

August 1966

In recent months the committee have endeavoured to hire a suitable boat to offer members the opportunity of off-shore diving...as yet we have been unsuccessful. If anyone has any suggestions to this end, the committee would be pleased to receive them.

Some little time ago I had the good fortune to be a guest on the boat of Ted Louis, from which I had my, as yet, deepest dive, furthest from shore dive and certainly my most scenic and enjoyable dive.

Editor

OFF-SHORE DIVE

Frank Davis

A rather quick, bumpy ride from Gibbon Beach to a point about 1 1/2 miles south of Cape Baily light and about 2 miles out from Cronulla Beach where we anchored - or rather tied up to a line which was anchored at one end and bouyed at the other.

For some 10 minutes I had been feeling unsettled and as I donned flippers and lung it was touch and go if I could flee the prancing surface and compose myself away from the influence of the waves. A few seconds in the water and all was well. The upper 20' of water held suspended sediments scattering light rays and limiting visibility to about 30': once under this layer the bottom, a further 70' down, was clearly visible.

My first impression, on nearing the bottom, was of astonishing water clarity and unexpected intensity of light and colour. The rock bottom which at first seemed flat resolved into steps, ledges, crevices and beneath many of the large flat rocks crevices became large caves - indeed all the rock features were inside a predominately flat bottom. The impact of this impression must be due mainly to repeated dives down the vertical

cliff face at Shiprock where, as well as this feature, several pinnacles of rock rise above the sea floor.

So numerous and so uniform in size and spacing they appeared cultivated were red cup sponges, red, flat, fan shaped sponges and pale green cylindrical shaped sponges. Scattered among the sponges were Gorgonian fans, red, orange, pink and yellow - these larger, like shrubs in a flower bed of sponges.

Within a space of minutes I saw 2 fire-brick stars, *Asterodiscus truncatus*, a *Plectaster decanus* and then a *Pentagonaster bubeni* which was bracketed by two of the deep red stars I first collected at Bass Point as long ago as October 1964; this specimen has not yet been identified by the Australian Museum and I am led to believe it has been forwarded to America.

Along with Gorgonians I collected a four foot long thin, whiplike growth which could have passed for an immense crayfish antennae. Plate sized growths of *meneilli* corals were sighted at least a score of these, up to no thought by us to be somewhat uncommon.

Fish were generally large and tame - one beautiful Blue Angel was sighted, a large school of pike, groper and of course morwong.

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SEA WASP TOXIN

from AMSA Newsletter

Until recently efforts to find an antidote to counteract the action of sea-wasp stings has been frustrated by lack of a process to extract the very volatile toxin. Almost simultaneously Bob Endean in Brisbane and Jack Barnes in Cairns have managed to isolate the toxin. According to Bob Endean the methods used were quite different and whereas his method has produced greater quantities, Jack Barnes has obtained the toxin in purer form. A great deal of work remains to be done before a counter to the toxin can be produced.

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CROWN-OF-THORNS STARFISH INFESTATION IN THE
VISCINITY OF GREEN IS. (NTH. QLD)

from Australian Marine Sciences Assoc.
Newsletter, June '66

The Crown-of-Thorns Starfish, Acanthaster planci (Linnaeus) is currently causing concern because of its depredations on reef corals on some north Queensland reefs.

The known Queensland range of this species has been extended within the last decade a further 600 miles southwards. During this period, sightings of the starfish on the reef surrounding Green Island (off Cairns) have become more frequent and there has been a very considerable and dramatic rise in its numbers on this reef within the last eighteen months. A wave or 'front' of high population density appears to have moved around the reef off the western end of the cay, leaving behind an almost complete 'kill' of reef corals. As the general area most affected coincides with the venue of the glass-bottomed boat trips, run in connection with the tourist hotel on the island, the hotel management is vitally interested in controlling this 'plague', and are currently employing a scuba diver to remove some starfish from the bombora off the northern side of the cay. Although some 25,000 starfishes have been destroyed to date, with catches up to 374 daily, the diver seems to be fighting a losing battle.

Short visits were made by the author to parts of other reefs in the vicinity of Green Island. No positive indications were obtained of the presence of these starfish on Michelmas and Upolu Reefs, but a high density of them was encountered on Arlington Reef, and extensive coral area separated from Green Island by a channel several miles across.

A. planci feeds by everting the gastric sac through the mouth and applying it over the connective tissue and polyps of a coral colony. The soft tissues of the coral are removed by enzymatic action. Recent attack by a starfish can be detected by the appearance of characteristic white 'feeding scars' on the surface of the colony, resulting from the exposure of the corallum. Where heavy predation takes place these scars may become coalesced over quite large areas.

Apart from the immediate problem posed by the Green Island infestation there are grounds for concern in a much wider field, as the phenomenon may not be a purely local one, and it is feasible that there could be a series of such outbreaks along a considerable extent of the Great barrier Reef. Indeed, Goreau, discussing the activities of A. planci in the Red Sea region, contend that there is a strong probability that this species may, under certain conditions, be an important factor limiting the growth and development of coral reefs.

following an allocation of funds for this purpose by the Queensland Government, Mr. Robert Pearson has recently commenced a detailed study of the bionomics of this species.

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DIVING IN SCOTLAND

Walt Deas

Diving in Scotland is a cold sport but there are clubs with many keen members who dive the year round.

I collected many shells in the early days of diving in Scotland, but it was what was in them that concerned me. Many a cold hour was spent diving for fresh water mussels in the river Tay near Perth. In these shells pearls were sometimes found. There the percentage of pearls to the number of shells was about one in seventy.

Local 'pearlers' who fish from small boats, looking through a glass-bottomed bucket to locate the mussels, worked comparatively shallow river stretches, as their reach is governed by the length of stick they use to catch the mussels and by the water's visibility: we worked the deeper parts of the river and it was here that several good pearls were taken out. A few of the shells landed up as ash trays in various homes but no great thought was given to actually collecting different shells.

Through my travels in my homeland I visited many out of the way places but always like to return to a lovely spot on the west coast called Camas on Caraich, situated between the villages of Arisaig and Morar; it is doubtful if there is any part of Scotland of equal area possessing such a variety of entrancing scenery, from rocky coastline to green isles and creamy sands, deep glens, flat moorlands and rugged hills.

One sunny morning four of us slipped into the cold but clear water. Protected by our rubber suits we set out for a visit to an earlier discovered wreck.

Levelling off at seven fathoms, we passed like ghosts through a shoal of silver-blue mullet and swam out into waters that still retained for us the awe-inspiring character of the unknown. Swimming over a field of weeds we come upon a large piece of corroded wreck, sitting upright on the sea-bed. As we hover over the main cabin a large conger eel (Conger conger) oozed out of a hole and glided down to be lost in the shadows of the hold. Gliding down on a level with the bow we saw an anchor cable with encrusted rusted links which streamed in a curve into the shadow under the hull. With barely moving fins we coasted over the deck. The forehold was burst open and the hatch was missing. A large area of the deck was shattered and the wreckage hung in tiers.

Despite all this the ship was still a wonderland of shape and form, of colour and hue, possessed not only by a green carpet of weed but by sea anemones, lobster, dogfish, pollack and tiny wrasse all making patterns of colour in the shafts of sunlight from the surface. Into the deck house I glided; it held nothing but a large lantern, badly corroded. Back out I headed down to the sea bed and filled my bag with scallops, *Pecten opercularis* and the occasional *Pecten varius*. David Dye and Allan Doyle also joined me in filling their bags with scallops while Roger Bruce was some distance away gathering a mound of edible oysters - *Ostrea edulis*.

All too soon our air supply diminished and we spiralled steadily upwards towards the shimmering surface.

Later in the day many, miles down the coast we collected two types of shells belonging to the cowrie family; they were Trivia monacha and Trivia artica. The colours varied between pink-grey-brown and the monacha had dark markings on it.

Scottish diving recalls to mind little sandy bays with crystal clear water, hills of purple heather, sea birds wheeling overhead and the soft breeze scented with tangle and clover, the underwater reefs in all their colour and delicious scallops devoured with good companions under a moonlit sky.

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A GUIDE TO THE NEW DIVER - PART II

Clarrie Lawler

Gloves are often an essential item of equipment to the diving collector, numerous animals or objects being able to inflict painful wounds to water softened hands. Apart from cuts received from the passive oyster and barnacle shells the most dangerous animal in this respect is the sea urchin. It is able to inflict injuries ranging from infected punctures from its sharp spines to death from the venomous barbs of some species (see last month's Bulletin). Certain corals and anemones are able to cause painful stings, especially in more tropical areas, as are several species of fish.

In the very cold winter water when temperatures can be as low as 55° or 56°F hands can be most distressingly affected and gloves of any description are most welcome. The type of glove chosen is a matter of individual choice, but they should be fairly snug fitting. I can recommend a tough plastic coated fabric glove (trade named Glovelies), ordinary rubber washing-up gloves are also satisfactory but more easily torn. Foam neoprene mittens or gloves are not recommended as you lose all sense of feel and loose fitting cloth or leather gloves tend to bunch up or come off.

Choice of fins is simple, nearly all full-footed fins being satisfactory. Big super-doooper sized fins are too cumbersome for the fossicking diver, if speed is wanted get a boat. Floating fins should also be avoided, if you lose a fin it is better it stays put, not floating up and away in a current.

The matter of correct weighting is often a problem, as a rule it is better to be overweighted. More energy can be expended continually fighting to keep down than gently pushing yourself off the bottom occasionally. Of course by no means strap 30lb of lead weights around you and sink like a stone, the ideal is to be 2 or 3lb over neutral buoyancy at the depth you are working. Your weights will need to be varied to suit your depth, less weight being needed during deeper dives. If you intend diving around the 20' to 40' range you should not float at the surface, cease all swimming movements and your body should slowly sink with breath exhalation. Working between 50' and 70' your weight should be such that you need to actually 'dive' down about 10' - 15' before you begin to sink naturally; between 80' and 100' you should almost have to struggle down the first 20' or 40'.

A lead belt is always the last item strapped on so it can be the first one dropped off, it is your most expendable piece of equipment, it can be made for less than a dollar from bits of brass wire, army webbing and salvaged lead sinkers so do not hesitate to throw it away if you are in trouble. It goes straight down, doesn't float away and can be salvaged later if need be. But don't keep it or it will keep you.

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DIVE AT LITTLE TURRIELL PT. (SHIPROCK)
SUNDAY 31ST JULY 1966 - 9 A.M.

Weather: Day sunny with cold southerly winds and moderate seas on the coast, air temp. at start of dive 55°, water temp. 56°F at surface and at bottom at 60': tide half and ebbing, visibility approx. 20'.

9 Divers Attending: F. Davis, C Lawler, K. Mullard, P. Morrison, M. Meliska, L. and F. Graham, D Powers and P Johnson.

Two zebra fire fish, a *Temnopleurus alexandria* sea urchin and a sample of a hanging sponge growth were collected. The presence of a marked cluster of cephalopod eggs was checked (this cluster first being seen on June 5th and was then freshly laid) some eggs were collected, a living embryo removed and examined under a microscope. It was apparently a cuttlefish, length about 5mm. Electric rays were encountered, slight shocks being received by two divers. The polyps of almost all the *Telesto* alcyonarians were retracted.

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