DIVING INCIDENTS REPORT

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"Before moving into the detail of my 1989 Incidents Report this morning, I'd like to explain briefly some of the background to the statistics this year. A fundamental reason for collecting and analysing the statistics is to identify trends and to make a comparison with previous performance. In doing this, it is important that we are sensitive not only to the numbers themselves but also to the background against which they are collected. This year, in particular, I am conscious that a number of external and unusual factors are at work, of which you need to be made aware.

First of all, as we all know, 1989 has been a record-breaking summer, with much more diving being carried out. Precisely how much more is always difficult to estimate, but an informal survey carried out amongst compressor operators on the South Coast suggests that air consumption – and what better measure of diving activity is there? – may have gone up as much as 100% this year. Obviously, more dives means more opportunities for something to go wrong and will inevitably lead to more incidents being recorded.

Another thing which can affect the statistics is a change in the efficiency of reporting. This year, we have seen just such an effect in two areas where we receive reports direct from third parties. On the one hand, we have received much better information from the Institute of Naval Medicine on the cases of DCS that they have treated or advised upon during 1989. This information is invaluable and will, in future, help us to identify trends much more accurately. However, in this the first year of receiving such reports, it has resulted in an apparent large increase in the number of cases of DCS.

On the other hand, and influencing the statistics in the opposite direction, this year we have received fewer reports from HM Coastguard. Good news you might think and I would certainly welcome a reduction in incidents involving HMCG under normal conditions. However, I know that, in the middle of this year, changes in the administration system for distributing copy reports to interested parties, such as ourselves, resulted in a temporary hiccup in the flow of information. We hope that this has now been sorted out but, although HMCG say that they have passed everything over to us, I feel that we must have missed a number of reports.

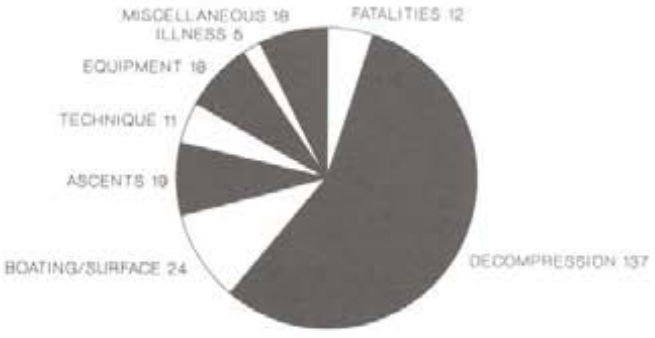
So, there are three special factors this year which have affected the statistics and which I will try to allow for in my analysis. As always, I would ask everyone to remember that although we are concentrating this morning on those dives in which something went wrong, these are the minority. The vast majority of dives each year (in fact more than 99.9% of dives) pass off safely and successfully.

So, with that background, what do the 1989 statistics show?

First of all let us look at the general pattern of incidents. The first chart (Fig 1 overleaf) shows the breakdown of incidents by type. In 1989, a total of 244 Incident Reports were received and analysed as against 197 in 1988. Breaking them down into their 8 categories, we see that 12 were fatalities – reduction from the 16 of 1988, 137 were decompression incidents – an increase from 89 and 24 were boating/surface problems – a reduction from 46.

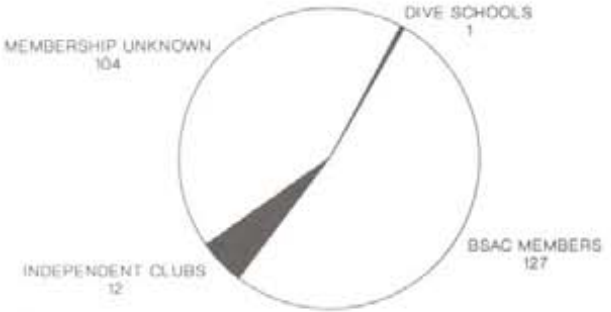
If we look at the membership breakdown (Fig 2 overleaf), we

Figure 1
DIVING INCIDENTS BREAKDOWN — 1989



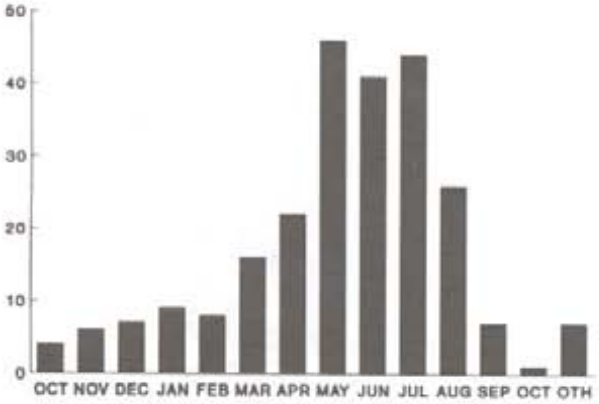
see that the proportion of incidents attributed to BSAC members appears to have fallen. This is because the improved reporting system of DCS cases from the INM means that we are recording many incidents from non-members and members of independent clubs which would, otherwise, not be reported to us.

Figure 2
INCIDENTS BREAKDOWN — 1989



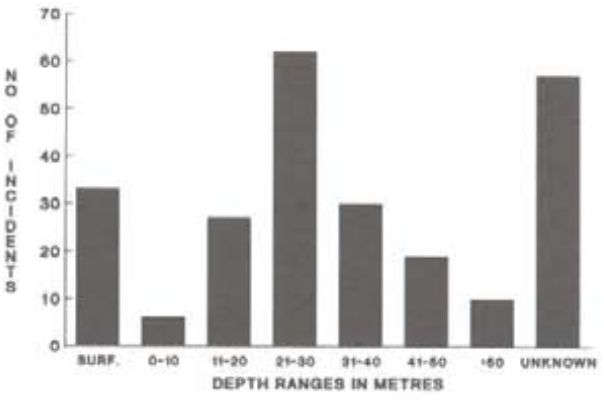
The monthly breakdown of incidents (Fig 3) shows the seasonal pattern that we have come to expect, with most incidents occurring during the May-August period. Interestingly, if we were to compare this with last year's chart, we would see a marked difference. Last year, summer was in June, and June was the month in which most incidents occurred with July and August well down by comparison. This year, the continuing good weather from May to August has resulted in a more even spread.

Figure 3
MONTHLY BREAKDOWN OF ALL INCIDENTS — 1989



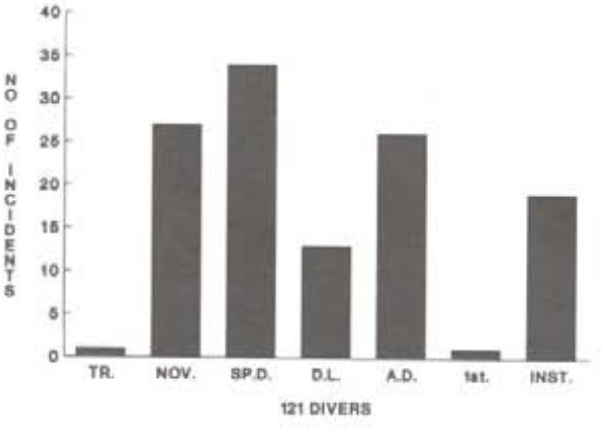
If, in the same way, we analyse the depth range of incident occurrence (Fig 4), we see that the 21-30 metre range is the most popular and has actually taken over this year from the surface as the most likely place where you will get into trouble. My own feeling is that these numbers probably reflect the number of dives performed in each depth range.

Figure 4
DEPTH RANGES & INCIDENT OCCURRENCE — 1989



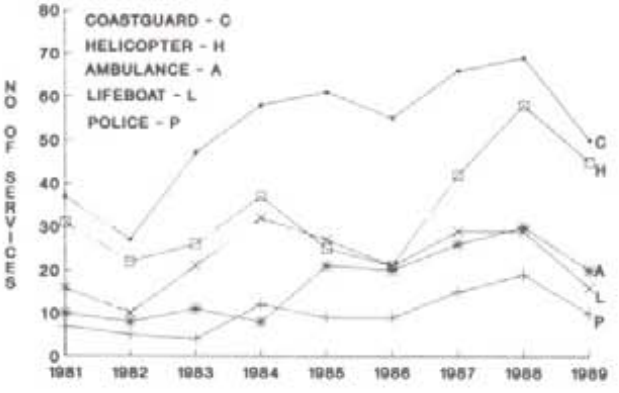
The breakdown of incidents by qualification of divers, 121 reports, is shown in Fig 5. The pattern is typical and is a reflection of the numbers of divers in each grade as well as the type of diving that they are doing. Once again though, a First Class Diver as a buddy seems a good bet!

Figure 5
QUALIFICATION OF DIVERS



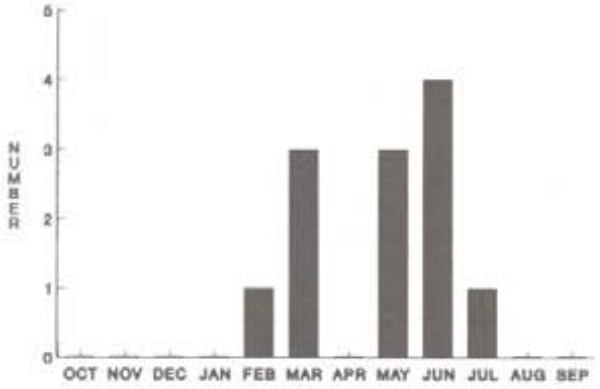
The graph, (Fig 6) below, of the first part of my presentation shows the divers' use of the Emergency Services and you will see a sharp drop this year in the HMCG involvement with corresponding reductions in helicopter and lifeboat callouts. I'd like to think that this was the case but, as I've already mentioned, I consider this to be mainly a reporting feature though, of course, the better weather may have resulted in fewer boating problems.

Figure 6
DIVERS' USE OF EMERGENCY SERVICES



So that is the overall pattern for 1989. Now let us look in more detail at the individual categories.

Figure 7
FATALITIES — MONTHLY BREAKDOWN — 1989



As I said earlier, the number of *Fatalities* this year (Fig 7) is down to 12 from the 16 of last year. This is definitely good news. It is particularly pleasing to note that of these 12, only 4 were BSAC members compared to 10 out of the 16 last year.

Figure 8
BSAC FATALITIES AND MEMBERSHIP 1980-1989

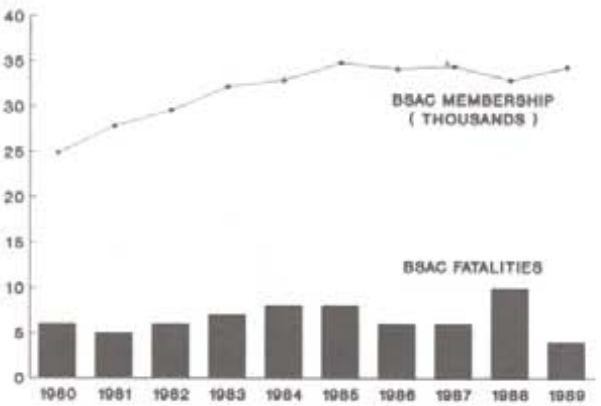


Fig 8 shows a plot of BSAC membership against the number of BSAC fatalities over the past 10 years. Last year, I pointed out that one of the main causes of deaths was running out of air followed by a failure to share effectively in the ensuing emergency. 6 of last year's fatalities involved such problems and this year, 4 divers died in similar circumstances.

Similarly, a number of *Decompression* problems and incidents on *Ascent* has their origins in one or more divers running out of air. The lessons for your dive planning and dive leadership are clear. Tomorrow, Dave Crockford will be looking at how to avoid running out of air in the first place and how you can equip yourself to deal with the situation should it still occur, albeit unexpectedly.

On the subject of *Equipment*, it is clear from the reports that I receive that it is essential for divers to consider their equipment as a complete package of component parts which must all work well together rather than simply a collection of individual items. If you change one piece of equipment, you may influence the performance of the whole.

Take the example of the diver who replaced the cuffs of his drysuit with new, heavy duty seals. A simple enough change you might think, except that the suit was not fitted with a dump valve and he normally vented his suit via his cuffs. During his first dive with the repaired suit, he found himself unable to vent because of the new seals; they were longer and had folded over on themselves. As a result, he lost control of his buoyancy and made a buoyant ascent from 25m to the surface.

Another diver almost died when she got into similar difficulties with her drysuit. Once again, the suit had no dump valve and the neck and wrist seals were quite tight. On this occasion the problem was caused by a borrowed ABLJ which, when it was inflated on the surface, pressed continously on the suit inflation button causing it to inflate. The diver soon became unconscious due to the constriction of her neck seal. Fortunately, quick-thinking rescuers cut open her suit to vent it and she was rescued and resuscitated.

Once again, here is a clear lesson not to underestimate the possible effects of even small changes in your equipment. Perhaps there is also a lesson that some form of dump valve in a drysuit is a necessity.

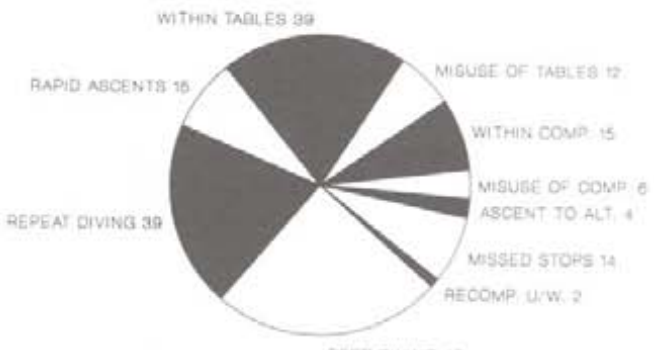
As I have already mentioned, the boating/surface category contains fewer reports this year (Fig 1). Possibly, this is partly due to the better weather. As usual we have had a number, happily a small number, of cases of lost divers. Apart from one case where a SMB buoy was severed by a passing boat, the main problem is still a failure to use SMBs – the remedy is obvious!

The most dramatic incident in this category comes from one of our Branches in the Middle East. A party of 5 divers, in a 17 foot dory with twin 50hp engines was moored above the dive site when they saw a large vessel approaching. It was a large landing craft, about 100 feet long and with a raised ramp at the front. Although it initially appeared to be going to pass close by, it suddenly changed direction and began to head straight for the dory. Two divers were in the water at the time. As the boat got nearer, ignoring all warning signals, the three remaining divers were forced to jump clear of their boat and swim for their lives as the landing craft drove straight over the top of the dory. Miraculously, there were no injuries although the boat was written off and a lot of equipment was lost or damaged. It later turned out that the vessel had simply not seen the divers because of the high ramp at the bow making forward vision very restricted.

Turning now to decompression sickness (Fig 9), I have already said that, this year, we have received many more reports directly from the Institute of Naval Medicine and these have added substantially to the figures. Last year I recorded 89 cases of DCS and this year I have recorded 137. There is no doubt that this increase is not due solely to increased reporting and there has been an actual increase in the number of DCS cases. As one of the main factors is the total number of dives carried out, it must be expected that there will be an increase in a year in which many more dives have been carried out. In trying to determine the size of the actual increase, we can get a feel for it by comparing statistics at individual chambers. Some chambers have, in fact, treated fewer cases this year but DDRC, probably one of our most reliable indicators, have treated 47 cases in 1989 compared to 34 in 1988.

In the past, we know that we have not captured details of all of the bends cases and have estimated that we were getting about 70-75%. This year I am confident we are much closer to 100%

Figure 9
DECOMPRESSION SICKNESS ANALYSIS — 1989



TOTAL NO. OF CASES = 137

data capture. As an indicator, in 1988, 53 DCS cases out of a total of 89 recorded were BSAC members. In 1989, although the total has risen from 89 to 137, the number who were BSAC members has risen from 53 to only 64.

Figures for MOD chambers, up to the end of September, show that they have recompressed 62 cases of DCS this year, a further 4 cases of embolism and 13 for omitted decompression stops. This total of 79 cases is slightly below their total for the whole of 1988. This suggests an annual increase of some 25%.

If we look at the breakdown of the figures for DCS, we see that the monthly breakdown (Fig 3) shows a similar pattern to that for all incidents. The greatest influencing factor is the number of dives carried out.

If we look at the breakdown of the cases themselves (Fig 10), we see the various factors involved. Deep diving (i.e. deeper than 30m) was involved in 48 cases. Repeat diving involved in 39 cases and rapid ascents in 15 cases. 39 cases were, apparently, within the tables and 15 cases were within computer parameters and I shall say more about these in my second presentation, later today, when I will be reviewing the performance of dive computers and of the BSAC '88 Tables over the year.

One of the features of the DCS reports from chambers is the increase in precautionary recompressions being carried out for omitted decompression stops and the number of vague symptoms being referred to them. This indicates two things. First of all, on the positive side, we are achieving a much greater awareness of the symptoms of DCS and the action to be taken. Secondly, and on the much more negative side, it indicates that too many people are not planning their decompression dives properly.

The problem of running out of air, which I highlighted earlier, is also a feature of many of the DCS cases. This is particularly the case where divers conduct dives requiring long periods of in-water decompression using a computer which does give them an indication of the total time to surface.

As I said last year, I consider that 20 minutes is the maximum time that you should be doing in-water stops. To do a dive requiring 30, 40 or more minutes of stops, as some people appear to be doing regularly, is pushing things too far. To attempt such dives without knowing, or calculating in advance, how long the decompression stops will be and, therefore, what your air requirements are, is plainly stupid. Tony Hoile will be speaking to you later about the proper organisation and practical aspects of decompression dives.

The statistics in 1989 contain the usual sprinkling of people who are diving too deep, too often and I make no apologies for repeating, once again very firmly, that 50m is a sensible safe maximum depth for sports divers and that 20 minutes of in-water decompression is a sensible maximum for sports divers. If you keep doing long sequences of deep, repeat dives, all involving long periods of in-water decompression, you will eventually get 'hit'.

A quick look at the *Miscellaneous* category reinforces some of the things that I have ben saying about increased awareness of possible DCS symptoms. We have had people treated at recompression facilities for strained muscles, pain from anti-tetanus injections and even an allergic reaction to Fairy Liquid! Also, on the unusual side in this category is the case of the diver who got the shot-line wrapped round his cross-flow cylinder valve, so that as he descended, his air was slowly turned off until he found himself at the bottom with no air! Fortunately, a successful assisted ascent was made to the surface.

In conclusion, this year I have two messages to leave you with. The first concerns reporting. It is clear from the reports, received from third parties, that some BSAC members and/or their Branches, do not consider a case of DCS as being worthy of reporting. The whole value of the Incidents Reporting Scheme is dependent on the quality of the information that I am provided with. We do not seek to apportion blame and all reports are treated as confidential. If you, or a member of your Branch, is involved in an accident, I will probably get to hear of it. But unless I have the full facts from the people involved, to complete the picture or, sometimes, to completely change the picture, I cannot pull out the correct lessons for everyone's benefit. Please report your incidents and near misses.

The final message is that, as you have seen, many of the incidents that I see are the result of inadequate planning, particularly in relation to air supply and the carrying out of decompression stops. Let's all Plan for Safety in 1990."

APPENDIX A — Diving Incidents Report

The Diving Incidents Report is produced annually by the British Sub-Aqua Club in the interests of promoting diving safety and the majority of statistical information is given in graphic form. Relevant statistics, not shown in the form of a graph, appear on page 15.

Within the period 16th October 1988 to 15th October 1989, **244** reports were received from a variety of sources via the BSAC Incidents Reporting Scheme. These have all been analysed and summarised in this Report with the intention of highlighting any lessons which may be learnt for the benefit of all divers, and particularly for those concerned with the organisation and conduct of diving activities.

During 1989 an increased amount of diving has taken place, due principally to the excellent weather conditions experienced throughout the summer. When reviewing the incidents contained in the Report we therefore urge that the reader should keep them in proper perspective and consider them against this background. It is estimated that in 1989 around 2,000,000 dives were performed by sports divers in the UK. The vast majority of these (in fact more than 99.9%) were carried out safely and successfully and hence attracted no publicity. Diving is therefore already a safe sport with a safety record which compares favourably with most others.

Incidents have been grouped according to type under **eight** categories:

Fatalities, Decompression Sickness, Boating/Surface Incidents, Ascents, Technique, Equipment, Illness and a **Miscellaneous** Section containing False Alarms, Ear Problems, etc.

Within each category the incidents are listed in the numerical order of their allocated reference number. The nature of many diving incidents, of course, involves an 'Incident Pit' situation with more than one cause. For example a bend may have been the result of a buoyant ascent which may, in turn, have been the result of a regulator malfunction. In this example you will find the incident listed under 'Decompression Sickness'.

Wherever possible each report is identified by date as well as reference number. The depth is given in the report, only when it is relevant, as is other information such as qualification of the diver, location etc. The only 'Letter Code' attached to each incident report, relates to membership.

B = BSAC Member. I = Member of Independent Club or Non-BASC Diver. U = Membership unknown.

FATALITIES

23/89 Feb. 1989. During a dive in 12m of water a novice diver became separated from her buddy. Although a search was quickly organised, she was found to be dead on the bottom. A post-mortem later revealed that she had died suddenly as a result of a heart condition. **I.**

32/89 March 1989. After problems on a dive to 46m when the victim's DV began to freeflow, a buoyant ascent was made, during which the victim sustained a burst lung. In spite of lengthy efforts to resuscitate him on-site the patient later died after having been air-lifted to Fort Bovisand. **B.**

33/89 March 1989. A novice diver on his third dive ran out of air at 6m on the ascent. His buddy gave him his own DV and began breathing off his ABLJ but the two divers became separated and the victim was lost. **B.**

77/89 May 1989. A diver drowned after she ran short of air on the bottom whilst trying to recover a heavy weightbelt which she and her buddy had found during their dive. On noticing her cylinder was almost empty the pair began to surface but the deceased ran out of air at about 25m. Sharing was commenced and the pair reached 6m before they became separated and she was lost. **B.**

81/89 June 1989. On a dive to 53m a diver ran short of air whilst carrying out a 9m decompression stop. Initially sharing was successful and the divers ascended to their 6m stop. At that point the air supply in one of the buddy's twin tanks was also exhausted and attempted sharing using the one remaining valve was unsuccessful. The victim became separated and sank to 35m. Although his buddy followed him down and inflated his ABLJ, which brought him back up, he was found to be dead on the surface. **B.**

83/89 June 1989. During a wreck dive to 36m a pair of divers ran low on air. They had to work hard against the current to return to the shot line and both ran out of air on the bottom. The buddy of the diver who died tried unsuccessfully to render assistance whilst breathing off his ABLJ and made a buoyant ascent to the surface. The body was later recovered by a Navy diver. **I.**

92/89 May 1989. A diver died after making a buoyant ascent on a dive to 46m after apparently having had problems with his weightbelt. Press reports only, no further details. **I.**

99/89 June 1989. An apparently untrained teenager who was making his first dive failed to surface and was presumed drowned. Press reports only, no further details. **U.**

126/89 May 1989. On arriving at an inland dive site a party of BSAC divers saw a diver struggling to the side. His buddy had apparently surfaced before disappearing underwater and a search was organised. The body was later recovered by the Police Diving Team. This would appear to have been only the deceased's second dive and training appears to have been inadequate. **I.**

227/89 March 1989. A 13 year old boy drowned during a dive with his father. The father was a professional diver carrying out a working dive to clear scaffolding. Press report only. No further details. **I.**

228/89 July 1989. A diver died after apparently having been trapped in rocks. Press report only. No further details. **I.**

243/89 July 1989. A US serviceman drowned whilst snorkelling alone. He was a keen sports diver and was apparently training to join the Navy Special Forces as a diver. Press report only. No further details. **I.**

DECOMPRESSION SICKNESS

1/89 Sept. 1988. After a dive to 52m for 15mins a diver had buoyancy problems on ascent and also ran out of air. Required stops were missed. Recompressed for suspected Type 2 symptoms. **B.**

4/89 Sept. 1988. After a dive to 40m a diver suffered symptoms of Type 2 decompression sickness. Total dive duration was 49mins with majority of time between 10 and 20m. Recompressed with complete resolution of symptoms. **B.**

8/89 Dec. 1988. A diver suffered Type 2 decompression sickness after a dive to 20m for 28mins and was recompressed. A previous pair of dives some two weeks earlier, one incorporating a sawtooth profile, and the second being the deeper of the two, are thought to have been contributory. **B.**

12/89 Sept. 1988. A diver missed stops due to problems with his buoyancy. He later developed symptoms of decompression sickness and was recompressed. His buddy also missed stops as a result of running short of air and was recompressed. **B.**

16/89 Nov. 1988. During a dive to 25m for 32mins, a diver had problems with his weightbelt. He ended up trying to carry the weightbelt in his hand and had difficulty controlling the buoyancy of his neoprene drysuit. Shortly afterwards he ran out of air and swam to the surface, controlling his ascent rate with difficulty. After experiencing mild itching the following day he contacted HMS Vernon and was recompressed. **B.**

18/89 Nov. 1988. A diver who felt unwell during a dive to 43m for 11mins in the Middle East was recompressed approximately 24 hours later. His symptoms were vague and indefinite. An excursion to altitude and previous alcohol consumption may have been contributory. **B.**

19/89 Nov. 1988. A diver who had missed decompression stops was air lifted to DDRC for treatment. No further details. **U.**

24/89 Jan. 1989. A diver suffered Type 2 decompression sickness after a dive to 25m for a total of 31mins using a dive computer. Medication being taken was a possible provocative factor. **B.**

25/89 Nov. 1988. A diver sustained Type 2 decompression sickness after a dive to 25m for 24mins. The previous day she had been doing training drills which included a number of ascents to the surface. Some residual symptoms remained after recompression. **B.**

26/89 Jan. 1989. Whilst on holiday abroad a diver sustained Type 2 decompression sickness. After a first dive to 9m for 15mins, a second dive was made 4 hours later to 25m for 25mins. Given recompression treatment on return to UK with some improvement in symptoms. **B.**

34/89 Jan. 1989. A diver had a "niggle" after missing decompression stops due to a lack of planning. A long dive to 7m being followed by a dive to 22m for 25mins. The symptoms faded over the next couple of days and no treatment was given. **B.**

35/89 March 1989. A candidate on a practical rescue management course sustained a Type 1 bend. Although five ascents were carried out, times were well within no-stop limits (13m 14mins). A previous knee injury may have been a provocative factor. **B.**

36/89 Jan. 1989. A diver became bent after a dive to 27m for a total dive duration of 24mins. He had previously been bent in 1987 and a previous back injury may have been a factor in both cases. He has now given up diving. **B.**

39/89 Sept. 1988. After dives to 45m for 26mins and four hours later 13m for 41mins a diver had symptoms of Type 2 decompression sickness. Symptoms were not recognised due to other problems experienced around the same time (dehydration, sun-burn and blow to head). First recompressed three days later and had seven treatments in all during the following weeks. Residual symptoms remained. **B.**

43/89 April 1989. Following a dive to 27m for 21mins a diver subsequently suffered symptoms of Type 2 decompression sickness and was recompressed. Incorrect tuition on decompression table use may have been a factor. **B.**

45/89 March 1989. An unknown diver is reported as having been treated for Type 2 decompression sickness. Coastguard report only. No further details. **U.**

46/89 March 1989. An unknown diver is reported as having been treated for decompression sickness. Coastguard report only. No further details. **U.**

47/89 March 1989. Coastguard report of a diver on board a fishing vessel suffering from decompression sickness. Transport arranged to local recompression chamber. No further details. **U.**

51/89 April 1989. Diver had symptoms of decompression sickness after a dive to 20m for 22mins including a 1min stop at 6m. He was treated overnight in hospital with oxygen and recompressed the following day with complete resolution of symptoms. **B.**

54/89 April 1989. After a dive to 16m for a dive time of 21mins, followed by a dive to 12m for 28mins, some 2 hours

later, a diver subsequently experienced symptoms of decompression sickness and was recompressed. **B.**

56/89 March 1989. A dive leader was treated for decompression sickness after an aborted dive. The dive was planned to be to 21m but buddy had ear clearing problems and after two descents to 6m and 10m respectively the dive was aborted. On entering the boat the novice dropped her weight belt and the dive leader "bounced" to 21m to recover it, making a rather fast ascent. He later had symptoms of DCS and was recompressed. **B.**

59/89 April 1989. A diver had symptoms of Type 2 decompression sickness after two dives with a 2 hour surface interval. The first dive was 32m for a dive time of 34mins and the second dive was to 19m for 35mins using a dive computer. Dehydration may have been a factor. **B.**

61/89 May 1989. After dives to 42m for 14mins and 14m for 20mins a diver complained of uneasiness and back pains 24 hours later. The dive site was at an altitude of 101m. Symptoms resolved on recompression. **B.**

62/89 May 1989. A diver was recompressed for DCS when she had pains in both elbows following two dives to 20m. Dive times were well within the table (RN11). Symptoms not resolved by recompression so may not have been DCS. **B.**

65/89 May 1989. After 31mins at 20m a diver reported symptoms of DCS. Although his dive was well within the no-stop time for RN Table 11 the diagnosis was confirmed and he was recompressed with complete resolution of symptoms. Dehydration and tiredness may have been a factor. **B.**

67/89 April 1989. Shortly after surfacing from a dive to 24m for 20mins at altitude a diver collapsed. He was transported to the chamber 35 miles away by inflatable and a lengthy treatment was undertaken. Residual symptoms remained after treatment. The dive was within US Navy Tables and the possibility of air embolism has not been ruled out. **B.**

73/89 May 1989. After a dive to 53m for 16mins a diver suffered symptoms of Type 2 decompression sickness and was recompressed. A complete recovery seems to have been made but he has been advised not to dive again. Dehydration may have been a factor. **B.**

74/89 May 1989. After dives to 27m for 24mins and 20m for 20mins a diver was recompressed for Type 2 decompression sickness. No further details, preliminary incident report only. **B.**

75/89 May 1989. A pair of divers were recompressed as a precautionary measure when they made a buoyant ascent at the end of a dive to 28m. The cause of the problem was a shortage of air due to one diver's reserve mechanism being inaccessible. **B.**

76/89 May 1989. A diver using SAA Tables was recompressed for Type 1 decompression sickness following a dive to 45m for 17mins. No further details. **I.**

79/89 June 1989. A pair of divers were both recompressed for Type 1 decompression sickness following a dive to 40m for 16mins with 10mins of stops and a second dive to 10m for 20mins. Preliminary incident report only, no further details. **B.**

80/89 June 1989. During an incident in which a diver died (see report 81/89) the buddy suffered DCS and was recompressed. **B.**

82/89 June 1989. During a dive to 36m a pair of divers both ran out of air. One died (see report 83/89) the other made a buoyant ascent and was flown by helicopter for recompression treatment. **I.**

84/89 May 1989. Following a decompression dive to 45m a pair of divers had problems with their delayed SMB on ascent. This resulted in them making a rapid ascent to the surface and missing decompression stops required by their dive computers. Both divers were recompressed as a precaution though no symptoms had occurred. Two days later one of the divers was recompressed again having experienced numbness around his elbow. **B.**

85/89 May 1989. After a series of three deep dives over a weekend a diver was recompressed for symptoms of Type 2 decompression sickness. Provocative factors may have been an extra ascent and re-descent during one of the dives, and a minor excursion to altitude whilst accompanying other divers from the same party to the local recompression chamber for treatment. **B.**

86/89 May 1989. After a series of three deep dives over a weekend a diver complained of a pain in his shoulder, which he thought was due to a muscle strain from lifting cylinders. When the pain persisted he was recompressed but the symptoms were unaffected. The diagnosis at the chamber was Type 2 DCS. **B.**

87/89 June 1989. Following a dive to 25m for a total of 33mins, of which 25mins were spent at 15m, a diver was recompressed for suspected Type 2 decompression sickness. Her buddy was later also recompressed but his "flu like symptoms" did not improve and seemed likely to be due to flu. **B.**

89/89 June 1989. After a weekend's diving well within tables a diver experienced aching muscles and slight itchiness. HMS Vernon were contacted for advice, as a result of which the diver spent 2 hours on oxygen at the local hospital. He was not recompressed. **B.**

91/89 May 1989. During a dive to 37m a diver had problems when his suit flooded, as a result of which the dive was aborted. He also suffered ear damage. A short while after surfacing he experienced numbness in his left arm and the authorities were contacted. Although his symptoms were first thought to be due to the cold from his flooded suit, he was later recompressed for suspected Type 2 DCS. **B.**

93/89 June 1989. A diver was recompressed after dives to 9m for 30mins and 6m for 26mins. He had pains in his hand, an ache in his shoulder and pains around his neck and chin. Previous history of shoulder injury and concurrent ear infection may have been contributory factors. **B.**

97/89 June 1989. A diver was recompressed for Type 1 DCS after he had run out of air during his stops. His dive had been to 59m for 28mins with a total dive time of 135mins! **I.**

98/89 June 1989. After a pair of divers became trapped in nets on the wreck of a trawler, one of them had to be recompressed for mild symptoms of decompression sickness. **I.**

100/89 June 1989. Forty-eight hours after a series of three dives, 34m for 18mins, 6m for 33mins and 22m for 17mins, a diver complained of a pain and pins and needles in his right hand. He was recompressed for suspected decompression sickness. **B.**

101/89 June 1989. After a series of five dives over a weekend a diver experienced niggles and skin irritation and was recompressed. Dives were apparently within tables but diver reports being very tired due to lack of sleep. **B.**

102/89 June 1989. Verbal report of diver with Type 2 DCS. No further details. **U.**

104/89 June 1989. After a dive to 26m for 30mins a diver performed sharing training at 12m and mask clearing at 6m for a total of a further 2mins. He was later recompressed for Type 2 DCS. This was the second time he had been bent within the last twelve months and he has now given up diving. **B.**

105/89 July 1989. A pair of divers collecting scallops had problems ascending at the end of their dive due to the weight of their goody-bag. The extra time taken on the ascent meant that their planned decompression stop was too short and they surfaced having missed stops. One of the pair later had symptoms of Type 2 decompression sickness and was re-compressed. The other diver was asymptomatic. **B.**

106/89 April 1989. A diver suffered Type 2 decompression sickness after a sequence of three dives over a weekend, 12m for 30mins, 14m for 30mins and 24m for 25mins. Heavy drinking on both evenings and a rapid ascent on the last dive were contributory factors. **B.**

109/89 May 1989. At the end of a dive to 20m a diver had problems with one of his fins. He became inverted whilst trying to rectify the situation and in attempting to get upright, inflated his ABLJ. He made an uncontrolled ascent to the surface, missing required decompression stops. At the surface he had to be rescued and resuscitated and was air-lifted for recompression treatment. It is not certain whether he suffered Type 2 DCS or an air embolism. **B.**

110/89 July 1989. After a single dive to 30m with a dive time of 25mins a diver suffered Type 2 DCS. He was recompressed and has been advised not to dive again. **B.**

111/89 July 1989. A diver suffered Type 2 decompression sickness after a dive to 32m. This dive was the second dive of the day and was within the dive computer she used. She was

recompressed with complete resolution of symptoms. **B.**

112/89 July 1989. A diver made a rapid ascent to the surface from a dive to 26m, when his direct feed assembly failed and his remaining air was lost. Minor symptoms of air embolism/Type 2 decompression sickness were not recognised and he made a further dive to 9m for 54mins. He was eventually recompressed three days later. **B.**

113/89 July 1989. A pair of divers ran low on air during a working dive at 42m. This resulted in them ascending rapidly and missing their 3m decompression stop. One of the pair later had symptoms of Type 2 DCS and was recompressed. **B.**

114/89 July 1989. Verbal report of diver suffering from decompression sickness. No further details. **U.**

118/89 May 1989. A diver suffered Type 2 decompression sickness during a week's diving holiday. Seven dives, the majority greater than 30m, had been performed in a four day period, using a dive computer. The diving was being carried out at a remote location and the helicopter flight to the recompression facilities took more than 3 hours. Repeated treatments were necessary but eventual full recovery is anticipated. **B.**

121/89 July 1989. After a series of three dives to 28m over a period of three days a diver suffered a Type 1 bend and was recompressed. The final dive in the series was 27m for 32mins with a 4mins stop at 6m. The dives were within tables. **B.**

124/89 June 1989. After two dives to 39m for 21mins within tables and a dive computer a diver suffered Type 1 DCS. He was air-lifted for recompression and made a complete recovery. **B.**

127/89 July 1989. A diver made a faster than normal ascent at the end of a dive to 26m as a result of problems with his SMB. At home a few hours later he experienced mild sensitivity and tingling in one calf. He was advised to attend for recompression and although asymptomatic on arrival, he was recompressed. **B.**

129/89 Aug. 1989. After a dive to 50m for 19mins a diver suffered Type 2 decompression sickness immediately on surfacing. Sharing during his decompression stops, heavy drinking the previous evening and missed stops on a dive the previous day may have been provocative. **B.**

132/89 July 1989. After dives to 32m for 18mins and 27m for 20mins a diver was recompressed for suspected decompression sickness. He had been experiencing headaches on previous days' dives. **B.**

133/89 Aug. 1989. A diver had problems when his direct feed jammed open and he missed decompression stops due to being low on air. Although asymptomatic he was recompressed as a precaution. **B.**

134/89 June 1989. Following a dive to 52m a diver surfaced missing 5mins decompression as required by his dive computer. He subsequently suffered symptoms of Type 2 DCS and was eventually recompressed 2 days later. **B.**

136/89 July 1989. After a dive to 24m for 30mins with 2mins at 6m on the ascent, a diver had symptoms of Type 2 DCS. She was recompressed 2 days later. **B.**

137/89 Aug. 1989. Following a dive to 43m a diver experienced Type 1 decompression sickness and was recompressed. A previous working dive to the same depth some 40 hours earlier had produced an itching sensation and was possibly contributory. **B.**

138/89 July 1989. Following dives to 34m for 26mins and 24m for 28mins using a dive computer, a diver suffered from decompression sickness. **B.**

139/89 July 1989. After a series of 5 dives in 3 days, maximum depth 32m and within BSAC '88 Tables, a diver was found to be suffering from Type 2 DCS and was recompressed. Symptoms were resolved by recompression but reappeared during the drive home over high ground. **B.**

141/89 Feb. 1989. Report of a diver with Type 1 DCS after a dive to 15m within tables. No further details. **B.**

142/89 April 1989. Report of a diver with Type 1 decompression sickness after a dive to 28m for 26mins following his buddy's dive computer. **U.**

144/89 May 1989. Report of diver with Type 2 DCS following 3 dives in 2 days. Excursion to altitude on the journey home may have been a factor. **U.**

146/89 June 1989. Report of a diver with Type 1 DCS after a dive to 44m for 18mins followed by 40mins at 4m. No further details. **U.**

147/89 June 1989. Report of a diver attending recompression chamber 5 days after a dive to 52m during which decompression stops were missed. **B.**

149/89 July 1989. Report of a diver with Type 2 DCS after a dive to 30m for 23mins followed 3 hours later by a dive to 11m for 41mins, using a dive computer. No further details. **U.**

150/89 July 1989. Report of a diver with suspected Type 1 decompression sickness after dives to 48m for 10mins and 18mins separated by a 15min surface interval. 37mins of stops were carried out as required by the diver's dive computer. **U.**

151/89 July 1989. Report of a diver with Type 1 DCS, following a dive to 20m for 60mins with required stops. No further details. **U.**

152/89 Aug. 1989. Report of a diver being treated for decompression sickness after 2 bounce dives to 31m for 10mins each with no surface interval. No further details. **U.**

153/89 Aug. 1989. Report of diver with Type 2 decompression sickness after 9 dives in 5 days. Symptoms appeared after dives to 15m for 18mins and 15m for 33mins with a 3.5 hour surface interval. No further details. **U.**

154/89 Aug. 1989. Report of diver presenting for treatment at a recompression chamber 11 days after his last dive. Suspected Type 1 DCS after dive to 8m for 35mins. The same diver had suffered Type 2 DCS in June. No further details. **I.**

155/89 Aug. 1989. Report of a diver with Type 1 decompression sickness after a dive to 39m with a time of 24mins and 7mins of decompression stops. No further details. **U.**

156/89 Aug. 1989. Report of diver with Type 1 DCS. He had apparently experienced difficulty controlling his buoyancy during his decompression stop after a dives to 30m for 27mins and 18m for 27mins. No further details. **U.**

157/89 Aug. 1989. Report of diver with Type 2 DCS after dives to 21m for 35mins and 30m for 15mins with a 5 hour surface interval. Problems with SMB had resulted in greater than normal exertion during the dive. **U.**

158/89 Aug. 1989. Report of diver with Type 2 DCS after a dive for 37mins with a maximum depth of 29.5m using a dive computer. No further details. **U.**

159/89 Aug. 1989. Report of a diver being recompressed, although asymptomatic, after dives to 22m for 27mins with 5mins of stops and 35m for 19mins with a 1min stop. No further details. **B.**

160/89 Sept. 1989. Report of a diver with Type 2 DCS within tables following a dive to 30m for 19mins. No further details. **U.**

167/89 Feb. 1989. Report of a diver with Type 2 DCS after 4 dives in 75mins with a maximum depth of 20m. No further details. **U.**

168/89 April 1989. Report of a diver with Type 1 decompression sickness after a dive to 20m for 35mins. No further details. **U.**

171/89 April 1989. Report of a diver with Type 2 decompression sickness within BSAC/RNPL Tables. No further details. **U.**

172/89 April 1989. Report of a diver with Type 2 DCS after a dive at 300m altitude using a dive computer. No further details. **U.**

173/89 May 1989. Report of a diver with Type 2 DCS after a dive to 33m for 17mins. No further details. **U.**

174/89 May 1989. Report of a diver with Type 2 DCS after a dive to 30m for 18mins. No further details. **U.**

175/89 May 1989. Report of a diver with Type 2 DCS. No further details. **U.**

176/89 May 1989. Report of a diver using a dive computer suffering from Type 1 decompression sickness. No further details. **U.**

177/89 April 1989. Report of a diver with Type 2 DCS. He had apparently made 3 ascents as part of a training drill and the rate of ascent may have been too fast. No further details. **U.**

178/89 May 1989. Report of a diver with Type 2 DCS. No further details. **U.**

179/89 May 1989. Report of a diver with Type 2 DCS. No further details. **U.**

180/89 May 1989. Report of a diver with Type 1 DCS. No further details. **U.**

181/89 May 1989. Report of a diver with Type 1 DCS. No further details. **U.**

182/89 May 1989. Report of a diver with Type 1 DCS. No further details. **U.**

183/89 March 1989. Report of a diver with suspected Type 2 decompression sickness. Ascent would appear to have been rather fast but there are no other details. **U.**

184/89 June 1989. Report of a diver with Type 2 DCS. No further details. **U.**

185/89 June 1989. Report of a diver with Type 2 DCS whilst using US Navy Tables. Tables appear not to have been followed correctly but there are no further details. **U.**

186/89 June 1989. Report of a diver with Type 2 decompression sickness using Buhlmann Tables. No further details. **U.**

188/89 June 1989. Report of a diver with Type 2 decompression sickness after multiple deep dives using a dive computer. No further details. **U.**

189/89 June 1989. Report of a diver suffering from Type 2 DCS within the US Navy Tables. No further details. **U.**

190/89 June 1989. Report of a diver with Type 2 decompression sickness within BSAC '88 Tables. Victim also apparently had DCS earlier in June which was not treated. **U.**

191/89 June 1989. Report of a diver with Type 2 DCS following incorrect use of US Navy Tables. No further details. **U.**

193/89 June 1989. Report of a diver with Type 2 DCS preceded by a skin bend. The victim was using a dive computer and had suffered a previous bend in 1988 which was not treated. **U.**

194/89 June 1989. Report of a diver with Type 2 decompression sickness within the Buhlmann Tables. No further details. **U.**

195/89 June 1989. Report of a diver with Type 1 decompression sickness within US Navy Tables. No further details. **U.**

197/89 July 1989. Report of a diver with Type 2 DCS within BSAC '88 Tables. No further details. **U.**

198/89 July 1989. Report of a diver with Type 2 decompression sickness. No further details. **U.**

199/89 July 1989. Report of a diver with Type 1 DCS within BSAC '88 Tables. No further details. **U.**

200/89 July 1989. Report from a recompression chamber of a late presentation of a diver with suspected decompression sickness. He had missed decompression stops as a result of his buddy running out of air. No further details. **U.**

201/89 July 1989. Report of a diver being recompressed for decompression sickness. No further details. **U.**

202/89 July 1989. Report of a diver suffering from Type 2 DCS. No further details. **U.**

203/89 July 1989. Report of a diver with Type 2 DCS whilst using a dive computer. No further details. **U.**

204/89 July 1989. Report of a diver suffering from Type 2 DCS whilst using US Navy Tables. An unreliable depth gauge may have been a factor. No further details. **U.**

205/89 July 1989. Report of a diver being recompressed after having run out of air and missed decompression stops. No further details. **U.**

206/89 July 1989. Buddy of 205/89 recompressed having run out of air and missed decompression stops. No further details. **U.**

207/89 July 1989. Report of diver being treated for Type 2 DCS. He had apparently had difficulty maintaining the depth of his stops. No further details. **U.**

211/89 July 1989. Report of a diver being recompressed for Type 2 decompression sickness. No further details. **U.**

212/89 Aug. 1989. Report of a diver being recompressed for Type 2 DCS. No further details. **U.**

213/89 Aug. 1989. Report of a diver being recompressed for Type 2 DCS. No further details. **U.**

214/89 Aug. 1989. Report of a diver being recompressed for Type 1 DCS with suspected Type 2 involvement using SAA Tables. No further details. **U.**

215/89 Aug. 1989. Report of a diver being treated for Type 1 DCS. US Navy Tables. No further details. **U.**

216/89 June 1989. Report of a diver being recompressed for Type 2 DCS. He was using SAA Tables and appears to have missed stops but there are no further details. **U.**

217/89 Aug. 1989. Report of a diver with Type 2 decompression sickness within BSAC '88 Tables. No further details. **U.**

218/89 Aug. 1989. Report of a diver suffering from Type 2 DCS after 5 dives in 24 hours all requiring significant decompression stops. The diver would appear to have had a previous decompression problem in June which was not treated. No further details. **U.**

219/89 Aug. 1989. Report of a diver suffering from Type 2 DCS within BSAC '88 Tables. No further details. **U.**

220/89 Aug. 1989. Report of a diver with Type 2 decompression sickness. No further details. **U.**

222/89 Aug. 1989. Report of a diver suffering from Type 2 DCS after a dive to 21m for 32mins using BSAC '88 Tables. There was a delay of several days before he presented for treatment and was recompressed. **U.**

226/89 Sept. 1989. After a dive to 31m for a total time of 38mins using a dive computer, a diver felt dizzy and had difficulty walking. He was subsequently successfully recompressed for Type 2 decompression sickness. Afterwards it became apparent that he had suffered from skin itching after a number of previous dives. **B.**

230/89 June 1989. Following a dive to 32m for 16mins a diver made a second dive 3.5 hours later to 15m for 20mins. On ascent he was nauseous and vomited on reaching the surface. He was dekitted by his companions and recovered fully. Two days later he awoke with a pain in his shoulder and was recompressed for suspected decompression sickness. **U.**

231/89 Oct. 1989. A diver who had symptoms of DCS following a holiday dive abroad, flew home for treatment. On the flight home she began convulsing. On arrival in the UK she was given recompression treatment. **U.**

234/89 Sept. 1989. During a dive to 68m! a diver's contents gauge hose failed and he ran out of air without being able to perform required stops. After 2 attempts at in-water recompression! he was eventually recompressed onshore. **I.**

237/89 July 1989. After a series of 5 dives in 4 days, within BSAC '88 Tables, a diver had mild symptoms of Type 2 DCS. Maximum depth was 51m. He was recompressed locally before returning to the UK for follow-up treatment. **B.**

238/89 May 1989. After dives to 16m for 29mins and 18m for 33mins with a 1 hour surface interval a diver experienced symptoms of Type 2 DCS. He was recompressed with full resolution of symptoms. **B.**

239/89 May 1989. A very experienced BSAC diver suffered Type 2 DCS following a series of dives well within the no-stop times of BSAC '88 Tables. Symptoms were resolved on recompression. **B.**

BOATING/SURFACE INCIDENTS

7/89 Oct. 1988. A pair of divers who surfaced 300m away from their cover boat were unable to attract attention and were swept away by the tide. They were rescued by helicopter after 90mins in the water. No SMB was being used. **B.**

9/89 Dec. 1988. During a branch boat handling course a rigid hulled inflatable overturned. The four occupants were rescued by fellow course members. The boat sustained significant damage. **B.**

11/89 Dec. 1988. A diver became separated from his buddy during the descent when he lost contact with the shotline. He surfaced some distance away from the cover boat due to the current and failed to attract their attention. He was rescued by helicopter some 90mins later after being spotted by a fishing boat. **B.**

15/89 Dec. 1988. A pair of divers who were having difficulty swimming back to shore against the tide gave the distress signal and their shore cover alerted the Coastguard. In fact they managed to reach shore safely just as the local lifeboat arrived. **B.**

20/89 Nov. 1988. A pair of divers diving from an untended dory were swept away in exceptionally strong tides. One diver who had secured himself to the dory by a line had to cut it free. The alarm was raised when one of the pair was picked up by a fishing boat and the second diver was rescued by a Fisheries Protection vessel. **U.**

21/89 Dec. 1988. Report of a missing diver resulted in search by four lifeboats and several vessels as well as an SAR helicopter. Diver recovered by helicopter, safe and well. Coastguard report only. **U.**

22/89 Dec. 1988. Following a call to the Coastguard reporting that a party of divers were overdue the local lifeboat and an SAR helicopter in the area were tasked to search. The Coastguard contacted divers by VHF and confirmed that all was well. **U.**

37/89 April 1989. A pair of divers conducting a drift dive without SMBs surfaced out of sight of their boat cover. Two lifeboats and an SAR helicopter were tasked to search but the divers were eventually picked up by their own boat. **B.**

38/89 April 1989. A pair of divers had difficulty swimming back to shore against the tide and one suffered from cramp and held on to a pot-buoy. They were picked up and returned to shore by a boat from another diving club. **B.**

49/89 March 1989. A diver became separated due to poor underwater visibility and when he surfaced was approximately half a mile away from the dive boat. After a search including an SAR helicopter, the local lifeboat and four other vessels, he was picked up by the lifeboat two hours after surfacing. **U.**

58/89 May 1989. Following a boat dive a pair of divers made a second dive from the shore. They surfaced a long way offshore in rough water and had difficulty swimming against the wind and swell. After they had signalled for assistance one of the boats was relaunched and recovered them close to some dangerous rocks. **B.**

70/89 April 1989. A 17' long dory with five divers on board was moored above the dive site which was in the Middle East. A large landing craft (100' long) approached on a collision course and failed to respond to all warning signals. The three divers on board the dory at the time had to abandon ship and the landing craft drove straight over the top of the it. Fortunately there were no injuries but the dory was written off and a substantial amount of diving gear lost. **B.**

88/89 April 1989. A diver surfaced with a free-flowing DV at an inland dive site and began swimming slowly to the exit point. When he was 25m from the side he asked for help and a diver from another party jumped in and towed him ashore. **U.**

103/89 June 1989. A passing motor cruiser ran over a diver's SMB and severed the line. This was not noticed by the divers who surfaced 20mins later to find their cover boat had lost contact with them and was searching some distance away. The divers were eventually picked up by their own boat after about 20mins. **U.**

107/89 June 1989. A pair of divers became separated from their cover boat when their SMB line broke during the dive. When they surfaced the boat was too far away for them to attract attention and they drifted into heavy overfalls. The Coastguard were alerted and the divers were quickly located by an SAR helicopter. **B.**

115/89 July 1989. A pair of divers surfaced on the far side of an island out of sight of their hard boat whilst diving at a remote offshore site. No further details, preliminary report card only. **B.**

120/89 May 1989. A pair of divers briefed their boat handler that they would make a 20min no-stop dive. In fact their dive duration was 30mins. The boat handler became concerned and began to search down-tide so that when the divers eventually surfaced they had become separated from their boat. The divers were recovered by a passing yacht which then contacted their own boat by VHF. **B.**

123/89 July 1989. A group of divers were launching a rigid hulled inflatable from the beach in a heavy swell. As the boat moved off, the stern swung to port and the propeller struck the foot of one of the launching party, damaging her drysuit and injuring her foot. **B.**

130/89 June 1989. A diver was injured when he was struck by the propeller of the inflatable tender to a charter boat. The inflatable was overloaded and difficult to steer and in attempting to come alongside it collided with the charter boat, causing the injured party to fall overboard. He suffered broken bones and required ten stitches. **B.**

225/89 Aug. 1989. A pair of divers on a shore dive were swept out of the sheltered bay in which they were diving and were unable to swim to shore against the current. They were eventually picked up by a lifeboat 2.5 hours later. **B.**

229/89 July 1989. A diver who got into difficulties on his first dive was winched off rocks about 400m offshore by a rescue helicopter. He was detained in hospital overnight but appears to have simply swallowed large quantities of seawater. **U.**

232/89 May 1989. A diver who surfaced half a mile from his cover boat fired a red flare to attract attention and was picked up. However the flare was also seen by other vessels who alerted the Coastguard which resulted in 2 lifeboats and an SAR helicopter being tasked to search. The rescue units were stood down as soon as it had been established that the diver was safe. **U.**

233/89 May 1989. Coastguards received a telephone call from a diving inflatable via a mobile telephone, reporting that 2 divers were overdue. After a brief search by inshore lifeboat and SAR helicopter the divers were located and returned to their boat. **U.**

241/89 July 1989. A pair of divers were winched to safety by an SAR helicopter after they had drifted half a mile from their dive site. Press report only. No further details. **U.**

ASCENTS

3/89 Oct. 1988. A pair of divers encountered a diver from another party who was out of air. An assisted ascent was made to the surface. Although the ascent became somewhat buoyant, all involved arrived safely at the surface. **U.**

13/89 Oct. 1988. A novice diver with only three previous dives to his credit, dived to 36m. He appears to have quickly run out of air and made a buoyant ascent to the surface with his buddy. He sustained an air embolism and was recompressed immediately. **B.**

41/89 March 1989. A diver felt slightly dizzy during the descent on a dive to 30m. At the bottom she felt herself about to black out and signalled to the dive leader. She was brought to the surface with a buoyant lift during which she sustained a burst lung and air embolism and was recompressed. **B.**

42/89 Dec. 1988. During a dive to 20m a diver knocked open the valve of her stab jacket air cylinder. Thinking air was entering her drysuit she tried to dump the suit without effect. She made a buoyant ascent to the surface and was immediately recompressed as she exhibited symptoms of pneumothorax. **B.**

48/89 Feb. 1989. Diver made assisted ascent using her buddy's octopus when her own valve started to freeflow on cold water dive. No further details. Preliminary incident report only. **B.**

52/89 April 1989. During ascent training at a BSAC school overseas a diver became breathless, surfaced quickly and was coughing up frothy liquid flecked with blood. On receiving medical treatment it was discovered that she had simply inhaled seawater during her exercise, the blood originating from a nose bleed. **B.**

66/89 May 1989. A pair of divers were taken to hospital after having experienced problems on their ascent. Due to problems with a flooding mask the novice "shot to the surface" from 6m before completing the required 1min stop. The divers were detained for observation but required no treatment. **B.**

96/89 June 1989. A diver was recompressed for an air embolism following a buoyant ascent from 40m. The diver appears to have suffered from narcosis, to have lost his DV at depth and panicked. **U.**

143/89 May 1989. Report of a diver with a suspected air embolism after a buoyant ascent, apparently as a result of a demand valve problem. **U.**

145/89 May 1989. Report of a diver being recompressed as a precaution following a fast ascent at the end of the second dive of the day. The first dive was to 35m for 15mins and the second to 17m for 20mins after a 3.5 hours surface interval. **U.**

161/89 Sept. 1989. Report of a diver being recompressed as a precaution for possible air embolism following a buoyant ascent from 18m. No further details. **U.**

162/89 Jan. 1989. Report of a diver with barotrauma after a fast ascent to assist his buddy. No further details. **U.**

163/89 April 1989. Report of a diver with a suspected gas embolism. No further details. **U.**

170/89 March 1989. Report of a diver with soft tissue injury/suspected Type I decompression sickness after practicing assisted ascent. No further details. **U.**

187/89 June 1989. Report of a diver being recompressed for a suspected air embolism. No further details. **U.**

196/89 July 1989. Report of a diver being recompressed for an air embolism. No further details. **U.**

224/89 Aug. 1989. Towards the end of a dive to 30m a novice diver ran short on air and made an assisted ascent to the surface using his instructor's octopus. The ascent was otherwise normal and included a 1min decompression stop. **B.**

240/89 July 1989. Towards the end of a dive to 27m one of a trio of divers ran out of air whilst performing a 2min decompression stop. He was given the dive leader's octopus rig and completed the stop and subsequent ascent to the surface without further incident. **B.**

244/89 July 1989. Report of a diver suffering from an air embolism following ascent from dive to 11m. No further details. **U.**

TECHNIQUE

27/89 Jan. 1989. A novice diver had problems on a dive to 24m. He lost one fin on the descent and this was refitted by his buddy. At the bottom he appeared to panic and headed for the surface. His ascent rate was controlled by his buddy and he was assisted from the water. He has not dived since. **B.**

78/89 May 1989. As a result of running out of air a pair of divers surfaced and missed decompression stops following a dive to 35m. A strong tide and an inadequate buoy on the shot line were contributory factors. **B.**

116/89 Aug. 1989. After a dive to 27m for 30mins a diver ran out of air on the bottom. Attempted sharing was unsuccessful and he made a rapid ascent to the surface. No symptoms of DCS inspite of fast ascent and missed stops. **B.**

122/89 July 1989. On a dive to 21m a diver noticed her contents gauge needle fluctuating with every inhalation. She signalled out of air and made an assisted ascent with her buddy. It was found that her air had not been turned on properly at the start of the dive. **B.**

192/89 June 1989. Report of 2 divers being recompressed for omitted decompression stops although they did not exhibit any symptoms of DCS. No further details. **U.**

208/89, 209/89, 210/89 July 1989. A trio of divers using Buhlmann Tables were recompressed together after having run out of air and missed stops. **U.**

221/89 Sept. 1989. Report of a trio of divers being recompressed as a precaution following problems with a buoy which led to them running out of air and missing decompression stops. **U.**

223/89 July 1989. During a dive to 36m a diver overstayed his time trying to retrieve a porthole and ran short of air which resulted in missed decompression stops. No symptoms or treatment. **B.**

242/89 June 1989. Towards the end of a dive to 39m a diver ran short of air. After initially sharing using his buddy's octopus he made a fast ascent to the surface. Although neither diver displayed symptoms of DCS they were both recompressed as a precaution. **B.**

EQUIPMENT

5/89 Nov. 1988. A diver made a buoyant ascent from 25m when he found himself unable to vent air from the cuffs of his drysuit. This was his first dive after having replaced his cuff seals with new heavy duty seals which being longer, folded over and prevented venting. **B.**

6/89 May 1988. On a dive to 29m a diver's dive computer was seen to be reading 4m maximum depth and 4mins dive time. Diver reverted to watch and depth gauge and completed dive normally. Computer replaced by manufacturer. **B.**

17/89 Jan. 1989. As a diver turned his console to show his air supply to his buddy the gauge blew off the hose. An assisted ascent was made to the surface using the buddy's octopus rig. The console was two weeks old and had exhibited no signs of leakage. The gauge hose would appear not to have been properly tightened up. **B.**

28/89 Feb. 1989. During a dive with a borrowed ABLJ a diver got into difficulties with her drysuit. The suit had tight wrist and neck seals and no dump valve. Whilst on the surface with an inflated ABLJ the direct feed of her suit was accidentally and continually operated by pressure from the ABLJ. She became unconscious due to the constriction of her neck seal. Rescuing divers had to cut the suit to vent it after which she was successfully resuscitated. **B.**

29/89 Feb. 1989. A diver's direct feed for his ABLJ jammed open, causing him to surface from about 6m. Cause appears to be dirt ingress. **B.**

30/89 Feb. 1989. During a dive to 22m in cold water a diver's demand valve started to cease. He successfully made an assisted ascent to the surface. On examination the DV had a small hole in the diaphragm but main problem appears to be water temperature of 3 degrees. **B.**

31/89 March 1989. A diver's air supply cut off during a dive to 25m and an assisted ascent was made to the surface. Subsequent investigation found the anti-debris tube in his cylinder was blocked by rust particles. The cylinder in question was only ten months old. **B.**

B40/89 March 1989. On a dive to 35m in cold water a diver's DV froze and freeflowed. An assisted ascent was made to the surface using his buddy's octopus rig. **B.**

53/89 April 1989. A novice diver found that his recently purchased DV was hard to breathe off and he was unable to use his suit inflation and breathe at the same time. The DV was later found to have a blockage. **B.**

55/89 Jan. 1989. A regulator first stage failed during a pool training session. When air was turned on the piston in the first stage failed and the top of the first stage was forced off. The cause would appear to be a manufacturing defect. **B.**

57/89 March 1989. At 20m during a dive a diver's ABLJ direct feed failed as he tried to put more air into his jacket. The hose connection system appears to have been at fault. The manufacturer is now utilising a different system. **B.**

64/89 April 1989. During a dive to 26m in cold water a diver's DV began to freeflow. He surfaced normally, breathing off the DV and the freeflow continued on the surface until the cylinder was empty. **B.**

71/89 May 1989. A diver was forced to make an assisted ascent from 36m using his buddy's pony set, when his first stage froze open on a dive in a fresh water quarry. **B.**

90/89 June 1989. On a dive to 27m a diver found he was very over-weight and could not ascend. His buddy inflated his stab-jacket for him but he was still unable to make progress towards the surface. Inflation of the buddy's stab-jacket as well resulted in a buoyant ascent to the surface. It would appear that the diver's wetsuit had been made out of a very soft neoprene unsuitable for diving because it compresses and results in a large loss of buoyancy at depth. **B.**

94/89 May 1989. On a dive to 50m at a fresh water site a diver's demand valve began to freeflow. He ascended normally to 6m and performed a decompression stop using the spare cylinder on the line. The valve stopped freeflowing at 6m and he was able to complete his ascent normally. **B.**

140/89 Aug. 1989. On a dive to 35m a diver found that the mouthpiece of his DV had come away from the second stage. He made a successful assisted ascent to the surface using his buddy's octopus system. **B.**

148/89 Sept. 1989. A diver's cylinder which had rattled from new was found on eventual inspection to contain a piece of silica gel and some metal swarf. **B.**

236/89 Sept. 1989. On attempting to fill a cylinder which was just over 12months old, the compressor operator found that a small hole had apparently been drilled through the cylinder wall maliciously. **B.**

ILLNESS

2/89 Nov. 1988. After a dive to 18m (30mins) a diver collapsed and became unconscious. She had experienced dizzy spells during the week preceeding the dive thought to be due to low blood pressure. No conclusive diagnosis arrived at. **B.**

95/89 June 1989. A diver suffered pulmonary oedema following a dive to 40m. She became breathless, made a somewhat rapid ascent and became unconscious on the surface. Oxygen was administered on site and she was flown to the nearest recompression chamber, from where she was transferred to hospital without being recompressed. **B.**

108/89 June 1989. During the ascent from a short dive to 20m a diver's breathing rate started to increase. On arrival at the surface he was still breathless and was given oxygen. He was taken to the nearest recompression facility but doctors are unsure as to the cause of his problem. **B.**

117/89 July 1989. A diver who reported to a recompression chamber was found to have an ear problem. No further details. **U.**

125/89 August 1989. A diver suffered an asthma attack at 20m. He surfaced normally, assisted by his buddy, and had to be assisted from the water due to shortness of breath. He made a prompt recovery at the surface. **B.**

MISCELLANEOUS

10/89 Sept. 1988. After a dive to 28m for 20mins a young novice diver reported to the local casualty department as he "felt tingly all over". After examination it was concluded that the symptoms were pyschological in origin and no treatment was given. **B.**

14/89 Jan. 1989. The day after a dive to 25m for 23mins a diver had an ache in his left shoulder and consulted HMS Vernon. After monitoring the symptoms for 24 hours it was concluded that the pain was the result of an antitetanus injection. No treatment given. **B.**

44/89 Feb. 1989. During a boat trip in an RIB a diver fell off the tube into the bottom of the boat when it hit a wave. He fell awkwardly and it was suspected that he had broken his ankle. The Coastguard arranged for an ambulance to meet the boat and he was taken to hospital where his ankle was found to be badly sprained. **B.**

50/89 March 1989. During a navigation drill a novice diver had trouble clearing her ears and sustained a perforated eardrum. She felt dizzy and was assisted to the surface by her buddy. **B.**

60/89 April 1989. A diver is reported as having difficulty breathing on surfacing from a dive. Preliminary incident report only. No further details. **B.**

63/89 April 1989. An instructor burst his eardrum during a pool session. No further details. **B.**

68/89 May 1989. A diver became unconscious on the surface following a dive to 30m. The dive had been strenuous and due to rough sea conditions two sea-sickness tablets had been taken before the dive. She had some problems on ascent and felt dizzy, on arrival at the surface she was overbreathing and also swallowed some water. Oxygen was administered on site and she made a full recovery. **B.**

69/89 May 1989. A diver returned to the surface to refit his gloves whilst his two buddies waited for him on the anchor line at 15m. When he re-entered the water he joined the wrong pair and had a 30min dive. After a short while his original buddies surfaced and, thinking him lost, the Coastguard was alerted and a search was initiated with an SAR helicopter and the local lifeboat. The search was called off when the diver surfaced safe and well. **B.**

72/89 May 1989. A diver was recompressed for suspected Type 1 DCS following a dive to 52m. His injury was confirmed to be a strained muscle. **I.**

119/89 May 1989. During descent down the shot line, the line appears to have wrapped around a diver's cross-flow pillar valve. Over the period of the descent the valve was slowly turned off until he found himself without air at the bottom. A successful assisted ascent was made back to the surface. **B.**

128/89 July 1989. During the course of a dive at a popular south coast location, divers saw evidence of raw sewage. Some days later five or six members of the dive party developed ear infections. **B.**

131/89 May 1989. A diver doing rescue training in a warm swimming pool wearing full equipment became hyperthermic. He was assisted from the pool and recovered soon after. **B.**

135/89 Aug. 1989. A novice diver with a pre-existing ear infection experienced severe pain on descent. He failed to check his buoyancy and was in danger of sinking out of control, but was brought to the surface by his dive leader. **B.**

164/89 April 1989. Report from a recompression chamber of a diver with barotrauma of both ears after difficulty with ear clearing. No further details. **U.**

165/89 May 1989. Report of a diver with mild barotrauma of gastrointestinal tract. No further details. **U.**

166/89 May 1989. Report of a diver attending a recompression chamber with suspected decompression sickness. Thought to have been in fact an allergic reaction to Fairy Liquid used to lubricate his wetsuit. **U.**

169/89 Jan. 1989. Report of a diver with minor injuries following a dive to 45m in a drysuit without suit inflation. Probably suit squeeze but gas embolism or Type 1 DCS were not ruled out. No further details. **U.**

235/89 July 1989. On ascent from a dive to 21m a diver felt slight disorientation and then a sharp pain in his ear. It was subsequently affirmed that he had burst his eardrum on ascent. **B.**

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 in the next column.

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

Date of incident

Name of Subject(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.

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. Forms and Cards should be sent to:

The British Sub-Aqua Club,
16 Upper Woburn Place,
London WC1H 0QW.

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.

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.

BSAC/NDC DIVING INCIDENTS REPORT

FATALITIES/INJURIES/ILLNESS

		1985	1986	1987	1988	1989
01	Fatality	14	15	8	16	12
02	Embolism	10	10	6	7	12
03	Decompression sickness	57	52	69	89	137
04	Injury caused	4	6	9	13	8
05	Illness involved	6	13	5	9	7
06	Ear problems/damage	5	6	4	8	8
07	Hypothermia	6	2	4	2	0
08	Unconsciousness	5	5	5	10	7
09	Resuscitation	2	5	5	7	6
10	Breathlessness	5	5	6	6	11
11	Narcosis	6	8	4	2	2

TECHNIQUE

12	Aborted dive	8	6	7	9	15
13	Assisted accent	7	9	8	7	16
14	Buoyant ascent	19	14	12	12	19
15	Free ascent	–	–	1	6	2
16	Other ascent	1	–	1	1	4
17	Lost diver(s)	18	21	34	24	15
18	Buoyancy/weight	16	10	8	8	8
19	Carelessness	13	29	35	13	11
20	Ignorance	19	27	24	4	4
21	Disregard of rules	14	22	28	13	10
22	Malice	1	3	–	2	1
23	Out of air	8	9	8	12	35
24	Pre-dive check	4	1	2	4	2
25	Rough water	17	14	9	10	6
26	Bad seamanship	10	5	4	10	4
27	Good seamanship	2	1	0	1	0
28	Good practice	6	6	7	5	3
29	Separation	14	7	6	14	6
30	Trio diving	2	7	3	9	9
31	Training drill	1	4	9	5	7
32	Training inadequate	12	10	5	4	5
33	Sharing involved	4	5	6	7	13
34	Deep dive (30m+)	41	43	51	54	40
35	Low U/W vis.	4	2	3	2	3
36	Low surface vis.	2	2	1	0	0
37	False alarm	6	4	2	2	2
38	Solo dive	2	4	6	4	0
39	Divers underwater	117	117	109	37	50
40	Divers on surface	48	37	44	54	35
41	Nets	2	1	1	1	1
42	Cold water	5	13	7	4	8

EQUIPMENT

		1985	1986	1987	1988	1989
43	Boat problems	13	4	3	8	2
44	Motor problems	12	3	4	7	0
45	Regulator performance	2	11	7	7	11
46	Equipment faulty	16	18	19	12	17
47	Equipment fitting	6	7	6	7	7
48	Equipment use	12	4	6	7	3
49	Equipment wear	2	4	2	0	0
50	Equipment inadequate	2	3	5	3	2
51	Ropes	2	3	5	1	2
52	SMB absent	7	5	7	0	3
53	SMB inadequate	1	4	3	2	1
54	SMB contributed	3	2	6	5	4
55	Propellor	1	2	0	2	2
56	ABLJ/BC/Stabjacket	3	5	3	0	4
57	Dry suit	13	9	4	8	5

CHANCE

58	Fire/explosion	0	0	3	0	0
59	Foul air	2	0	1	0	0

RESCUE SERVICES

60	Ambulance	–	–	26	30	20
61	Police	–	–	15	19	10
62	Helicopter	–	–	42	58	45
63	Coastguard	–	–	66	69	50
64	Lifeboat	–	–	29	29	16

DECOMPRESSION SICKNESS ANALYSIS

65	Recompression chamber	–	–	63	81	152
66	Recompression U/W	–	–	3	3	2
67	Within tables/computers	–	–	29	21	56
68	Rapid ascent	–	–	6	9	28
69	Repeat diving	–	–	12	27	39
70	Deep diving (40m+)	–	–	20	15	32
71	BSAC/RNPL tables	–	–	25	13	10
72	Inaccurate use	–	–	11	15	23
73	Computers	–	–	11	30	50
74	BSAC '88 tables	–	–	–	1	43
75	Flying or ascent to alt.	–	–	–	5	4
76	US Navy tables	–	–	–	–	8
77	Buhlmann tables	–	–	–	–	9
78	Missed stops	–	–	–	–	25
79	RNII tables	–	–	–	–	2

HISTORY OF DIVING FATALITIES

YEAR	MEMBERSHIP	DEATHS BSAC	DEATHS NON-BSAC
1959	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	

YEAR	MEMBERSHIP	DEATHS BSAC	DEATHS NON-BSAC
1976	25,310	4	
1977	25,342	3	
1978	27,510	8	(4)
1979	30,579	5	(8)
1980	24,900	6	(7)
1981	27,834	5	(7)
1982	29,590	6	(3)
1983	32,177	7	(2)
1984	32,950	8	(5)
1985	34,861	8	(6)
1986	34,210	6	(9)
1987	34,500	6	(2)
1988	32,960	10	(6)
1989	34,422	4	(8)

STATISTICAL SUMMARY OF ACCIDENTS AND INCIDENTS

ITEM	1985	1986	1987	1988	1989
Incidents reported	165	154	162	197	244
Incidents analysed	164	154	162	197	244
British incidents	160	146	142	173	170
Incidents abroad	5	8	16	15	14

ITEM	1985	1986	1987	1988	1989
Location unknown	0	0	4	9	60
BSAC Members	118	107	110	117	128
Non-BSAC Members	17	19	5	13	12
Membership unknown	29	28	47	67	104