

## JANUARY 1965

It has been proposed that the U.R.G. publish or have published a book to fill the gap which appears to exist in present literature dealing with identification of marine life, both animal and plant.

Most pictorial books deal either with species encountered by shorebound naturalists in the inter-tidal zone or commercially important fish such as one can view at Paddy's Market, and in fact, some of the illustrations in such books may have been taken at this establishment.

It is visualised that the proposed book will depict both plant and animal life in the zone most frequented by the majority of SCUBA divers.

The success of this proposed venture rests with the enthusiasium and talents of ALL members fortunate enough to own a camera. Let us have all you shutter bugs with your heads together on this deal and see what we can come up with.

here inserted a photograph 11 X 8 cm (b&w)  
caption below "Tubularia gracilis?"  
photo by W. Tyler

The above photograph was taken at Bass Point in 60' of water and shows a plant like animal - or is it an animal - like plant - in any case it shows something I have not seen in any book and is an indication of the potential of the proposed book.

### PREPARATION OF SPECIES FOR COLLECTIONS

It is difficult to dive and observe such fascinating things as sea stars, shell fish, urchins, etc., without wanting to collect some of each as mementos and, lets be honest, as an exhibition to relatives and friends of your diving talents.

This is fine and could lead to some serious research on any number of things - provided, of course, your trophies become a collection and are not merely left to rattle around in an unused drawer or worse.

The storage or display of articles can be accomplished in so many ways that I will leave this to the individual concerned.

Dealing firstly with the actual 'taking' of species, a number of points should be kept in mind.

1. Take only what you NEED - no one needs 50 of any one item for display
2. Accomplish your hunting with as little disturbance as possible to surrounding creatures. If a rock is overturned, return it to its original position when you are finished - many creatures will die if left exposed to the elements and/or predators.
3. If, after reaching shore, some of your finds prove unsuitable - return them to the water, don't just drop them on the beach.

For a serious collection, specimens should not be reshaped or coloured but many will need cleaning and will require various methods:-

Most shells may be cleaned by merely boiling in fresh water for about 5 minutes after which the animal can be withdrawn. Avoid sudden temperature changes to prevent damage to nacre.

Cowries and Olives being rather restricted in access can be cleaned by burying for about 14 days in clean damp beach sand and then hosed out.

Chitons shell plates separate if boiled, their shape can be preserved by placing the animal directly into a glass jar of seawater where it will cling to the side, then add about one level teaspoon of epsom salts - this will narcotise the animal and he will die nicely straightened out. Then place in a solution of 8 parts water to 1 part formalin for about 3 weeks (puncture the flesh to ensure penetration), the animal can then be dried out and added to your collection.

Sea Stars should be just covered with sea water then add a pinch of menthol crystals - leave for 1/2 hour after movement has ceased, then treat with formalin solution as for chitons.

Brittle Stars are a real challenge, supposing you manage to keep one intact long enough try narcotising with menthol crystals but preserve in a mixture of 70% pure alcohol and 30% water to which add one teaspoon of glycerine. This solution will leave the specimen a little less brittle and less likely to break in the disconcerting way they have dead or alive.

#### MEMBRANE DRAWS AIR FROM WATER

A thin synthetic membrane that is more permeable to some gases than to others and

that makes it possible to extract air from water is the newest development of the G.E. Research Lab. in the U.S.

Potential applications of the membrane include improved air supply systems for space craft that can expel waste gases and water vapour while holding in oxygen and 'breathing systems for submarines that could extract oxygen and return CO<sub>2</sub> to the water: several other applications are cited for use of the membrane in the steel and chemical industries as well as the field of medicine.

The membrane is less than .001" thick and is made from various materials, the most useful of which is a type of silicone rubber 30 times as permeable as auto tyre rubber would be at the same thickness and 1000 times as permeable as the plastic used to wrap food.

Oxygen passes through such a membrane over twice as fast as nitrogen if ordinary air is brought into one side of a membrane, while the other side is maintained at a lower pressure the gas passing through will be rich in oxygen, eg. if the low pressure side is maintained at 1/15 of atmospheric pressure the gas passing through will contain about 35% oxygen instead of the normal 21%.

from Industrial World

The possibility of a type of diving apparatus employing such a system as described above must be immediately apparent - a photograph accompanying the original article showed a guinea pig enclosed in a plastic box about 1 ft. cube ONE side of which was such a membrane as described - the whole of this is immersed in water and the photo shows the trapped animal to be alive and well.

---

Group activities over the last month have been somewhat restricted due mainly to the vacations of several members, however, one success story can be told. after 6 weeks or so of unsuccessfully trying to entice a sea urchin into the terra cotta flower pot and once having to replace the pot after heavy seas, finally on Jan, 10. an urchin was observed in the pot. The pot will later be removed and the urchin plus associated specie will be delivered to the Aust. Museum.

F.R. DAVIS  
Hon. Editor

167 Karimbla Road  
Miranda.  
524 2661