those few divers who are highly trained in it with each other. Break-away is common when difficulties are encountered. In this case it was the donor who suffered pulmonary barotrauma.

3. Starting a dive with non-functioning equipment (the vest) introduces an unnecessary risk factor.

4. The value of the buoyancy vest, the nearby buddy, and alert surface cover are illustrated.

5. Neither diver accepted the significance of the symptoms. DIVERS MUST BE ALERT TO ASSOCIATE POST-DIVE SYMPTOMS AS DIVE RELATED, THAT "DIVING MEDICINE PROBLEMS" DO EXIST AND ARE NOT THE INVENTION OF WRITERS OF DIVING BOOKS.

6. The Neurologist and others were not divers and were seemingly unaware of the relevance of the diving element of the story presented by the victim. SELF PRESERVATION REQUIRES THAT THE DIVER IS ABLE TO COMMUNICATE THE BASICS OF DIVING MEDICINE. Management would have been different had the problem been made known to a Diving Medicine Specialist.

7. This was a case of Pulmonary barotrauma with mediastinal and neck "surgical" emphysema and clinical evidence of air embolism. The cord was affected from the consequences of the CNS "shock" response. This matter will be discussed more fully by Dr John Miller in a later issue.

ACKNOWLEDGEMENTS
This important and informative report has been reprinted virtually as received. Its writer is to be highly commended and is sincerely thanked.

UNUSUAL INCIDENTS FROM THE PAST

Number 2 - 1965

A Tongan's Grim Battle

A Tongan spearfisherman was seriously injured in a curious accident last week, reports the Tongan newspaper, the Chronicle. He is Hausia Sekona, who went night-diving with a group of others aided by petrol lamps.

The Chronicle says that from reports gathered from the other divers, it appears that Hausia was pierced through the head by a haku, a swordfish of the Bar family.

These fish are an occupational hazard to night divers as they are attracted to the light, and skip along the surface at a high speed towards it.

One of the witnesses said that he saw what he thought was Hausia, struggling with what appeared to be a good fish, so he went to his help.

By the time he arrived, Hausia was unconscious, head-down and bleeding profusely from the head.

From this observation, the Chronicle continued, the divers surmised that what had been seen was a haku with its sword jammed in Hausia's head, and struggling to free itself, which it did before they appeared.

The Tongan Medical Department reported that the wound which was 1 inch long and 1 inch deep caused the base of the skull to fracture and ruptured the covering of the brain and spinal cord.

The latest report of Hausia's condition said that he was progressing satisfactorily.

Australian Skindivers Magazine, December 1965

UNUSUAL INCIDENTS FROM THE PRESENT

Number 1 - 1983

COMPRESSED-AIR CYLINDER TAP DEFECT

Noel Roydhouse

On the 12th of January 1983, when diving for scallops in 80 feet of water in the Cavalli Passage, I left the surface with an air cylinder whose gauge indicated 3,300 psi. The flow of air was tested and found to be adequate at the surface. A fairly rapid descent brought me down to 80 feet where my buddy diver looked round, saw me six feet away, and started doing his collecting. At this stage I suddenly had great difficulty in breathing, as though my air supply had run out. A look at the pressure gauge, which now showed 500 psi, and I decided that UP was a good place to be. The only thing I could think of at this stage was that I had not turned the tap on and had descending using the air in my circuit, although that was obviously not feasible. I placed myself in the upright position and as I did not appear to be moving upwards came to the conclusion that I should inflate my buoyancy compensator, and decided that I would split it 50/50. As I did not appear to be rising at the rate which I needed, I dropped a 2 pound lead weight (I have a vest type diving outfit which has the weights in pockets, a built-in compensator and back pack). My rate of ascent increased and I began an emergency ascent. My rate of ascent was equal to my bubbles for the first half, and faster than the bubbles for the second. I used the continuous breathing cycle ascent with an over-emphasis on the expiratory phase. I reached the

surface and held up my right hand to indicate my need for help from the drifting, diving flag equipped, boatman. After a pause of five seconds, he flew into action, started the engine and came to collect me.

The defect was that the tap had only been turned 2.5 turns on instead of six. This gave enough air at the surface but not enough was supplied at a depth of 80 feet. The cause of the malfunction was corrosion on the stem of the tap meeting further corrosion in the seating of the tap once the tap had been unwound 2.5 turns. It was an aluminium cylinder and was due for a check in April 1983. With manipulation, this tap could be turned on fully and it was only because a light touch had been used to open it that the tap had stopped after 2.5 turns.

The moral of this story is that you should always ensure that you tap is turned on fully, and you should know how many turns is full on.

CEREBRAL AIR EMBOLISM CASE REPORT SYMPTOMS OF CEREBRAL AIR EMBOLISM COMING ON FIFTEEN MINUTES AFTER RESCUE

Reprinted from DIVER (Sept 1982) by kind permission of the Editor.

A seventeen year old Oxfordshire diver, Tricia W, suffered a cerebral air embolism after surfacing too rapidly at Stoney Cove, Leicestershire, early this year (1982). She was successfully treated in the Centre's recompression chamber.

The accident took place one Sunday when there were more than 200 divers enjoying the facilities of the cove. Tricia reached the surface in a panic and the rescue boat responded promptly to her screams. She was carried swiftly (feet higher than head) to a hut where her condition was assessed, and she seemed none the worse for her experience. Then, fifteen minutes later, she cried, "Alan, I can't see you". Her vision had gone.

Only three minutes passed before she was locked into the recompression chamber with a first aid man, David Crouch, and compressed to 50m. Surgeon Commander Thomas Shields, of the Royal Navy Diving Division, HMS Vernon, was consulted by phone and he decided to drive immediately to Stoney Cove.

He was impressed with what he saw when he arrived and spent three hours drawing up special tables of pressure and oxygen levels before returning to Portsmouth.

It took 39 hours to complete Tricia's treatment in the chamber and 43 year old David Crouch lost about two stone in weight during his constant vigil at her side. The team outside, which included the Centre's directors, Harry Chapman and Alan King, monitored the compression treatment and kept up a supply of clothes, washing materials, medical needs, food and drink. For the last eight hours the Centre's manager, Andy Fraser, joined the patient and attendant in the chamber as they breathed pure oxygen. This was so that he could help the watch for signs of oxygen poisoning, a risk at this stage of the treatment.

Happily Tricia has made a complete recovery from her ordeal, thanks to the outstanding efforts of all involved.

BS-AC REPORT REVEALS "EPIDEMIC" OF SPINAL BENDS

The British Sub-Aqua Club has been collecting, and reporting on, diving related incidents for longer than any other organisation in the world. Its most recent annual report, presented at the BS-AC Diving Officers' Conference (31 October 1982), maintains the tradition of making the data available for general discussion. It contains Information of all types, not limiting itself to the UK or to BS-AC member incidents, a point to remember when reading it. Despite the efforts of the Diving Incidents Panel, many incidents are but sketchily reported. Nevertheless their inclusion is of real value because they help the discovery of the most commonly occurring problems, or at least the problems divers think are report-worthy. Over the years such a policy has indicated the danger areas of poor boatmanship and of Deep Rescue tests, among other matters. This year the critical danger areas include the incidence of decompression sickness (DCS), particularly the number of Type II cases, of icy water diving, of ENT problems and buoyancy vest (ABLJ) troubles.

There were nine fatalities noted, though no details were available concerning one. Two victims seem to have suffered "Heart Attacks" while alone, three became separated during ascent (one was a failed buddy breathing ascent in which the donor died) while a fourth drowned at the surface after an Assisted Ascent exercise. One diver was lost under ice, while the last case was the result of trauma from the dive boat's propeller. Non-fatal propeller and ice incidents are detailed also.

The thirty three (33) cases of DCS which occurred are a grave warning of slipping standards, particularly as they included nine (9) spinal bends (or possibly 10) and two (2) cerebral bends. There were also five cases where the diver seemingly deserved, but did not suffer, DCS and one case where the diagnosis was later changed to that of a nipped nerve as the cause of symptoms. One case occurred after a chamber "dive" to 165 feet, and one occurred in a 16 year old.