

DIVING INCIDENTS

Martin Marks - Chairman, Diving Incidents Panel

"Before I start on this annual half-hour of groan and moan, perhaps it is worth asking ourselves how each of us can best make use of the lessons that have been learned the hard way by other divers over the last twelve months. Whilst we may feel a quick wave of horror or even amusement from others' apparent stupidity, ignorance or misfortune, I am sure that many of you will agree that in some cases we can see ourselves, in the past, in similar situations where we were lucky and there was no incident.

What I believe should be our aim is to remove the need for luck as far as possible by good training, sound equipment, thorough planning and sticking to the rules. If the way you currently conduct your diving would allow you or your Branch members to get into the situations similar to any that I am about to describe, then I ask that you consider some way of improving it.

In your delegates folder you should have a copy of my Report (Appendix 1). There are three or four pages of incident statistics followed by a summary of each incident. They are numbered by the month in which they occurred followed by a serial number and the year. For example, the first one is November 42/81. They are listed in chronological order starting from November and running through to October to tie in with this Conference. They are in approximate numerical serial order within each month but because of late information this is not always the case. At the end of each description there is a coded

analysis of the incident. You will find a key to this at the end of the report.

We received 216 incident reports in the last year, of which 203 have been analysed. The difference is accounted for by reports that are illegible, refer to professional divers or foreign amateurs abroad. This is a large increase on last year, but as it covers everything from deaths to a minor engine fault, and we do not know whether the increase is based on more incidents or more reporting, I do not feel that it is too important.

Although I gather information on all amateur diving incidents, you will see that some 160 of the reports refer to BSAC members. Obviously reports from our own Branches are more readily obtainable and tend to dominate the statistics for that reason. We must be careful not to draw the wrong conclusions from a bank of data that is not fully representative.

Fatalities.

This is one area of the statistics that is probably fairly accurate and therefore representative. This year there have been 12 deaths of amateur divers.

What is most significant, though, is that 5 of these were diving alone at the time, and 5 had become separated. Ten out of twelve died alone.

Of the 12, 5 were BSAC members, of whom 4 were separated, none solo.

Whilst any death is one too many, to put that in some sort of perspective I note that the Solent Area Coast-guard reported 12 deaths in that area during the first eight months of this year resulting from people just being at sea and nothing to do with diving.

Let us look at some of these diving fatalities in more detail.

March 71/81. A BSAC novice doing a first open water dive in a quarry was accompanied by an experienced Third Class Diver. The novice had passed A, B and C tests but not D, E and F, although considered ready for E and F. She had done one Third Class lecture 'Principles of the Aqualung', but had not taken a medical examination.

In the quarry the pair became separated in a dense cloud of silt. The dive leader conducted an unsuccessful search and then rose above the silt to look for bubbles but could see none. The remainder of the party with a Third Class Diver as Marshal had all returned to their cars to get changed and he had to get a nearby climber to raise the alarm while he continued to search. The Marshal took over the search from him and found the victim in 8m of water. He gave EAR which was continued with ECM by the Police who arrived shortly afterwards, but the diver was pronounced dead. The inquest was told that the victim's heart stopped as result of extreme shock.

Now, I know that many Branches have to rely heavily on Third Class Divers in training programmes, but if I suggested that you took motoring lessons from an experienced car driver who still needed a provisional licence, you might think it more than strange. A Third Class Diver is a diver under training and must be recognised as such. I am not in any way saying that this was the cause of this incident, but it may well have moved this dive further down the slope of the theoretical Incident Pit.

June 126/81. A diver alone and without a SMB at 35m. He did not surface and his body, as far as I know, has not been found.

June 125/81. Two members of an independent club, brother and sister, were diving in a quarry. They had planned to dive to 30m but ended up at 40m. The brother knocked his demand valve out. According to a local newspaper report he tried to reach his sister's octopus rig and then tried to reach her demand valve to share but failed. He carried out a buoyant ascent and was lucky to be unhurt. His sister was later found dead. I have no further information.

January 45/81. A group of five BSAC divers on a Branch holiday abroad were caught on the surface returning from a dive by a sudden deterioration in the weather. The victim was seen to give the 'OK' signal but then turned over onto his stomach. He was rescued and brought ashore where EAR and ECM were given for

2½ hours but he was pronounced dead. There was some criticism of the time taken for the ambulance to arrive and when it did get there, after 1½ hours, the cylinder of oxygen could not be taken down to the beach as it was bolted down.

The victim had only one fin when rescued, his bottle harness and ABLJ were around his hips. The ABLJ had little air in it and the bottle was empty and loose. He had ditched his aqualung cylinder but the top buckle of his ABLJ was stretched.

Apparently he had a habit of putting his contents gauge through his ABLJ strap. I fear this is not an uncommon habit and I know one prominent BSAC diver who does something similar.

I have also had, via HQ, a letter from a PADI Instructor who was working in the area at that time. During the whole of that week there had been heavy gales and he had been out with a camera taking pictures of surf and spray on that same day. Even the victim's Branch reported that there was a 6 to 10 foot swell which suddenly deteriorated to 15 to 20 feet. The PADI Instructor, who knows the area well, considered it quite unsuitable for diving. He was accompanied by two BSAC Instructors who, he says, supported that view.

Decompression Sickness.

There were 30 incidents reported involving decompression sickness. Of these, 23 were recompressed. Nineteen occurred at 30m or more, 7 were involved in repeat dives of some form and three were carrying out re-entry decompression. Twenty-three were BSAC members.

Comparison with last year is interesting, as it shows a marked increase in reported cases but a smaller increase in those requiring recompression. The increase in incidents involving repeat dives is also very small. This might be construed to mean that diving tables are generally better understood and that divers are getting, recognising or just reporting more minor cases. Perhaps they are just pushing the tables to their limits. One encouraging trend is a marked reduction in the dangerous practice of re-entry decompression.

There has been a wide variety of incidents.

October 51/81. A diver received a skin bend after a dive to 50m in Swithland Quarry. Now, I do not normally report incident locations any closer than 'home' or 'abroad', sea or fresh water, but this one is significant. The diver had not appreciated, I am told, that the quarry is at 104m above sea level and therefore qualifies for altitude diving corrections.

July 158/81. Something more serious. A dive was planned correctly for 15 min at 40m with 5 min stops at 10m and 5m. Divers A and B descended the shotline. B had trouble clearing his ears, so A left him and continued to the bottom

alone. The shot was at 46m and off the wreck, so A moved it some 10m and then a further 6m vertically up onto the deck of the wreck. At this stage he was joined by B who had cleared his ears.

After 19 min, bearing in mind the planned 15 min bottom time, they left the bottom and arrived at 10m with 50 ata in A's twinset. They did 5 min at 10m before A was forced to surface, so he had missed out 20 min of stops resulting from his dive being deeper and longer than planned.

After 10 min on the surface, A began to feel giddy. He re-entered the water and did 10 min at 10m and 20 min at 5m. His symptoms cleared, but back on the surface again he vomited and collapsed.

Shortly before this another diver in the same group, C, developed pains in the legs, also after diving to 40m. He, too, did re-entry decompression. A was recompressed by the Navy and C spent 2 hours on oxygen under medical supervision.

Re-entry decompression is not suitable nor recommended for amateur divers. To do it with prior symptoms is suicidal. This BSAC Branch needs to examine its decompression procedures carefully.

April 85/81. A shell fisherman did two dives to 29m, of 41 min and 30 min, and made one stop of 4 min on the first dive. In doing so he missed 70 min of stops according to RN tables. He surfaced with severe bend symptoms and died before reaching a chamber. He was reported to be relying on a decompression meter subsequently found to be defective.

August 167/81. A BSAC National Instructor carried out a repeat dive to 32m just within the limits of the BSAC table. He is a fit and active diver who does regular deep repeat dives. He developed a shoulder ache but waited until the next day before seeking medical advice. This delay prolonged the treatment.

His depth gauge was later found to be 4m out at 32m, which meant that he had missed out a 5 min stop at 10m and 5m on the second dive only.

When was your gauge last tested? Mike Todd will be talking on this subject later in the Conference.

July 165/81. A diver who had been suffering from 'flu recovered sufficiently to go to a party on Saturday night, where he celebrated his return to health and went to bed at 3am. After 2 1/2 hours sleep, he travelled to the dive site and at 1130am did 53 min at 18m. The no-stop time is 37 min.

He developed partial paralysis of the lower right side within ten minutes of surfacing.

Illness, alcohol and tiredness can all lower our resistance to decompression sickness; this diver qualified on all three counts.

August 52/81. A BSAC diver developed a bend after a 15 min dive to 62m using a decompression meter for the stops. The first 8 min of the dive at depth were spent on his own. He was recompressed.

July 152/81. A BSAC diver did a dive to 33m for 21 min without stops. The tables call for 5 min at 10m and 5 min at 5m. Half an hour after surfacing he developed pains in the hip and knee, followed by vomiting. He sought medical advice, but not until the next day, and was recompressed.

He was a Third Class Diver with ten open-water dives logged, who told the chamber staff that he 'was not very knowledgeable on decompression stops as he had missed the lecture'. One wonders who signed him up for Third Class.

August 160/81. A BSAC diver tangled in a lifting bag and was taken rapidly from 20m to 7m before release. On the surface the diver complained of a headache only, but later began to shiver violently and lose feeling in the legs. Recompression was arranged.

The Branch reported that 'the victim normally suffers from severe headaches and vomiting after a deep dive and then finds a quiet corner to sleep for half an hour or so'. Whatever the cause of this behaviour, it is hardly helpful to any poor Dive Marshal.

Nitrogen Narcosis has not figured to any great extent in this year's report, but August 67/81 more than makes up for that.

A trio was diving to 46m, one of whom was a complete stranger to the other two. He was using borrowed equipment and was heavily overweight. The leader reported that 'on a narcosis scale, they were 8 out of 10'. There were no injuries.

That, to my mind, was a real accident situation looking for somewhere to happen.

As well as being the year of the BSAC Lifeboat Fund, this has been the year of the lifeboat and helicopter search. There were 37 Coastguard alerts, 16 incidents involving lifeboats and 31 with helicopters - all looking for lost divers.

April 87/81. Raspberry of the Year Award must go to the BSAC Branch who forgot to tell the Coastguard that they were back from a dive - but they had given notice of their departure. As they relaxed in a pub miles from the sea, an air and sea search was being launched.

It costs over 25,000 an hour to operate a large helicopter of the type used for these searches. As taxpayers, that comes out of our pockets eventually.

June 126/81. A lone diver with no SMB soon became a lost diver and the RNLI and Coastguard commenced a search. Two and a half hours later he crawled up the beach after swimming ashore.

It was a BSAC Branch dive and he was a Club Instructor and the Branch Diving Officer. At least he had the commendable honesty to write the report.

June 61/81. Two divers with an inadequate SMB were lost in deteriorating weather. There had been no attempt to obtain a weather forecast. Their boat then suffered an engine failure.

The subsequent search involved an RN frigate, two helicopters, a light plane, a lifeboat and several local fishing boats. The divers were rescued unhurt after two hours.

June 124/81. Two divers were lost by their boat cover. They had dispensed with the SMB after it had become tangled. The divers managed to swim to shore and spent the night in a cave. Meanwhile, a search was under way involving a helicopter, a lifeboat and more than 16 small boats.

May 133/81. This was a sea and helicopter search for two missing divers who had been dropped from an inflatable and then left without any cover.

It is interesting to compare these last five incidents with September 213/81.

Three divers were separated from their boat cover when their SMB line parted. On surfacing they fired a smoke flare carried by one of them and were quickly rescued. The Coastguard District Officer commented that 'a personal indicator used sensibly avoided the possibility of protracted and expensive search'.

There seems to be a strange reluctance amongst divers to use a SMB, as if it was a sign of weakness. Yet it is impossible for any boat to be certain of following the bubble trail of one pair of divers in average British coastal waters.

On the other hand there have been three incidents reported where SMBs have been caught up in passing boats, causing the divers to rise involuntarily and rapidly but, fortunately, without injury. In two cases the divers' own boat cover was at fault.

One lesson to be learned is the danger of attaching a SMB line to yourself by a clip or slip knot. Diving knives are not generally designed for the quick draw required in this sort of situation.

What else have THEY been up to?

Well, we have a DO with some fresh new thinking on the abilities of Second Class Divers. On a Branch dive, a diver found three shiny brass portholes, but did not have time to recover them. His Branch DO went in, on his own, to get them up.

The finder of this treasure trove had only 50 ats left in his twin-set but arranged that he would 'pop down to see how the DO was getting on'. While doing so, he got caught up in some ropes and ran out of air. Luckily, he

managed to attract the DO's attention and they carried out an assisted ascent.

In his report the DO commented: "You will have noticed by now that neither of us had dived with a buddy. The reason for this is that on a shallow dive a Second Class Diver is capable of looking after himself." This dive was to 17m!

If the incident alone is not sufficient demonstration to him of how wrong he is, then he should look at September 86/81, where a Second Class Diver died in 2½m of water.

This incident worries me more than the 'cowboy' diver type of stunt. At least most divers can recognise the cowboy for what he is. This DO really seems to believe in what he says, and no doubt the disease is rampant throughout his Branch.

August 186/81. Two divers were at 170ft. A showed B his contents gauge, which read 20 ats. B finished reeling in the distance line that they had been using, which was attached to the bottom of the shot line. He turned back to A and 'was surprised to find that he was no longer there, but heading rapidly for the surface'.

I cannot imagine why! A was lucky to escape with only ear damage. It would seem, to be charitable, that B was suffering from narcosis. The dive, by a BSAC Branch, was carried out using US Navy Tables with which, the Branch report says, all divers and Marshals were familiar.

The US Navy Tables are not designed for use by amateur divers, nor is their use recommended by BSAC.

April 105/81. A novice who had never dived below 15m before was taken to 34m by a Club Instructor diving on French tables. During the descent they were joined by a third diver who had been ascending but had some air left. The novice was not so lucky, he later surfaced with an empty tank.

Clever chaps, the French; they have managed to work out tables that let you stay down longer. There are, however, one or two drawbacks that you should investigate before gambling your health on them.

There is a reference in the incident statistics 'Ears', referring to ear damage. There has been a large increase from 5 reported incidents last year to 14 this year. There does not seem to be any particular underlying trend and causes vary from vague references to difficulty in clearing ears through to buoyant ascent- they will clear your ears alright!

One member is now permanently deaf in one ear after an incident this year. We all know the rules; do not dive with a cold, do clear your ears frequently on a descent, do not wait until it hurts-

but do all our trainees? Perhaps it needs more emphasis.

BSAC Slimmer of the Year Award goes to a diver who, in April (incident 78/81), went for his first dive of the season after a winter slimming campaign. The water temperature was about 4°C and his by now loose-fitting wetsuit did not offer its usual protection. He suffered mild hypothermia.

The boating incidents started in the early Spring with the usual crop of first outing of the year engine failures. It really is quite marked. An engine that has been in store for several months without attention cannot be expected to be reliable.

Later, an experienced instructor fell from his dory when showing some boat-handling course students how to do tight turns. At this stage, the students had not been showed how to recover a man overboard, and had to work it out for themselves with vocal encouragement from the water.

On a more serious note, a diver on another boathandling course received serious head injuries when he fell under a boat as it turned at power.

April 80/81. An outboard engine jumped into gear as it started, says the report, throwing the cox into the sea. The empty boat set off on its own. As the cox surfaced he found that the boat had turned around and was heading straight for him. His raised arm saved him from head injuries but he was badly lacerated. Luckily the engine stalled when the propeller hit him.

May 115/81. A Branch dropped the anchor from their inflatable only to discover that it was not actually attached to the anchor line. So far just embarrassing, annoying and expensive. But, combine that with an engine failure which, of course, is what happened next, and things start to become more critical. All because nobody checked the boat equipment.

April 118/81. Three divers descended from an anchored inflatable onto a popular wreck site leaving the fourth member of their party, a girl, in the boat. When the divers surfaced they did so downstream in a 1½ knot tide and, luckily, were rescued by another Branch's boat. The girl had made no effort to assist them and it later transpired that she had been told to sit and wait for their return. She could not have started the boat anyway, and none of the divers were qualified or approved boathandlers and did not even have permission to use the boat.

Last year at this Conference, Linda Ashmore talked on 'Women in Diving' and drew attention to the fact that a lot of diving equipment is not really suitable for them. February 58/81 reports an incident in which a lady diver got into difficulty during assisted ascent training because of

a large mouthpiece on a demand valve. In trying to get her mouth around it, she swallowed a lot of water and panicked. Her buddy quickly retrieved the situation.

This illustrates the point that mouth-pieces can vary considerably in size. So, ladies, before you persuade the Dive Marshal to pair you off with the new tanned, muscular diver in the Branch, check the size of his equipment!

By now, I hope some of you may be thinking of ways of avoiding becoming an incident statistic, if any of these events sound as though they could happen to you. My predecessor, George Skuse, produced an excellent article in 'Diver' last March, outlining his Seven Rules of Survival. Although only intended as advice, I thoroughly endorse his suggestions, based on this year's incidents.

1. - Dive with a buddy. Stay within 5m of each other whatever the visibility and remain in visual or physical contact in low vis. Remember the 5 divers who died solo.
2. - Stick to the practice of 'one up, all up', whatever the reason. Remember the 5 divers who died separated.
3. - Dive under a SMB at all times, including wreck dives, unless the buoy is a positive danger, and not just a bit of a nuisance.
4. - Always wear an ABLJ. This needs no further comment.
5. - Only dive no-stop dives. A quarter of this year's bend cases did not. You may be interested that this is mandatory in all RN, RAF and Army Sub-Aqua Clubs and many other Branches are following suit.
6. - If you must have a decompression stop, plan the dive beforehand, get someone to check it and then stick to the plan. We have heard of the fate of several who did not. Plan the dive and dive the plan.
7. - Insist that trainees dive only with Second Class divers. Only a Third Class diver should be allowed to dive without a Second Class buddy.

In the report you will find guidance on reporting incidents, and I have attempted to provide a simple definition of an incident - an event involving divers or diving equipment in, on or out of the water where the diver is killed, injured or subjected to more than normal risk.

Some of the most useful reports that I have received are those where, as well as reporting the facts, the Branch has taken the time to reach some conclusion over the cause of the incident. The value of this to the Branch must be considerable, in that they have thought how they can prevent it from happening again.

Such publicity would kill the reporting system stone dead very quickly.

All the reports are treated in confidence and names are never divulged, so there is no point in asking me who the idiot in incident number so-and-so was.

No doubt some of you will be thinking that this incident stuff is always much the same; the same mistakes, the same results, year after year. But have all your Branch members heard it? As a positive step towards incident prevention how about you, as Branch DO, giving a short punchy presentation to your Branch? All the material you need is there. Go back and frighten them to death - or rather frighten them to life!

And that is where I started this talk - preventing incidents by good training, sound equipment, thorough planning and sticking to the rules.

My thanks to all those who have sent in reports; I am sorry that I cannot always acknowledge them. Special thanks to the Coaches who are a regular source of information, HM Coastguard who provide copies of all their incident reports involving divers - including the BSAC Advanced Instructor who got bent in Scotland this August and who has 'Forgotten' to report it - and to John Hinchcliffe for a regular supply of South-coast newspaper cuttings."

QUESTIONS

Ian Juniper (Harlow). "On the decompression accidents that we have heard, how many involved a direct failure of the tables without any further complications?"

Martin Marks. "I do not have the figure here, but I would say not many, if any."

Mr Dighton (Nottingham). "Can you give us any information about a recent fatality in Stoney Cove? I believe that it was during a shared ascent exercise. Do you have any comments on the dangers of this exercise from 20m."

Martin Marks. "I have had one verbal report from HQ so far. I do not have details and it would not be fair to comment. I can think of only one other incident this year involving an assisted ascent."

Roger Horden (Matlock). "Do you have a record of how many incidents involve groups of three divers?"

Martin Marks. "It is in the report; there were 13 this year."

Don Collier. "I was on a dive when someone had to go to HMS 'Vernon'. When we contacted 'Vernon' the duty Lt Cdr instructed us to call a doctor as he could not ready the chamber without medical advice. The doctor took 20 min to arrive, but before then the Coastguard arrived, having been called on '999'. They took over completely and the helicopter was in the area before the doctor. Has BSAC talked with the RN about the standing instructions that first contact must be with 'Vernon', as I believe that this problem is not uncommon."

Martin Marks. "Yes, we have been talking with the RN on these matters. My RN background is completely divorced from diving; I am not a Naval diver."

Tony Dix. "The problem that you identify is a very real one. The whole situation is very complex, as it varies from one part of the country to another. In some areas, it has been recommended that we contact the Coastguard and ask them to be the coordinating agency for the entire rescue."

In recent discussions with the RN, they were very reluctant to agree to this.

If you can give me precise details of the incident, then I can use the example in our discussions with the RN. Alan Watkinson has had several discussions and these continue, although he thinks that the RN believe that a problem does not exist. Any concrete information will be helpful."

APPENDIX 1

ACCIDENTS AND INCIDENTS
OVER A THREE YEAR PERIOD

ITEM	'78	'79	'80	'81
Incidents reported	89	120	151	216
Incidents analysed	81	114	148	203
British incidents	63	105	135	190
Incidents abroad	12	9	9	8
Location unknown	6	0	6	5
BSAC members	53	76	106	160
Non BSAC divers	15	14	22	9
Membership unknown	13	24	17	33
Nat. Snorkellers Club	0	0	3	1
.....				
Total fatalities	12	13	13	12
BSAC fatalities	8	5	6	5
BSAC Branch diving	3	4	2	4
ALL fatalities -				
Solo	5	1	5	5
Separated	5	6	0	5
Underwater		9	7	9
On the surface		4	5	3
Three or more in party		4	1	1
.....				
Divers in the water	83	128	157	
30m or deeper	19	30	18	
50m or deeper		4	51	
1m to 30m		42	42	76
On the surface	12	40	58	
Involving boats	23	21	44	
On land	5	17	6	
Unknown	10	3	28	
Swimming pool			8	6

ITEM	'78	'79	'80	'81
Coastguard alerted	17	34	24	37
Ambulance		8	4	10
Police		5	2	7
Lifeboat		21	14	16
Helicopter	12	22	12	31
HM Coastguard report		35	19	21
Boat incidents -				
Report by Branch		9	17	3
NOT reported by Branch		7	6	3
Club/Branch unknown		13	13	18
Non BSAC club		5	1	3
.....				
Decompression sickness	29	33	18	30
Recompressed	23	32	16	23
Depth reported	19	12	16	24
30m or deeper	12	6	14	19
Repetitive diving	4	2	6	7
Attempted recom- pression underwater		5	6	3
Commercial chamber		5	7	5
Service chamber		27	7	11
BSAC members		13	12	23
Definitely NOT BSAC			4	2
.....				
Ascents	22	25	36	46
Emergency ascents	13	5	6	5
Aborted dives	12	20	11	30
Assisted ascents	12	9	8	11
Buoyant ascents	6	7	5	15

ITEM	'78	'79	'80	'81
Bad seamanship	6	8	3	8
Injury caused	14	8	6	25
Weight/buoyancy	10	3	6	8
Solo diving	9	5	12	26
Separation	9	10	6	14
Resuscitation	4	11	8	7
Narcosis reported	3	2	6	35
Ears	2	4	5	14
Good practice involved			29	13
.....				

Monthly Breakdown.	ALL Fatalities, Bends,		
November	3	0	0
December	6	0	1
January	4	1	0
February	8	0	0
March	7	1	1
April	25	1	1
May	28	1	3
June	27	5	3
July	20	1	6
August	47	0	10
September	14	2	2
October	14	0	3

All the above reports are based on information received between 1 November 80 and 31 October 81.

APPENDIX 2
FREQUENCY OF INCIDENTS

The figures in brackets represent the number of times each occurred in 1980 and 1981 respectively.

Code	Item	'80	'81
1.	Aborted dive	(11)	(30)
2.	Assisted ascent	(8)	(11)
3.	Buoyant ascent	(5)	(15)
4.	Emergency ascent	(6)	(5)
5.	Other ascent	(6)	(15)
6.	Aural barotrauma	(5)	(14)
7.	Pulmonary barotrauma	(5)	(3)
8.	Boat trouble	(18)	(29)
9.	Decompression sickness - not recompressed	(3)	(5)
10.	Recompressed in water	(6)	(3)
11.	Recompressed in chamber	(13)	(26)
12.	Ambulance	(4)	(10)
13.	Coastguard	(25)	(37)
14.	Helicopter	(12)	(31)
15.	Lifeboat	(14)	(14)
16.	Police	(2)	(7)
17.	FATALITY	(13)	(12)
18.	Good practice used	(30)	(13)
19.	Illness	(4)	(15)
20.	Injury	(6)	(25)
21.	Lost diver(s)	(23)	(21)
22.	Rescuer (II)	(5)	
23.	Rescued	(24)	(33)
24.	Resuscitation	(8)	(7)
25.	Unconsciousness	(9)	(1)
26.	Embolism	(2)	(1)
27.	Pressure accident	(3)	(52)
28.	ABLJ	(10)	(10)
29.	Breathlessness	(2)	(4)
30.	Buoyancy/weight	(6)	(8)
31.	Carelessness	(9)	(28)
32.	Demand valve performance	(9)	(3)
33.	Equipment - faulty	(11)	(26)
34.	- fitting	(3)	(4)
35.	- use	(3)	(3)
36.	- wear	(1)	(0)
37.	- inadequate	(5)	(4)
38.	Fire/explosion	(2)	(2)
39.	Foul air	(0)	(2)
40.	Fuel	(1)	(2)
41.	Hypothermia	(1)	(6)
42.	Illness beforehand	(10)	(5)
43.	Ignorance	(4)	(5)
44.	Malice	(1)	(2)
45.	Motor	(8)	(18)
46.	Narcosis	(6)	(4)
47.	Out of air	(10)	(22)
48.	Pre-dive check	(3)	(0)
49.	Repetitive diving	(4)	(6)
50.	Ropes	(0)	(0)
51.	Rough water	(14)	(13)
52.	Bad seamanship	(3)	(8)
53.	Good seamanship	(0)	(0)
54.	Separation	(6)	(14)
55.	SMB absent	(9)	(12)
56.	SMB inadequate	(5)	(5)
57.	Solo dive	(12)	(26)
58.	Three diving together	(4)	(13)
59.	Training drill	(4)	(5)
60.	Training inadequate	(4)	(3)
61.	Sharing	(1)	(9)
62.	Deep dive	(34)	(23)
63.	Low vis. underwater	(1)	(1)
64.	Disregard of rules	(9)	(24)
65.	False alarm	(5)	(2)
66.	Cold	(5)	(6)
67.	VVDS	(4)	(10)

APPENDIX 2 - Continued

SUMMARY REPORTS

Each of the following reports is set out in a standard way :

month, serial number, precis, membership, type of dive, where - country/water, depth in metres (underlined), and a set of numbers which indicate an analysis of the major factors in accordance with the key.

KEY

MEMBERSHIP :

B - BSAC, I - Independant, O - none
C - Commercial, N - Nat. 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 - Fresh water,
S - Sea, L - Land, P - Swimming pool

IN ALL THE ABOVE :

X - Unknown or not relevant

November 42/81 Faceplate of old RN type mask dislodged during Octopush.
B.3.C.O.H/P.2.36.

November 56/81 Apprehension and lack of diving trim led to breathlessness, buoyant ascent from 30m and panic. Quick recovery no after effects.
B.2.C.Sh.H/F.30.3.32.

November 65/81 Perforated eardrum at 5m descending to carry out training drill.
B.3.C.T.H/A.5.6.21.28.62.

December 41/81 Cox in dry suit knocked into water by large wave whilst recovering two divers. Boat washed onto reef and swamped, engine out of action. Ex-cox unable to make headway without fins and swept out to sea. Flares fired. Cox managed to return to boat. Helicopter rescue.
B.2.C.B.H/S.0.8.14.48.54.

December 43/81 Three cylinders knocked into sea by freak wave whilst loading a boat off a beach.
B.X.C.B/Sh.H/S.0.8.54.

December 47/81 Red Sea holiday, four dives in 24 hours.

0933 Dive 1	44m,	bottom time	15 mins.
		dive duration	65 mins.
1509 Dive 2	40m,	bottom time	10 mins.
		dive duration	58 mins.
2010 Dive 3	11m,	night dive,	70 mins.
0600 Dive 4	40m,	bottom time	17 mins.
		dive duration	65 mins.

After ascent from bottom time, remaining period in dives 1,2 and 4 at less than 9m. Shortly after last dive he developed stomach ache, vomiting and diarrhoea. Later pins and needles in arms and hands.

Pins and needles disappeared after breathing oxygen. Later diagnosed as acute gastro-enteritis!

(By DIP - it is not possible to carry out this series of dives using BSAC/RNPL Tables. Time spent at 9m between other dives must be accounted for - see BSAC Decompression Workbook)
B.2/I.H.S.A/5.44.20.28.52.65.67.

December 48/81 Mask squeeze - blotchy patch around forehead and eyes but not nose - nose sealed off by fit of mask.
B.S.C.Sh/T.H/F.21.28.37.

December 49/81 Ran out of air - assisted ascent.
B.3.C.X.H/S.2.34.50.64.

December 68/81 After carrying out a dive to 48m for 12 mins, diver felt numbness in limbs. Diagnosed and treated for decompression sickness but symptoms confused by fact that he was taking antibiotics for a cold and sore throat.
B.X.H.S.S/A.48.11.14.20.45.65.

January 44/81 Octopush player received cut on forehead requiring 10 stitches when sharp mask was impacted onto him.
B.O.C.T.H/P.3.21.36.

January 45/81 FATALITY. Group of five divers caught by 'sudden deterioration in weather', became separated - on reaching shore one diver seen giving OK signal near the water's edge but then drifted out on his front. Brought ashore and EAR/ECM given for 2½ hours until pronounced dead. When rescued had one fin; cylinder harness (without cylinder) and ABLJ both around hips; ABLJ bottle empty

APPENDIX 2 - SUMMARY REPORTS - Continued

and loose; ABLJ top strap buckle also stretched. Diver had habit of putting contents gauge through ABLJ strap. Post mortem indicated drowning. A report from an independent, well qualified diver suggests it was too rough to dive in that area on that day.
B.3.C/H.Sh.A/S.0.12.18.25.31.54.57.58.

January 46/81 Hypothermia. Got wet and cold waiting for dive and after 17 mins. dive in fresh water, became drowsy and lethargic.
B.3.C.Sh.H/F.20.4.44.69.

January 83/81 Three divers picked up from small boat by helicopter after firing red flare. Coastguard report.
X.X.X.B.H/S.0.8.13.14.24.48.

February 73/81 Perforated eardrum.
B.O.C.Sh.H/F.17.6.21.28.62.

February 72/81 Stomach pains after apparently swallowing air during a dive - worsened as he ascended. No lasting effects.
B.2/I.C.Sh.H/F.20.24.28.31.57.61.

February 59/81 Lady diver got into difficulty during assisted ascent training drill because of size of buddy's large demand valve mouthpiece. Assisted buoyant ascent.
B.3.C.Sh.H/F.25.2.3.24.31.37.62.64.

February 69/81 Two divers on shore dive got into rough water on surfacing and were unable to find safe exit onto rocks. Lifeboat called but not used. Eventually landed with help from shore party.
B.3.C.Sh.H/S.0.13.15.22.54.58.

February 50/81 Diver felt chest pains on bottom just before surfacing. 30 mins. at 6.5m. Time 1043. Did not report pains

until 1500. Spent over two weeks in hospital undergoing tests. No positive results - severe muscular strain suspected. Diver had been drinking until 0300 before dive.
B.S.P.B.H/S.6.5.20.

February 60/81 Facemask glass shattered. No injury.
B.X.C.X.H/P.0.36.

February 75/81 Demand valve free-flowed at 31m. Trainee diver made controlled ascent. Water temp 2 - 4°C.
O.O.C.Sh.H/F.31.1.4.19.35.36.

February 101/81 Cox fell into the water from power boat during vigorous manoeuvre.
B.2/I.C.B/I.H.S.0.8.24.34.55.

March 70/81 Diver fainted at the wheel of a car returning from abroad. Car hit a lorry. Hypothermia diagnosed.
B.3.C.B.A/S.20.52.

March 70/81 FATALITY. Diver doing first open water dive in a quarry with a Third Class diver. Lost contact in a silt cloud. Could not find novice again; surfaced; carried out further search; still not found. Raised alarm and third diver took over equipment and then found casualty. Coroner recorded cause of death as a heart attack resulting from extreme shock.
B.O.C.Sh.H/F.8.16.18.22.25.57.

March 76/81 Diver complained of seasickness, loss of normal vision, loss of sensation in one hand; treated in recompression chamber. Generally considered as after effects of a cold. Medical Panel diagnosed a bend.
B.2/Inst.C.S1.H/F.18.11.28.45.

March 77/81 Diver doing forward entry

into pool landed face-down causing glass in NOVA mask to shatter. Minor cuts on eyebrow and hand.
B.S.C.Sn.H/P.21.34.40.

March 90/81 Diver with apparent severe bend. Reported as his first open water dive. No further details.
I.O.P.B.H/S.10.11.12.20.28.61.

March 91/81 Guest at pool night swimming over aqualung training area kicked pillar valve and cut his foot - stitches needed. He had not been briefed on pool organisation.
O.O.C.O.H/P.21.46.67.

March 137/81 Novice burst ear drum. No details.
B.S.C.H/F.X.6.28.

April 18/81 Diver became disorientated during working dive and then displaced weight belt. Free buoyant ascent. No after effects.
B.3.C.B.H/S.15.1.3.33.60.

April 85/81 FATALITY. Diver with severe bend died before reaching recompression chamber after two dives to 29m of 41 mins. and 30 mins. respectively. He made one stop of 4 mins. on first dive, but the dive interval is not known. Reported to be using a decompression meter which was subsequently found to be defective.
C.X.B.H/S.29.9.13.14.18.28.36.60.65.67.

April 20/81 Ran out of air. free ascent, no after effects.
I.3.C.B.H/S.15.1.5.34.50.60.

April 78/81 After a winter slimming campaign, a diver entered water at 4°C in a now loose-fitting wetsuit. Mild hypothermia.
B.3.C.B.H/S.X.37.44.69.

APPENDIX 2 - SUMMARY REPORTS - Continued

April 80/81 Outboard engine jumped into gear on starting, threw cox into water. On surfacing he found boat had turned and was heading for him. Severe cuts on arm but no other injuries.
B.2.C.B.H/S.0.8.21.36.48.

April 81/81 Diver exhausted trying to exit from water. Ambulance called but not needed.
B.X.C.X.H/S.0.32.

April 87/81 Dive Marshal forgot to phone back to Coastguard after a dive. Helicopter search initiated.
B.I.C.B.H/S.0.13.14.34.

April 88/81 four divers on surface for half an hour after boat cover lost track of SMBs. Picked up by another Branch's boat.
B.X.C.B.H/S.0.22.34.59.69.

April 89/81 Engine failure after dropping two pairs of divers. Red, smoke and parachute flares used to attract other Branch boat over half a mile away. Lifeboat launched and eventually towed in both boats after second boat got water in fuel tank. Branch DO and cox are to be commended on a detailed report and comments.
B.X.C.B.H/S.0.8.15.22.24.36.48.59.

April 94/81 Suspected perforated ear drum after Octopush match.
B.S.C.Sn.H.X.6.28.

April 95/81 Divers separated. Dive leader with SMB surfaced but buddy did not. Search organised and diver sighted on surface but not picked up because of engine failure. Flares used and Coastguard alerted helicopter. Diver picked up by another Branch's boat.
B.X.C.B.H/S.0.8.13.14.22.48.57.60.67.

April 97/81 Branch boat ran out of fuel
B.X.C.B.H/S.8.34.43.

April 98/81 Engine failure with divers down.
B.X.C.B.H/S.8.36.43.

April 100/81 One diver of two surfaced up SMB line but boat engine failed and he could not be picked up. Rescued by another Branch's boat.
B.3.C.B.H/S.0.8.12.20.44.48.61.

April 103/81 Engine failure. Towed in by another Branch's boat.
X.X.X.B.N/S.

April 104/81 Unfit diver badly out of breath after loom swim and then started to panic. Towed in by buddy. The diver had not dived for two years in UK, his suit was very tight and the water cold.
B.3.P.Sh.H/S.0.1.24.32.37.

April 113/81 Engine failure. Towed in by fishing boat and cleared rope from its prop in return.
B.X.C.B.H/S.0.8.24.36.54.

April 116/81 Perforated ear drum.
B.3.C.B.H/S.25.6.21.28.

April 117/81 Severe mask squeeze.
B.S.C.B.H/S.15.21.28.

April 118/81 Three divers descended onto wreck from anchored boat (no SMB) where fourth member of the party remained. Divers surfaced drifting down-tide and eventually picked up by another Branch's boat. Fourth member made no attempt to assist as she had been told to sit and await their return and did not know how to handle the boat. None of the three divers were entitled to take away the

Branch boat.
B.3.P.B.H/S.24.58.61.67.

April 148/81 Two divers in water when engine failed. Radio used to summon assistance from Coastguard. Well prepared Branch report.
B.Inst.C.B.H/S.0.8.13.24.48.

April 156/81 Diver dragged to surface from 5m when accompanying hard boat ran over SMB line. No ill effects.
B.I.C.B.H/S.5.34.55.

April 79/81 Breathlessness initiated by very cold water stimulating respiratory centre caused diver to beat demand valve.
B.3.C.Sh.H/F.15.3.32.69.

April 92/81 Two divers surfaced a long way from boat cover and spent 45 mins. in the water.
B.X.C.B.H/S.X.22.58.

April 105/81 Novice who had never been below 15m taken to 34m by Club Instructors (ex-DO and ex-TO) diving on French Tables. During descent, they were joined by a third diver who had been ascending. Novice surfaced with zero ats in cylinder.
B.Inst.P.B.H/S.34.57.61.65.67.

May 3/81 Two members rescued powerboat and para-kiter after kite pulled boat astern and swamped it. Two children who were trapped inside were released.
B.2.X.X.H/S.8.19.23.

May 4/81 Two divers at 30m, one overweighted and had difficulty finning up. Reluctant to use ABLJ. Soon became exhausted. Buddy (?) at 50 ats decided to surface on his own. Overweighted diver sank to bottom (34m) to rest. Found by another pair of divers, breathing heavily

APPENDIX 2 - SUMMARY REPORTS - Continued

and suffering from narcosis. Buoyant rescue ascent. No serious after effects. B.3.C.Sh.H/F.34.3.19.24.33.49.56.63.

May 17/81 'Round window' rupture in ear. Cause not determined. B.O.X.X.H.X.6.21.28.

May 21/81 Ran out of air. Free ascent. B.X.C.B.H/S.15.1.5.50.60.

May 22/81 Ran out of air. Free ascent. B.3.C.B.H/S.15.1.5.50.60.

May 24/81 Pillar valve not turned on fully, restricting air supply. Dive aborted. B.X.C.B.H/S.1.34.38.60.

May 25/81 Ran out of air. Free ascent. B.2.C.B.H/S.15.1.5.50.60.

May 26/81 New member doing 'A' training dived into shallow end (1.3m), chipped tooth and split lip. B.O.C.T.H/P.1.21.63.

May 106/81 FATALITY. Pair of divers returning on surface from night dive. One altered course and seen to give distress signal on reaching nearby rocks. Standby divers went to assist but initially unable to find him. Later found diver on surface some distance away with ABLJ inflated and all equipment in place. Towed ashore, EAR and ECM given for 30 mins. until local doctor pronounced him dead. Post mortem gave cause of death as drowning from sea water inhalation and vomit. B.3.C.Sh.H/S.0.12.13.18.25.57.58.

May 107/81 Bend. Following dive to 23m within tables, diver suffered vertigo and nausea. Recompressed for 38 hours. Prob-

able vestibular bend (ie, affecting ear). B.2.C.B.H/S.23.11.14.28.

May 108/81 Engine failure whilst picking up divers. One diver in the water for half an hour before finally picked up. Choppy sea, Force 5. B.2/Inst.C.B.H/S.8.22.48.54.

May 109/81 Mask squeeze. No pain or discomfort during dive. Bright red eyeballs and black eyes developed during following days. B.S.C.B.H/S.21.28.

May 111/81 Diver inflated ABLJ on surface in choppy weather to find the oral inflation tube had become detached. B.3.C.Sh.H/S.31.36.

May 112/81 Inflatable lost contact with divers when SMB became detached from buoy line. Picked up by passing yacht. B.3.C.B.H/S.22.24.59.

May 114/81 Eight divers rescued after borrowed old engine failed. Coastguard alerted by member of public after hearing whistles and sighting red flare. Coastguard report received - nothing from the Branch. B.X.X.B.H/S.8.24.48.

May 115/81 Anchor dropped from inflatable only to discover it was not connected to anchor line. Engine failure followed. B.X.C.B.H/S.8.34.48.55.

May 121/81 Mild skin bend after dive to 25m for 27 mins. with 'gentle, slow ascent taking 3 mins.' Experienced diver, buddy unaffected. B.2.C.B.H/S.25.9.28.

May 122/81 Diver aborted dive after

feeling faint. Flushed appearance. Carbon monoxide poisoning; faulty compressor. B.2.C.B.H/S.20.20.36.42.

May 127/81 Diver on surface developed cramp, lost fin, and panic followed. Choppy sea, Force 4-5. B.3.C.B.H/S.54.

May 130/81 Four novice divers with one Second Class diver. One novice separated and surfaced, another overweight and difficulty getting off the bottom. X.2.X.Sh.H/F.X.33.57.61.

May 132/81 Diver on surface drifted onto rock in heavy swell. Helicopter alerted by Coastguard but unable to launch. Recovered by boat using cliff line. B.X.C.B.H/S.13.16.24.

May 133/81 Sea and helicopter search for missing divers who had been dropped from inflatable and left without cover! Divers swam ashore. X.X.X.B.H/S.13.14.22.67.

May 134/81 Five divers suffered apprehension and headaches at depth. Dives aborted. Recovered in fresh air. Exhaust fumes through gap in van rear door during 1½ hr trip to dive site suspected. B.2.C.Sh.H/F.30.1.20.42.

May 135/81 Diver developed spinal bend after 20 mins. at 30m. Two sessions of recompression therapy. Buddy unaffected. B.2.C.B.H/S.30.11.14.28.65.

May 136/81 Diver ruptured direct feed hose on air lift fitting and emptied his cylinder rapidly. Assisted ascent with buddy until buddy's torch tangled an air line and caused separation. Third diver of group took over sharing to surface. B.2.C.B.H/S.

APPENDIX 2 - SUMMARY REPORTS - Continued

June 119/81 Air embolism - recompressed for 36 hours. Too-rapid ascent suspected. Diver advised by doctor never to dive again. Had passed 'all exams to Third Class except D test'.
B.O.C.B.H/S. 18.11.13.14.27.28.67.

June 120/81 Lost divers - swept away by underwater current and boat cover lost contact. SMB discarded after tangling!
X.X.X.B.H/S. X.13.14.20.34.44.58.

June 123/81 FATALITY. Two missing foreign divers, presumed dead. Fierce underwater currents. Prolonged search involving RN minesweeper, three helicopters, four fishing boats, lifeboat, two diving boats and Coastguard.
X.X.X.B.H/S. X.13.14.15.18.22.58.

June 124/81 Lost divers. Found own way ashore and climbed cliffs. All-night search involving helicopters, lifeboats and over 16 pleasure craft.

June 125/81 FATALITY. Diver lost mouthpiece at 40m and tried to reach buddy's octopus rig. Unable to do so, inflated ABLJ and carried out buoyant ascent. Buddy later found dead after search. The first diver surfaced to safety.
I.X.C.Sh.H/F. 40.3.18.65.

June 126/81 Lone diver, no SMB on Branch dive became lost diver. RNLI, lifeboat and Coastguard involved in search. Diver, who is Branch DO and Club Instructor, took 2 1/2 hours to swim ashore!
B.Inst.C.B.H/S. 2.13.14.15.22.34.58.60.67.

June 131/81 FATALITY. Lone diver, no SMB, at 35m. Did not surface, body not found by extensive search. Coastguard reported that one of his fellow divers stated that

if they exceeded the 20 mins. bottom time they would swim up the bank until they reached an approximate depth of 30ft and then carry out stop times.
I.2.C.B.H/S. 35.13.14.15.16.18.22.58.60.67.

June 138/81 Lead from echosounder rested across contents gauge hose in damp conditions. Loud bang and hole appeared in hose covering.
B.Inst.C.B.H/S. 0.36

June 139/81 Diver ran out of air but forgot that his set had a reserve. Successful assisted ascent.
B.3.C.B.H/S. 32.1.2.34.50.64.

June 144/81 Missing diver picked up after search by helicopter and boats.
X.X.X.B.H/S. 0.13.14.15.22.58.60.

June 145/81 Engine failure - towed in by RNLI.
B.X.C.B.H/S.8.15.24.48.

June 10/81 Branch towed in local fisherman after his engine failed.
B.X.C.B.H/S.19.23.

June 138/81 Diver bumped head on van door prior to dive. Lost use of legs during dive, towed ashore by buddy. Trapped nerve suspected.
B.3.C.Sh.H/S. 10.19.21.24.45.

June 172/81 Burst eardrum caused dis-orientation during dive. Despite this he returned an OK signal, possibly out of habit.
B.S.C.B.H/S. 15.1.6.21.28.24.

June 128/81 Minor bend - recompressed.
B.X.C.X.H/S. X.11.28.

June 129/81 Minor bend - recompressed.
B.X.C.X.H/S. X.11.28.

July 35/81 Ran out of air.
X.X.C.B.H/S. 15.4.34.50.60.

July 36/81 Ran out of air. Pillar valve not fully open.
X.X.C.B.H/S. 15.2.34.38.50.

July 37/81 Demand valve fault, buoyant ascent.
B.3.C.B.H/S. 15.3.35.36.60.

July 38/81 Demand valve fault, assisted ascent.
I.3.C.B.H/S. 15.1.2.36.37.

July 52/81 Engine failure. Four divers attempted to swim their inflatable back three miles to shore. Rescued by lifeboat after two hours.
X.X.X.B.H/S. 0.15.24.

July 74/81 Pinhole in new ABLJ cylinder.
B.O.C.Sh.H/F.36.

July 147/81 Bend. Dive was 20 mins. with 165ft max depth. Took 3 mins. to ascend

June 206/81 ABLJ cylinder disconnected from jacket at depth.
B.X.X.X.H/S. X.31.37.

June 209/81 Diver ascending too quickly from 28m apparently pulled mouthpiece off ABLJ in mistake for dump valve. Mouthpiece came off and ABLJ vented. Diver descended 'quickly'. Buddy caught up and brought both to the surface. Some ear pain through not clearing ears during rapid descent.
(By DIP - victims must have been very overweight at start of dive; not a good practice. Branch reported three similar incidents due to loose-fitting mouthpieces. CHECK SECURITY OF FITTINGS.)
B.3.C.B.H/S. 28.5.19.24.33.36.37.40.

APPENDIX 2 - SUMMARY REPORTS - Continued

to 20ft and did 5 mins stop followed by 1 min. at 10ft when air ran out. Surfaced to collect spare set and then went down to 20ft for 10 mins and 10ft for 20 mins. Recompressed - residual shoulder ache. B.2.C.H/S. 50.11.16.28.65.67.

July 150/81 FATALITY. Lone diver 'in difficulty' rescued but found to be dead on arrival at hospital. X.X.X.Sh.H/S. X.12.13.14.18.60.

July 152/81 Bend. Dive was 33m for 21 mins. no-stop. Pain in hip and knee 30 mins. after surfacing, vomited, sought medical advice next day, recompressed. A 'Third Class' diver with ten open water dives who told chamber staff that he was not knowledgeable on decompression stops as he had missed the lecture; B.3.C.X.H/S. 33.11.28.46.61.64.67.

July 151/81 Outboard engine drive shaft sheared. Assistance arranged by VHF radio. B.X.C.B.H/S. X.36.40.

July 154/81 Novice's demand valve came away from mouthpiece at 16m, shared air to 9m but decided he was not getting enough air and carried out buoyant ascent. No after effects. B.S.C.B.H/S. 16.1.2.3.36.64.

July 165/81 Diver had 'flu, cleared up on Saturday. Went to party Saturday night, left at 3am. Up early after 2½ hours sleep. At 1130 did 53 mins. at 18m (no-stop 57 mins.). Developed partial paralysis 10 mins. after surfacing. (By DIP - do not drink and dive!) B.2/Inst.C.O.H/S. 18.11.28.45.

July 170/81 Member recovered young boy's body after boating accident. B.Inst.P.Sh.H/F. 3.16.66.

July 174/81 Six divers rescued after engine failure and boat swamped. X.X.X.B.H/S.8.13.14.15.22.24.48.

July 158/81 Dive planned for 15 mins. at 40m with 5 mins. stops at 10m and 5m. Divers A and B descended shot line. B had trouble clearing ears. A left him and proceeded to bottom. Shot weight was at 46m and off wreck. A moved it 10m to wreck and 6m up onto upper deck. B joined up with him. Left bottom after 19 mins., arrived at 10m with 50 bar in A's twinset. Did 5 mins. at 10m, 5 mins. at 5m (missed 15 mins. of stops). After 10 mins. on surface, A began to feel giddy. Re-entered water and did 10 mins. at 10m, 20 mins. at 5m; symptoms cleared. On surface A vomited and collapsed; was recompressed by RN.

During this period another diver from the same party also developed pains in the legs after 15 mins. at 40m with 5 mins. at 10m and unspecified stop at 5m. He also carried out re-entry decompression, and later spent 2 hours on oxygen under medical supervision. (By DIP - re-entry decompression is NOT a recommended practice. Doing it with symptoms of decompression sickness is suicidal. This Branch needs to look at its decompression procedures carefully.) B.2.C.B.H/S. 46.10.11.13.14.28.34.50.57.65.67.

July 149/81 Diver ran out of air during ascent. Buddy had misread former's contents gauge. Sharing thwarted by demand valve neck strap of donor and/or victim's panic (reports differ). Victim did buoyant ascent from 40ft. Unclear who inflated

ABLJ. No ill effects after initial chest pain cleared. B.3.C.B.H/S. 25.1.3.7.28.31.50.64.

July 153/81 Bend. Tingling in legs and loss of balance after dive to 40m for 17 mins. with stops, followed by 8m dive. Failed to report symptoms for 7 hours. Recompressed twice and advised not to dive again. Slightly overweight. B.3.C.B.H/S. 40.11.28.65.67.

July 157/81 Bend. Victim just recovered from 'flu. X.X.X.B.H/S. X.11.28.

July 168/81 Hypothermia. X.X.X.B.H/S. X.20.44.69.

July 210/81 Divers had 'slight trouble' clearing ears on descent. Deaf in right ear after dive. Subsequent operation found damaged tissue near round window. Diver totally deaf in one ear and cannot dive again. B.3.C.B.H/S. 34.6.21.28.

August 9/81 Fishing boat deliberately ran through SMBs. B.X.C.B.H/S. 0.8.47.

August 11/81 Direct feed hose blew off at connection to first stage. Hose end defective. Diver surfaced unaided. B.3.C.B.H/S. 7.1.5.31.36.

August 12/81 Demand valve went onto free flow and blew off exhaust port. Assisted ascent. B.3.C.B.H/S. 19.1.2.36.64.

August 39/81 Demand valve malfunction, emergency ascent. Cylinder not turned on properly. B.3.C.B.H/S. 15.1.4.34.60.

August 179/81 Buoyant ascent, out of air. B.X.X.B.H/S. X.3.50.

APPENDIX 2 - SUMMARY REPORTS - Continued

August 40/81 Ran out of air.
B.3.C.B.H/S.15.4.34.50.60.

August 58/81 Bend after 15 mins dive to 200ft using decompression meter for stops. Diver had spent 8 mins. solo at depth.
B.2.P.B.H/S.60.11.60.65.67.

August 66/81 Broken starter cord.
B.X.C.B.H/S.0.48.

August 67/81 Two diving to 46m, one of whom was a stranger with equipment new to him and heavily overweight - 'on a narcosis scale we were 8 out of 10'. No injury sustained.
(By DIP - a real accident situation looking for somewhere to happen!)

B.2.C.X.H/F.47.1.5.33.38.49.61.65.

August 146/81 Three divers rescued from boat with engine failure and anchor dragging in Force 8 by lifeboat.
X.X.X.B.H/S.8.15.24.54.

August 155/81 This dive aborted after dive leader dropped mask overboard and one diver too underweighted to submerge. The accompanying divers were on their first and second open water dives resp.
I.X.P.B.H/S.8.1.33.61.63.

August 161/81 SMB snagged by boat, diver lifted 5m off bottom and dragged along. SMB attached to ABLJ by karabinier.
B.X.C.B.H/S.26.5.55.

August 162/81 SMB snagged diver's own hard boat causing diver to become separated from two buddies.
B.X.C.B.H/S.8.5.55.

August 163/81 Aluminium cylinder failed during test. Later discovered to have been involved in a fire, and re-painted.

NAMRON advise that aluminium cylinder subjected to a temperature higher than 175°C must be condemned.
C.X.X.X.H.8.36.41.

August 167/81 Bend. Carried out two dives to 32m within the limits of BSAC/RNPL table. Depth gauge subsequently found to be 4m out. Shoulder ache, but waited until next day before seeking medical advice.
B.1/Inst.C.B.H/S.36.11.28.36.52.65

August 169/81 Dive boat capsized. Five divers rescued by auxiliary Coastguard.
X.X.C.B.H/S.8.13.24.

August 171/81 Branch dive attacked by fishing vessel - no injuries.
B.X.C.B.H/S.15.47.

August 173/81 Two divers drifting out to sea on ebb tide rescued by another Branch. Ignorant of local conditions.
B.X.P.Sh.H/S.8.24.26.

August 177/81 Mild bend. Day 1, dives to 15m and 25m missing out 5 mins. of stops. Feeling hot pain in shoulder two or three hours later. Day 2, 46m for 8 mins., more pain during ascent.
B.Inst.P.B.H/S.46.9.28.52.

August 178/81 Bend. Day 1, 42m for 8 mins. with correct stops, followed by 9m for 50 mins. Slight shoulder ache after first dive. Day 2, 32m for 22 mins. with correct stops. Pain in shoulder half an hour after dive, followed by shivering, breathing difficulty, weak pulse and loss of consciousness. Helicopter to recompression chamber where he recovered. Diver was 'rated as Third Class in water but not signed up due to lack of formal theory attendance'.
B.S.C.B.H/S.32.11.13.14.28.65.

August 180/81 Exhausted lone diver rescued by local boat after Coastguard alert.
X.X.Comm.T.H/S.8.12.13.16.24.60.

August 181/81 Lost divers. No SMB. Search involved helicopter, lifeboat, inshore rescue boat, dive boat. Divers swam ashore.
X.X.X.B.H/S.8.13.14.15.22.58.

August 182/81 Engine failure, divers swam ashore.
X.X.X.B.H/S.8.13.48.

August 183/81 Two Branch members rescued four people in flooded speedboat.
B.X.C.B.H/S.8.23.

August 159/81 Recompressed after buoyant ascent from 45m.
X.X.X.Sh.H/F.45.3.11.28.

August 160/81 Diver caught in lifting bag and taken rapidly from 20m to 7m before release. Lifting had commenced after the planned no-stop time had elapsed. Complained of headache only; later began to shiver violently and lose feeling in legs. Recompressed. Branch reported that 'victim normally suffers from severe headaches and is sick after deep dives and then finds a quiet corner to sleep for half an hour'.
B.2.C.B.H/S.33.3.11.12.13.14.28.33.65.

August 164/81 Successful EAR given to diver recovered from quarry - cause unknown.
X.X.X.Sh.H/F.8.12.19.24.25.26.

August 166/81 Bend. Dived to 28m for 35 mins. Stops cut short when ran out of air. Joint pains and later vomiting - recompressed.
X.X.X.X.H/S.28.11.28.67.

APPENDIX 2 - SUMMARY REPORTS - Continued

August 184/81 Diver vomited at depth, had been seasick several times during bumpy 10-mile hard boat trip. He removed his demand valve to be sick and replaced it afterwards.
(By DIP - there is a misconception commonly quoted that 'you will be OK once you get in the water'. Seek diving medical advice before using seasickness tablets when diving)
B.3.C.B.H/S. 30.20.45.54.65.

August 192/81 Foot lacerated by propeller.
B.X.X.B.H/S. X.18.21.

August 193/81 Two divers missing after boat anchor cable and SMB line parted. Found after air and sea search.
B.X.C.B.H/S. X.8.13.14.22.24.

August 194/81 Diver left three portholes on bottom at end of dive. Branch DO went in solo to recover them; first diver, who had 50 ata left in twinset, would 'pop down to see how he was getting on'. Whilst doing this he ran out of air and was caught up in ropes. Managed to make contact with DO and carried out assisted ascent. The DO in his report commented - 'You will have noticed by now that neither of us had dived with a buddy. The reason for this is that on a shallow dive a Second Class diver is capable of looking after himself'.
(By DIP - this practice is totally wrong and very dangerous; the incident illustrates the point.)
B.2.C.B.H/S. 17.2.24.46.50.60.64.67.
August 195/81 Novices demand valve

August 195/81 Novice's demand valve went into free flow at 10m. Controlled ascent carried out. Demand valve incorrectly set up.
B.S.C.B.H/S. 10.1.5.19.36.

August 200/81 Two divers swept overboard from inflatable.
B.X.X.B.H/S. X.8.54.

August 202/81 Diver separated from buddies by strong current. Picked up after search.
B.X.C.B.H/S. X.54.57.

August 203/81 75ft dive boat caught fire during charter.
B.X.C.B.H/S. X.41.

August 207/81 Bend. Three dives involved.
B.X.X.X.H/S. X.28.52.

August 208/81 Bend. Problem with no-stop times.
B.X.X.X.H/S. X.26.28.

August 211/81 Branch inflatable narrowly missed several spearfisherman during competition. Their safety boats were flying 'A' flags and competitors had SMBs.
B.X.C.B.H/S. X.34.55.67.

August 216/81 Diver did buoyant ascent despite operating dump valve. ABLJ cylinder valve not shut off. No ill effects.
B.Inst.C.B.H/S. 33.3.31.38.57.

August 186/81 Two divers at 170ft (51.7m) One shows the other contents gauge reading 20 bar; second diver finishes reeling in distance line and finds buddy has headed for surface rapidly! Narcosis? First diver lucky to escape with ear damage only. Dive carried out on US Navy tables with which 'divers and marshals were familiar'.
(By DIP - USN tables are not designed or recommended for amateur use)
B.2/Inst.C.B.H/S. 52.1.3.6.11.13.14.21.28.34.50.65.

August 187/81 A compressor operator was

killed when a cylinder being filled exploded. The aluminium cylinder had been nylon-coated and this involved heating to 200°C for 30 mins, which reduced the strength of the cylinder.
Not included in analysis as it took place in South Africa.

August 188/81 Auxiliary Coastguard vessel picks up two divers from sea; nearest dive boat 400m away, seven other dive boats in area, non flying 'A' flag.
X.X.X.B.H/S. X.13.22.24.58.67.

August 175/81 Direct feed hose to VVDS burst. Diver carried out controlled ascent using buddy's octopus rig.
B.H/S. 27.1.2.19.36.

August 176/81 Divers separated when one attempted to retrieve dropped camera. Situation further confused by earlier pair of divers releasing shot line on wreck. Lost diver recovered down-tide after 35 mins. in water.
B.2.C.B.H/S. 27.1.22.57.

August 196/81 Coastline Safety Corps boat rescued exhausted man without life jacket after yacht capsized.
B.X.C.B.H/S. X.19.23.

August 197/81 Mask squeeze led to blood-shot, black eyes.
B.S.C.Sh.H/F. 22.21.28.

August 199/81 Loos of sensation in legs after 15 mins at 34m. Recompressed for 5 hours. Reported to have had a stomach ailment prior to dive, which recurred.
B.3.C.B.H/S. 34.11.13.28.

Sept 8/81 Misunderstood and incorrectly given 'on reserve' signal led to diver running out of air during ascent. Buoyant

APPENDIX 2 - SUMMARY REPORTS - Continued

ascent from 10m. Three divers, one overweight, no pre-dive brief or check.
B.3.C.B.H/S.22.3.33.50.51.61.

Sept 14/81 Suspected decompression sickness. Chamber alerted but not used.
X.X.X.B.H/S.9.12.13.

Sept 15/81 Three divers rescued after engine failure. No paddles, no flares.
X.X.X.B.H/S.8.12.13.16.22.24.40.

Sept 55/81 Engine drive shaft snapped on outboard.
B.X.C.B.H/S.48.

Sept 57/81 Reversed ear during snorkel dive.
B.2/Inst.H.B.A/S.10.6.21.28.

Sept 86/81 FATALITY. Diver drowned in 2.5m of water after becoming inverted in a dry suit whilst wearing two 31b ankle weights, 2.41b waist belt and 321b harness belt. Inquest concluded that harness weight-belts were dangerous when used with a normal cylinder harness. Buddy was unable to turn him over or release equipment - five separate quick releases needed to ditch all his gear.
B.2.C.B.H/F.2.5.18.39.

Sept 190/81 Two identical masks shattered soon after purchase - comment from maker awaited.
B.X.X.X.H.X.36.

Sept 191/81 Bend. Missed stops. Attempted re-entry decompression with symptoms. Was recompressed.
B.2.P.X.H/S.X.10.11.28.67.

Sept 198/81 Diver became unconscious from extreme cold during dive. Heavy drinking previous night, no breakfast and only a

'burger for lunch. Rescued by a BSAC and a SAA diver.
B.X.X.Sh.H/F.20.1.19.25.44.69.

Sept 212/81 Missing diver found dead after search.
X.X.X.B.H/S.X.13.14.15.16.18.

Sept 213/81 Three diver separated from boat after SMB line parted. Fired smoke flare carried by one of them and were quickly rescued.
(By Coastguard District Office - 'A personal indicator used sensibly undoubtedly avoided the possibility of a costly protracted search')
X.X.X.B.H/S.X.13.14.15.19.57.59.61.

Sept 185/81 FATALITY. Lone snorkeller failed to surface; found after 20 mins. by diver. Hyperventilation suspected.
B.3.C.Sh.H/F.X.16.18.60.67.

Sept 215/81 ABLJ cylinder not clamped correctly, fell off during dive.
B.X.X.X.H/S.X.31.37.

Sept 217/81 Engine failure. Anchor fouled and cut free before engine was started. Boat, with one paddle, drifted onto rocks leaving three divers in water. One reached the boat, two swam ashore. Rescued.
X.X.X.B.H/S.X.8.13.24.48.55.

Oct 1/81 Burst ear drum - novice during pool training.
B.O.C.T.H/P.3.5.6.21.28.

Oct 2/81 Burst ear drum.
B.3.C.B.H/S.26.6.21.57.58.

Oct 5/81 Burst lung - whilst cleaning car. Novice with hereditary lung weakness.
B.O.X.X.X.0.7.28.

Oct 6/81 Burst ear drum.
B.O.C.Sh/T.H/F.7.6.21.28.

Oct 31/81 Skin bend after dive to 50m in Swithland Quarry. Later check revealed quarry at altitude of 104m.
B.2.C.Sh.H/F.50.9.20.28.65.67.

Oct 53/81 Trainee snorkeller burst ear drum - previous history of some trouble, had not had medical.
B.O.C.T.H/P.3.6.21.22.62.

Oct 54/81 Persistent headache after 'A' test.
B.O.C.T.H/P.X.20.28.62.

Oct 82/81 Bent diver taken to chamber by helicopter - Branch. Coastguard report - nothing from the Branch.
B.X.X.B.H/S.X.11.25.28.65.

Oct 204/81 Student on Boathandling course fell overboard and received severe lacerations to the head and face.
B.X.C.B.H/S.X.8.21.

Oct 205/81 Diver slipped on poolside and accidentally pushed second diver into shallow end of pool. Stitches and hospital treatment needed on second diver's arm.
B.Inst.C.T.H/P.X.21.

Oct 214/81 Engine failure, rescued after using distress flare.
B.X.X.B.H/S.X.8.24.48.

Oct 7/81 Burst ear drum.
B.2/Inst.C.B.H/S.27.6.21.28.

Oct 13/81 Bend. Three divers spent 17 hours in recompression chamber.
B.X.C.X.A/S.X.11.28.

Oct 16/81 Lone diver's signals to inflatable reported by member of public as diver in difficulty. Lifeboat launched and helicopter called.
X.X.X.B.H/S.0.13.14.15.60.68.

APPENDIX 2 - Continued

Year	Membership	Deaths - BSAC (Other)
1958	2,615	1
1962	5,023	1
1963	5,255	1
1964	5,571	2
1965	6,813	3 (0)
1966	7,979	1 (4)
1967	8,350	1 (6)
1968	9,241	2 (1)
1969	11,299	2 (8)
1970	13,721	4 (4)
1971	14,898	0 (4)
1972	17,041	10 (31)
1973	19,332	9 (20)
1974	22,150	3 (11)
1975	23,204	2
1976	25,310	4
1977	25,342	3
1978	27,510	8 (4)
1979	30,379	5 (8)
1980	24,900	6 (7)
1981	27,834	5 (7)

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 it to the address below.

For new incidents, the minimum information that is of use consists of:

Date of incident
 Name of victim
 Vicinity of incident
 Nature of incident

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

Much more use is the greater detail that can be set out on an Accident/Incident 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

What is an incident?

Any event involving divers or diving equipment in, on or out of the water where the diver is killed, injured or subjected to more than normal risk.

Naming Names

Information obtained on incidents is treated confidentially and despite frequent requests at DOC, names are never quoted. The only exception to this is where an act of rescue or lifesaving merits recognition.