is the sight of a large turtle comforting when one does not know exactly what it is, and the coiling of a sea-snake around one's legs, although it has only one's hands to bite at, is, to



DRAWN BY W. TABER.

AFTER A SQUALL.

ENGRAVED BY H. E. SYLVESTER.

say the least, unpleasant. A little fish called the stone-fish is one of the enemies of the diver. It seems to make its habitation right under the pearl-shell, as it is only when picking them up that any one has been known to be bitten. I remember well the first time I was bitten by this spiteful member of the finny tribe. I dropped my bag of shells, and hastened to the surface; but in this short space of time my hand and arm had so swollen that it was with difficulty I could get the dress off, being unable to work for three days, and suffering intense pain the while. Afterward I learned that staying down a couple of hours after a bite will stop any further discomfort, the pressure of water causing much bleeding at the bitten part, and thus expelling the poison.

One of the strange effects that diving has upon those who practise it is the invariable bad temper felt while working at the bottom; and as this irritability passes away as soon as the surface is reached again, it is only reasonable to suppose that it is caused by the unusual pressure of air inside the dress, affecting probably the lungs, and through them the brain. My experience has been that while below one may fly into the most violent passion at the merest trifle; for instance, the life-line held too tight or too slack, too much air or too little, or some imaginary wrong-doing on the part of the tender or the boys above, will often cause the temper to rise. I have sometimes become so angry in a similar way that I have given the signal to pull up, with the express intention of knocking the heads off the entire crew; but as the surface was neared, and the weight of air decreased, my feelings have gradually undergone a change for the better, until by the time I reached the ladder, and had the face-glass unscrewed, I had forgotten for what I came up. It is evident from the number whom I have known to make a first descent, and who afterward positively refused to try again, that all men are not born to be divers. At one time I had for my tender a brawny young

Scotchman named Rob, a six-footer, about twenty-three years of age, and as fine a specimen of the genus *Homo* as I ever came across. As was to be expected, Rob had a sweetheart in the "auld countree," and the one aim and end of his life was to make a fortune wherewith to return and marry the girl of his choice. He had tried the Kimberley gold-fields, and the Silverton silver-fields, without success, and was now anxious to try his luck at diving. I told Rob that I would put him down the first slack day we had to see how he liked it, and when that day arrived, with a few parting injunctions from me as the face-glass was put on, down he went, I acting as his tender. I felt him land on the bottom and begin walking from the boat; he answered the signals all right, and I anticipated no trouble, but before he had been down three minutes he was foul of the anchor-chain, and I had to pull the anchor and Rob up together. By this time he had become thoroughly frightened, and was screaming inside the dress to be pulled up; he had also lost his presence of mind, and had screwed the used-air escape-valve at the side of the helmet the wrong way, thus keeping in the constant supply of air from the pump above, and the dress was in danger of bursting. As soon as we got him alongside I unscrewed the valve, and he was soon on deck, laughing over his mistakes.

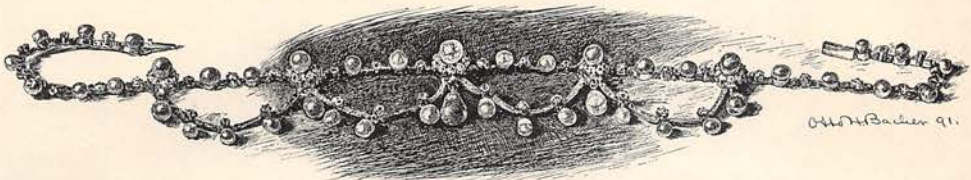
About a week after this he made a second attempt, and this time nearly lost his life. As before, he became alarmed, thought that there was too much air in the dress, and tried to let it out by the escape-valve, but screwed it up the wrong way again, shutting in the air; and then, finding the air still increasing in pressure, his presence of mind again deserted him, and he began to take off the face-glass. Fortunately for Rob, his girl, and my apparatus, he lost consciousness before he quite got it off, and we hauled him to the ladder, kicking and yelling like a madman. He remained delirious for several hours, and when at length he came to his senses, and recovered from his

fright, we concluded that diving was not his forte, and that his fortune would have to be made in some other way.

Though pearl-diving, if the fates are propitious, is a lucrative occupation, its dangers are manifold. In the community in which one has to live may be found some of the "toughest" men on earth. A mixture of all nationalities far worse than one meets on a gold-field, and an exciting calling, without restraint or law, are not likely to form a peaceful community. A diver is always at the tender mercies of his Malay crew, and the slightest accident to his

apparatus, such as the breaking of the pump or the air-pipe, ripping the dress, getting entangled on the bottom, or even losing his presence of mind, may end fatally. Then, again, it is most injurious to the health, some dying from the effects after a few months, while deafness and incipient paralysis are common features. But worse than all these are the terrible cyclones that visit the coast, carrying everything before them, and leaving only a track of death and the flotsam and jetsam of wrecked hopes to mark their passage.

Hubert Phelps Whitmarsh.



NECKLACE OF DIAMONDS AND AMERICAN PEARLS.

KHAMSIN.

OH, the wind from the desert blew in!—
 Khamsin,
 The wind from the desert blew in!
 It blew from the heart of the fiery South,
 From the fervid sand and the hills of drouth,
 And it kissed the land with its scorching
 mouth;
 The wind from the desert blew in!

It blasted the buds on the almond bough,
 And it shriveled the fruit on the orange-tree;
 The wizened dervish breathed no vow,
 So weary and parched was he.
 The lean muezzin could not cry;
 The dogs ran mad, and bayed the sky;
 The hot sun shone like a copper disk,
 And prone in the shade of an obelisk
 The water-carrier sank with a sigh,
 For limp and dry was his water-skin;
 And the wind from the desert blew in.

The camel crouched by the crumbling wall,
 And oh, the pitiful moan it made!
 The minarets, taper and slim and tall,

Reeled and swam in the brazen light,
 And prayers went up by day and night,
 But thin and drawn were the lips that prayed.
 The river writhed in its slimy bed,
 Shrank to a tortuous, turbid thread;
 The burnt earth cracked like a cloven rind;
 And still the wind, the ruthless wind
 Khamsin,
 The wind from the desert blew in.

Into the cool of the mosque it crept,
 Where the poor sought rest at the Prophet's
 shrine;
 Its breath was fire to the jasmine vine;
 It fevered the brow of the maid who slept;
 And men grew haggard with revel of wine.
 The tiny fledglings died in the nest;
 The sick babe gasped at the mother's breast;
 Then a rumor rose and swelled and spread
 From a tremulous whisper, faint and vague,
 Till it burst in a terrible cry of dread,—

The plague! The plague! The plague!

Oh, the wind Khamsin,
 The scourge from the desert blew in!

Clinton Scollard.