enjoyed Christmas last year won’t be around for the fun in 1982.

The most serious incidents are, of course, those leading to a death and the only good thing I can report is that this year, there were down quite a hit on last year (216), but about the same as the year before that. I do get the impression though that less trivial incidents are being reported. 1/6 of these incidents involve BSAC members, but as the system is heavily biased towards BSAC members, the point is that a buddy might have been in a better position to look for the solo diver’s bubbles; as it says in the Branch report ‘mainly for something to do’. The diver was found 400—500 metres away on the surface with his snorkel in place and ABLU inflated. It was apparent that something was wrong and his limp body was pulled inboard. Both EAR and CCCM were given. The coroner’s verdict was ‘accidental death due to drowning’, probably resulting from a heart attack. He criticized the insufficient surface cover and the fact that the victim was diving alone but added that he could not say if the outcome would have been any different had that cover been there. Fair comment, of course, but to my mind the point is that a buddy might have been able to help and that alone is reason enough for having one.

The Branch report notes that the victim had ‘satisfied the boatman about such diving two years previously’, and appears to prefer to diving alone on a shallow wreck without a surface marker buoy. Satisfied the boatman about what? His ability to breathe sea water in an emergency, assist himself to the surface when unconscious or indicate the position he is trapped in without a surface marker buoy? The whole thing sounds like a lame excuse to justify diving alone.

Why did he have to satisfy the boatman and not the Branch Dive Marshal? Who was in charge of the diving? Obviously, professional boatmen need to be involved in the dive organization but to hand over control and responsibility for the diving often puts them in an unfair position. They have a commercial interest and are keen to please. When a customer proposes to bend or break the rules they must be tempted to go along with him. In some cases their diving standards differ considerably from those recommended by the BSAC but to be fair there are some who insist on high standards and maintain them.

By far the worst and most tragic accident this season also involved a hardhat. Two divers were sitting on the transom of the boat, their feet on a purpose-built platform. One heard a shout from the skipper and turned to see what was happening. The other apparently misinterpreted the shout to be the signal to

DIVING INCIDENTS REPORT
Cdr. Martin Marks, RN, Chairman, Diving Incidents Panel

“Before I plunge into this year’s catalogue of death, disaster and damage, I believe that it is important to consider why the BSAC maintains a record of diving incidents. It is not just aimed at providing material for this presentation but at the much wider and more important target of providing feedback to Branches so that all divers can make use of others’ hard earned lessons and experience. Errors and misfortune thereby reducing the chances of it happening again.

To help with this feedback you will all have a copy of the Diving Incident Panel Report in your delegate folder. A further copy will be sent to all Branches by Headquarters to those Diving Officers who were unable to attend. There will also be a follow up article in ‘Diver’, highlighting the more important lessons as I see them. You might like to consider how you, as a Branch Diving Officer, can contribute to reducing future accidents using this information, and I will make some suggestions later.

This year, which runs from 1st November, 1981 to 31st October, 1982. I have received some 149 incident reports. This is down quite a bit on last year (216), but about the same as the year before that. The records show that fewer incidents are being reported. 1/6 of these incidents involve BSAC members, but as the system is heavily biased towards BSAC Branch reporting, I do not feel that the figure has any significance.

The incidents are grouped together under the month in which they occurred and then given a serial number followed by the year, for example: January 61/82. The reports contain several summaries of incidents under many headings.

Fatalities
The most serious incidents are, of course, those leading to a death and the only good thing I can report is that this year, there were less than the previous one. However, nine British divers who enjoyed Christmas last year won’t be around for the fun in 1982. Six of them were BSAC members.

Once again, solo diving and separation featured prominently. Of the nine, three were diving solo. In other words they deliberately went diving alone without even a manned lifeline. One of these was a BSAC member. Three others were separated during the course of a dive and died alone; again a step forward from last year, when ten out of eleven were either solo or separated. I believe that ‘DIVE ALONE AND DIE ALONE’ is a catchphrase worth impressing on divers.

Two other fatalities involved some other element of failing to comply with normal BSAC Rules or recommendations. One was a tragic accident.

The BSAC member who died solo was on a Branch holiday. On the fatal day, his first dive was for 40 minutes during which he ‘accidentally exceeded his planned maximum depth by going to 27 metres’. It is worth noting that 41 minutes 27 metres is on the absolute limit of the BSAC Table. Being concerned about missed decompression he decided to miss the next dive. Some four hours later, however, he was dropped from the hardboat for a dive alone and without a surface marker buoy. The boat moved some 200 metres away to another group of divers and picked them up when they surfaced. After some 15 minutes the inflatable went limp and was pulled inboard. Both EAR and CCCM were given. A helicopter was arranged and he was flown to hospital where he was pronounced dead.

The coroner’s verdict was ‘accidental death due to drowning’ probably resulting from a heart attack. He criticized the insufficient surface cover and the fact that the victim was diving alone but added that he could not say if the outcome would have been any different had that cover been there. Fair comment, of course, but to my mind the point is that a buddy might have been able to help and that alone is reason enough for having one.

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By far the worst and most tragic accident this season also involved a hardhat. Two divers were sitting on the transom of the boat, their feet on a purpose-built platform. One heard a shout from the skipper and turned to see what was happening. The other apparently misinterpreted the shout to be the signal to
Enter the water, and did so. In fact the shout was to tell another diver in the water to stay where he was and that the boat was about to manoeuvre to pick him up.

The diver who entered the water was struck by the propeller, severing a hand and an arm at the shoulder. He died before reaching hospital.

In fairness to the skipper and Dive Marshal a clear ‘stand by’ and ‘go’ system was in use to indicate when divers should enter the water; reconstruction of the Branch report notes a safe, positive system for controlling the entry of divers into the water from boats? Does it allow for the effect of wind, tides on hearing?

Bends

For the third year in a row the number of reported cases of decompression sickness is up. This year to 36. Thirty-three of these were recompressed, 14 involved dives to 30m or more and 3 the decompression sickness was up, this year to 36. Thirty-three of these featured BSAC members. Of some concern are figures from the Institute of Naval Medicine which reports 83 patients. All incidents featured BSAC members. Of some concern are figures from the Institute of Naval Medicine which reports 83 patients, all amateur/civilians, of whom 50 were positively identified as a bend, arterial gas embolism or pulmonary barotrauma. A few examples:

August 36/82. Concerned a severe bends victim being given in-water recompression overseas and received national press coverage. The diver who organized and took part in the recompression has received several awards. It was carried out in bad weather and involved two dives to 36m for 6 hours with a partially paralysed victim.

However, I believe that it is important to emphasize that there was no chamber available and that the victim had been given the last rites. Such circumstances are never likely (to occur) in the British Isles and this treatment should never be attempted by amateurs. Diving medical advice is that it is likely to do more harm than good. The sheer logistics of supplying the air are well outside the scope of most amateur organizations anyway, apart from the problem of water temperature.

January 61/82. A New Year Eve’s party a diver consumed eight pints of beer and seven double Hascard’s. He was unable to recall going to bed. Over the next two days he undertook relatively shallow dives well inside the no-stop times, although there was a rapid ascent after the first.

For the next ten days he complained of severe head pains and distorted vision. His own doctor told him to go home and relax. When the symptoms deteriorated his Regional Coach became involved and recompression was arranged. Which reminds me of a note in one report this year where a diver’s own doctor had told him that the pain couldn’t possibly be a bend because it never occurs at the joints!

September 132/82. A diver was lifted from a fishing boat and transferred to a recompression chamber by helicopter. He was paralysed from the waist down after a dive to 125 feet for 30 min. He was still so paralysed after treatment.

One hundred and twenty five feet for 30 min - every time I see this simple precaution?

One hundred and twenty five feet is very close to 38m. and at that depth the BSAC/RNPL Table stops at 27 minutes. Even on the RNPL 1972 Table at the back of the Diving Manual the dive is below the limiting line. For those not familiar with the implications of this I quote from the Naval Diving Manual: ‘Following the law the limiting line carries a greater risk of decompression sickness. Intentional diving below the limiting line should not be undertaken unless a compression chamber is available on site and even then only when circumstances justify the risk.’ How can any sport diving justify such a risk?

March 44/82. A dive was carried out to 103 feet for, ‘some 16 or 17 min. It sounded as though he was using an hour glass for a timer. Further quote, ‘he knew that the no stop time for 30 metres was 20 min.’

In fact 103 feet is very close to 32m and the ascent as recorded took 5 minutes instead of 2. Putting all these together careless approximations together produces a dive two minutes over the no stop time. The diver later complained of an ache in the right leg and shoulder and was recompressed.

August 102/82. A diver sought recompression six days after returning from a diving holiday. His problem was later diagnosed as a spinal bend. During the five month period preceding the incident, his log book showed that he had done a lot of diving, with 12 dives below 30m. There was no reference or record of stops. The dives included 35m for 60 min, 38m for 30 min and 40m for 28 min. When asked about stops he told the chamber staff that he ‘swam about shallow to use up his air.’

He is a BSAC Second Class Diver. I wonder if the DO who certified him as being worthy of that qualification is here? It is their life in your hands - a very heavy responsibility.

August 112/82. A spinal bend. The preliminary report indicates a BSAC Branch dive using US Navy Tables, during which 140 min of stops were missed. I await the details with interest. There seems to be a growing trend to use the extra bottom times and shorter surface intervals offered by the USN Tables. I only hope those involved are aware of the extra risk involved. They should read the article by Dr. B. E. Basset in the ‘PADI Undersea Journal’, 2nd Quarter of 1982.

November 40/82. A diver felt weak and complained of a numb right leg after a dive to 25m for 25 min. Despite this, he carried out a second dive to 10m later in the day after which he felt better. His condition returned but worse the following day. He had 24 hours of recompression spread over the next four days and has been advised not to dive again.

July 103/82. A fifteen year old boy was recompressed after suffering a bend. This information came from a HM Coastguard Report and I have had no reply from the local diving club when I asked for more information.

Boats

This year has seen a crop of serious boating accidents, one of which I have already described. At this Conference last year I was asked about an incident which had taken place a few weeks earlier, but at the time I had no details.

This year, April 5/82, there has been a carbon copy incident. In both cases divers were practising man over board drill from inflatable boats, with live bodies. During the course of the drill a diver either fell or jumped and went under the boat when it was moving. In last year’s incident the diver suffered a skull fracture in four places and in this year’s thepropeller sliced through his femur, fractured a fibula and fractured muscle, ligaments and tendons.

June 129/82. A diver was hanging on to the grab rope of a inflatable when the boat suddenly went ahead. The rope gave way and the diver went under the boat where he was struck by the propeller. He needed stitches in the leg. The Cox’n had not realized that he was there.

September 141/82. A diver fell off of an inflatable whilst a novice Cox’n was attempting a crash stop. The Cox’n was being supervised by a Branch member who had just attended a ‘Boat Handling Course.’ The diver suffered from shock and a cut wrist. He was luckier than the others. Boats must be treated with respect, they have the combined hazards of a motor car and Broadhead’s Charter.

Surface Marker Buoys

Based on the reports that I see you would expect that I could show you a slide of a surface marker buoy as a difficult ‘what is it’ question. There are still many Branches who never use them and there were eight incidents directly attributable to them, or at least the lack of them.

July 101/82. Is a good example. Three divers with no surface marker and, surprise, the boat cover was unable to follow their bubbles. The divers surfaced some way from the boat. They later reported that the searching inflatable passed within 108m and, despite their waving and blowing ABLI whistles, they were not sighted. Sea state 4 was reported. The divers were later picked up. There is something to be said for folding flags or a flare attached to your surface marker buoy.

July 117/82. Again, the surface cover lost contact with a pair of divers who had no surface marker buoy. The divers were eventually recovered. The Branch report notes that ‘in future surface marker buoys will be used on all dives’. Does every Branch have to wait for its own personal incident before it takes this simple precaution?

Of course, there is another side to the story. A report that has just come in was too good to wait until next year. On a popular wreck site recently, an anchored inflatable was approached by a second boat. The newcomers asked if the boat was anchored over
the wreck. Perhaps foolishly, with hindsight, the first boat replied 'no', and continued digging. When B looked towards A shortly afterwards he had dropped the demand valve and was blue in the face with staring eyes. Diver B tried to pull A back to the hole but was making little progress and using a lot of air.

He cut himself free and reached open water. Diver A was released shortly afterwards by spectators but efforts to revive him failed. Diver A was a First Class Diver and Advanced Instructor with over 500 dives logged. B was a Second Class Diver.

They broke most of the basic recommendations for diving under ice in having no line to the hole, no standby diver, no competent surface party and failing to return to the hole as soon as a problem developed.

January 35/82. This is interesting as it involves a host of different problems. Two Third Class Divers and a novice were diving under thin ice. The novice’s weight belt slipped down to his knees and o of his buddies repositioned it. The novice then ran out of air and snatched the first buddy’s demand valve — obviously a trained survivor. The two Third Class Divers shared air.

As they surfaced the second buddy moved over to share air with the novice but, after the latter had taken 6 breaths in a row, had to pull back his demand valve. They managed to break through the ice on the surface, which was fairly thick. By this time the novice was unconscious with purple lips and was not breathing at all. However his breathing restored of its own accord as soon as his vis neck was extended as a preparation for EAC. He recovered in hospital.

March 32/82. A novice and a dive leader, who was the Branch DO, surfaced after the novice complained of cold. The novice was instructed to snorkel back to the ice surface whilst the DO continued his dive alone. The novice developed cramp and had to be rescued by other divers.

This was the same Branch DO who featured in last year’s report as considering that Second Class Divers were quite capable of looking after themselves on solo 17m dives.

After all this some of you might think it is safer to stay ashore. Wrong!

Augst 114/82. A diving cylinder was left standing upright and unattended. A passing diver caught her knife in the harness, pulling the bottle over onto her foot and breaking a toe.

May 58/82. A diver broke his finger whilst winching a boat out of the water and October 137/82 a boat trailer accidentally ran down a slip, striking a diver and severing an artery in his leg. A BSAC member was commended for his prompt action in applying a tourniquet until a doctor and ambulance arrived. However, as it was he who accidentally released the trailer he would seem to have been under a moral obligation at the very least.

In the past, I and my predecessors on the Incidents Panel have always emphasized the anonymity of all reports. However, on this occasion I intend breaking with tradition and naming names. I can say a few worried faces are already.

The incident is August 149/82 and resulted when a 14 year old boy got into difficulties whilst swimming in the Thames near Oxford. A search was organized and two members of Dover Sub-Aqua Club who were on a boating holiday offered to help. They went down, snorkelling, over a dozen times into water 10 feet deep, which was cold and murky, until they found the body.

The two were John Sayers who was 16 and Gary Furneaux aged 15. Their efforts were commended by the Thames Valley Police. A splendid effort by two young lads.

And now a cautionary tale of dry suits. January 34/82. A drysuit direct-feed valve jammed open after use. The diver made a rapid ascent, although luckily from only 3 metres. On the surface he was unconscious with purple lips and was not breathing at all. His pillow-and-pin type rubber weight belt snapped. He was rescued by his buddy with bruises on the neck as the only after-effect. The victim pointed out in his report that the air supply button on his direct feed system functioned in this case to have been under a moral obligation at the very least.

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In the past, I and my predecessors on the Incidents Panel have always emphasized the anonymity of all reports. However, on this occasion I intend breaking with tradition and naming names. I can say a few worried faces are already.
What can you, as a Branch DO, do to reduce accidents next year? I have already suggested the quality of Dive Marshals as an area that seems to need attention. Surface marker buoys and boats are other areas needing thought and care.

How about arranging a Branch presentation on this year’s incidents? I’ve done most of the work for you already in the Incident Report, and all you need is a volunteer to give it.

I would like to thank all those who have sent in reports, especially HM Coastguard Headquarters in London who send me copies of all their reports involving divers. Also John Marshall, the staff officer of the St John Ambulance Brigade in Guernsey, who runs the much-used chamber out there.

Finally a challenge. I challenge you all to put the Incident Panel out of business with a safe, incident-free year next year!

Questions
Simon Fraser (Hampstead). “In the decompression accidents, have you made any attempt to test the depth gauges being used to see if they were contributory factors to the incidents?”

Martin Marks. “Not personally, but I know that when HMS ‘Vernon’ are involved in a case, they automatically do this if they can. You have to appreciate that in a lot of cases all the information I ever get is on the back of a scrappy piece of card.”

Paul Baker (Dover). “One or two of the incidents that you have described today have involved people that in the past have caused other incidents. I know that at one time we were talking about expelling these people; has anything been done on that line to either issue warnings from Headquarters or actually expel these people, as it seems to be the same people time after time who are causing the problems?”

Martin Marks. “My policy is, and I am sure that Tony Dix will hear me out, that when I do come across something that I believe to be very dangerous, then I write privately to Tony. The action to be taken is then up to him.”

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**APPENDIX I**

**STATISTICAL SUMMARY OF ACCIDENTS AND INCIDENTS**

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All the above reports are based on information received between November 1, 1981 and October 31, 1982.
APPENDIX 2

SUMMARY REPORTS

Each of the following reports is set out in a standard way: month, serial number, precise, membership, qualification, organisation of dive type of dive, where—country/water, depth in metres (italics), and a set of numbers which indicate an analysis of the major factors in accordance with the key provided in the report.

KEY

MEMBERSHIP:
B = BSAC, I = Independent, O = no organisation.
C = commercial, N = National Snorkellers Club.

QUALIFICATION:
O = none, S = Snorkel, 3 = Third Class, 2 = Second Class,
1 = First Class, Inst = Instructor.

ORGANISATION OF DIVE:
C = Club/Branch, P = Private, O = none,
Comm = commercial, H = holiday.

TYPE OF DIVE:
B = boat, Sh = shore, Sn = Snorkel, D = drift,
T = training drill, O = none.

LOCALITY:
H = home, A = abroad, F = freshwater, S = sea, L = land,
P = Swimming pool.

DEPTH IN ALL THE ABOVE:
In Metres (italics), X = UNKNOWN OR NOT RELEVANT.

November 2/82: Fatality. Buoyancy problems caused separation during assisted ascent exercise. Victim reached surface but was in difficulty, having lost contact with his D.V. Buddy unable to release his weightbelt because of thrashing arms. Victim then sank. Body recovered about one hour after the assisting buddy spun in his own weightbelt. B.S.C. Sh/H/F.17.24.30.59.

November 15/82: Pregnant diver became breathless during "G" test. Attributed to tightness of wetsuit B.S.C.T. H/F. 1.29.34.59.

November 16/82: DV failure amongst two at 120ft. Successful assisted ascent B.2.C.Sh.H/F.37.1.18.32.33.58.

November 17/82 Novice suffered disorientation during dive. Perforated eardrum and prior-to-dive ear infection diagnosed. B.S.C.Sh.H/F.20.6.20.27.42.

November 19/82 Diver panicked in dark low viz; confused signals as buddy blinded by torch. Buoyant ascent without ill effects. B.X.C.B.H/F.1.3.48.63.


November 40/82: Diver felt weak and had numb right-leg after dive to 25m for 25mins. Despite this he carried out second dive to 10m later in the day after which he felt better. Condition worsened next day. Twenty hours of recompression spread over four days. Advised not to dive again. B.3.C.B.H/S.23.11.27.

December 25/82: Diver lost mouthpiece when buddy line slipped and became trapped under ice in frozen river. Rescued by other divers cutting through ice. Press reports only. B.X.C.Sh.H/F.19.23.24.25.58.66.


December 30/82: Divers separated and one surfaced through ice and panicked. Rescued by snorkler breaking through ice to him. B.2.C.Sh.H/F.23.54.66.

December 31/82: Branch reports several DV's frozen in free flow position during ice dives. Higher performance valves most susceptible as to be expected. B.3.C.Sh.H/F.32.37.66.

January 33/82: 2 DV's frozen up after about 5 minutes. Divers surfaced safely. B.X.C.H.F.1.32.37.66.

January 34/82: Dry suit direct feed valve jammed open after use. Diver made rapid ascent although luckily only from 3m. On surface internal pressure prevented him bending arm to disconnect input tube, prevented him breathing and nearly throttled him. Pillar and pin type rubber weight belt snapped. Rescued by buddy. Bruises on neck only after effect. Noted that inlet air valve button on VVDS projects above valve casting so that it is possible for life-jacket to hold button down. B.2.Comm.B.H/1.33.37.67.

January 35/82: Two Third Class divers and a novice diving under ice. Novice weight belt slips around his knees. Re-positioned by buddy. Novice then runs out of air and snatches buddy's DV. Remaining two share air. Second buddy then shares with novice but has to pull back DV after six breaths. Manage to break through the thicker ice they have moved under. Novice unconscious, purple lips and not breathing on surface. Breathing restarted as soon as his neck was extended. Recovered in hospital. B.S.C. Sh/H/F.17.23.24.25.34.47.48.58.61.66.

January 37/82: Two DV's froze up and ABLJ free flowed when used causing uncontrolled buoyant ascent. Diver exhaled hard. No after effects. B.3.C.Sh.H/F.21.3.28.32.37.66.


January 61/82: At a New Year's Eve party a diver consumed 8 pints of beer and 7 double Bacardis. He was unable to recall going to bed. On 1st and 2nd January he undertook two relatively shallow dives well within no-stop times although there was a rapid ascent after the first. Over the next ten days he suffered severe head pains and distorted vision. Own doctor told him to go home and relax. Regional Coach arranged for recompression when symptoms worsened. Treatment successful. B.X.C.B.H/S.11.27.64.


March 32/82: Novice and dive leader surfaced after novice complained of cold. Novice instructed to snorkel back breaking the ice in front of him whilst leader continued his dive alone! Novice developed cramp. Assisted by other divers. B.S.C.H/H.F.5.1.23.57.64.

March 42/82: Semi-commercial shell fish diver with bend in shoulder. Dive schedule:
Day 1 Two dives to 130ft, estimated at 35mins total time with one hour interval and 10 min stop at 10ft.
Day 2 One dive to 130 ft, estimated 15mins; one hour interval; second dive 45ft, 25mins approx. (approx. 10 min stop at 10ft).

All dives carried out on a decompression meter. Both days diving outside limits of BSAC Table. By RN Table II he missed 20 min stops Day 1 and 30 on Day 2. Medical opinion that he was lucky to escape with minor break. O.O.Comm/X.H/S.40.11.27.62.62.


March 44/82: Diver carried out to 103ft for "some 16 or 17 mins", "knowing that the no stop time for 30m was 20 mins" (N.B. 103ft is nearer to 32 metres). Ascent took 5 mins (3 mins in excess of tables) Later developed ac in right leg and shoulder. Recompressed. B.3.C.Sh.H/F.32.11.27.31.62.64.

March 45/82: Burst ABLJ. No details. 28.33.

March 48/82: Novice suffered injury to teeth and gums jumping into pool fully kitted from 1 metre diving board.
Hand over mask but not DV. Diver Training Programme will be altered to emphasise holding mask and DV. B.O.C. T.A./P.20.43.60.


March 59/82: Burst eardrum, lost consciousness at 7m. Successful rescue. B.X.C.X.H/I/F.7.6.20.23.25.

April 49/82: Diver suffered surgical emphysema. Had participated in one hour underwater swim in pool as part of sponsored dive. B.S.C.O.H/P.2.20.27.


April 51/82: Contents gauge sealed at 3000 psi. Gauge later found to be out of air in air only. Approx. 10 released for retail sale. Graduations in black (psi) and red (bar). Sticker on rear notes that “this gauge is fitted with a safety pressure equalising system”. Hose fitting is 1/8in BSPP with a flat bottom, not female cone as is more usual. B.3.C.B.H/S.22.4.33.37.

April 53/82: Coastguard, helicopter and lifeboat involved in search for two missing divers. Recovered by helicopter. Diving party had no knowledge of local tides, carried no flares and boat ran out of fuel. O.X.X.B.H/S.13.14.15.21.23.37.40.43.

April 55/82: Dive boat assists in search for lost boy swimmer. B.C.B/H/S.23.51.

April 56/82: Branch boat tows in another. B.C.C.B/H/S.8.

April 57/82: Diver badly injured by outboard propeller after falling overboard whilst practising man overboard drill. Propeller sliced through femur, fractured fibular, lacerated muscle, ligaments and tendon. B.C.B.H/S.8.12.20.52.[DIP comment - live victims should not be used for man overboard practice].

April 65/82: Lone diver without ABLI went “finning and walking” along rocky shore to find inflatable which had been swept away. Rescue services alerted when he failed to return as it got dark. Diver found and boat recovered B.3.C.C.B/H/S.8.13.14.16.21.51.

April 74/82: One diver separated from group of 3 and then seen surfacing rapidly. Diver cannot remember surfacing. Fint dive with new direct feed ABLI. B.X.C.C.H/F.1.13.3.30.35.54.58.

April 76/82: Two 3rd Class divers at 34m failed to note their dive time. Neither did the surface cover. Estimates ranged from 13 to 24 mins. Expedition leader instructed them to re-enter and decompress! No after effects. Excellent, detailed Branch investigation and report. B.3.C.C.B./H/S.34.10.31.64.[DIP comment: re-entry decompression is not a recommended practice for amateur divers, even if there are no symptoms.]

April 83/82: Diver carried out buoyant ascent after running low on air. No after effects. B.3.C.C.B/H/S.6.34.7.54.

May 4/82: Out of air. Diver unable to operate reserve on hired cylinder. Emergency ascent. B.3.3.H.B.A/S.22.3.35.43.47.60.


May 60/82: BSAC branch boat rescues two divers half a mile off shore. No shore party, no boat cover, no ABLI on one diver, no air on surfaced, no knowledge of tides. One diver had received no diving training. O.O.P./H/S.23.28.43.47.55.60.


June 62/82: Near miss by skier on snorkeller. Snorkeller was Apparently using an orange buoy, no flag on boat cover. Several ski boats in the area. B.X.X.B.H/S.8.16.56.

May 68/82: Diver dived straight after dive to 25m. Buddy had surfaced earlier (!) and diver was noticed to be behaving strangely when he returned to inflatable and then became unconscious. Shortly afterwards his breathing stopped as did his heart. CCCM restarted heart and breathing. Taken to hospital where air embolism was diagnosed. Overfast ascent suspected.

June 8/82: Diver developed slight tingling in the fingers after missing 5 mins of stops after dive to 27m. Symptoms worsened over next few days. Recompressed. B.X.C.C.H/S.27.11.27.


June 23/82: Lost divers during drift dive. Divers, one of whom was Dive Marshal, had declined the offer of an S.M.B. Subsequent search involved helicopter, lifeboat, inshore rescue boat and 30 small boats. Lost divers swam ashore but were unable to climb cliffs. Swam around cliffs the next morning. B.3.X.X.C.H/S.13.14.15.21.55.

June 24/82: Cave diver bent after missing stops and ignoring altitude effects. Dive was for 15 mins to 46m at 215m altitude. Omitted 20 mins of stops. O.X.X.X.H/F.46.11.27.60.44.

June 70/82: Diver shared air with buddy after DV failed. After one series of breaths diver pushed back shared air and inflated ABLI at 26m. Air embolism - two days in recompression chamber. B.3.C.C.H/F.20.3.11.26.32.33.61.
June 71/82: ABLJ direct feed hose failed in boat after dive. 
Apparent inadequate bonding/crimping of metal fitting to 

June 77/82: Lone diver swallowed seawater after DV 
failures. Managed to reach rocks where he was rescued by a 
local boatman. No boat on shore cover.

X.X.H.Sh.H/S.7.23.32.33.55.57.64.

June 78/82: Divers carried out re-entry decompressions 
(after carrying out dive of 35 mins to 25m) on instructions

June 105/82: Novice's ABLJ direct feed jammed open at 
10m. Novice had presence of mind to operate dump valve 
and ascended in "a not too desperate state". No after 
effects. B.S.C.B.H/S.3.18.28.33.

June 106/82: Overweight novice with faulty direct feed 
connecting piece. Divers given 10 minute stop at 25m, 10 
minute stop at 35m. Once bottom was reached, the diver 
could not see his buddy. Branch dropped shot line and commenc-
ened search. Other boats and helicopter involved in search 
and carry them on all dives" DIP comment - very laudable 
couraged to construct fluorescent orange emergency flags 
and carry them on all dives unless they are considered to constitute 
potential hazard. As on wreck dives. Divers will be en-

July 90/82: Bend recompensed after 14 min dive to 
30m. Assisted to surface by dive leader using his own 
ABU. B.S.C.B.H/S.32.1.3.23.28.30.33.

July 93/82: Type 1 bend after 35 min at 20m. Ache in left 
arm following day which moved to shoulder. Recompres-
sed. B.X.C.B.H/S.11.27.59.

July 97/82: Unconscious diver lifted by helicopter to 
unconsciousness. Diver picked up by passing motor boat. At one stage divers reported that they were only 100m from inflatable, waving and blowing ABLJ whistles but were not seen or heard by boat 

July 103/82: Unconscious diver lifted by helicopter to 
recompression chamber. CCCM given by ambulance crew 
during flight. Embolism suggested. Coastguard report 

July 116/82: Bend. 15 year old boy recompressed. No details. 
B.O.C.B.H/S.11.20.27.60.

July 10/82: Anchored (?) boat drifted 3/4 mile during dive. 
Divers on surface for 15 minutes waiting for pick up. 
B.-C.B.H/S.5.8.52.

July 11/82: Commercial hardboat's diesel tank ran dry 
after five mile return to harbour on one engine 
only as other tank was expected to run out soon. 

July 120/82: Recompression incident. No details. 
B.X.X.X.X.H/S.II.

July 129/82: Diver hanging onto inflatable grab rope was 
infected when the boat suddenly went ahead and the rope 
gave way. He went under the boat and was struck on the 
leg by the prop. Cox'n did not realise diver was there. 

July 147/82: Boat cover lost contact with pair of divers 
without SMB. Extract from Branch Report Recommenda-
tions: "SMB's will be taken on all club diving trips irrespec-
tive of whether a wreck dive is planned or not. SMB's will be 
used on all dives unless they are considered to constitute an 
additional hazard, as on wreck dives. Divers will be en-
couraged to construct fluorescent orange emergency flags 
and carry them on all dives" DIP comment – very laudable 
recommendations although SMB's should be used on wreck 

July 14/82: Snorkellers from hardboat rescued young boy 
stranded on rocky isle by outboard failure. 
B.X.X.X.X.H/S.18.22.

July 84/82: Cerebral bend after 35 min at 70ft; 4 hour 
interval; 45 min at 50ft. Aggravated by two day delay 
before seeking treatment. Limited knowledge of diving 
thory and no proper diving training. 
O.O.P.X.H/S.11.27.60.

July 85/82: Diver received severe head injuries after being 
struck by boat propeller. Last reported to be recovering. 
B.X.C.B.H/S.12.20.52.
August 118/82: Dive planned to 36m for 20 mins with appropriate stops. Diver failed to monitor air and on running out carried out buoyant ascent, ditching set on the way. Carried out re-entry decompression on instructions from boat skipper. No ill effects. B.3.C.B.H/S.36.10.64. [DIP comment: re-entry decompression is not recommended.]

August 119/82: Drowning man rescued by BSAC member. No detail. B.18.22.

August 122/82: Spinal bend with classic 'stagger symptoms after following dives
Day 1 (a) 20 mins @ 120 ft 2 min stop @ 20 ft.
(b) 1 hour interval
(c) 20 mins @ 120 ft 2 min stop @ 20 ft.
(d) One 72 cu ft bottle at 60 ft to decompress
Day 2 (a) 20 mins @ 130 ft 2 min stop @ 20 ft.
(b) 1½ hour interval
(c) 20 mins @ 130 ft 2 min stop @ 15 ft.

Symptoms after first day of severe pain in neck and elbow. Collapsed after second with complete disorientation. Extensive recompression required. Casualty has had no formal diving training and does not use tables for diving.

August 123/82: Diver taken to recompression chamber with suspected bends after "15 to 20 minutes at 25m". No detail. Coastguard report only.

X.X.X.H/S.25.11.


August 126/82: Lone diver reported to be two hours overdue by his wife. Coastguard initiated search by fishing boat, helicopter, divers and shore party. Wife later reported to have left in her car. No sign of missing diver or report of him coming ashore. Assumed to have come ashore.


August 127/82: Fishing vessel reported a lost diver. Helicopter scrambled but diver recovered by own boat.


August 128/82: Divers reported to have lifted live high explosive shells. B.X.C.B.H/S.43.

August 130/82: Overweight diver sunk from 10 to 24 m. Rescued by buddy using victim's ABLJ in controlled ascent B.3.C.B.H/S.24.5.18.23.28.30.

August 135/82: Helicopter search for missing diver who eventually found own way ashore. Coastguard report only.


August 140/82: Bend after less than 23 min at 23m. Recompressed after helicopter lift to chamber. Previous bend history. B.2.C.B.H/S.23.11.14.42.

August 149/82: Two teenage snorkellers commanded by police for their location of a body in 3m of 'cold murky water'. B.S.P.H/S/F.16.18.

September 1/82: Exhausted diver in difficulty on surface.

X.X.X.H/S/X.29

September 18/82: Two divers on holiday advertised for dive buddies and were joined by a third. "We agreed that most of the time we would be diving by himself although on deeper dives on wrecks he would be accompanied by one of us ...." Dive profiles on first day indicate disregard of decompression tables. Third diver suffered paralysis after dive on second day and was recompressed.

2x8 (1x ex-B).3.P.B.H/S/F.11.27.57.64.

September 26/82: Snorkel diver without knife ("he did not bother to take it with him") tangled in string. Freed by buddy. B.S.C.H/S/F.31.

September 46/82: Professional diver carried out four dives to 120 ft, total bottom time 60 mins during 90 minute period. Bend symptoms within 30 mins. Attempted re-entry decompression. Followed by dizziness, nausea and
vomiting. Recompressed for the fourth time! (Not include
ed in analysis – professional diver).

September 121/82: Diver reported to have surfaced
coughing blood after DV failure and 'assisted descent' from 30m.
Helicopter lift to hospital.

September 125/82: ABLJ direct feed fractured at connection
to D.V. as diver reached into a wreck. Carried out free
ascent. B.2.C.B.H/S.1.5.35.

September 131/82: Two lost divers rescued by helicopter
and 'assisted descent' from 30m. September 132/82: Diver reported to have surfaced cough-
ed in analysis - professional diver).

September 133/82: Diver recompressed after deep dive and
pains in arm. Later diagnosed as trapped nerve.

September 134/82: Perforated ear drum during 33m dive.
B.X.C.B.H/S.33.6.20.27.

September 136/82: Diver with minor bends symptoms
picked up by helicopter and recompressed.

September 138/82: Lost divers. Helicopter involved in
search. Outcome not clear in report.

September 139/82: Two divers trapped on rocks by heavy
swell. Branch member snorkelled over from hard boat and
assisted them back. B.X.C.B.H/S.18.23.

FREQUENCY OF INCIDENTS

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<td>Lost diver(s)</td>
<td>23</td>
<td>21</td>
<td>15</td>
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<tr>
<td>22</td>
<td>Rescuer</td>
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<tr>
<td>23</td>
<td>Rescued</td>
<td>24</td>
<td>33</td>
<td>22</td>
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<tr>
<td>24</td>
<td>Resuscitation</td>
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</tr>
<tr>
<td>25</td>
<td>Unconsciousness</td>
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<tr>
<td>26</td>
<td>Embolism</td>
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<tr>
<td>27</td>
<td>Pressure accident</td>
<td>3</td>
<td>52</td>
<td>54</td>
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<tr>
<td>28</td>
<td>ABLJ</td>
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<tr>
<td>29</td>
<td>Breathlessness</td>
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<tr>
<td>30</td>
<td>Buoyancy/weight</td>
<td>6</td>
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<tr>
<td>31</td>
<td>Carelessness</td>
<td>9</td>
<td>28</td>
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</table>

901/82: Diver fell out of inflatable whilst
not recompressed 3 5 I
notice cox'n was attempting a crash stop. The cox'n was
- not recompressed 3 5 I
being supervised by a Branch member who had attended a
boat Handling Course. Diver suffered shock and cut wet
Boat Handling Course does not
suit. The diver suffered some disorientation during a dive
attempt to train instructors and is only the first step
wards becoming a skilled cox'n.

1981 1982

- not recompressed 3 5 I

142/82: Diver needed stitches after slipping on
boat Handling Course. Diver suffered shock and cut wet

146/82: Two missing divers initiated helicopter

148/82: Helicopter and cliff rescue team involved
in the recovery of a diver trapped at bottom of

October 27/82: Diver ran out of air during dive to 46m.
- not recompressed 3 5 I
Shared with buddy but during ascent they struck sirk hole
wall dislodging mask. Further confusion over buddy's
octopus reg and expanding air in ABLJ lead to a buoyant
ascend. No after effects. Trio diving.
B.2.C.Sh.A/F.46.23.12.28.31 (or 46).47.58.61.62.63.

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<tr>
<th></th>
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<td>32</td>
<td>DV performance</td>
<td>9</td>
<td>3</td>
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<tr>
<td>33</td>
<td>Equipment faulty</td>
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<td>26</td>
<td>17</td>
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<tr>
<td>34</td>
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<td>Equipment use</td>
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<td>37</td>
<td>Equipment inadequate</td>
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<td>Fire/explosion</td>
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<td>45</td>
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<td>46</td>
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<td>Bad seamanship</td>
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<tr>
<td>53</td>
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<td>0</td>
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<td>54</td>
<td>Separation</td>
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<td>12</td>
<td>8</td>
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<td>56</td>
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<td>57</td>
<td>Solo dive</td>
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<td>Three diving together</td>
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<td>4</td>
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<td>Low vis. underwater</td>
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<td>64</td>
<td>Disregard of rules</td>
<td>9</td>
<td>24</td>
<td>14*</td>
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<td>False alarm</td>
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<td>2</td>
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<tr>
<td>66</td>
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<td>67</td>
<td>VVDS</td>
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</tbody>
</table>
WHAT IS AN INCIDENT?
Any event involving divers or diving equipment in, or out of
the water where the diver is killed, injured or subjected to
more than normal risk.

INCIDENT REPORTS
If you would like to add to, correct or place a different
interpretation upon any of these incidents, please put it
in writing and send to the address below.

For new incidents, the minimum information that is of use
consists of:
- Date of incident
- Name of victim(s)
- Vicinity of incident
- Nature of incident

All of this can be briefly stated on a Preliminary Incident
Report Card. These are circulated by HQ to branches or
be obtained from the address below.

Much more use is the greater detail that can be set out on
an Incident/Accident Report Form and one is sent out to
all those who send in a Preliminary Incident Report Card.

COMMANDER M. R MARKS RN
MILBURY COTTAGE
24 SWANAGE ROAD
LEE-ON-THE-SOLENT
HANTS PO13 9JW

NAMING NAMES
Information obtained on incidents is treated confidentially
and despite frequent requests at the DO's Conference
names are never quoted. The only exception to this is
where an act of rescue or saving life merits recognition.

A PROPOSED NEW SCHEME OF DIVER GRADES

D. H. Robertson, National Training Officer

"The Board of Examiners have been reassessing our Diver
Training programme for some time now and the purpose of this
presentation is to let you know what their thoughts are and to
open this subject up for discussion.

I would like to start by making a few generalised observations.
1. A large majority of the Club membership never attains the
Second Class Diver qualification. Yet a Third Class diver is
defined as 'a diver under training'.
2. There is often an undue burden placed upon Second Class
divers within some branches to continually take trainees on
their dives.
3. Typically it is now taking trainees about six months to
progress from 'A' test through to their first open-water dive.
4. Dive marshalling and supervision in a number of branches is
below standard, this has been well illustrated in the incidents
report by Martin Marks.
5. First Class Diver no longer has a clear role to play within the
branch structure. Because there is now no clear job for the
First Class diver and this standard is fixed in an entirely
arbitrary manner.
6. BSAC recognised schools are issuing different BSAC
qualifications from those issued by branches, eg.
'elementary' and 'sport' diver. Branches are having some
difficulty in evaluating and thus accepting these
qualifications.

These are a few observations which have been made on some
problems which exist within the BSAC today. There is more than
a grain of truth in each of them I feel. The NDO has recognised
that our Diver Training Scheme has an influence on all of these
problem areas plus quite a few I haven't mentioned. He asked the
Board of Examiners to take a long hard look at the present
training scheme to see if we could improve its effectiveness and
relevance to today's needs without compromising safety.

We are talking about a scheme which is well proven and has
been with us for over 25 years. Like all good schemes it has been
the subject of continual change in the light of circumstances. For
example there used to be a drill called 'dry-suit venting and
buoyancy adjustment', it was taken out of the training programme
because we all started using wet suits. Today I think we have
probably come full cycle and it looks as though there is a need for
this particular drill to return. In the days when this drill was
withdrawn there were only four lectures in the Third Class
Schedule. there are now twelve. We have certainly seen an
increase in the content of the Training Programme since those
days, a 66% increase in lecture topics and a more than doubling in
the dive requirements. This has tended to raise the standards of
the grades themselves and to move them further apart.

I would like to spend a few minutes looking at the present
Training Scheme in a slightly different way.

Figure A is what many of you will recognize as a 'learning
curve'. It says that we learn elementary things quickly and if we
follow the curve, we build up on the elementary knowledge when
progressing to more complicated things. Note that these curves
show that time or experience is the key variable.

A PROPOSED SCHEME OF DIVER GRADES

**TABLE**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MEMBERSHIP</th>
<th>BSAC DEATHS (NON-BSAC)</th>
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</tr>
<tr>
<td>1962</td>
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<td>1963</td>
<td>5,255</td>
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<td>6,813</td>
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<td>1966</td>
<td>7,797</td>
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<td>1967</td>
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<td>1968</td>
<td>9,241</td>
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<td>1969</td>
<td>11,299</td>
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<td>1970</td>
<td>13,721</td>
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<td>1971</td>
<td>14,898</td>
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<td>1972</td>
<td>17,041</td>
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<td>19,332</td>
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<td>22,150</td>
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<td>1975</td>
<td>23,204</td>
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<td>1976</td>
<td>25,310</td>
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<td>25,342</td>
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<td>27,510</td>
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<td>1979</td>
<td>30,579</td>
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<td>1980</td>
<td>24,900</td>
<td>6 (7)</td>
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<td>1981</td>
<td>27,834</td>
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<td>1982</td>
<td>29,599</td>
<td>6 (3)</td>
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</table>

HISTORY OF DIVING FATALITIES

**CHART**

- **Figure A**

- **Level of skill/ knowledge**

- **Time/ experience**

- **Level of skill/ knowledge**

- **Time/ experience**