AUGUST 1964

The pearl has been so highly thought of by men at all times that even the Bible does not disdain to use it to illustrate the excellence of the kingdom of Heaven itself and at one time only Royal personages were priviledged to wear it. It is, in fact, one of the richest and most admirable works of Nature, and, is formed from the dew of heaven in those parts of the world where it is purest and loveliest. The shell opens when it feels the first rays of the sun and it receives the precious drops of dew, then it descends down into the sea again with its rich booty and produces within its nacreous interior-which itself imitates the colour of the heavens, that wonderful thing the pearl. At certain times when they are moved by the sexual urge, oysters leave the bottom of the sea in droves and swim towards the coasts. Like swarms of bees thew have a queen who is distinguished from her subjects by her size and beauty. Pearl fishers do their utmost to sieze this queen owster. if they succeed, then all they have to do is to capture the leaderless swarm which now wanders around in disorder.

If, like me, you have not seen a 'swimming' oyster, you may ask how such nonsense comes to be printed in the 'News". The truth is that the above statement is one of the first recorded written works on the oyster by a 17th Century naturalist. Even as you now read this and doubt the accuracy of the observations so did scores of others in the intervening 300 years, who in turn were criticized and 'corrected' so that now a great deal is known of the 'lives and loves' of the oyster. The continued advancement of knowledge in all fields could not be maintained if the first steps were not taken for fear of criticism. In the field of submarine biology you, the members of an Underwater Research Group, hold a unique advantage: You 'see' things, alive and in their natural habitat, and it is not only your priviledge, but your responsibility, to record, for the advancement of knowledge, the observations made underwater. Let us have yoyr articles for publication n the 'News"- like our friends who said pearls are 'dew drops' you may be criticized, you most certainly won't be ridiculed.

ADVANCES IN SUBMARINE EXPLORATION

from 'Product Engineering' (Report from W. Tyler)

EArly this month a submarine which looked more like a jellyfish than a man-made craft, dropped 656 feet below the ocean surface, crawled about among the volcanic rocks there, and expending its mechanical arm and claw, sucked a brachiopod from a rocky shelter. This unusual fishing trip retrieved a vestige of the Palezoic Era for researchers to study. The brachiopod is a sea animal that flourished roughly 250-400 million years ago. This monthm the same vehicle has made a few exploratory forays for the Shell Oil Company - their interest is more commercial than scientific. The craft was being tested as a possible tool for underwater oil field operations including oil well heads and other equipment. These two excursions are symbolic of a growing interest in the underwater world, which promises commercial and research treasures as well as cover during naval operations in wartime. The two man submarine mentioned above is known as the Soucoupe and was built under the direction of Jacques-Yves Cousteau. Westinghouse Electric Corp. now has a licensing agreement with Cousteau to develope the craft in the U.S. The Soucoupr has an oblate spheroid hull, made of steel, 3/4" thick. It is surrounded by a free flooding fibreglass facing that houses batteries and electronic componebts outside the hull. Overall the craft is 9.5 feet dia., 5.5 feet tall and weight is 7000lb.

While underwater the Soucoup is propelled by two hydraulic jets, mounted on its sides. The jets rotate to turn the vehicle up, down or right and left. Under thus power the craft prowls along at a speed of about 1 knot for up to four hours. descent is controlled by weights, two of them being used to start a dive. When the desired level is reached one of the weights is dropped, and at that point, the craft is neutrally buoyant. Later on the pilot releases the second weight to surface. At present the craft will dive to 1000 feet. Later models, it is said, will permit dives to 12,000 feet. To facilitate probing these gloomy depths the soucoupe has high powered lights, which will illuminate the surroundings through two pexiglass portholes, and retrieve objects with a mechanical arm and claw.

STONEY CORALS OF THE SYDNEY AREA (Report from C.J. Lawler)

Contrary to popular belief at least three stoney corals occur commonly in shallow waters around Sydney. Such an authorative work as Dakin's 'Australian Seashores', which deals with marine life of the Sydney coast, fails to mention the presence of these corals. The reason for this being, I think, that the depth favoured by the corals is below the usual inter-tidal and sub-tidal ranges previously studiedby shorebound naturalists. It is only since the advent of the intent S.C.U.B.A. diver poking his rubbery features into every nook and cranny of the 15' - 50' depths, that many hitherto unsuspected marine occupants of our shore have been discovered. Cases of these crop up regularly; a zeanthid, previously dredged once in the early 19th century growing profusely at Fairlight, wandering tropical sea urchins at Camp Cove, a West Australian seastar at Fairlight, more and more sightings of rare? tropical cleaner shrimps, barrier reef lion fish and chaetodons at Gunamatta Bay. Of the three species with which I shall deal, the two commonest forms belong roughly in the large family of star corals which are world wide in distribution. Pleasiastria urvillei is the name of the most common coral found around the Sydney seashore and occurs to my knowledge at least as far south as Batemans Bay and of course north until it merges with the tropical coral growths. This species is an encrusting form spreading over rock surfaces in layers up to 1/2" think and from a few inches to a couple of feet across. The most characteristic colour is a brilliant emerald green but a light blue form is farly common and sometimes the two colours occur together in one growth. The usual depth range is between one and four fathoms and specimens growing in this lower stratasometimes have a brownish shading. The polyp mouth and plates exhibit the typical star shaped pattern of the family, excellent examples can be found at Fairlight and Camp Cove. The second species I will discuss is called Coscinarea moneilli, this coral is not nearly so common as the previous one, favouring a deeper habitat of from three to six fathoms. It is not encrusting in the true sense but grows in a large, flat, mushroom-like shape, hugging the rock substrate on which the basal stalk is growing. Specimens have been seen up to 5 feet across although the thickness would be not much more than 1/4" on the edges. The colour is usually a purplish beige. The polyp and plate design follows a somewhat rectangular ripple-like pattern and is not at all like the star design of Pleasiastria. There are several splendid growths near Bare Island. The last species and least common is Astrangia-no specific name being available at this time. This coral looks quite different to the other two, having much larger polyps; it would be best described as a cluster of short, deep bluish tubes, 1/8" wide and 1/8" high growing directly off the rock surface in small patches only a few inches wide. Differing again from the other two, which when dead show a uniform bleached appearance. Astrangia retains the blue colouring in the limey portions. So far I have only found this coral growing at two isolated spots at congwong Bay but have no doubt it occurs elsewhere along our shores.

At the July meeting a talk was given by Ken O'Gower, of the C.S.I.R.O. fisheries department, on the progress results of research on the Port Jackson shark. Thre talk took the form of a round table discussion and was informative as well as entertaining. The number of shark sightings at a reef off Coogee has been recorded in graph form and records of tagged sharks kept, it was interesting to find that a number of tagged sharks have been resighted on the same reef after quite a time lapse. Among the things Ken hopes to learn are the migratory habits of the sharks and to what these migrations are related.

Results of tests on Depth Compensator carried out by members of the U.R.G.

The 'bouyancy compensator' jacket as described in the June news has been used regularly since that time by W. Tyler with a great deal of success while in the best tradition of 'research' an added refinement has been added by J. Jansons. John has fitted a line and valve to the Hookah attachment of his regulator taking the necessary air direct from his cylinder eliminating the need to remove the mouth piece to orally inflate the jacket.

TRAWLER DIVES

Since the publication of the last 'News" the Group has engaged in two trawler dives. On July 12th the dive commenced in calm water on Jibbon Bombora but as the divers surfaced about an hour later they were greeted by rising seas and fierce winds. A second dive was undertaken just offshore from Oak Park in water sheltered from the wind by the adjacent land mass. Two divers were in the water when it was noticed that the boat had drifted having dragged the anchor in the strong wind. The divers were located without difficulty but not before they had explored an extensive area of the rock faces along the coastline where they found several varieties of swimming anemone and several species of uncommon sea stars. On august 9th, repeating out talent for picking bad weather, we again left the mouth of the Port Hacking river in gusty S.W. winds and choppy seas heading this time for Cape solander light. Here in the lee of the high cliffs the water was quite calm and clear water made for a most pleasant diving condition. A feature of the dive was the large number of octapus in the area many laying openly exposed on top of rocks. Towards the end of the dive a large colony of port Jacksn sharks were sighted at the base of a small ledge at a depth of 66 feet. Using the tags supplied by Ken O'Gower and demonstrated at last months meeting, ten of these sharks were tagged and information sheets giving location, etc., have been forwarded to the C.S.I.R.O. These tags are numbered 161 to 170 and group members are reminded to note and report the sightings of any tagged shark to the C.S.I.R.O. fisheries department. A trial of the Group sled was conducted and some modifications have been suggested. The outing was cut short owing to worsening winds and waves and an 'interesting' trip back to Dolans Bay rounded off the day.

The July Group dive held at Camp Cove was poorly attended, there being only four members present. It would appear that weather conditions on the day indicated an 'ocean front' dive, instead of the harbour where dives can be undertaken at times when weather rules out open water dives. The venue of future outings will be chosen just prior to the monthly meetings so that a more accurate appreciation of prevailing weather conditions can be considered in the selection of the site.

The Club transfer is now available and will be issued free to members on receipt of their annual subscriptions.

Forward all news, items, etc., to U.R.G. News,
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