

## Provisional Report on Australian Diving Deaths in 1977

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### Overview

Five deaths have been identified but the limitations of the system used to detect the occurrence of fatal incidents (voluntary notification by interested persons, and newspaper reports if the cases occur when nothing more newsworthy has occurred) make it probable that the total is higher. There were two breath-hold diver and three using scuba. Improvident actions contributed to these deaths, gross inexperience being present in all the scuba victims. While this factor can never be eliminated it is hoped that consideration if these cases will alert trained divers to the great disservice they do to a friend if the either lend their equipment or condone the use of their good name to allow an untrained person to obtain and use scuba equipment. The factor of cold was mentioned in two fatalities, another reminder that youth and determination alone are no guarantee of safety. The wearing of buoyancy vests would have made four of these deaths less likely. Several safety violations were present in all the cases, none being the penalty of a single mistake.

### Cases

The following brief reports are based in part on information presented at Inquests and in part on newspaper and other sources. Information available is not always as great as would be desired and readers are requested to involve themselves in supplying information, not limited to fatalities, to broaden the scope of the investigations. Confidentiality is always afforded to such reports.

Case BH 77/1 This victim was with two companions in an area where people dived for abalone. He was reluctant to dive this day because he had no wet suit and the water was cold and choppy. The three divers swam from the beach, separately, to a reef about 100 m off shore. He was seen to surface suddenly from a breath-hold dive, clutch his stomach, and then disappear from sight. One of his friends swam to offer assistance but was unable to find him. The other diver remained ignorant of the incident until he had completed his dive and returned to the beach. The body was not recovered till the next day, by which time it had been damaged by sharks. He was said to have been a good swimmer and to have skin-dived before. It is thought that the body was mauled after death. Through a misunderstanding concerning the degree of body loss, only the external examination of the body was ordered and no internal organs were examined so no type of useful medical evidence is available. Death is assumed to have resulted from drowning.

Case BH 77/2 The danger of diving alone is apparent in this simple tragedy. He was a good swimmer, spear fishing while his father sat in the boat and line fished. His float was observed to be remaining unusually still so, after watching it for about 10 minutes, his father pulled up the line and found his son floating without moving. He brought the body into the boat but resuscitation attempts failed. Water depth was 18-21 m (60-70 ft) and the sea calm. Medical evidence was given that the victim had a probable epileptic history, though a specialist physician who investigated him about 17 months before this incident reports that the E.E.G. was normal. Nevertheless he had been prescribed Dilantin, it being felt that both faints and fits had occurred previously and were possibly stress related. It is not known if he took his suggested medication. Hyperventilation, which was almost certainly practiced by any experienced spearfisherman operating in 18-21 m (60-70 ft), could have led either directly to an anoxic blackout or induced a fit. As he was diving alone, drowning would inevitably follow.

Case SC 77/1 A friend was introducing this young man to scuba diving. The day before he made a 10 minute dive, apparently his first ever. The sea conditions seemed good so the friend called him into the water for what was to be the fatal dive. He had a borrowed scuba set. After about 5 minutes of check-out in the water he was judged to be alright and it was agreed that they would dive and swim across a sandy area, water depth about 4 m (12 ft), to reach some rocks. The friend led the way, about a length and a half in advance of his "pupil". Apparently the leader surfaced to check their position and was unable to find the victim on returning to the sea floor. He searched visually without success until he saw some fins floating at the surface, shortly afterwards finding his friend lying on the sea bed. He brought him to the surface and onto some rocks, semi-conscious and without mask or fins. Resuscitation was attempted by use of the regulator but waves washed him back into the sea several times, till the rescuer himself was in trouble and calling for assistance to get back onto the rocks. He was assisted to leave the water and the victim's body was recovered shortly afterwards from 2.4 m (8 ft) of water, still wearing the weight belt. Neither wore buoyancy aids.

Case SC 77/2 An occupational risk of professional fishermen is the loss of their trawl nets on sea floor wreckage or rocks. On this occasion the fisherman obtained a quotation for recovery of his nets and decided the cost of a professional diver would be excessive. He therefore went to a sports store and hired scuba equipment to enable him to do the job for himself, a procedure he had followed on a number of previous occasions. His first attempt was only partially successful as he used up his air supply before completing the job. He was diving in a tideway so was seen by the harbour police launch crew, who stopped by to suggest, politely, that he should notify the Marine Service of his proposed activities. They also lent him a "Diver Down" flat to display. On this occasion he was wearing a home made weight belt over his overalls, though the next day he wore it beneath them. He was questioned about this by the friend he took with him the next day to manage the boat while he dived, but did not change the arrangement of his equipment. He was wearing desert boots, socks, a skivvy and two jumpers under the overalls, and had a knife, spike, shifting spanner and line attached to his waist. For this second attempt to release his net he hired two tanks to ensure that he was not thwarted by running out of air again. The water was rough and the wind was gusty. He had neither fins nor a buoyancy vest, however there was a contents gauge on the hired tanks. He was seen to surface after freeing the net, appearing about 36 m (120 ft) in front of his boat. It is thought that his mask was off and that the demand valve was not in his mouth when he was seen on the surface. Not unnaturally he seemed to be having some difficulty in remaining at the surface. He disappeared before the boat could be brought to his position. According to the police the victim was an experienced snorkel (breath-hold) diver but had only used scuba about six times, usually to free his nets. The sports store keeper declared that he had frequently hired equipment over the preceding 6-7 years, and that as a "licensed fisherman" he could be expected to know how to dive. Another dive shop had refused to accommodate his request to hire tanks as his qualifications were doubted.

Case SC 77/3 This young man was making his second scuba dive, the first having been in a protected pool used for diver training. His friend had his own equipment and his certification card. The card was presented to ensure the hire of a scuba set, which was then handed to the victim for his use. The water visibility was poor and the sea was sufficiently cold for the buddy (trained) to suggest terminating the dive after about 10 minutes. They were diving from rocks into water up to 11 m (35 ft) deep. After about half an hour, a check of

contents gauges showed that the pressure was down to 500 psi. They started to ascend together. Owing to the difficulty of making a successful exit onto the rocks, which were being washed over by waves, the buddy was fully occupied by his own problems for a short time. When finally out of the backwash, he took his mask off and looked around for his friend but was unable to sight him. A nearby rock fisherman called that he had seen a diver in difficulties so he began an urgent search, but was hampered by the loss of his mask. The mask had been washed away into the white water while he recovered from the exertion of his exiting problems. Other divers joined the search and the body was found about 6 m (20 ft) seawards from the position of last sighting. According to one of the searchers, a strong current was running. It is possible that the victim made an unsuccessful attempt to leave the water but was drowned after being washed off the rocks and tumbled about in white water.

### Discussion

In no case was a buoyancy aid worn. All were either diving alone or had separated from their companion at the critical time. Except for the diver who had an epileptic history and was probably a "post-hyperventilation blackout" victim, a buoyancy aid could have greatly improved the chances of survival. In two cases it is presumed that cold was a significant factor. None of the four scuba divers were in any way adequately prepared to manage their scuba equipment if faced with any untoward event. Case SC 77/2 is almost an object lesson in how not to dive. It is worth noting that the survival of a diver cannot be taken to indicate that his methods and knowledge are worthy of emulation. "Experience" is a teacher to be viewed critically! His death may have been from an air embolism, but as the body was not recovered for a week this could not be demonstrated. It is very unfortunate that these three persons were able to borrow or hire scuba equipment, for had it been otherwise they would still be alive. The need to assess the ease of leaving the water before entering is underlined in the last case, it being the final critical error. As has been noted other reports, there are almost invariably a series of negative factors present which contributed to the fatal outcome. Often the correction of any one would have altered the outcome. One should not only be trained to survive at least moderate misadventures but learn to assess the conditions so as to avoid attempting more than is within the capabilities of the least able of the party. Have a buddy and a buoyancy vest and you are likely to live to tell your own diving story.

### ACKNOWLEDGEMENTS

This report would not have been possible without the help of those who send in notification of incidents and the provision of copies of Inquest proceedings by the Attorney General's and Justice Departments in all States.

### Project Stickybeak

Reports on diving related incidents of every type are desired including fatalities, as safety depends on the recognition of potentially dangerous circumstances while avoidance is still a simple matter. Safety also depends on making the correct response to such situations should they occur, and reports from those who have successfully met the test would share their knowledge with others. Confidentiality is guaranteed to all correspondents.

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