

Australian divers would pay their annual subscription to DAN. The support from the instructors would be vital and would only be forthcoming if it could be demonstrated that DAN was serving a useful role in the diving community.

Finally it appears that with the recent advent of the DES service in Australia a DAN would have to augment this service in other ways, perhaps the dissemination of medical knowledge to divers and/or the acquiring of data (upgrade "Stickybeak") and the making of this data available to divers and instructors.

### THE SPONGE DIVERS OF KALYMNOS

Bev Biggs and John Hayman

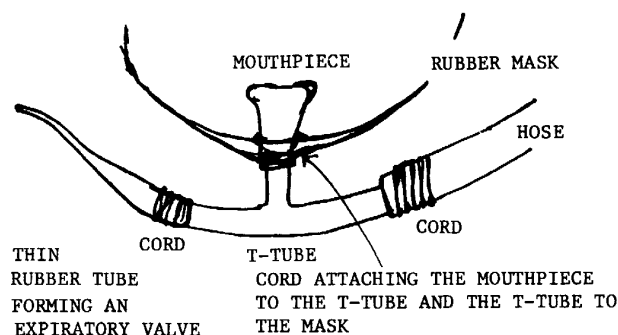
The Greek Island of Kalymnos is in the south east Aegean, 30 km from the Turkish coast. It is a precipitous and mostly barren island, with an area of only 11,000 sq km. Of the population of 14,000, 11,000 live in the port town of the same name. Since Phoenician times the Kalymnians have been seafarers, traders, fishermen and gatherers of sponges.

The history of sponge collection goes back thousands of years. Sponges have been used as padding for armour, contraceptive pessaries, and for more familiar purposes, such as domestic cleaning, since Roman times. Originally sponges could be hooked directly from a boat in the waters adjacent to the island, but they have become progressively more difficult to obtain. Today the sponge divers are at sea for months at a time, travelling to the coast of Libya where most of the sponges are gathered. The sponges are cleansed and processed in several small sponge factories on the island, and exported throughout the world. As well as sponges collected by the local fleet, considerable quantities of sponges are imported in a raw state from Cuba and the Caribbean, processed in the local factories, and exported with the local product.

It seems that sponge collection has always been a hazardous occupation. Diving outfits discarded by the French and British Navies have now been replaced by soft rubber masks and wet suits, but the diving facilities are still primitive. Divers use "hookah" type gear, with compressor and hose. The compressors are in the hold of the boat, driven by the boat's small diesel engine and mounted beside it, with no external air intake. The compression line leads to a reserve tank, which in turn has one or two diving hoses connected to it. These consist of 100 to 120 metres of what appears to be simply better quality garden hose. This hose connects to a mouth piece through a T tube, with a third arm of the T tube forming a primitive valve, sealed off with soft bicycle tubing (see Figure). No regulators are apparent and the apparatus functions with exhaled air and surplus air, if any, being blown off through the primitive valve closing the third limb of the T tube. The mouth-piece is fitted through the rubber of the face mask, with both this and the valve being tied in place with cord. Obvious hazards are carbon monoxide poisoning, if the air being compressed is contaminated by exhaust fumes, and carbon dioxide retention if the diver is forced to inhale previously expired air when insufficient compressed air reaches him.

Two divers working from one compressor, with only a small shared reserve supply, would mean that any "buddy" system would be of very limited value. Using this type of equipment, divers work in depths of 20 to 40 metres, 4 to 6 hours a day, diving every day. The better, more valuable sponges are found at greater depths, so there is a financial incentive for divers to dive deeper and stay down longer.

DIAGRAM OF SPONGE DIVERS' BREATHING APPARATUS



There are several diving fleets operating from the island, each boat carries 2 or 3 divers with up to 50 divers in a fleet. The boats generally leave in April or May each year and return in August or September, at the end of the season, although some boats may come back earlier to unload their collections and then return to the sponge beds. Each year there are one or two diving fatalities, and a much larger number of divers suffer neurological damage from decompression sickness.

There are some 16 doctors practicing on the island, which has a small hospital equipped with a recompression chamber. These facilities, however, are not of much value to divers working sponge beds off the Libyan coast. However, conditions are improving for divers and many divers are now given training in Marseilles. A team from the Massachusetts Institute of Technology visits the island annually and surveys the divers, but there is no record of post-mortem examination after any of these fatal accidents.

A large proportion of the island's residential adult male population suffers effects from "the bends" and has been forced to retire from diving. Most of the workers in the sponge factories are retired divers with varying degrees of disability. We stayed on the tiny adjoining island of Telentos, and here almost all the adult males seem to have neurological problems.

Kalymnos may be reached by twice weekly ferries from the neighbouring island of Kos, which has an international airport and a regular air service to Athens. There are frequent ferries to and from Rhodes, Leros, Samos, Patmos and Piraeus. Motor cycles are freely available on the island and a small boat runs continuously between the township of Massouri on the west coast and Telentos. Our host on Telentos has his taverna and serviced rooms on the waterfront, just north of this boat-landing. An "I love Australia" sticker should be on the wall behind the bar.

The remains of an Italian ship sunk by the British in World War II can be seen with mask and snorkel in the little harbour of Vathis on the east coast. Scuba gear is not available for hire on the island and the use of a boat with hookah apparatus is not recommended. Rhodes is the only island among those mentioned where Scuba gear is available.

Telentos is separated from the main island by a narrow channel, no more than one kilometre wide. The small township lies along the beach with a single huge granite mountain rising behind. Ruins of previous settlements can be found on the lower slopes and the remains of a sunken city can still be found beneath the waters of the channel. Our host on the island, Nikalaos Ellhaus, was a retired diver in his forties with severe spastic paraparesis as the result of a diving accident when he was seventeen. As well as this neurological disability he had arthritic deformity in both knees. Despite these problems he was in good spirits and a very convivial host. Like almost everyone we met in Kalymnos, he had numerous relatives in Australia, mostly in Darwin, and was pleased to meet Australians. His small taverna on the waterfront in Telentos is a place where Greek food and Greek hospitality may be enjoyed.

Kalymnos is an island where the morbidity associated with diving can be seen and studied. Scuba diving facilities are not available, and are generally hard to find on the Greek Islands. However the water is clear and usually calm and there are many rocky coves and inlets where much can be seen with use of a mask and snorkel.

#### FURTHER READING:

Grosvenor MB, Parkes W and Grosvenor ES. The Islands of Greece. *National Geographic*. 1972; 142(2): 147-193.

#### BOOK REVIEW

##### MARINE ANIMAL INJURIES TO MAN

Dr Carl Edmonds  
Wednell Publishing  
54 Shutt Street  
Melbourne  
Price: \$11.95 (paperback)

This book is the sequel to "Dangerous Marine Animals of the Indo-Pacific Region" and presents a wealth of information in an interesting and eminently readable form. It has everything one can imagine needing to know about the multitude of creatures who have good reason to regard us as intruders in their living space, and who we contact at our disadvantage. The subjects start with those which can eat us (in whole or in part), progressing through those who lap us in various ways until we reach those whose Pathian shot hits after we have eaten them. The illustrations are excellent, even though some of the subjects are far from photogenic, and add greatly to the temptation to read on and on beyond the item of initial interest. In many instances a photograph is much to be preferred to too

intimate a contact with the subject, as the author notes in relation to the dental structure of barracuda after showing the fish at a respectful distance.

Detailed advice is given on both the immediate first-aid and the definitive management, as would be expected in a book intended as far more than a library companion. The reader is reminded that it is rare for the animal concerned to be seeking out the diver or swimmer or person wading, though this nice ethical point is of little interest to the victim at the time. Scattered through the text are a number of aphorisms, including the possibly tongue-in-cheek advice to "Handle Old Wives with care". There is only one statement which this reviewer believes few will entirely follow, for the author suggests that the book "should accompany the patient and be given to the medical practitioner who is responsible for management." Shown ... Yes, loaned ... just possibly, but given ... that stretches generosity too far. But perhaps it could be regarded as a gift from a grateful patient, who would then promptly buy a new copy for himself (or herself).

#### "THERE'S NAUGHT SO QUEER AS FOLK"

Anon

A case report from the  
*Project Stickybeak Non-Fatal Incidents File*

It was over the Christmas holidays when I took a man and his wife on my diving boat to an island from which they, and others, intended to dive. He impressed me as being an alert and healthy man about 40 years old, a smart and successful businessman. While the other divers made their first scuba dives of the trip he was observed spearfishing and seemed to be very efficient in the water. Following lunch we intended to dive again and after he described past diving in another state I agreed to give him the loan of my equipment. Before he swam off with the other three divers I checked him out. I remained on the boat.

The plan was for the four of them to surface swim the 40 m to the chosen dive area, but after swimming a little less than half way he became separated from the other three. I saw him lift his head from the water, take his mask off and start struggling, then heard him calling for help. He was about 40 m from me and by the time I'd put on my fins and swam to his position he was 10 ft underwater and going down. He had neither inflated his (Fenzy) vest nor dropped his weight belt, though he had removed his scuba tank and had it over one arm. I inflated his vest and got him to the surface, where he fortunately started to breath again. I towed him to the tailboard of the boat, where he coughed and spluttered for some time before recovering fully.

Discussion afterwards revealed some remarkable and somewhat unexpected additional facts. First, the other divers admitted that they had indeed heard the cries for help. They could not explain their failure to respond. All three were experienced and had no reason to fear for their personal safety had they responded. A possible suggestion is that they did not expect or believe in the possibility of a