

# **The British Sub-Aqua Club**



## **NDC Diving Incidents Report**

# **1999**

*Compiled by*

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## Introduction

This booklet contains the 1999 Diving Incidents Report, produced by The British Sub-Aqua Club (BSAC) in the interest of promoting diving safety. It is important to note that it contains details of UK diving incidents occurring to divers of all affiliations, plus incidents occurring worldwide involving BSAC members.

### Report Format

The majority of statistical information contained within this report is also shown in graphical form. Please note that all statistical information is produced from UK data only and does not include Overseas Incidents unless noted as 'All Incidents'.

The contents of this report are split into an overview of the year, and then the details of nine incident categories plus some historical analyses. The various sections can be found as shown below:-

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Within each category the incidents are listed in the order of their occurrence, not necessarily that of Incident Reference. They are laid out in the following form:

<i>MONTH/YR OF INCIDENT</i>	<i>INCIDENT REF.</i>
Brief Narrative of Incident.....	
.....	

The nature of many diving incidents is such that there is usually more than one cause or effect. Where this is the case the incident has been classified under the more appropriate cause or effect. For instance an incident involving a fast ascent, causing decompression illness, will be classified under 'Decompression Incidents'.

*Brian Cumming,  
BSAC Diving Incidents Advisor,  
November 1999*

## Acknowledgements

Data for this report is collected from several different sources. I would like to extend my thanks and appreciation to the following for their assistance in its production and in ensuring its completeness:

**Reg Hill, Coastguard Sport Diving Liaison Officer**

**Peter Bradley, Sea Safety Liaison Officer, Royal National Lifeboat Institute**

**and, in particular, all of those divers and other sources who have taken the trouble to complete Incident Reports and share their learning experience with others.**

**Finally, to Dr. Yvonne Couch for proof reading this report**

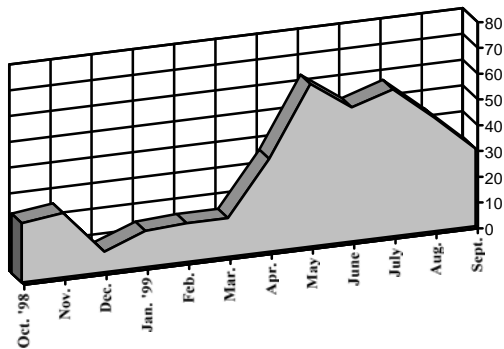


## Overview

**1999** has seen a fall in the total number of incidents that have been reported. In the 1999 incident year (October 98 to September 99 inclusive) 382 incidents have been recorded, compared with 431 in 1998 and 370 in 1997. Part of the reduction over last year will be due to the cancellation of the press cutting service for cost control reasons. In the 1998 incident year, incidents recorded by press reports only accounted for 4% of the total. If the same factor is applied to the 1999 data, a total of 398 reports might have been expected. It is anticipated that the 2000 report will again incorporate press cutting information.

The distribution of these reports is shown in the following chart, which is entirely consistent with previous years. As can be seen, 68% of these incidents have occurred in the summer period.

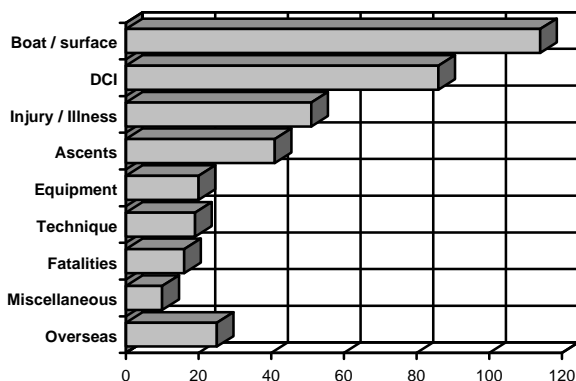
**Monthly breakdown of all incidents - 1999**



### Incidents by category

The incident database categorises all incidents into one of nine major categories, and the following chart shows the distribution of the 1999 incidents into those categories.

**Categorisation of the year's incidents**



This chart indicates 16 incidents involving fatalities, but one of these was a double fatality.

### Fatalities

The report includes 17 UK fatalities of which 8 involved BSAC members. 17 Fatalities is in line with the average number of UK fatalities that have been experienced in the last five years (16.8) but it is higher than the average of the last ten years (14.8), indicating a trend of increasing deaths. Fatalities of BSAC membership is slightly higher than the averages of the past five and ten years, but there is no indication of an increasing trend. Indeed, when the numbers of BSAC fatalities are compared with BSAC membership numbers over the last twenty years a strong trend of increasing safety can be seen.

The causal factors behind the UK fatalities can be summarised as follows:-

- Three cases were the result of people experiencing heart attacks whilst diving.
- Three cases resulted from dives in the 50 to 60m depth range, one of which involved a solo diver using a rebreather. The cause of this latter fatality is unclear, but the diver is known to have made a very rapid ascent with his drysuit over-inflated.
- A second case of a fatality of a diver using a rebreather occurred at the very beginning of a dive, with the diver becoming unconscious at the surface. Again the exact cause is not known.
- Two cases involved divers at or near the surface. In the first, two divers became separated from their boat and one of them lost consciousness in rough sea conditions. Some time passed before they were rescued and the unconscious diver did not recover. In the second case a diver was struck on the head by a boat's propeller and died from the injuries.

This leaves eight cases remaining where there is simply insufficient information to draw any conclusions with respect to the causes.

- Four involved divers who were lost underwater and not recovered despite extensive searches; one in a lake and three at sea.
- Four others involved divers who became unconscious underwater and, despite being recovered at the time, failed to respond to resuscitation techniques.

In many of these cases it is clear that accepted safe diving practices were not being followed.

### Incident depths

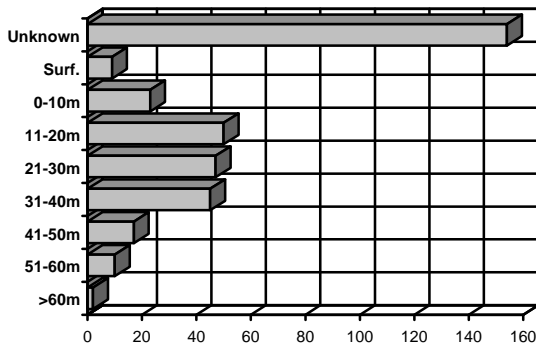
The following chart shows the maximum depth of the dive during which the incident took place, summarised into depth range groupings. The pattern is very similar to that normally seen and reflects the frequency of diving in these depth ranges. There is an increase over last year of dives greater than 50m; twelve incidents with maximum depths of over 50m, compared to six last year.

As noted earlier, three of these twelve incidents at depths of over 50m resulted in fatalities, this is a significantly higher fatality to incident ratio than is seen in the shallower depth ranges. The potential for problems increases significantly as diving depth increases.

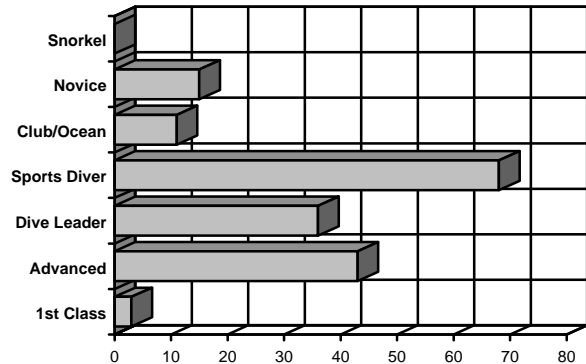
BSAC Safe Diving Practices advises that no dive should be deeper than 50m, and that dives to 50m should only be conducted by divers who are appropriately trained and qualified.

#### Maximum depth of dive involving an incident

**Qualification of the divers involved in incidents**

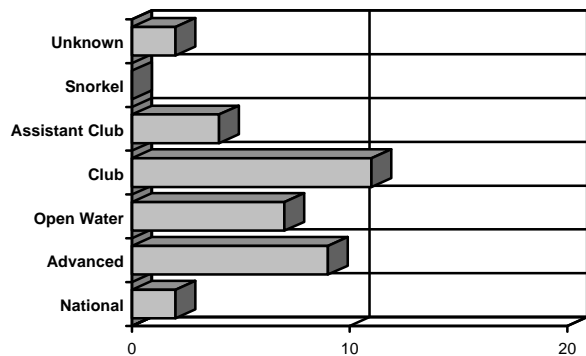
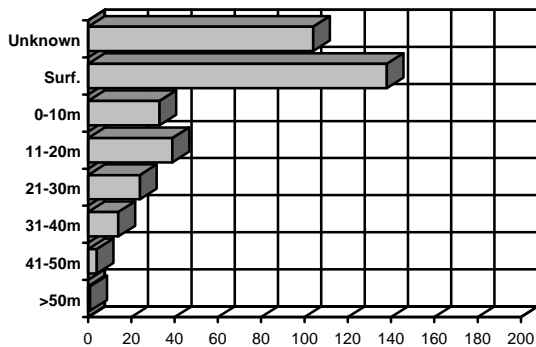


The next chart shows the depth at which the incident started. Inevitably the data is biased towards the shallower depths since many incidents happen during the ascent or at the surface. Critical among these are the DCI cases where almost always the casualty is out of the water before any problems are noted. This partially explains the large occurrence of 'surface' cases as this includes divers with DCI who have left the water.



**Qualification of instructors involved in incidents**

**Depth at which an incident started**



Other surface incidents involve boats and boating incidents. 1999 has been a typical year for boating problems; 50 incidents involving engine failure, and 13 cases involving problems with the boat itself. Numbers of divers becoming separated from their boats has increased, with 51 instances reported, compared with 34 last year.

It is important to note that these divers were involved in the incident but this does not necessarily mean that they suffered the effects of it. Some were involved as rescuers or in some other indirect way.

Inadequate maintenance is certain to be the cause of many of the engine problems. Engine failure, with divers underwater, often results in lost divers since the boat is no longer able to recover them. These divers are then left floating at the surface until discovered. The search operation is often very extensive with lifeboats, other craft and helicopters deployed to find the missing divers, and sometimes the divers are not found quickly. One of the cases in this report records a 7 hour search before the lost divers were found, and in another case a pair of divers were found just before nightfall.

An analysis of incident by diver qualification shows that no grade of diver, from novice to instructor, is immune to problems. It is all too easy to make the assumption that only inexperienced divers get into problems, but the chart shows that this is not so. Although it suggests that divers at the level of Sports Diver are the most prone to problems one must be careful in the interpretation of these data. The picture is clearly distorted by the numbers of members that we have at each of these grades. It is very probable that the largest single group of members are Sports Divers, hence the high incidence of problems.

The distribution of these qualification data conforms to the pattern seen in previous years.

As in previous years, the benefits of effective surface detection aids are highlighted, especially in the Coastguard reports.

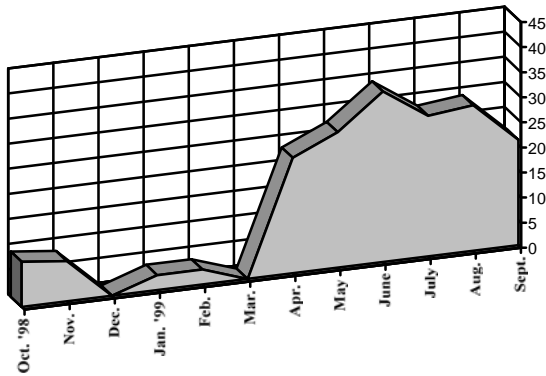
**Divers' use of the Emergency Services**

Divers' use of the rescue services shows a monthly distribution aligned to the distribution of all incidents, and is clearly correlated with the number of dives that are taking place. Our demands upon the Coastguard service was typical for the year, as were our calls upon the services of the RNLI.

**Diver Qualifications**

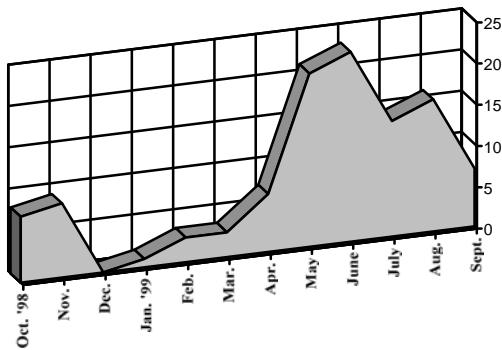
The next two charts show the qualification of those BSAC members who were involved in reported incidents.

**UK Incidents involving the Coastguard agency - Monthly breakdown**



Total Coastguard Incidents: 185

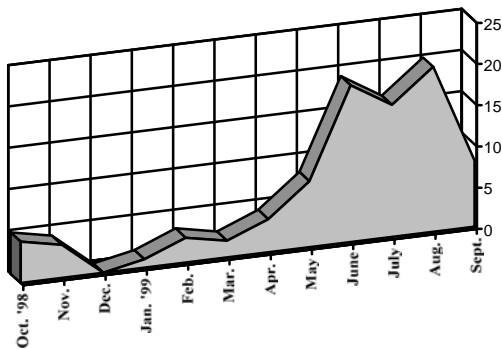
**Diver's use of RNLI facilities by month**



Total Lifeboat Launches : 112

Also very similar to last year has been divers' need for assistance by helicopter. There were two main reasons for this; firstly the transportation of divers with DCI to recompression facilities and, secondly, for the location of lost divers.

**Diver's use of SAR helicopters by month**



Total Helicopter Call Outs : 90

**Decompression Incidents**

The BSAC database contains 86 reports of DCI incidents, some of which involve more than one casualty. When these multiple cases are counted the result is 98 incidents of DCI.

The 1998 report recorded a total of 120 incidents of DCI; it is to be hoped that this reduction marks the beginning of a new trend towards more careful diving.

An analysis of the causal factors associated with these cases indicates the following:-

- 31% involve diving to greater than 30m
- 29% involve rapid ascents
- 21% involve repeat diving
- 14% involve missed decompression stops

Some cases involve more than one of these causes.

The report includes several cases of 'Diver illness' reported by the RNLI and whilst the nature of this illness is not recorded it is very likely that these are further cases of DCI.

The 1999 data show that an increasing number of rapid ascents involve poor buoyancy control, and there seems to be two main reasons for this loss of control. Firstly divers are simply failing to correctly maintain control over their drysuit and/or BCD, usually during the ascent. Secondly, there have been a number of cases where divers have lost their weightbelts.

The primary reason behind the buoyancy control issue appears to be training, or the lack of it; some divers are clearly not skilled enough to maintain the delicate balance required to prevent an uncontrolled ascent. Other issues relate to the failure of inflation and/or dump valves, and here correct servicing and appropriate equipment configuration is the key. With respect to weightbelts, the report contains a number of examples of weightbelts being accidentally released. Again the issues relate to servicing, configuration and experience.

**In Conclusion**

The 1999 incidents year has not highlighted any major new concerns. Most of the incidents reported within this document could have been avoided had those involved followed a few basic principles of safe diving practice. Those that I would emphasise are:-

- Dive within your limits.
- Build your experience gradually.
- Practice the basic skills until you are faultless, and then keep in practice.
- Plan and equip yourself correctly for the dive.
- Maintain constant vigilance whilst involved in diving activities and be ready to act quickly as soon as things start to go astray.
- Ensure that equipment is fully and correctly serviced (both diving and boating).

Please read the detailed reports in this booklet carefully and use them to learn from others' mistakes. They have had the courage and generosity to record their experiences for publication, the least that we can do is to use this information to avoid similar problems.

Finally, if you must have an incident please report it on our Incident Report form, available free from BSAC HQ or via the BSAC internet website.

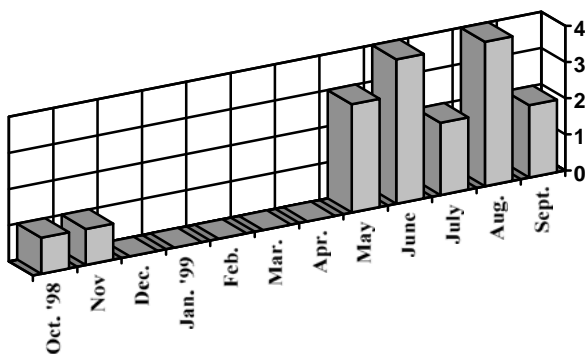
As always, your anonymity is assured – great care is taken to preserve the confidentiality of any personal information recorded in BSAC Incident Reports.

## Fatalities

**October 1998** 99/017  
 Diver missing presumed lost, after a dive in a lake. Police search underway.

**November 1998** 99/032  
 Four lifeboats and three helicopters searched for 20 hours for a missing diver. The diver was not found. (Newspaper report only)

### UK Fatalities - Monthly breakdown from October 1998 to September 1999 incl.



**May 1999** 99/094  
 Two divers were ascending from a wreck dive. At 14m one of the divers attracted the attention of his buddy and then collapsed releasing his mouthpiece. The buddy brought him to the surface, started resuscitation and summoned help. The casualty was recovered into the boat, the Coastguard alerted and resuscitation continued during the boat and helicopter journey to hospital. The casualty failed to recover. A heart attack is considered to have been the cause.

**May 1999** 99/118  
 A pair of divers was diving on a wreck in a depth of 55m. One of the pair seemed to be suffering from narcosis and had to be prevented from going deeper. One of the pair then surfaced alone. The lost diver was recovered from the wreck by another member of the party but he was found to be dead.

**May 1999** 99/125  
 A diver commenced a solo dive to a wreck in a depth of 55m. He returned to the surface rapidly 4 mins later. At the surface he was unconscious. There was only one person in the boat and recovering him into the boat was difficult. Assistance was requested and a helicopter took the casualty to hospital where he was found to be dead. This diver was using a rebreather. It is believed that his drysuit became over-inflated, although no subsequent fault was found with the inflation equipment. This diver had suffered from a rupture of his lungs.

**June 1999** 99/137  
 After a dive to 52m for 60 mins, a diver failed to surface. A major search and rescue operation ensued. Three lifeboats and a Coastguard helicopter supported by a navy vessel

searched for the lost diver throughout the night. He was not found.

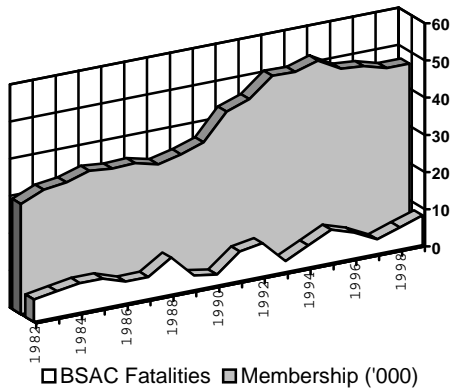
**June 1999** 99/143  
 During the descent a diver became unconscious and sank to the seabed at a depth of about 30m. She was quickly brought to the surface by her buddy. A second boat heard the emergency call and went to assist. When they arrived the casualty was still in the water and two divers entered the water to assist. With difficulty she was recovered into the boat. No vital signs could be detected and resuscitation techniques were continuously applied whilst the boat took the casualty to the nearest harbour. Once ashore a doctor and an ambulance team attended but, despite further resuscitation attempts, the casualty was declared to be dead.

**June 1999** 99/148  
 A diver was struck on the head by the propeller of an RHIB and suffered severe injuries. The Coastguard were called and a lifeboat and helicopter dispatched to assist. The casualty was brought ashore but was found to be dead. (Coastguard & RNLI reports).

**June 1999** 99/147  
 Four pairs of divers entered the water for a drift dive. Their plan was that they would deploy delayed SMBs after 20 mins and surface after a maximum time of 40 mins or if the depth exceeded 28m. One of the pairs descended more slowly than the others and is thought to have thus encountered different water currents that carried them in a different direction to the others. On surfacing this pair found themselves about half a mile from the boat, and they were not spotted. One of the pair was carrying a flag attached to his air cylinder but he could not release it. His buddy went behind him to release the flag. The buddy had by this time exhausted her air supply and used a snorkel. The sea conditions were worsening, with waves occasionally breaking over the divers. After a short while the first diver realised that his buddy was not releasing the flag and when he turned he found her floating face up motionless. He went to her assistance and, realising that she was not breathing, commenced AV. Due to the difficult conditions he quickly became exhausted. The group in the boat realised that they had one pair missing and called the Coastguard for assistance. A helicopter, a lifeboat and several other boats began a search. After being on the surface for 70 mins the pair were spotted and recovered into the lifeboat. The casualty was taken by helicopter to hospital but further resuscitation attempts failed.

**July 1999** 99/166  
 A diver started a descent with two other divers. At 20m he indicated to the others that he was going to ascend. The other two divers continued their dive. The lone diver returned to the surface and called for help to the boat. Another diver entered the water and found the casualty not breathing, he commenced AV and the casualty was recovered into the boat. The Coastguard was alerted and resuscitation continued. The casualty was taken by helicopter to hospital but declared dead on arrival, he was found to have choked on his own vomit.

### BSAC Fatalities against membership 1982-1999 (UK data only)



**July 1999** **99/174**  
 A diver got into difficulties whilst conducting a shore dive. His buddy brought him to the shore. Resuscitation attempts were made but the casualty failed to recover. It is thought that a heart attack may have been the cause.

**August 1999** **99/176**  
 A diver got into difficulties in the water. His buddy attempted to rescue him but he was recovered dead from the water. The

casualty is thought to have suffered a heart attack.

**August 1999** **99/196**  
 A diver using a rebreather entered the water to commence a dive. He was found to be unconscious at the surface and other divers went to his aid. The Coastguard was alerted and a helicopter took the diver to hospital. Resuscitation attempts were made but the diver did not recover.

**August 1999** **99/203**  
 Two divers were reported missing. A helicopter, a fixed wing aircraft, a lifeboat, a fishery protection vessel and other boats conducted a search. The divers were not found.

**September 1999** **99/219**  
 17 mins into a dive at a depth of 28m a pair of divers ran into difficulties that resulted in them making an ascent sharing air. During this ascent one of the pair became unconscious. The Coastguard was alerted to the problem and the pair was airlifted to a recompression facility. The unconscious diver failed to recover; the other was successfully recompressed.

**September 1999** **99/226**  
 One of a pair of divers surfaced and raised the alarm that his buddy was in difficulties. This diver was airlifted to a recompression facility. The buddy was quickly recovered from the water but failed to respond to resuscitation attempts.

## Decompression Incidents

October 1998

99/046

Two divers made a wreck dive to 41m for a duration of 32 mins. During the descent one of the divers lost the use of the inflator hose to his diving 'wing' due to a 'bungee' cord failure, which allowed it to move out of reach. He swapped to a second hose. Underwater conditions were very dark and the divers were unable to find the shotline for their return. The divers were 2 mins over their planned bottom time. The helmet mounted lamps of one of the divers dazzled the other, making communications difficult. Both deployed delayed SMBs and the lines became tangled on several occasions. The diver with the displaced hose forgot to dump the air from his back-up buoyancy aid, and rose rapidly from 15m to the surface, missing all stops. At the surface oxygen was administered and the Coastguard alerted. He was flown by helicopter to a recompression facility for treatment. A full recovery was reported.

October 1998

99/034

Two divers completed a dive to a maximum depth of 35m for 32mins, with much of the time at 20m and 10m. They completed 1 min safety stop at 3m. 1 hour 45 mins later they dived to a maximum depth of 20m for a dive duration of 33 mins, of which 15 mins was spent at 10m. They conducted a 1 min safety stop at 3m. 15 mins later one of the divers felt dizzy and sick and sought advice. He was given oxygen that provided initial relief. Then he quickly became worse and was recompressed. This resolved his symptoms. He was kept in hospital overnight for observation. No subsequent ill effects were reported.

October 1998

99/269

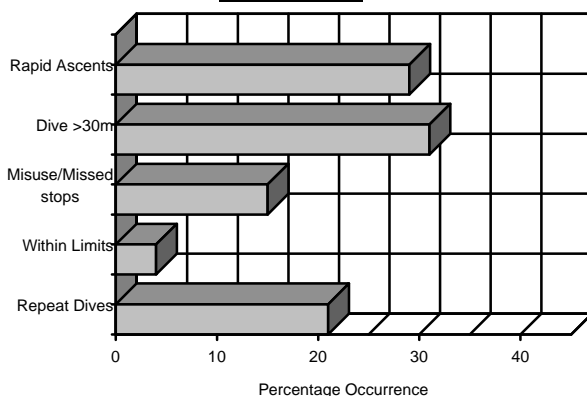
Recompression treatment was required for a diver whose dive profile appeared normal. (Coastguard report).

October 1998

99/270

Upon surfacing after collecting shellfish at 23m a diver had 'pins and needles' in the arm. The Lifeboat was called and the diver was taken for treatment. (Coastguard report).

**Percentage analysis of factors involved in cases of DCI**



November 1998

99/033

Three divers were making an ascent from a depth of 51m in a

quarry. At 33m one made an attempt to change regulators and started to hyperventilate. His buddies helped him to ascend. During the ascent one of the buddies gave him his regulator and switched to another regulator breathing pure oxygen. At one point they sank back down to 16m. BCDs were inflated and they rose rapidly to the surface. At the surface the subject was semiconscious. He was suffering from hypothermia. He and one of his buddies, who showed mild symptoms of DCI, were flown by helicopter to a recompression facility. Both divers made a good recovery. (Newspaper report only)

November 1998

99/271

Problems dumping air resulted in a rapid ascent. Once ashore, Ambulance paramedics assessed and transported the diver for treatment. (Coastguard report).

November 1998

99/049

A diver completed a 15 mins dive to 5m. 2 hours later he dived again to 25m for 5 mins. Immediately after the second dive he felt uncomfortable in the stomach, a condition which worsened. He developed 'pins and needles' in both arms and then loss of movement in his hands. The diver was recompressed and the symptoms were resolved. He was detained in hospital overnight for observation.

November 1998

99/079

Three divers completed a dive to a maximum depth of 23m. 25 mins were spent at 20 to 23m and then they ascended to 15m over the next 15 mins. Total dive time 45 mins. On surfacing they had to walk some distance, up a hill, to return to their cars. One hour after surfacing one of the divers noticed a itching of his abdomen and upper arms, and this condition worsened over the next 30 mins. Examination revealed red rashes over parts of his upper body. One of the others had similar but less severe symptoms. The divers sought medical advice, were given oxygen and taken to a recompression facility for treatment. Recompression fully resolved the symptoms.

November 1998

99/051

Due to equipment problems, a diver made an uncontrolled ascent from 31m and was taken to a recompression facility for treatment.

January 1999

99/276

An inlet valve stuck open and a dump valve jammed closed resulted in a rapid ascent from 17m. The unlucky diver was airlifted to DDRC by RAF helicopter for precautionary treatment. (Coastguard report).

January 1999

99/275

A dive to 46m for 10 minutes resulted in nitrogen narcosis, which caused the diver to lose control and make a rapid ascent. The results were DCI and treatment at Dunstaffnage Hyperbaric unit. (Coastguard report).

January 1999

99/071

Two trainees and an instructor were involved in a navigation exercise. 4 mins into the dive at 20m one of the trainees indicated that he needed the alternative air source of the other, this was provided, and they started for the surface. The first trainee had buoyancy problems and sank down, pulling the regulator mouthpiece off the alternative air source. The



instructor intervened and they used his alternative air source. By this time, the second trainee had had his mouthpiece knocked from his mouth and he swam for the surface. At the surface he was seen to be in trouble by other divers and was assisted from the water. Shortly afterwards the instructor and the first trainee surfaced, also in distress. Both were monitored for DCI. After 1 hour 30 mins the trainee who had made the free ascent became very unwell, weak, aches and pains, and had difficulty breathing. He was recompressed and responded slowly to treatment. He was admitted to hospital for observation. It was subsequently discovered the first trainee's BCD inflation valve was damaged and had leaked a lot of air causing him to lose his air supply.

### January 1999 99/277

A diver was transported by ambulance to Dunstaffnage Hyperbaric unit after he reported having difficulty breathing after a dive. (Coastguard & RNLI reports).

### January 1999 99/086

5 divers completed a dive to a maximum depth of 35m for a total time of 34 mins including a 2 min stop at 3m. After 1 hour 39 mins they dived again to a maximum depth of 28m for a total duration of 41 mins. That evening one of the divers experienced pain in his arm, which progressively worsened. He reported to a recompression facility and received treatment. This resolved the symptoms.

### April 1999 99/128

2 divers descended a slope to a wreck at a depth of 30m. At this point one of the pair experienced buoyancy problems and was on the edge of panic. His buddy managed to control the situation and he settled as they started back up the slope. At 25m he indicated a problem with his fin and his buddy attempted to tighten it for him. During this they started to rise and the troubled diver was unable to dump air from his drysuit rapidly enough. They made a buoyant ascent to the surface. Total dive duration 15 mins. Later that afternoon the diver became confused and was taken to a recompression facility for treatment. Two days later he felt nausea, dizziness and a loss of feeling in his arm. He was given further recompression treatment and this resolved all his symptoms except for a slight residual loss of feeling in his left hand.

### April 1999 99/112

Two divers were 8 mins into a dive at a depth of 15m when one stopped to adjust his weightbelt. The weightbelt was accidentally dropped and the diver started a buoyant ascent. His buddy caught up and attempted to slow him, but they were both carried to the surface. They were recovered into their boat. The diver with the lost belt was seasick and complained of a wrist pain. Further symptoms developed - pain in forearm, elbows, back and knees and tingling in the fingers. With no oxygen and other divers still in the water, the Coastguard was called for assistance by VHF radio. 35 mins after surfacing a helicopter arrived and took both to a recompression facility. The diver with symptoms was recompressed and the other kept under observation. A full recovery was reported.

### April 1999 99/227

Two divers descended an anchor line to a depth of 33m. During the dive they moved up to a depth of 18m. At this point one of the divers experienced problems controlling his buoyancy as he was unable to release air from his drysuit. He became inverted and began to fin downwards. He was able to exchange the 'go up' signal with his buddy and then made an uncontrolled buoyant ascent to the surface. His dive time was

18 mins. His buddy made a normal ascent including a 1 min stop at 6m. At the surface the buoyant diver was in distress and help from another boat was required to get him out of the water. Oxygen was offered but refused. The group recovered other divers and then returned to the shore. Just over an hour after surfacing the buoyant diver noticed a tingling in his right arm and chest, and was given oxygen. The Coastguard was alerted and a helicopter tasked to take him to a recompression facility. He was recompressed and received oxygen treatment for the following two weeks.

### April 1999 99/186

Two divers completed a 25 mins dive to a depth of 38m, they started their ascent during which they anticipated 25 mins decompression stops. One of the divers was using a BCD which he had serviced himself and in which, unknown to him, a wire operating a dump valve had not been connected. They planned to decompress under a buoy which they deployed at 15m. The diver with the faulty BCD dump thought that he had been dumping air and when he operated the dump at 15m and nothing escaped he assumed, incorrectly, that it was empty. The diver then lost control of his buoyancy and made a fast ascent to the surface, the other diver correctly completed his stops. At the surface the buoyant diver signalled the boat for assistance and was recovered into it. He was placed on oxygen and began to experience a tingling in his feet and hands. The Coastguard was alerted and a helicopter was tasked to take the casualty to a recompression facility, the buddy was also taken. The buoyant diver was recompressed three times over three days. His symptoms were fully resolved. The buddy suffered no ill effects and was not recompressed.

### April 1999 99/134

Two divers were 23 mins into a dive at a depth of 25m when the weightbelt buckle of one of the divers became unfastened. This diver made a buoyant ascent to the surface, his buddy followed as fast as he could. No symptoms were evident and, 4 hours later, they dived again to 7m for 29 mins. Later that night the diver who had made the buoyant ascent experienced pains in his knees. The following night he sought medical advice and both divers were given recompression treatment. 4 weeks later this diver started diving again. He completed a dive to 35m with a 3 mins safety stop, then, after a surface interval of 1 hour a second dive to 20m, again with a safety stop. The following day he again experienced pains and received further recompression treatment.

### April 1999 99/120

A pair of divers entered the water for a dive to 15m for a planned duration of 45m. After 18 mins they resurfaced, one 15 seconds before the other. They reported that underwater visibility was almost zero and that one of the pair had made a faster than normal ascent from about 12m. 3 hours 30 mins later the diver who had made the fast ascent felt the skin on his knee to be itchy. He sought medical advice and was given oxygen. After a further 3 hours 30 mins it worsened and he was referred to a recompression facility for treatment. He was told that he had a category 6 air embolism. The following day the symptoms had gone.

### May 1999 99/127

A diver completed a wreck dive to a maximum depth of 28m. He ascended to a shallower part of the wreck with 2 mins of no stop time showing on his computer, and then ascended the shotline to a depth of 6m. Here 7 mins of no stop time were indicated by the computer. The diver completed a 2 mins safety stop and surfaced. 2 hours later this diver experienced a shoulder ache. 20 mins later a skin rash appeared. Oxygen was administered and assistance sought. He then experienced

a tingling sensation in his hands. He was flown to a recompression facility for treatment. This fully resolved his symptoms.

**May 1999 99/122**

10 mins into a dive at a depth of 12m one of a pair of divers started to get water into her mouthpiece. She switched to her buddy's alternative air source. She began to panic and was not breathing properly. At the surface she was in distress and had difficulty breathing. She suffered from asthma and used an inhaler. She developed 'pins and needles' in her right leg and some loss of mobility. She was recompressed in a recompression chamber and then kept in hospital overnight for observation. She was discharged the following day. Her regulator mouthpiece was found to have a small hole in it.

**May 1999 99/297**

A female diver made a rapid ascent and suffered 'pins and needles'. She was airlifted to hospital by Air Ambulance. (Coastguard report).

**May 1999 99/301**

Three divemasters were diving in a threesome. One ran out of air and all three immediately returned to the surface, omitting decompression stops. All divers experienced pains in shoulders and forearms and were transferred to Haslar Hyperbaric Unit. (Coastguard report).

**May 1999 99/304**

Two divers dived to 28.7m for 36 mins. Both ascended without making stops (possibly due to buoyancy difficulties). Both displayed DCI symptoms and were conveyed to Poole Hyperbaric Unit for treatment. (Coastguard report).

**May 1999 99/140**

Two divers made a dive to a wreck at a maximum of 52m. There was a strong current. They used a line attached to the bottom of the shotline to guide their return. When they began their return to the shot, their line became entangled in its reel. To save time the other diver signalled that he would gather in the line and that it should be sorted out at the surface. The diver gathering the line became too buoyant and began to float upwards. He caught hold of the wreck but realised that his buddy was being carried away by the current. He pulled her back with the line joining them. At this point the buoyant diver mistakenly inflated his BCD instead of dumping air as intended (he believes that he was suffering narcosis) and began a buoyant ascent from 36m. Realising that he was also pulling his buddy up he released the line and ascended buoyantly to the surface. He was recovered into the boat and placed on oxygen. The buddy completed a normal ascent including an 8 min decompression stop at 6m as indicated by her computer. During this stop she was joined by another member of their group and used his octopus for 2 mins because her own air supply had become depleted. Emergency assistance was sought and both divers received recompression treatment.

**May 1999 99/305**

A diver experienced pain to his right shoulder 10 mins after surfacing. His last dive (17.7m for 36 mins) had been midday the previous day. He was airlifted by military helicopter to the Dunstaffnage Hyperbaric Unit. (Coastguard report).

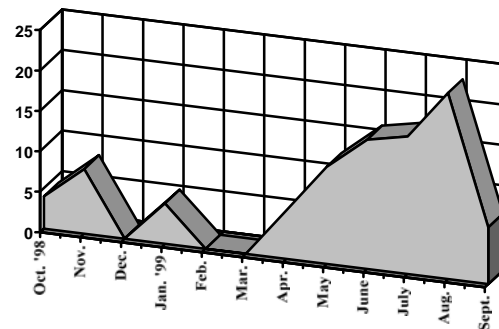
**May 1999 99/307**

A diver suffered type 2 DCI following a non-stop dive to 32m for 33 mins. He was taken by helicopter to Aberdeen Hyperbaric Unit for treatment. (Coastguard report).

**May 1999 99/308**

A diver was conveyed to the DDRC by friends following lightheadedness after surfacing from a 15m dive. (Coastguard report).

**Decompression incidents by month**



**June 1999 99/173**

Two divers completed a dive to a maximum depth of 31m for 38 mins. 2 hours 44 mins later they dived again, this time to 33m. The dive duration was 44 mins and they completed a total of 13 mins of decompression stops. One of the pair completed 5 mins of decompression at 6m, as indicated by her computer, and then conducted an extra 4 mins decompression at 5m to remain with her buddy whose computer indicated extra decompression requirements; the first diver's computer had already 'cleared'. On surfacing this first diver experienced a sharp pain in her left elbow. She was placed on oxygen and the Coastguard alerted. The casualty was brought ashore by lifeboat and then taken by helicopter to a recompression facility for treatment.

**June 1999 99/316**

A diver suffered type 2 DCI some 2.5 hours after a dive to 20.4m. He was airlifted to Kishorn Hyperbaric unit for treatment. (Coastguard report).

**June 1999 99/317**

DCI symptoms became apparent to a diver during the evening following an afternoon dive. Self treatment of paracetamol and oxygen failed to effect a cure so he was admitted for hyperbaric treatment. (Coastguard & RNLI reports)

**June 1999 99/136**

Following two 30m dives in one day a diver suffered pain to his shoulder. He was airlifted to DDRC Derriford for treatment. (Coastguard report).

**June 1999 99/320**

A diver surfaced with a headache and later complained of 'pins and needles'. The boat skipper called for help and the casualty was airlifted by CG helo to Poole hyperbaric unit. (Coastguard report).

**June 1999 99/319**

After a dive to 52m a diver lost his weightbelt and made a rapid ascent. He surfaced with blood over his face so was airlifted by CG helicopter to Haslar hyperbaric unit. This was the first of two major incidents from this boat in one day! (Coastguard report).

### June 1999 99/197

Two divers conducted a dive down a sloping wreck to a depth of 43m. At this point one of the divers began to feel light-headed and had difficulty focusing. He ascended to 30m but his condition got worse. His buddy approached him and tried to attract his attention but got no response. The light-headed diver then decided to ascend directly to the surface. He remembered trying to release air from his drysuit and seeing 17m showing on his depth gauge. He also remembered feeling concern that he might start to sink back down. He arrived at the surface and called for help. He was recovered into his boat and given oxygen. The Coastguard was alerted and a lifeboat launched to take him to a recompression facility for treatment. A neurological bend was diagnosed. His buddy met up with another pair of divers and ascended with them.

### June 1999 99/261

A dive to 30m resulted in DCI symptoms. The diver was airlifted from the dive charter vessel and taken to Poole hyperbaric unit for treatment. (Coastguard report).

### June 1999 99/263

Two divers surfaced missing 28 mins decompression stops. The Coastguard was alerted and a helicopter tasked to evacuate the divers. The divers were transferred to another boat and then flown to a recompression facility.

### June 1999 99/188

Two divers were surfacing from a 25 mins dive on a wreck to a maximum depth of 41m. At 10m they stopped to deploy a delayed SMB. One of the pair lost control of his buoyancy and ascended to the surface, missing 6 mins of stops, his buddy completed the required stops. The buoyant diver was recovered into the boat and put on oxygen. At the same time divers from another nearby boat surfaced missing 30 mins of stops. They had no oxygen. They were given oxygen and the Coastguard alerted. A helicopter was tasked to take them to a recompression facility. When the helicopter arrived the diver who had missed 6 mins of stops had developed a severe headache and 'pins and needles' in his upper arms, so he too was taken into the helicopter along with his buddy. This diver received recompression treatment.

### June 1999 99/322

A quarry dive to 50m involved the Coastguard when a 999 call was made to them. A diver had become unconscious on the ascent of a 50m dive. He was airlifted by RAF helicopter to Thingwall hyperbaric unit where he made a full recovery. (Coastguard report).

### June 1999 99/325

Two divers suffered DCI when they made a fast ascent (depth unknown). They were brought ashore and taken to hospital prior to Coastguard involvement. (Coastguard report).

### June 1999 99/327

A dive to 20m and a subsequent lost fin resulted in panic and a fast ascent. DCI symptoms soon materialised and the diver was airlifted to Poole Hyperbaric unit by Coastguard rescue helicopter. (Coastguard report).

### June 1999 99/191

A diver completed a dive to 35m for 59 mins including 18 mins stops. 4 hours 50 mins later he dived again to 33m for 31 mins with a 3 mins safety stop. 30 mins after surfacing he complained of a headache and feeling hot and giddy. He then became confused. The Coastguard was alerted and the diver was given oxygen. On reaching shore he was taken by ambulance to a recompression facility, a cerebral bend was diagnosed and he was recompressed.

### July 1999 99/193

Following a dive to 37m a diver lost his weightbelt on the ascent. He and his buddy then made a rapid ascent. Both were airlifted to Poole hyperbaric unit by Coastguard helo. (Coastguard report).

### July 1999 99/195

A dive vessel reported a diver had make a rapid ascent and had missed stops. He was airlifted by the Coastguard helo to Poole hyperbaric unit. (Coastguard report).

### July 1999 99/332

A solo cave diver at St Kilda ran out of air and made a rapid ascent. He was unconscious and not breathing on the surface. Following successful resuscitation, he was airlifted to Dunstaffnage hyperbaric unit. The dive was to 51.8m for 30 mins. (Coastguard report).

### July 1999 99/233

A diver who regularly suffered from migraine completed a series of dives during a week's diving holiday. She suffered a number of headaches and migraine attacks during the week. She also noticed that her breasts were swollen. The following week, whilst at work, she noticed some untypical symptoms; memory and balance loss, and she sought medical advice. She attended a recompression facility, was diagnosed as having a cerebral bend and received treatment. She reported other recent occurrences of problems, after diving, that were put down to migraine, at the time, but may have also been diving related.

### July 1999 99/334

A 15 year old diver suffered DCI symptoms following a wreck dive. He went to hospital but was transferred to DDRC by military helicopter. (Coastguard report).

### July 1999 99/184

Two divers had completed a dive to 15m and one commenced to deploy a delayed SMB. He had difficulty inflating the buoy. He used his main regulator instead of his octopus regulator. He then lost grip on his regulator and was unable to find it again. He mistakenly tried to breathe from his buddy's BCD inflator and his buddy found it difficult to give him his octopus regulator due to the mounting panic. The diver then started a rapid ascent to the surface. His buddy held on to him and went with him, concerned that he would be lost in the poor visibility. They arrived at the surface and were recovered into the boat. Their dive duration was 38 mins. Both divers were placed on oxygen. The buddy then noticed a tingling sensation in his hands and fingertips. The Coastguard was alerted and both divers taken by helicopter to a recompression facility where the buddy was treated.

### July 1999 99/338

A 17 year old diver and buddy dived to 23.2m. She lost her buddy and panicked, the weightbelt was dropped and she made

a rapid ascent. She had suspected DCI symptoms so was conveyed to hospital by Ambulance. (Coastguard report).

### July 1999 99/237

A diver dived to 24m for 23 mins and completed 3 mins decompression at 6m. 1 hour 15 mins later he dived again to 16m for 31 mins and completed 3 mins decompression at 6m. Later he was helping to unload the boat when he felt a pain in his left arm. He was given nitrox 64 and then oxygen. He sought medical advice and was given recompression treatment that resolved the problem.

### July 1999 99/192

Two divers completed a dive to 71m then ran out of air with 2 mins of decompression remaining. They initially refused to attend a recompression facility but it is believed that one was subsequently treated for a shoulder bend.

### July 1999 99/339

A 16 year old diver surfaced with DCI symptoms. He and his buddy were airlifted for hyperbaric treatment by the Coastguard Helo. (Coastguard report).

### July 1999 99/341

A nitrox (26/74) diver dived to 41m with 30 mins bottom time. Stops at 9m for 3 mins and 6m for 23 mins. Despite this, he complained of lack of balance and sickness. The diver was airlifted to Haslar hyperbaric unit by Coastguard helicopter. (Coastguard report).

### July 1999 99/240

A diver completed a dive to 69m, on trimix, for a duration of 104 mins including 27 mins decompression at 3m. 24 hours later he dived again to 62m, using air, for 100 mins including 24 mins decompression at 3m. Decompression in both cases was conducted using nitrox 41 and oxygen. Shortly after surfacing the diver experienced a pain in both elbows. He was placed on oxygen and then flown to a recompression facility for treatment. He was recompressed for a second time the following day. He reported having experienced elbow pain after previous dives.

### July 1999 99/210

A diver had completed four dives over a two day period. On the second day he dived to 41m for 40 mins with 18 mins decompression, then again 5 hours 52 mins later to 45m for 29 mins with 13 mins decompression.

Later that day he helped to unload the boat, which involved heavy work, pulling equipment up onto a jetty. He felt a twinge across one shoulder. The following morning this shoulder had swollen considerably, and pain and restricted movement were experienced. Medical advice was sought and the diver placed on oxygen. 20 mins later the problem had subsided.

### July 1999 99/344

A diver who dived to 27.4m for 40 mins suffered DCI some 10 mins after his ascent. He was airlifted from St Kilda by Coastguard helicopter to Dunstaffnage hyperbaric unit. He had dived twice the previous day (25.3 and 33.9m). (Coastguard report).

### July 1999 99/347

A diver was landed ashore from a dive boat suffering from suspected DCI. He was airlifted by RAF helicopter to hospital. (Coastguard report).

### July 1999 99/348

A diver made a rapid ascent and showed signs of DCI on the surface. She was airlifted to DDRC by RAF helicopter. (Coastguard report).

### August 1999 99/223

A diver completed a dive to 19m for 36 mins. 1 hour 30 mins later he dived again, this time to 32m for a maximum time of 35 mins. He and his buddy made their ascent back up the shotline and got to 15m before they reached the point where they had attached the distance line to the shotline. The diver instructed his buddy to remain on the line whilst he redescended to 28m to check that the shot weight was free. Although it was heavy he moved the shot clear of the wreck, and returned to his buddy. They then ascended using the buddy's computer to control their decompression, as the first diver did not have his computer with him on that dive. They completed 2 mins at 12m, 3 mins at 6m and then surfaced. On return into their boat the diver who had moved the shot weight felt a sharp pain in his left shoulder and he put this down to a pulled muscle. He took pain killers but the pain remained and his arm became numb. The following day he was still in pain and unable to use his arm. He sought medical advice and received treatment at a recompression facility.

### August 1999 99/252

Two divers descended their anchor line but found it caught up on a lobster pot line at a depth of 25m. They followed the line downwards to a point where it split in two directions, they followed one of the lines to find a lobster pot suspended at 35m. They returned to the surface after a total dive time of 7 mins. After a surface interval of 25 mins they dived again. They dived to a depth of 42m. After 6 mins on the bottom, the computer of one of the divers showed a requirement for 2 mins decompression at 3m. This requirement cleared during their ascent but they conducted 2 mins decompression at 9m and 5 mins at 6m as a precaution. Back on the boat one of the pair developed a tightness in his chest and 'pins and needles' in his legs. He was placed on oxygen, the Coastguard was alerted and he was flown by helicopter to a recompression facility for treatment. During recompression the symptoms worsened, the 'pins and needles' spread to his chest and his legs became numb. He received two recompression treatments per day for the next 8 days. At the time of the report the diver had progressed to the stage where he could walk with the aid of sticks.

### August 1999 99/350

A first dive to 25m for 30 mins resulted in a diver being taken directly to a hyperbaric unit by lifeboat. Poor procedures resulted in the Coastguard hearing about this incident in a very roundabout route. (Coastguard & RNLI reports).

### August 1999 99/352

Shortly after surfacing from a dive, a diver complained of weakness and back pain. He was airlifted by a Coastguard helicopter to a hyperbaric unit. (Coastguard report).

### August 1999 99/353

A diver who made a rapid ascent from 60m suffered DCI symptoms and was airlifted by RAF helicopter to a hyperbaric unit. (Coastguard report).

### August 1999 99/354

Two divers were airlifted by Coastguard Helicopter to a hyperbaric unit following a report of tingling fingers some 25 mins after surfacing from a 32m dive. (Coastguard report).

**August 1999** 99/212

A diver conducted a dive to 20m for 20 mins and completed a 1 min safety stop at 6m. The following day she awoke with a pain and tenderness in her abdomen. She sought medical advice and was recompressed. This treatment provided nearly full pain relief.

**August 1999** 99/355

Following a dive to 46m, and despite the correct stops being carried out, a diver showed signs of DCI. He and his buddy were airlifted by Coastguard helicopter to a hyperbaric unit for treatment. (Coastguard report).

**August 1999** 99/246

A diver completed a dive to 58m and conducted the following stops 1, 2, 4, 6, 9, 4 and 21 mins at 21, 18, 15, 12, 9, 6 and 4.5m respectively. During the last two stops he was breathing nitrox 85. As he entered the boat the boat rolled and his arm was wrenched. 6 hours later he experienced pain in his arm that spread. He decided not to dive the next day and spent a restless night with increasing pain. In the morning the arm was unusable and he reported to a recompression facility. He received recompression over a 3 day period. The diagnosis was a muscular and skeletal bend with slight neurological effect. He was advised not to dive for 3 months.

**August 1999** 99/217

A diver completed a dive to 28m for 36 mins. He conducted 4 mins of safety stops at 6m. 15 mins after surfacing he complained of 'pins and needles' in his right hand. This spread across his body affecting both arms and legs. His skin became hypersensitive. The diver was unable to stand. He was lain down and given oxygen. The Coastguard was alerted and the diver taken by helicopter to a recompression facility where he received treatment. The symptoms had disappeared before he arrived at the recompression facility. The two other divers with whom he had been diving suffered no ill effects.

**August 1999** 99/358

5 dives within the depth range of 19 to 39.5m in the proceeding 48 hours, plus a final dive to 21.5m for 52 mins with a calculated total of 190 mins of missed stops resulted in DCI for this instructor. He was given hyperbaric treatment, but advised not to dive for 3 months. (Coastguard report).

**August 1999** 99/249

Two divers descended a shotline to a wreck. At 28m one of the pair signalled that all was not well, his buddy gave the ascend signal but there was no response. The troubled diver was holding on to the shotline and fumbling with his suit inflator. The buddy discovered that it was not connected but could not reattach the hose. The buddy tried to lift him using his BCD but as soon as the troubled diver released the shotline he began to ascend; he had dropped his weightbelt. Despite attempts to control the ascent both divers rose rapidly to the surface, with the buoyant diver becoming increasingly panicked. Both divers were recovered into the boat and placed on oxygen. The Coastguard was alerted. The boat was escorted ashore by two lifeboats. The panicked diver was showing signs of DCI and was taken by ambulance to hospital. He was then transferred to a recompression facility by helicopter and was recompressed.

**August 1999** 99/360

A diver drifted in and out of consciousness at 50m. He made a rapid ascent, missing 21 mins of stops. He surfaced with type 2 DCI. His buddy also made a rapid ascent, this time from 25m.

Both were airlifted, by military helicopter, for recompression treatment. (Coastguard report).

**August 1999** 99/224

A diver completed a series of dives over a one week diving holiday. On the last day he completed two dives; one to 41m for 30 mins with 4 mins decompression, the second, 4 hours later, to 26m for 39 mins with 3 mins decompression. Later that evening he engaged in an 'arm wrestling contest' at which significant effort was made. Soon afterwards he complained of increasing severe pain in his shoulder, elbow and wrist joint of his right arm. He sought medical advice and was recompressed. It is reported that all symptoms were resolved by recompression.

**August 1999** 99/361

A diver on holiday had been doing 2 dives a day, the last being to 25.5m for 40 mins. Type 2 DCI developed within 45 mins of surfacing. He was airlifted to a hyperbaric unit for treatment. (Coastguard report).

**August 1999** 99/250

Three divers completed a dive to 36m for 32 mins including 4 mins decompression stop at 6m and 1 min at 3m as a precaution. Over 5 hours later they dived again to 19m. One of the pair had lost his weightbelt after the earlier dive and borrowed one for this second dive; this belt was a little too heavy. During the dive they encountered a current and one of the three got out of breath trying to keep up with the dive leader. He signalled the problem and they ascended to a shallower part of the wreck at a depth of 15m. He signalled that he wished to ascend and struggled to control his breathing. They made a normal ascent including a 1 mins stop at 6m. At the surface the breathless diver was found to be semiconscious and was recovered into the boat. He was given oxygen and the Coastguard alerted. The boat returned to shore. The casualty reported that he had 'pins and needles' in his left foot and a tingling in his left hand. After 30 mins the casualty was taken by helicopter to a recompression facility for treatment. He was diagnosed as having a type 2 neurological bend. He made a full recovery.

**August 1999** 99/363

A fast ascent from 28m after 15 mins and subsequent coughing up of blood led to this diver being taken to a hyperbaric unit by lifeboat. (Coastguard report).

**August 1999** 99/364

Two dives, one to 17m for 30 mins and a second to 17m for 25 mins, led to this diver feeling generally unwell. He was taken for hyperbaric treatment by ambulance. (Coastguard report).

**August 1999** 99/365

A diver suffering from DCI was airlifted by military helicopter to a hyperbaric unit for treatment. (Coastguard report).

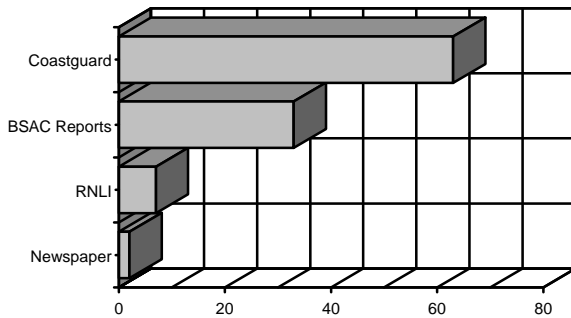
**August 1999** 99/368

A diver with chest pains and 'pins and needles' was airlifted to a hyperbaric unit for treatment. (Coastguard report).

**August 1999** 99/369

A diver suffering from 'pins and needles' was taken to hospital by ambulance after the club RHIB had landed him ashore. (Coastguard report).

**Decompression data source analysis**



**September 1999** **99/253**

Two divers conducted a dive to a maximum depth of 47m. After 16 mins they started to ascend. They stopped for 1 min at 20m, 1 min at 12m, 15 mins at 6m and 3 mins at 3m. Both divers' computers were clear before they surfaced. 90 mins after surfacing one of the divers complained of an itchy back and his left shoulder was found to be covered with red and blue blotches. He lay down and was given oxygen and fluids. After 1 hour the blotches had mainly gone. This dive was the ninth in a series of dives during a diving holiday.

**September 1999** **99/371**

A diver was airlifted to the DDRC suffering from CAGE, following a 31m dive for 20 mins with a stop at 6m.

(Coastguard report).

**September 1999** **99/373**

A wreck dive to 34m, 15 min bottom time and stops at 9 and 6m still resulted in 'pins and needles'. The diver was taken to a hyperbaric unit by Air Ambulance. (Coastguard report).

**September 1999** **99/374**

A diver and his buddy were airlifted by Coastguard Helicopter to a hyperbaric unit after one of them complained of type 2 DCI following a dive. (Coastguard report).

**September 1999** **99/257**

A diver completed a dive to 32m for a duration of 28 mins. 3 hours 2 mins later he dived again to 14m for 39 mins. On his return to shore he had an itchiness and an ache in his upper right arm. His skin showed a red and blue rash. He was taken to a recompression facility for treatment. Recompression resolved his symptoms.

**September 1999** **99/380**

A 41m dive, strong current and horizontal shotline resulted in two divers becoming low on air and making a rapid ascent, missing 9 mins of stops. Both showed signs of DCI on surfacing. Both were airlifted to a hyperbaric unit. (Coastguard report).

## Injury / Illness

- October 1998** 99/076  
A diver was diagnosed as having a ruptured eardrum the day after a 'Try Dive' session in a swimming pool.
- October 1998** 99/390  
Lifeboat launched to help diver with illness. (RNLI report).
- October 1998** 99/037  
A diver was participating in a drysuit course. He had poor buoyancy control and made many ascents and descents, this resulted in injury to his ear.
- November 1998** 99/047  
During an instructor training course students were practising lifting themselves from the shallow end of the pool onto the pool side in snorkelling equipment. One student had difficulty in doing this and sustained a dislocated finger. He was taken to hospital for treatment.
- November 1998** 99/048  
After completing two dives, the second of which included a practised emergency ascent, a diver complained of severe chest pains. He was very cold and had suffered a flooded drysuit. He was given oxygen and taken by ambulance to hospital. He was discharged 2 hours later.
- November 1998** 99/065  
After a 38 min dive to a maximum depth of 35m, which included a long swim at 20m, a diver became breathless during a 3 min safety stop at 9m. Once out of the water she was given oxygen and soon recovered. She was thought to have the start of a cold.
- December 1998** 99/066  
A diver experienced back and arm pains after a dive to 36m for 18 mins with 7 mins stops. The dive ended with a long surface swim. The diver was kept under observation for 1 hour. The pains reduced and the problem was considered to be related to a previous back injury.
- December 1998** 99/068  
8 mins into a dive, at a depth of 35m, a diver burped and vomited into his mouthpiece without warning. He was able to breathe and he headed for the surface. As he neared the surface he managed to start breathing normally. No subsequent ill effects were reported.
- January 1999** 99/070  
A diver completed a 20 min dive to 18m. Some time after the dive the diver felt dizzy and started to lose his sight. This developed to a total sight loss although his co-ordination was fine. After about 5 mins in a warm room his sight returned. He was taken to hospital where no cause of the problem could be found. Subsequently it was proposed that acute occipital lobe ischaemia could have been the cause.
- January 1999** 99/072  
A diver was overweighted and sank in the water. He got out of breath and couldn't settle down. He then over-inflated and made a fast ascent to the surface. Dive depth 20m, total time 5 mins.
- That evening he developed a bad headache, and the following morning a shoulder pain. He was examined for other symptoms of DCI and none were found. He was advised that recompression was not needed and he steadily improved.
- January 1999** 99/073  
During an oxygen course, in a class room, a student fainted. He was semiconscious, dazed and unaware of his surroundings. He was given oxygen and 30 mins later was fully recovered.
- February 1999** 99/082  
A diver experienced problems clearing his ears during a descent. He and his buddy ascended to 9m where the ear could be cleared. The dive was conducted at 9m and no pain was felt. After the dive, blood was found coming from the ear. The diver sought medical attention but inflammation of the ear prevented the exact problem from being determined.
- February 1999** 99/100  
A diver damaged her eardrum during the ascent from 18m.
- March 1999** 99/090  
3 divers conducted a dive to 17m. 14 mins into the dive one of the divers started to fidget with her equipment and indicated that she wanted to ascend. At the surface she seem to be alright. She was towed ashore and helped from the water. She started to explain her problem and then fainted. She drifted in and out of consciousness. Assistance was called and she was flown by helicopter to hospital for examination. No recompression was conducted and she was released after a few hours.
- March 1999** 99/104  
At the end of a day's diving a diver felt dizzy and had a problem with his ear. He also complained that the neck seal of his new drysuit was too tight, and that he had been affected by the stress of the training course that he was on. The next day he had recovered.
- April 1999** 99/264  
A diver slipped and hit his back whilst loading equipment onto a dive boat.
- April 1999** 99/126  
Two divers entered the water to dive on a submerged pinnacle. There was a current and they missed the pinnacle and dived into deep water. One of the pair did not put enough air into her drysuit and began to descend rapidly. At 28m she felt severe ear pain, became disorientated and began to panic. She grabbed her buddy by the regulator. The buddy brought her to the surface using a controlled buoyant lift. The Coastguard was contacted and they were advised to take her to hospital, which they did. A strained eardrum was diagnosed.
- April 1999** 99/294  
A diver made a rapid ascent from 7m whilst undergoing navigation training. Medical advice was obtained from the hyperbaric unit and the diver was taken to hospital suffering from hypothermia. (Coastguard report).
- April 1999** 99/292  
After a dive to 9m for 19 minutes a diver complained of shoulder

pains. After medical advice from hyperbaric unit the diver was taken to a general hospital for assessment. (Coastguard report).

**May 1999** **99/131**  
Two divers made a descent to a wreck at a depth of 50m. At the bottom, one of the pair turned to his buddy and saw two divers; he thought that they had been joined by other members of their party. He felt fine but when he looked again he could see three divers. He realised he had a problem when he saw that the three images were moving as one. He gave the 'something is wrong' signal and let air into his drysuit to make an ascent. He felt that he was 'in a green orb' but managed to make an ascent to the surface. He was recovered into the boat and placed on oxygen. He suffered some loss of feeling in one foot. He was taken ashore, by which time all symptoms had disappeared. He was given a medical examination but no problem could be found. No further treatment was given. He is believed to have suffered from narcosis.

**May 1999** **99/129**  
A diver was attempting to fit his diving equipment when he sustained an injury to his back. He collapsed to the ground in pain and could not move. He was taken to hospital where a prolapsed spinal disc was diagnosed.

**May 1999** **99/124**  
A diver was practising breath holding snorkel dives in a swimming pool, trying to swim 2 lengths of the pool. He was seen lying on the bottom of the shallow end of the pool by other branch members. One of these people thought that he might be in difficulties and reached underwater to lift him to the surface. He was found to be unconscious and not breathing. They lifted him from the pool, summoned an ambulance and started resuscitation. He soon started to breathe for himself and began to regain consciousness. He was taken to hospital by ambulance.

**May 1999** **99/157**  
Two divers had dived to a maximum depth of 36m. 24 mins into the dive, at a depth of 20m, one of the pair started to cough and choke. They aborted the dive. At the surface the diver was shaken but otherwise unharmed.

**May 1999** **99/135**  
A diver was helping to park a boat and trailer on a jetty at night. He tripped on an eyebolt on the ground, fell backwards, and dropped 1m onto a concrete slipway, hitting his back and head on the ground. He was examined for injury and no breaks were found. He recovered and was able to walk away. The following day, despite aches and stiffness, he was able to dive in the afternoon. Subsequent medical examination revealed no serious injury.

**May 1999** **99/413**  
Lifeboat launched to help diver with illness. (RNLI report).

**May 1999** **99/154**  
Two divers conducted a dive to a maximum depth of 17m. The dive was terminated after 36 mins because one of the pair felt cold. 1 hour after the dive this diver felt a dull ache in her knee. After a further 2 hours she was sick. It was also noted that her eye movement was a little jerky when following a moving object. She was placed on oxygen and taken to hospital. After medical checks she was released.

**June 1999** **99/415**

Lifeboat launched to help diver with illness. (RNLI report).

**June 1999** **99/155**  
After a dive to 21m for 25 mins, with 2 mins decompression stops, two divers complained of headaches, one also developed shoulder pains. No other signs of DCI were found. After a further hour both had recovered.

**June 1999** **99/160**  
After a dive to 15m for a duration of 22 mins a diver suffered a bloodshot eye as a result of mask squeeze.

**June 1999** **99/150**  
A diver conducted two dives to 6m and one to 11m. She had earache following these dives, a condition which worsened overnight. The following day she dived again to 6m, but 3 mins into the dive suffered a severe pain in her neck, head and ear, and she felt sick. The dive was aborted.

**June 1999** **99/151**  
A diver conducted a series of dives over two days. After the first day she felt breathless and put this down to a tight diving suit. The second day, with a looser suit, she dived again but again suffered from breathlessness. An hour after leaving the water she was breathless again and was placed on oxygen. She was taken to hospital where a damaged left lung was diagnosed and she was given extensive oxygen therapy.

**June 1999** **99/177**  
Three divers completed a 60 mins dive to a maximum depth of 5m. At the end of the dive they left the water by some stone steps. At the top of the steps one of the divers bent over the side to clear her mouth and overbalanced. She fell about 8 feet into about 1 foot of water. The diver later attended hospital for a foot x-ray, and a sprained ankle was diagnosed.

**June 1999** **99/161**  
After 26 mins into a dive at a depth of 33m two divers started their ascent. At 7m one of the pair lost control of his buoyancy and made a fast ascent. At the surface he had breathing difficulties. He was placed on oxygen and, although this eased the problem, he was still unwell. He was taken by ambulance to hospital and detained overnight. He is believed to have suffered from an existing, non diving related, congestion of his lungs.

**June 1999** **99/172**  
A diver completed a dive to 24m for a duration of 42 mins with 3 mins decompression at 5m. At the surface he had to swim hard to get back to the boat. Once onboard his legs felt weak and his left knee collapsed. A little later he suffered a vision impairment and had a pain in his chest. He was given oxygen and the Coastguard was contacted. The casualty was taken by helicopter to a recompression facility for treatment. His condition was thought to have been due to a migraine attack.

**June 1999** **99/187**  
Two divers had completed a 26 mins dive to a depth of 36m and were ascending a shotline with an indicated 14 mins of decompression required. At 6m they halted to start the decompression. One of the pair was then hit by a falling lifting bag that had a 20kg load attached. The bag had been on the surface for 5 mins and then failed. As it fell the bag and load entangled with a delayed SMB which in turn tangled around the diver. The diver was dragged down to 20 to 30m. His buddy followed quickly and found the diver struggling and disorientated. He cut him free. The diver had put air into his BCD and suit to



try to stop his rapid descent and now made a rapid ascent to the surface missing all of his stops. The buddy completed his stops. At the surface the buoyant diver was placed on oxygen. He vomited and this showed signs of blood. The Coastguard was alerted and, once all divers were recovered, they returned quickly to shore. The casualty was taken by ambulance to a recompression facility for treatment. He was found to have suffered a burst eardrum, but no long term effects.

### June 1999 99/170

A diver completed a training dive to a maximum depth of 24m for a duration of 20 mins with a 3 min decompression stop. Immediately on surfacing he felt very tired and had difficulty breathing. He was given oxygen. He then suffered from an apparent minor epileptic fit. He was taken to hospital and subsequently sent for recompression treatment. This same individual is the subject of an earlier incident. It was subsequently found that this diver has a PFO.

### June 1999 99/207

Two divers entered the water and started their descent. One of the divers was felt to be underweighted and they left the water to rectify this problem. They started again and were at a depth of 25m when the diver who had been underweight suddenly, and without warning, rushed back to the surface. The buddy completed a normal ascent. At the surface the distressed diver was recovered into another boat. He complained of crushing pains in his chest and was placed on oxygen. The Coastguard was alerted and the diver taken by helicopter to a recompression facility. Examination of this diver showed no medical problems and he was released. Subsequent analysis of his air revealed very slight traces of CO<sub>2</sub> although this was not considered relevant. The problem was considered to have been hypoxia as a result of stress induced hyperventilation.

### July 1999 99/234

A diver experienced pain in his tooth and gum during descents. His solution was to make slow descents. On one dive he suffered pain during the ascent and spent 8 mins at 6m in an attempt to ease the pain. On surfacing the pain increased and spread to the whole side of his face, causing blurred vision and impaired speech and balance. He was taken to hospital and given painkillers. A sinus barotrauma was diagnosed. The following day the diver had recovered. Subsequent dental work on a root canal, indicated that the problem was due to pressure on a nerve because of a filling.

### July 1999 99/201

Two divers conducted a dive on a wreck at a depth of 38m. At the bottom one of the divers indicated that something was wrong and they ascended to 28m. Here the distressed diver began to shake badly and his buddy brought him to the surface using a controlled buoyant lift. They were recovered into their boat. The dive duration was 12 mins. One of their computers showed missed stops. Neither diver showed any adverse symptoms. The distressed diver's air cylinder was later found to contain small particles of grit and rust.

### July 1999 99/183

Two divers were practising assisted ascent drills from 10 to 6m. They lost control of the ascent, nearly came to the surface, and then sank back down to 14m. One of the pair hurt his ear and was found to have blood coming from his nose and ear.

### July 1999 99/236

After 18 mins at 22m a diver developed a nose bleed. He returned to the surface and the nose bleed stopped after a

further 35 mins.

### July 1999 99/185

Two divers descended a shotline to a depth of 44m. On the way down they passed two others of their group ascending the shotline. One of the descending pair stopped at 34m and his buddy returned to him. They exchanged OK signals. The diver who had stopped then flung out his arms violently, knocking the regulator from the mouth of the other. This diver replaced his regulator and took hold of the struggling diver. This diver was breathing heavily and fast and 'clawing for the surface'. Then he stopped struggling and became unresponsive. His buddy was able to detect a pulse and started to fin for the surface with the casualty. He sank to the bottom. Then holding on to the casualty's drysuit inflator hose he dragged himself up the shotline with his other hand. The pair of divers that had previously ascended realised that something was wrong and descended to help. They met at about 25m and one of this pair helped the original buddy to lift the casualty to the surface. Here they called for assistance from the boat and started AV. They recovered the casualty into the boat and gave further AV. He started to recover and was placed on oxygen. The assisting diver from the other pair had missed 2 mins of decompression stops, the fourth diver completed his stops before surfacing. The Coastguard was alerted and the boat headed for shore. The casualty was airlifted to a recompression facility for precautionary treatment. None of the other divers suffered any ill effects.

### July 1999 99/239

Two trainees were conducting a navigation exercise in 6m water with their instructor. One trainee got left behind and started to panic, she sank over a ledge to 8m. Her instructor brought her to the surface. She was frightened and had a bleeding sinus. This diver had previously conducted a dive to 18m for 30 mins followed by an abandoned dive to 5m because of an ear problem.

### July 1999 99/175

A number of children were being given lessons in snorkel diving by members of a diving club. One evening, before the session started, one of the children jumped from the top diving board and landed on one of the club members who was swimming in the pool. The shoulder of the swimmer was dislocated in the incident, the child was unhurt. The injured swimmer was taken to hospital for treatment.

### July 1999 99/345

Following a dive to 50m a diver complained of numbness in her arm. Medical advice was sought, and after consultation her symptoms were attributed to a tight cuff seal. (Coastguard report).

### August 1999 99/244

A diver completed a dive to 8m during which she made two ascents to the surface conducting training drills. On the last occasion she made a fast ascent during a mask clearing drill. Total dive duration 41 mins. She then suffered a severe headache and difficulty with vision. The diver stated that she did not suffer migraine and was recompressed. The problems subsided and then returned. It was concluded that she was suffering from migraine. She was taken to hospital for observation and discharged shortly afterwards.

### August 1999 99/245

A diver suffered an ear problem whilst diving at 7m.



August 1999

99/214

Two divers completed a dive to 26m for a duration of 25 mins. The divers deployed a delayed SMB to make their ascent. They experienced some difficulty as the tide had started to run. At times during their ascent they partially re-descended. Back in their boat one of their computers showed a missed 2 mins stop and the other displayed an error. One of the divers complained of a tingling sensation in one of his fingers. Both divers were placed on oxygen and the Coastguard alerted. Once ashore the divers were taken to a recompression facility for examination. The diver with the tingling sensation was recompressed and suffered an oxygen fit during the treatment. It was finally concluded that neither diver had suffered from a diving related problem.

September 1999

99/382

A diver surfaced with breathing difficulties. He was taken to hospital by ambulance, where partial drowning was diagnosed.

He was allowed home later that day. (Coastguard report).

September 1999

99/260

A trainee had a problem equalising her ears at a depth of 7m. The instructor terminated the dive. It was thought that she had damaged her eardrum.

September 1999

99/251

A diver was engaged in a 'try dive' session in a pool when the high pressure hose failed as she was inhaling. Moments afterwards this diver experienced a pain in her chest and was unable to breathe normally. She was helped from the pool, she was very stressed and complained of a severe chest pain. She was taken to hospital and released after examination. The next day she was fully recovered.

## Boating & Surface Incidents

- October 1998** 99/265  
A diver who became separated from her group due to strong undercurrents was located some distance from the point of entry by a fishing vessel. Lack of detection aids was made up for by a high visibility stab jacket. (Coastguard report).
- October 1998** 99/389  
Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).
- October 1998** 99/266  
A diver became separated from their boat. CG helicopter scrambled, two Lifeboats launched but diver was located by their own vessel shortly after. (Coastguard & RNLI reports).
- October 1998** 99/014  
A diver was conducting a training dive, at night in a river, when he was swept away by the current. Other members of the party called the emergency services. He was found by a police helicopter using thermal imaging equipment, 90 mins later, on the riverbank, 4 miles downstream. He was uninjured.
- October 1998** 99/024  
A group of four divers entered the water and started down a shotline. At 9m one of the group was unable to clear his ears and decided to abort the dive. He indicated to his buddy that he should continue with the other three. He ascended alone and on the way up met another four coming down. He moved off the shotline to allow them past. The shotline was pulled downwards and he was not able to locate it again to continue his ascent. He continued to the surface. At the surface, conditions had become rough and he was not spotted by the boat. Despite trying to attract their attention he was swept away. The other members of the group sought Coastguard assistance when they realised that the diver was missing and he was found and rescued by helicopter. No subsequent ill effects were experienced.
- October 1998** 99/268  
The SINGLE outboard of a dive RHIB would not start resulting in a SOLO diver being nearly a mile from the boat. The dive boat handler fired flares which were spotted by persons at sea and on shore. The diver inflated lifting bags that were sighted by the Coastguard Helicopter. (Coastguard & RNLI reports).
- October 1998** 99/391  
Lifeboat assisted in the search for missing diver(s). Others coped. (RNLI report).
- November 1998** 99/392  
Lifeboat assisted in the search for missing diver(s). Others coped. (RNLI report).
- November 1998** 99/273  
Engine failure once again led to 5 divers becoming separated from the boat. They were all picked up by a Lifeboat and a fishing vessel. (Coastguard & RNLI reports).
- November 1998** 99/272  
Complaints were received from a fishing vessel regarding a diver on the surface at a harbour entrance. The vessel had to go hard astern to avoid hitting the diver. The local Coastguard team attended and gave advice to the diver! (Coastguard report).
- November 1998** 99/059  
A group of divers were testing an RHIB on a reservoir when they discovered a capsized dinghy. The solo sailor had been in the water, unnoticed, for 45 mins. They recovered him into the RHIB and took him to the shore. They radioed ahead but, on the way, their own boat became swamped. A support boat arrived and they were all safely brought ashore.
- November 1998** 99/274  
After becoming separated, a dive buddy raised the alarm by 999. A Coastguard Rescue Team arrived to see the other diver finning ashore. (Coastguard report).
- November 1998** 99/394  
Lifeboat launched to assist dive boat with fouled propeller. Craft towed in. (RNLI report).
- November 1998** 99/395  
Lifeboat launched to assist dive boat with steering problems. (RNLI report).
- November 1998** 99/080  
Two pairs of divers anchored their boat and the first pair conducted their dive. Once back in the boat the second pair started their dive. The first pair felt unwell and one lay down in the boat. They did not realise that the boat was drifting. After 1 hour and 15 mins the second pair could not be seen and the two in the boat started a search, but because they had been drifting this was in the wrong place. The divers, meanwhile, had surfaced near their entry point and were holding onto a fishing buoy. After 15 mins of searching, the pair in the boat called the Coastguard for assistance. Two lifeboats, a spotter plane and a helicopter started a search. The divers were spotted, signalling with their torches, by a lifeboat and recovered 30 mins before nightfall.
- November 1998** 99/396  
Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).
- November 1998** 99/041  
Two divers who had become lost were found clinging to a fishing buoy 30 mins before nightfall. The search had involved one helicopter, one spotter plane, and three lifeboats. (Newspaper report only)
- February 1999** 99/397  
Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).
- February 1999** 99/278  
A major search and rescue operation launched for a missing diver in the Sound of Jura. Located on the surface by a searching ferry some 3hrs 24mins after he entered the water. No

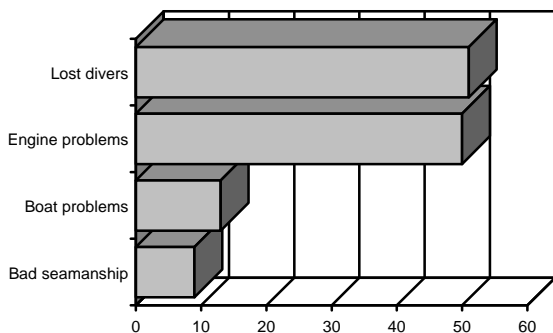
SMB or surface detection aids reported. (Coastguard report).

**February 1999** **99/081**  
 A student was at the helm of an RHIB during a boat handling course. During a tight turn an instructor reduced the throttle and increased the tightness of the turn. The boat then hit a large wave and jumped sideways. Another student lost her balance and fell from the boat. She grabbed the ropes at the side of the boat and was dragged a short distance before letting go. She was wearing a drysuit and an automatic inflation lifejacket. The boat returned to pick her up. No ill effects resulted.

**February 1999** **99/095**  
 Two pairs of divers commenced a dive from an RHIB. Sea conditions were moderate and there was a strong current. The SMBs of both pairs of divers were pulled under the surface and the cover boat lost contact with them. When the divers were clearly overdue an attempt was made to contact the Coastguard using the boat's VHF radio. It was found that the radio could receive but not transmit. The boat returned to the shore and one of the pair onboard went ashore to phone for assistance, the cox returned to search. A 4 hour search involving 3 lifeboats, 3 Coastguard units, 2 helicopters and local fishing boats took place. The divers were eventually found at the surface, one pair six miles and the other pair six and a half miles from their entry point. Sea conditions had become very rough and nightfall was close. Torches, flags and the SMBs helped the divers to be spotted from the air. Two of the divers were taken to hospital for treatment for hypothermia.

**February 1999** **99/398**  
 Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).

**Analysis of boating & surface incidents**



**March 1999** **99/400**  
 Lifeboat assisted in the search for missing diver(s). Others coped. (RNLI report).

**March 1999** **99/401**  
 Two lifeboats launched to assist stranded diver(s). Two people brought in. (RNLI report).

**March 1999** **99/402**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).

**April 1999** **99/280**  
 Dive club RHIB with 8 POB ran out of fuel and was towed into harbour by passing vessel. (Coastguard report).

**April 1999** **99/282**  
 A dive boat reported 3 divers down but the weather was worsening and they were concerned that they may not be able to locate the divers on surfacing. Coastguard rescue teams were dispatched, but the dive boat managed to recover the divers. Good forward thinking, but did they get a weather forecast? (Coastguard report).

**April 1999** **99/281**  
 A RHIB with 7 divers aboard broke down and was towed into port by the ILB. The boat had no radio, so one of the divers swam ashore to raise the alarm! (Coastguard & RNLI reports).

**April 1999** **99/283**  
 Pan Pan broadcast received from a dive RHIB with 8 POB after it had run out of fuel. It was towed back to port by a passing angling boat. (Coastguard report).

**April 1999** **99/284**  
 A visiting RHIB with 8 POB suffered gearbox failure and was towed into port by another boat. (Coastguard & RNLI reports).

**April 1999** **99/285**  
 Two shore divers were reported missing, helo, lifeboat, Coastguards and local vessels tasked to search. Divers located by a local vessel, having been swept away by the tide. (Coastguard & RNLI reports).

**April 1999** **99/286**  
 A local club RHIB with 4 POB broke down and fired a red flare. Towed into port by accompanying RHIB. (Coastguard & RNLI reports).

**April 1999** **99/287**  
 A dive RHIB reported mechanical failure off Start Point. It was towed into port by a passing vessel. The sole occupant had been solo diving off his boat!!! (Coastguard report).

**April 1999** **99/403**  
 Lifeboat launched to assist swamped / leaking dive boat. Craft towed in. (RNLI report).

**April 1999** **99/404**  
 Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).

**April 1999** **99/291**  
 A dive RHIB with 7 POB suffered engine failure. It was towed into port by a passing yacht. (Coastguard report).

**April 1999** **99/290**  
 Dive vessel suffered engine failure with 5 divers down. The divers were picked up later by a fishing vessel responding to a Pan Pan broadcast. The dive vessel towed into port by an inshore lifeboat. (Coastguard & RNLI reports).

<b>April 1999</b> A shore diver became separated from his buddy and drifted half a mile before being spotted by shore anglers. A dive boat in the area recovered him safe and well. (Coastguard report).	<b>99/295</b>	<b>May 1999</b> A dive RHIB broke down with two divers down. Divers recovered by another vessel and RHIB towed in by another. (Coastguard & RNLI reports).	<b>99/309</b>
<b>May 1999</b> Lifeboat assisted in the search for missing diver(s). (RNLI report).	<b>99/405</b>	<b>May 1999</b> A RHIB with 4 POB and 4 divers in the water broke down. Divers recovered by another vessel. The RHIB was towed to port by the Inshore Lifeboat. (Coastguard & RNLI reports).	<b>99/311</b>
<b>May 1999</b> Lifeboat launched to search for missing divers. Two people landed. (RNLI report).	<b>99/406</b>	<b>May 1999</b> Dive boat with 3 POB broke down. It was towed ashore by an Auxiliary Coastguard afloat. (Coastguard report).	<b>99/310</b>
<b>May 1999</b> Two divers planned to conduct a drift dive over a wreck and then ascend using a delayed SMB. They descended and discovered that they were not on the wreck and deeper than planned. They deployed their SMB and made their ascent. At the surface their boat was engaged in placing other divers into the water and they were not noticed. They were unable to attract the attention of those in the boat and were carried away by strong currents. The Coastguard was alerted when it was realised that they were missing. The divers were located by a yacht and recovered by a helicopter after being missing for over 1 hour.	<b>99/229</b>	<b>May 1999</b> Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).	<b>99/412</b>
<b>May 1999</b> Eight divers were in an RHIB when it struck a submerged object. The left hand side of the boat was badly damaged and a large quantity of diving equipment was lost overboard. The divers radioed for assistance and two lifeboats and a helicopter were launched. One lifeboat and another pleasure craft took the divers on board and the damaged boat was towed ashore. (Newspaper report only).	<b>99/117</b>	<b>May 1999</b> A group of divers were diving from two RHIBs, on a wreck 4 miles offshore. Contact was lost with one pair of divers. The Coastguard was alerted and a search involving lifeboats, planes, a helicopter and other craft began. Weather conditions were wind force 5 and torrential rain. They were found 5 hours later and taken to hospital by helicopter. They were suffering from mild hypothermia.	<b>99/164</b>
<b>May 1999</b> A diving support vessel reported two divers missing, but they were recovered shortly after the report, before SAR units could be mobilised. (Coastguard report).	<b>99/299</b>	<b>May 1999</b> Two divers went missing 4 miles south of Folkestone. A major search and rescue operation followed. Both divers were found in the water after drifting for 7 hours. No surface detection aids were carried and the VHF radio was left ashore. The casualty actually complained that we took too long to find him!! (Coastguard & RNLI reports).	<b>99/313</b>
<b>May 1999</b> Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).	<b>99/408</b>	<b>May 1999</b> A diving RHIB with 4 persons on board broke down some 7 miles offshore. It was towed into port by the Inshore Lifeboat. (Coastguard & RNLI reports).	<b>99/314</b>
<b>May 1999</b> A dive RHIB with 4 POB broke down en-route to the dive site. They were towed back to port by a passing yacht. (Coastguard report).	<b>99/302</b>	<b>June 1999</b> Two divers descended a shotline to a wreck. Unknown to them as they descended the line the buoy was dragged underwater, so the people in the boat lost sight of it. When they reached the seabed at 25m the divers saw that the shot was dragging along the bottom. They ascended and found the shot buoy at 20m. They attached a lifting bag to the buoy and sent it to the surface. They then ascended this line. At the surface they could see their boat about 1 mile away, but they were not spotted by the people in the boat. After the agreed dive time the boat party alerted the Coastguard of the missing divers. A lifeboat and army helicopter commenced a search. The divers were recovered after 1 hour 15 mins in the water and returned to their boat. No subsequent ill effects were reported.	<b>99/144</b>
<b>May 1999</b> Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).	<b>99/409</b>	<b>June 1999</b> Three divers were conducting a drift dive at a depth of 17m. The current was found to be stronger than expected and in the opposite direction. Because of these factors the divers terminated the dive after only 15 mins and they launched a delayed SMB. At the surface they found that they had been swept along the coast and out of sight of their boat. They swam inshore and left the water. One of the group walked back along the cliffs to where the boat was but was unable to attract their	<b>99/145</b>
<b>May 1999</b> After a 22 min drift dive, two divers discovered that the reel line to their SMB had become detached - the result was a lost dive boat that was following the free SMB. They swam ashore but were later taken back to their dive boat by a lifeboat. (Coastguard & RNLI reports).	<b>99/306</b>		
<b>May 1999</b> Lifeboat launched to search for missing diver. One person landed. (RNLI report).	<b>99/410</b>		

attention. A lifeboat was already assisting. Eventually the diver who had walked back was picked up by an inshore lifeboat and taken back to recover the other two divers. A swell had picked up and these divers were recovered with difficulty. A helicopter was launched but not needed. All divers were safely returned and their kit subsequently recovered by the lifeboat crew.

**June 1999** 99/416  
Lifeboat launched to search for missing divers. Two people landed. (RNLI report).

**June 1999** 99/321  
A dive cox (who had never driven a boat before) flooded the engine and drifted onto rocks, all this with a solo diver down. The diver surfaced 20 mins later to find a CG helicopter and Lifeboat on scene. Perhaps the diver/owner will choose better trained boat cover next time. I have listed this under dangerous practice. (Coastguard & RNLI reports).

**June 1999** 99/165  
A pair of divers became separated from their boat. The two in the boat called the Coastguard for assistance. The lost divers were spotted two and a half miles away by a passing yacht. The yacht stood by until the divers were recovered by a lifeboat.

**June 1999** 99/417  
Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).

**June 1999** 99/418  
Lifeboat assisted in the search for missing diver(s). (RNLI report).

**June 1999** 99/323  
Four divers were reported missing by their attendant boat. An RAF helicopter, RNLI lifeboat and two fishing vessels began a search. All four divers were located safe and well by a fishing vessel, some 1.5 miles from the dive site. (Coastguard & RNLI reports).

**June 1999** 99/419  
Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).

**June 1999** 99/324  
A fishing vessel reported picking up 2 divers who had surfaced away from their support vessel. They were taken back to their RHIB none the worse. However, the RHIB had no A-flag or radio and was well loaded with 12 divers. (Coastguard report).

**June 1999** 99/420  
Lifeboat assisted in the search for missing diver(s). Others coped. (RNLI report).

**June 1999** 99/326  
A diver was lost on the surface when his SMB line parted during the dive. A major search resulted in him being located by the Coastguard rescue helicopter. (Coastguard & RNLI reports).

**June 1999** 99/169  
Four diving boats were positioned over a wreck with a number of divers in the water. 'A' flags were being displayed. A fleet of

racing yachts approached the area with the intention of using a nearby navigation buoy as a turning mark. The dive boat users attempted to warn the yachts from the area and some turned away but others didn't and sailed over the diving area. The Coastguard was alerted to the situation and an inshore patrol boat attended the scene. No injuries were sustained.

**June 1999** 99/232  
On the way to a dive site, the engine of a dive boat failed due to an electrical fault and could not be restarted. The Coastguard was alerted and the boat towed back to the shore by a lifeboat.

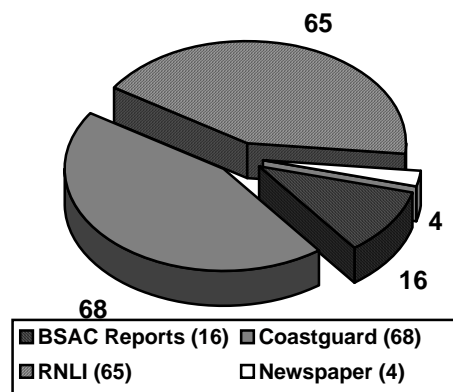
**June 1999** 99/329  
A RHIB with 4 POB broke down near the Eddystone. It was towed in by another vessel who answered its Pan broadcast. (Coastguard report).

**June 1999** 99/328  
A dive RHIB with 8 POB suffered mechanical failure and was towed back into port by a RNLI lifeboat. (Coastguard report).

**June 1999** 99/423  
Lifeboat launched to assist dive boat with engine problems. Others coped. (RNLI report).

**June 1999** 99/422  
Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).

**Boating & surface incident report source analysis**



**July 1999** 99/330  
A RNLI inshore lifeboat, on routine exercise, came upon an exhausted and lost shore diver. He was rescued and returned safely ashore. (Coastguard & RNLI reports).

**July 1999** 99/424  
Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).

**July 1999** 99/333  
Two divers who became lost on the surface deployed a red flare. They were spotted by a passing yacht and rescued. A GOOD

EXAMPLE OF SURFACE DETECTION AIDS WORKING.  
(Coastguard & RNLI reports).

July 1999 99/335  
A RHIB ran out of fuel near Plymouth Breakwater. It was towed in by a passing motor vessel. (Coastguard report).

July 1999 99/426  
Two lifeboats launched to assist dive boat with engine problems and missing diver(s). (RNLI report).

July 1999 99/427  
Four lifeboats launched to assist dive boat with engine problems and missing diver(s). (RNLI report).

July 1999 99/336  
Two divers were reported 20 mins overdue by their boat cover. A major search and rescue operation commenced and resulted in the divers being found approximately 1 hour later, a considerable distance downtide. (Coastguard & RNLI reports).

July 1999 99/428  
Lifeboat launched to assist dive boat with fouled propeller. (RNLI report).

July 1999 99/238  
Two divers surfaced after a dive and were waiting at the surface to be picked up by their boat. They noticed a large pleasure cruiser coming straight for them at 25 - 30 knots. They waved their SMB to attract attention. The boat turned away when only 2 boat lengths from them.

July 1999 99/225  
A group of divers dived in pairs on a wreck using the shotline of another group. When the last pair had descended the shot was recovered. The dive marshal was in the penultimate pair to descend and, when he had finished his dive and dekkitted, he checked on the status of the others with his deputy. They determined that one pair were still underwater. The boat was slowly underway. They checked with the skipper and he told them that he was on his way back to shore. The boat returned to the site to recover the last pair who, by that time, had been on the surface for 15 mins.

July 1999 99/340  
Gearbox failure with two divers sub surface led to another craft recovering the divers and then towing the broken down vessel into port. (Coastguard report).

July 1999 99/342  
A dive RHIB with 13 pob suffered engine failure and was towed into Oban by a local vessel. (Coastguard report).

July 1999 99/429  
Lifeboat assisted in the search for missing diver(s). (RNLI report).

July 1999 99/343  
Divers on a wreck surfaced on the wrong shotline and drifted a mile from their dive boat before they were recovered. (Coastguard & RNLI reports).

July 1999 99/346  
One of a party of 3 shore divers got into difficulties when he became exhausted swimming against the tide. He was rescued by a passing fishing boat. The other 2 divers made the shore unaided. (Coastguard report).

July 1999 99/431  
Lifeboat launched to assist dive boat in difficulties in adverse conditions, craft brought in. (RNLI report).

July 1999 99/349  
Two divers were reported 40 mins overdue. 3 RNLI lifeboats, a private lifeboat, a military helicopter plus numerous other vessels in the area were tasked to search. They were found safe and well approximately 60 mins later by the helicopter and returned to their dive craft. (Coastguard & RNLI reports).

July 1999 99/430  
Two lifeboats launched to assist dive boat with engine problems and missing diver(s). Two people and craft brought in. (RNLI report).

August 1999 99/432  
Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).

August 1999 99/198  
Two divers were reported missing whilst diving a wreck 20 miles offshore. Four lifeboats, a helicopter and other vessels searched for them. They were found 45 mins later 3 miles down tide. They were safely recovered. (Coastguard report).

August 1999 99/433  
Lifeboat launched to search for missing divers. Two people landed. (RNLI report).

August 1999 99/351  
An inflatable displaying an "A" flag was found unoccupied and moored to a harbour 5 knot buoy by a harbour patrol boat. Shortly afterwards 2 divers surfaced to be confronted by a very displeased Harbourmaster. This dangerous practice must be discouraged. (Coastguard report).

August 1999 99/359  
A diving support vessel suffered engine failure and was towed into port by a RNLI lifeboat. (Coastguard report).

August 1999 99/248  
Two divers descended into 15m of water and encountered a current. After 10 mins they were at 20m and they deployed a delayed SMB. They reached a maximum depth of 39m and surfaced after 39 mins. At the surface visibility was down to 500m and they could not see their boat, but could see the shore. They raised a flag, and inflated a second SMB. They started to fin towards the shore. After 52 mins the two divers left in the boat contacted the Coastguard. The lost divers were recovered by a helicopter after 40 mins at the surface.

August 1999 99/216  
Two RHIBs with six people in one and seven in the other were on their way to a dive site when one of the two hit a large wave. This caused the bow sponson to be separated from the hull. The

boat was swamped, the battery flooded and the engine stopped. The fuel tank was separated from the fuel line and became filled with seawater. The second boat took off the dive equipment and the Coastguard was called for assistance. Two other dive boats came to their assistance and they took divers onboard and the damaged boat in tow. They were joined by a police launch, a lifeboat and a helicopter. The lifeboat took divers onboard and the damaged boat in tow. On the way back the second boat developed a malfunction and was also taken in tow. Both boats and all divers were returned safely to the shore.

**August 1999 99/222**

Two divers booked places on a charter dive RHIB. They planned a site with a maximum depth of 25m, and gave this information to the cox. On the way to the site, with a total of six divers onboard, the boat seemed overloaded, had a leak, and became partially flooded with water. The two divers commenced their dive but, at 34m, they still could not see the seabed. They aborted the dive. At the surface they could see the boat but were not recovered since the engines of the boat would not start. These divers were swept into a tidal race with rough sea conditions. The cox attempted to radio for assistance and then fired a red flare. Two lifeboats, other vessels and a visiting warship went to assist. The other four divers also returned to the surface, two of them having reached 48m without seeing the seabed. A helicopter recovered these four divers and then returned to rescue the cox. One of the rescued divers informed the helicopter crew that two were still missing. The last pair was also recovered, but were required to abandon their kit, prior to rescue, due to the poor sea conditions. Their diving equipment was recovered 24 hours later by a fishing boat. A lifeboat recovered the RHIB.

**August 1999 99/367**

A dive RHIB with 5 POB broke down and was towed to port by RNLI inshore lifeboat. (Coastguard report).

**August 1999 99/366**

A 24m drift dive in a strong tide equalled 2 lost divers. A helicopter and lifeboat were tasked to search, but both divers were located safe by their own RHIB, having been swept further than expected. SMBs would have helped! (Coastguard report).

**September 1999 99/375**

A clear contravention of the Collision Regulations resulted in a complaint being made against a RHIB passing through a dive site at speed despite an 'A' flag being flown. Classed as dangerous practice. (Coastguard report).

**September 1999 99/377**

An early morning dive with divers surfacing in thick fog led a member of the public to hear shouting and whistles from seaward. A Coastguard response team and RNLI inshore lifeboat found divers lost on the surface attracting attention with air horns. The divers were all recovered. Noise is a good surface detection aid in thick fog. A busy morning with unexpected incidents for Tyne Tees Coastguard. (Coastguard report).

**September 1999 99/376**

A broken down diving RHIB was towed into port by another

RHIB. (Coastguard report).

**September 1999 99/378**

Two divers were reported lost following a drift dive. A helicopter, lifeboat and Coastguards were tasked to search. The divers were located safe by their parent boat just as rescuers arrived on scene. (Coastguard report).

**September 1999 99/258**

A diver's knife became unsheathed during a return journey from a dive site and punctured the side tube of an RHIB. The boat was safely berthed.

**September 1999 99/256**

The engine of a dive boat cut out as it left harbour. It was restarted but cut out again when put in gear. There was an offshore wind and so the boat's anchor was deployed. The Coastguard was alerted and a lifeboat, which had been on exercise, towed the boat back to the shore.

**September 1999 99/379**

Two divers were reported overdue from a dive at St Kilda. Stornoway lifeboat, Coastguard helicopter and other vessels in the area were tasked to search. Both divers were located safe some 40 mins later by their own boat. (Coastguard report).

**September 1999 99/381**

The cox of a dive RHIB went ashore to use a mobile phone to report 8 missing divers, lost on a drift dive off a notorious headland. All the divers were picked up by a motor-sailing vessel on passage. Perhaps a VHF on board would have been prudent! (Coastguard report).

**September 1999 99/383**

A RHIB suffered engine failure and was towed in by Lifeboat. (Coastguard report).

**September 1999 99/384**

A dive vessel with 3 POB suffered engine failure and was towed into port by RNLI lifeboat. (Coastguard report).

**September 1999 99/387**

A dive RHIB with 6 POB suffered engine failure and was towed to harbour by another vessel. (Coastguard report).

**September 1999 99/386**

A dive RHIB with 8 POB suffered engine failure and was towed to safety by a rescue boat. (Coastguard report).

**September 1999 99/388**

A dive vessel with 6 POB suffered engine failure. It was towed to port by a RNLI inshore lifeboat. (Coastguard report).



## Ascents

### October 1998 99/267

A 62 year old novice diver unfamiliar with mask clearance and buoyancy control made an uncontrolled ascent from 20m and lost consciousness at 6m. He was brought ashore and CPR commenced (weak pulse) with 100% O<sub>2</sub>. Ambulance then took casualty (conscious) for treatment. (Coastguard report).

### December 1998 99/064

After a 19 min dive to a maximum depth of 35m a diver lost control of her buoyancy and made a rapid ascent from 3m missing decompression stops. No ill effects were noted.

### January 1999 99/062

A trainee diver completed a dive 8m for 47 mins. 2 hours later this diver dived again to 17m. 18 mins into the dive he and two companions started a slow ascent up a rock wall. At 14m he lost a fin, and then the second fin. He became disorientated and made a fast ascent to the surface. Towards the end of the ascent his regulator was pulled from his mouth. At the surface assistance was summoned and he was helped from the water. He was given oxygen and taken to hospital for examination. The only ill effect reported was a pain in his knuckles 15 hours later which passed after a further 2 hours.

### January 1999 99/075

A diver was using a hired drysuit in which the boots were too large. 19 mins into a dive at 31m her feet came out of the boots and she panicked. She made a fast ascent to the surface. Her buddy surfaced normally. No subsequent ill effects were reported.

### February 1999 99/097

Two trainees dived together to a depth of 32m. After 8 mins a fast ascent was made and planned stops were missed. No problems were noted at the time.

### February 1999 99/098

Two divers had been to a maximum depth of 32m. At 20m one lost control of her buoyancy and made a fast ascent to the surface missing a planned safety stop. Total dive duration 21 mins. No ill effects were noted.

### February 1999 99/109

A group of divers were delayed in their journey to a wreck and the entry into the water was rushed. One pair dived to 33m and, 10 mins into the dive, the computer of one showed 1 min of no stop time remaining. He showed his buddy but little attention was paid. Later he asked to see the buddy's contents gauge. It showed 70 bar, the level at which they had previously agreed to ascend. He indicated the ascent, but the buddy swam on. He insisted and the ascent started. At 6m the diver prepared a delayed SMB, he handed the weight to the buddy and filled and released the buoy. As it ascended it caught on his torch; this was quickly released. The buddy however was holding the SMB line and started to be pulled upwards. He dumped air and started to descend quickly. He put air back into his jacket and was carried to the surface. The divers were recovered into the boat and their computers indicated missed stops. The diver who had done the buoyant ascent was given the single oxygen supply and the other placed on nitrox 33. They were taken ashore. Once ashore both were placed on oxygen and taken to hospital. Advice was sought and they

were airlifted to a recompression facility where they received precautionary recompression treatment. It is believed that narcosis had affected one of the divers. No subsequent ill effects were reported.

### February 1999 99/279

A novice diver, who had a history of back pain, dived to 9.4m and had a panic attack. He made a rapid ascent and was airlifted to Poole Hyperbaric unit with his buddy. (Coastguard report).

### February 1999 99/099

After 16 mins at a maximum depth of 14m one of a pair of divers lost control of his buoyancy and made a fast ascent to the surface. No subsequent ill effects were noted.

### February 1999 99/093

Two trainees and an instructor were making their way back up from a 20m dive and planned to complete a practice controlled buoyant lift. They were about 14 mins into the dive when the instructor's attention was distracted by a shoal of fish. He turned to point them out to one of the trainees but he was not to be seen. The instructor and the other trainee conducted a search around them and then made a normal ascent to the surface. There they found the third diver, who had made a rapid ascent. This diver was monitored for signs of DCI. No ill effects were reported.

### March 1999 99/089

Two divers were conducting a dive at a depth of 12m. After about 12 mins one of them felt a click around her waist. She looked to find out what had happened and her weightbelt slipped off. She was not able to grab it and made a buoyant ascent to the surface. At the surface she was assisted by other divers to leave the water. No subsequent ill effects were experienced. It was thought that the weightbelt slid round and the buckle released itself against her cylinder.

### March 1999 99/102

Three divers were at 5m after a dive to 36m for 24 mins. One of the divers lost control of his buoyancy and made a fast ascent to the surface missing a planned safety stop.

### March 1999 99/106

A trainee and an instructor were at a depth of 6m when, despite having air in his cylinder, the trainee gave the 'out of air' signal and spat out his regulator. The instructor provided her alternative air source and they started an ascent. At 4m the trainee panicked, spat out the regulator again, inflated his drysuit and rushed to the surface. At the surface he complained of shortness of breath and severe chest pain. He was towed ashore, oxygen was given and an ambulance called. A helicopter was then called and the diver and instructor were flown to a recompression facility. By this time the trainee had recovered. No recompression treatment was given, and he was released after some hours of observation. It was subsequently discovered that, despite a current medical, the trainee suffered from asthma, and had been suffering stomach pains and diarrhoea for the previous month.

### March 1999 99/119

Two divers were 7 mins into a dive at a depth of 22m when the

air inlet valve to one of the divers' drysuits stuck in the open position. He made an uncontrolled ascent to 6m where he was able to regain control by venting from his neck seal. The valve was subsequently found to be corroded. No subsequent ill effects were reported.

**April 1999 99/116**

Three divers were at a depth of 16m. 6 mins into the dive the weightbelt release of one of the divers was snagged on a rock and released. The diver, who was wearing a wetsuit, made a buoyant ascent. He breathed out and attempted to slow the ascent but was carried to the surface. The other two followed making a normal ascent. No subsequent ill effects were experienced.

**April 1999 99/202**

Two divers completed a dive to 28m and started their ascent after 22 mins. During the ascent one of the divers was unable to control his buoyancy and ascended directly to the surface missing a 1 min stop. He was recovered into the boat and placed on oxygen. He showed no ill effects. The other diver completed a normal ascent. The buoyant diver had previously removed weights from his belt believing that he had previously been too heavy.

**April 1999 99/133**

Two trainees and an instructor were at a depth of 20m when one of the trainees started to become buoyant. The other trainee tried to assist and they began to ascend rapidly. The air feed to the buoyant diver's drysuit had stuck in the 'inflate' position. The other trainee pulled the hose from the valve, but they were still carried to the surface. The buoyant diver was inverted during part of this ascent. No subsequent ill effects were reported.

**April 1999 99/204**

Two divers had been to 34m and were ascending up an underwater slope. At 26m one of the divers was unable to release air from his drysuit and made a buoyant ascent to the surface, his buddy completed a normal ascent with stops. At the surface, the buoyant diver's computer indicated 3 mins missed decompression. The Coastguard was contacted and medical advice sought. The diver was taken by boat to a recompression facility for treatment. No symptoms were experienced at any time. The diver was diving in a new suit and was not familiar with its shoulder dump valve.

**April 1999 99/289**

Two divers made a fast ascent, one showed slight DCI symptoms. Both were lifted by helo to Poole decompression unit where assessment showed that no treatment was necessary there. Both divers taken to a general hospital. (Coastguard report).

**April 1999 99/293**

Two divers lost buoyancy at 8m following a 40m dive. They made a fast ascent. Oxygen given and they were met at port by a diving doctor who pronounced them fit and well. Lucky escape. (Coastguard report).

**April 1999 99/115**

An instructor commenced a dive with two trainees. 5 mins into the dive, at a depth of 9m, one of the trainees signalled a problem with his ears and the instructor indicated that he should hold onto the SMB line and move up a little, which they did. The trainee then spat out his regulator, the instructor replaced it but he spat it out again and commenced to use his octopus

regulator. The instructor turned to look at the other trainee at which point the first trainee rushed to the surface. The instructor and other trainee followed. At the surface he was in some distress and was towed to the shore. He showed no signs of injury and reported that he had lost his regulator and rushed to the surface.

**April 1999 99/296**

Two divers reported missing stops after a 30m dive. No symptoms reported. Situation monitored and fortunately DCI did not manifest itself. (Coastguard report).

**May 1999 99/132**

Three divers descended a shotline to a wreck at a depth of 20m. They had to struggle against a current. One of the divers' octopus regulator began to free flow. Shortly afterwards his main regulator also started to free flow. He made a fast ascent to the surface, breathing from his main regulator and allowing the excess air to escape from his mouth. His dive computer registered a fast ascent and locked for 24 hours. No subsequent ill effects were reported.

**May 1999 99/228**

A diver breathing nitrox 32 dived to a maximum depth of 28m. At 18m he prepared to deploy a delayed SMB. He passed the buoy to his buddy and held on to the reel. His buddy put air into the buoy and released it. The line snagged on the diver with the reel and started to pull him to the surface. He was unable to free himself and had no knife to cut the lined. He was pulled to the surface. Total dive time 30 mins. His buddy made a normal ascent. At the surface the diver was placed on oxygen and taken ashore. Medical advice was sought. No ill effects were experienced and no other treatment given.

**May 1999 99/298**

A diver made a rapid ascent from 24.7m after she had lost her weightbelt. Medical advice was obtained and she was advised not to dive again that day. (Coastguard report).

**May 1999 99/123**

Two divers were 14 mins into a dive at a depth of 20m. Their maximum depth had been 25m. One of the pair lost control of her buoyancy and made a fast ascent. She was unable to dump air fast enough from her drysuit dump valve. Her undersuit had a showerproof outer surface and it is thought that this inhibited air release from the suit. No subsequent ill effects were reported.

**May 1999 99/205**

Two divers descended a shotline to the seabed at a depth of 42m. The shot was not on the wreck and they attempted to navigate to it. One of the divers had a problem with a fin and attempted to correct it. In doing so they became separated and the diver became inverted. He was unable to right himself and, believing that he was being carried towards the surface, took out his knife to release air from his suit. At this point his buddy returned and helped to right him. The divers started towards the surface and made a fast ascent from 6m because of loss of buoyancy control. At the surface their computers recorded a fast ascent. The diver who had been inverted developed a tingling in his fingers and a pain in his calf muscles. He was placed on oxygen and these symptoms were resolved.

**May 1999 99/300**

Two divers missed a 3 min decompression stop. They were taken to hospital by ambulance for precautionary observations. (Coastguard report).

### May 1999 99/149

A trainee and an instructor completed a dive to a maximum depth of 18m. After 14 mins the trainee became tired and confused. He started to ascend normally but at 4m he lost control and made a fast ascent. His weightbelt was released at the surface. No subsequent ill effects were reported.

### May 1999 99/206

Two divers conducted a dive to 32m. After 30 mins they started their ascent. At 8m one of the divers lost control of his buoyancy and ascended directly to the surface. The other diver completed 20 mins stops at 4m. A search was initiated for the second diver and the Coastguard was alerted that he was missing. When he surfaced it was realised that the first diver had missed stops. He was placed on oxygen and taken ashore by lifeboat. He was taken to hospital and released later that day. No symptoms were experienced by either diver.

### May 1999 99/162

After 28 mins into a dive to 19m a pair of divers prepared to ascend. One of the pair attached a lifting bag to their boat's anchor and the other moved away to wait. This diver was then suddenly unable to breathe from his regulator. He looked at his contents gauge and it read zero. He made a fast ascent to the surface and was recovered into the boat. He was placed on oxygen and monitored for problems. The buddy was also recovered into the boat. They contacted the Coastguard, and were escorted back to shore by a lifeboat. The diver was given a medical examination and found to be free of problems.

### May 1999 99/142

Two divers were 13 mins into a dive at a depth of 28m, they ascended to 18m then redescended to 22m to observe a crayfish under a ledge. At this point the direct feed actuation valve to the drysuit of one of the divers was pressed against the rocks and the suit became inflated. This diver was carried buoyantly to 3m. He finished his ascent and was recovered into the boat and placed on oxygen. The other diver discovered his buddy was missing and made a normal ascent. The Coastguard was advised. Subsequent medical examination did not reveal any DCI problem.

### May 1999 99/241

Two divers completed a drift dive to 27m for 20 mins. As they prepared to ascend one of the pair found that his drysuit dump valve was dumping air uncontrollably. He used his BCD to make the ascent. At 22m the ascent rate increased and he found that he was unable to dump air from his drysuit. The last 7m of the ascent was rapid. His buddy made a normal ascent and completed a safety stop before surfacing. The buoyant diver was placed on oxygen. No subsequent ill effects were reported.

### May 1999 99/315

A fast ascent from 10 and 15m by two trainee divers led to oxygen administration and overnight observation. Both divers showed no ill effects. (Coastguard report).

### May 1999 99/152

Two divers entered the water and descended a shotline to the top of a rock at a depth of 25m. They descended a rock wall to a maximum depth of 51m. One of the pair appeared ill at ease and they returned to the top of the rock. They deployed a delayed SMB and began to ascend. The diver who had been ill at ease struggled to control his buoyancy and to operate the SMB reel. At 8m this diver ran out of air and his buddy gave him his spare regulator. The first diver, still struggling, then became inverted and tangled in the SMB line. Both divers were carried to the surface missing 16 mins of decompression stops. At the surface they were safely recovered into the boat and spent over 1 hour breathing oxygen and 80% nitrox. No symptoms of DCI were experienced.

### July 1999 99/331

A diver lost his weightbelt at 10m and made a rapid ascent. He was taken to hospital by ambulance as a precaution. (Coastguard report).

### July 1999 99/182

10 mins into a dive, at a depth of 21m, one of a pair of divers started to hyperventilate. Her buddy realised that there was a problem and brought them to the surface. They made a fast ascent but apparently suffered no ill effects.

### July 1999 99/235

A diver conducted a dive to a maximum depth of 22m for a duration of 34 mins. During the ascent he lost control at 16m and made a slightly fast ascent. His computer indicated a violation of ascent rate. Afterwards he noticed a numbness of the right side of his face and swollen hands. The condition was monitored and he was symptom free after one hour.

### September 1999 99/370

Shouts for help from seaward were investigated by Coastguards. On arrival they found that a diver, on her first night dive, had panicked and made a rapid ascent. Apart from a headache, she was none the worse for wear. (Coastguard report).

### September 1999 99/372

Medical advice was sought after a diver became anxious after missing 8 mins of stops during a 32m dive for 23 mins on 22% nitrox. He was told not to dive anymore that day. (Coastguard report).

### September 1999 99/259

A diver was at a depth of 22m and was too heavy. She ditched her weightbelt and made an uncontrolled ascent to the surface. The dive time was 23 mins. No ill effects were experienced.

## Technique

**October 1998** 99/035  
At a depth of 16m a diver felt that he had run out of air and started to panic to the surface. His buddy held his regulator in his mouth, pushed the purge button, and controlled their ascent. No subsequent ill effects were experienced.

**October 1998** 99/036  
5 mins into a dive, at 20m, a diver's mask flooded and she started to inhale water. She panicked and made a fast ascent to the surface. It was subsequently found that an upgrade to her regulator exhaust valve had not been conducted and that there was sand in the second stage. The diver experienced no subsequent ill effects.

**October 1998** 99/038  
A diver was 30 mins into a dive with a maximum depth of 20m. At 15m he suddenly felt that he couldn't breathe out properly. As he ascended the feeling became worse. He made a rapid ascent to the surface. No subsequent ill effects were reported.

**December 1998** 99/087  
A diver experienced difficulty getting air from her regulator at a depth of 20m, her buddy shared his air and they made a safe return to the surface. (Newspaper report only)

**December 1998** 99/069  
Two divers planned to dive to 20m. One diver was using a full face mask and had difficulty equalising his ears. The other diver swam on and by the time the first caught the second they were at 35m. The leading diver then experienced a regulator free flow and started to panic. The second diver offered his alternative air source. The diver with the free flow started to ascend and dislodged the other's full face mask causing it to flood. The diver with the free flow then sank back down and his buddy, still with a flooded mask, went after him, found him and managed to get him to the surface. At the surface he was not breathing and had no heart beat. Resuscitation attempts were made and the diver quickly recovered. He was taken to hospital and discharged himself after 3 hours. No subsequent ill effects are reported.

**February 1999** 99/077  
A diver was at a depth of 20m, 10 mins into a dive, when she became distressed and switched to her octopus regulator. This regulator was inserted into her mouth upside down and could not be cleared of water. Her buddy offered his octopus regulator but this was refused. The diver then lost consciousness. Her buddy brought her to the surface using a controlled buoyant lift. At the surface assistance was summoned and with the buddy giving AV at the surface their boat came over to them. The casualty was recovered into the boat. She had a pulse but was not breathing. AV was continued whilst the casualty was taken ashore. Once ashore she was found to be breathing and oxygen was given. The casualty was taken by ambulance to hospital, where she remained for four days. A good recovery was anticipated.

**April 1999** 99/113  
A diver commenced his first open water dive with an instructor. At a depth of 2m the trainee panicked and returned to the surface. Here he removed his mask and regulator. He continued to panic complaining that he couldn't breathe. He was helped ashore and provided with warm clothing. He recovered but later took himself to hospital for a check up. No problems were found. It is felt that a tight wetsuit and the effects of cold

water may have caused his concern.

**April 1999** 99/121  
Two pairs of divers were diving together at a depth of 20m. 12 mins into the dive one of the divers swam ahead of the others and became separated. The other three surfaced and raised the alarm. After several minutes the lost diver had not surfaced and no bubbles could be seen from where he had been. An underwater search was initiated. After a total of 34 mins the lost diver surfaced. He had tried to find the others, became disorientated and ran into decompression stops. No subsequent ill effects were reported.

**May 1999** 99/130  
A diver entered the water with a new pony cylinder set up. The cylinder contained nitrox 50. At the surface he removed the regulator from his mouth. As he started his dive he placed the pony cylinder regulator in his mouth by mistake. When he reached 27m he realised that his gas supply was getting low. He and his buddy aborted the dive and they made a safe ascent.

**May 1999** 99/146  
A boat deployed four pairs of divers and they were covered by this and another boat. One diver surfaced after about 10 mins having become separated from his buddy, the buddy surfaced shortly after. They were reunited and they continued their dive. The dive depth was 10m. 10 mins later the diver surfaced again, having once more become separated underwater. His buddy did not surface and the first diver was recovered into the boat. A search was conducted for the lost diver and a set of 'solo' bubbles were spotted. The buddy commenced to kit up to go to investigate but the bubbles were lost. Other divers finished their dives and were recovered. 20 mins after the second separation the second diver surfaced and was recovered into the boat. It is reported that this diver had continued diving solo after a previous underwater separation.

**May 1999** 99/171  
Three divers conducted a dive to 44m. On reaching the bottom the dive leader conducted an air check. After 16 mins they began their ascent. During the ascent one of the divers realised that his air supply was low. At 10m their computers indicated 8 mins decompression at 3m. At this point the diver's air supply ran out. He signalled to one of his buddies, who had a twinset and twin regulators, but the buddy refused to provide him with air and signalled that he should ascend to the surface. The other buddy was below and unable to offer his pony regulator before the diver without air swam to the surface. This diver made a rapid, free ascent from 10m and, as a result, his computer indicated a total of 21 mins missed decompression stops. At the surface this diver was recovered into his boat and given oxygen. He showed no symptoms of DCI and no further assistance was sought.

**May 1999** 99/159  
20 mins into a dive to 21m a diver ran out of air and made a fast ascent to the surface. No subsequent ill effects were experienced.

**June 1999** 99/153  
Two divers commenced a wreck dive to a planned maximum depth of 30m. They intended a no stop dive of a maximum duration of 20 mins. At the bottom of the shot they were at 31m. During the dive the current increased and they struggled to

return to the shotline for their ascent, this took more time and air than anticipated. They made a slow ascent and arrived at 6m after a total time of 32 mins. They carried out 4 mins of decompression and then surfaced with low air. The stops required for this dive were stated as 1 min at 9m and 6 mins at 6m. Both divers were monitored for symptoms of DCI but none were experienced.

### June 1999 99/190

Two divers completed a dive to a maximum depth of 27m and ascended a shotline to a depth of 6m. As they started the ascent, one of the pair had 40 bar remaining in his air cylinder. At 6m this diver ran out of air, attempted to breathe from an alternative air source that was also connected to the empty cylinder, and started to panic. His buddy realised the problem and gave him her octopus regulator. They let go of the shotline and started to sink down. They made a safe ascent to the surface and were recovered into their boat. No subsequent ill effects were experienced.

### July 1999 99/208

Two divers completed a dive to 15m for 24 mins. At this point one of the divers apparently ran out of air and switched to her pony cylinder. They completed a normal ascent including a safety stop at 6m. At the surface the diver who was out of air struggled to stay at the surface since she was unable to put air into her BCD. She was assisted by her buddy. Back in the boat she was breathless and had pains in her calf muscles. She was placed on oxygen and taken by helicopter to hospital. No signs of DCI were present; the muscle pain was diagnosed as cramp. It was subsequently found that her cylinder still contained 130 bar, but was not fully turned on. She had been distracted whilst preparing for the dive and it was not discovered during the pre-dive check.

### July 1999 99/200

Two divers completed a dive to 32m. They started their ascent after 29 mins and completed 3 mins stops at 6m and 8 mins stops at 3m. One diver, whose computer had cleared, indicated that they should ascend, and the other diver agreed. 1 hour after surfacing the second diver's computer was found to be indicating missed stops. Both divers had surfaced with only 10 bar remaining in their cylinders (12l). The diver with missed stops was monitored for problems but none were observed.

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### July 1999 99/262

Two divers conducted a wreck dive to a depth of 35m. One warned the other about problems with their dive computer, and they agreed to follow the second diver's computer if it should become a problem. They did not find the shotline and started a slow ascent with 80 and 100 bar respectively in their cylinders. By the time they reached 9m one of the divers' computer had cleared but the one with which problems had been experienced showed 7 mins decompression required. They deployed a delayed SMB and at 6m one of the pair ran out of air. The other diver had 50 bar and they shared air at 3m. They finally ran out of air and surfaced with 1 min decompression still remaining. No subsequent ill effects were experienced.

### July 1999 99/242

Two divers conducted a dive to 20m. After 23 mins one diver checked the other's air. This diver gave the out of air signal and made a rapid ascent to the surface. He was given oxygen. No subsequent ill effects are reported.

### August 1999 99/211

Two divers completed a dive to 27m. After 22 mins one of the pair attempted to deploy a delayed SMB. This failed because it had a puncture. The other diver then deployed her SMB. By this time they had run into decompression stops. The divers ascended. As they did so the line from the SMB fouled the stationary prop of their boat and the boat began to pull on the line. By the time the divers were at 7m 50m of line was reeled out. The diver with the reel conducted stops at 7m with her buddy at 5m. The diver at 5m completed her stops, the one at 7m had 2 mins remaining. The SMB line was then cut by the propeller and the diver reeled it in. The computer of the diver at 7m cleared and they started to ascend. It then again showed 2 mins decompression so she halted the ascent, the other diver arrived at the surface and signalled an emergency since she had become separated from her buddy. The other diver surfaced safely soon afterwards.

## Equipment

**October 1998****99/013**

At the end of a training dive, at a depth of 6m, a trainee's regulator started to free flow. The instructor passed the trainee his octopus regulator and brought the trainee to the surface using a controlled buoyant lift. The regulator continued to free flow.

Two divers were filling a lifting bag to raise a shot weight. One diver used the octopus regulator of the other. On completion the diver was replacing her octopus regulator into its clip when she accidentally pressed the purge and started a free flow. This could not be stopped and, breathing from the octopus regulator of her buddy, they made a safe controlled ascent. No subsequent ill effects were reported.

**November 1998****99/039**

6 mins into a dive, at a depth of 15m, a diver found herself starting to rise to the surface. She was unable to control her buoyancy and rose rapidly to the surface. The inflation valve of her drysuit was subsequently found to have stuck in, allowing air to flow continuously into the suit. No subsequent ill effects were reported.

**March 1999****99/103**

10 mins into a dive to 36m a diver's cylinder became loose. Her buddy tried to fix the problem but couldn't, so they decided to ascend. At this point the buddy's regulator started to free flow. They used the first diver's alternative air source and made a faster than normal ascent to the surface. No subsequent ill effects were reported.

**November 1998****99/050**

Two divers descended a shotline to the seabed at a depth of 31m. Underwater visibility was very low. At the bottom, the regulator of one of the divers let in seawater, which caused him to panic. He was connected to his buddy by a line and the buddy also had an SMB. The panicking diver made for the surface dragging the other with him. The buddy caught up and managed to control the panicking diver at 23m. They made a controlled ascent to 6m and conducted a 3 mins stop. No subsequent ill effects were reported.

**March 1999****99/108**

A diver was on a training course at a depth of 20m. 10 mins into the dive his regulator started to free flow. Another diver provided an alternative air source. The first diver was still in difficulties and the instructor took control of the ascent. At the surface the diver was found to be in shock and distressed. He was given a medical check and found to have low blood pressure and an irregular heart beat (a known prior condition). He was taken to hospital but discharged the same day after a period of observation.

**November 1998****99/052**

Four pairs of divers descended a shotline to a depth of 40m in a quarry. One pair became temporarily separated during the descent due to one stopping to adjust his weightbelt. The buddy of this diver suffered a regulator free flow as soon as he arrived at the bottom. One of the other divers gave him his alternative air source and a controlled ascent was made. The divers conducted 4 mins of stops. No subsequent ill effects were experienced.

**April 1999****99/114**

Three divers were conducting a dive to 35m. 14 mins into the dive they commenced a slow ascent. At this point the regulator of one began a slow free flow. This diver switched to his octopus regulator. One of his buddies took hold of this diver and they started to ascend. The regulator was now fully free flowing. During the ascent the first diver's main cylinder became fully depleted and he switched to his pony cylinder. At 12m they got a fast ascent warning from one of their computers and they both dumped air. They lost too much buoyancy and returned to 20m before they realised. The buddy inflated his BCD but the other diver was unable to do so because he had no air remaining in his main cylinder. The buddy fully inflated his BCD and struggled to hold on to the heavy diver. Slowly they ascended again and reached the surface. The third diver stayed with the other two throughout. No subsequent ill effects were experienced.

**December 1998****99/060**

Two divers involved in pool training noticed a smell similar to cellulose paint thinners in their diving air. Other cylinders were found to be similarly contaminated. The air was released and the cylinders refilled. During this process the refilling air bank also became contaminated. Refilling all associated cylinders reduced the problem, but a taint was still present.

**May 1999****99/189**

At a depth of 36m a diver switched to his pony cylinder regulator and used his main regulator to blow some air into a pipe found on the bottom. When he released the purge button the regulator continued to free flow. He and his buddy made a safe ascent to the surface.

**December 1998****99/061**

16 mins into a night dive, at a depth of 23m a diver entered an underwater structure in a quarry. The BCD direct feed hose of this diver became snagged on a hook inside this structure and she was unable to exit. Her buddy entered and was able to free her. The divers made a safe return to the surface.

**May 1999****99/156**

Two divers were at a depth of 25m when the regulator of one of the pair began to free flow. The octopus regulator of the other diver was then used but this also started to free flow. The divers ascended to the surface. The final part of the ascent was quick. No subsequent ill effects were experienced.

**March 1999****99/101**

A diver was testing a new equipment configuration in shallow water. Prior to the dive, during a kit check, the feed supply to his BCD was inadvertently turned off. Underwater he had a problem with a full face mask, and was just able to get his alternative air source into his mouth before losing consciousness. He had been unable to make himself buoyant. He was recovered to the surface by his buddy and another diver and made a full recovery.

**May 1999****99/158**

Three divers were at a depth of 34m when, after 10 mins, one

**March 1999****99/092**



of their regulators began to free flow. This diver used the alternative air source of one of the others and they made their ascent. The ascent became fast from 20m and they missed a planned safety stop. No subsequent ill effects were reported.

**May 1999** **99/163**

Two divers were 10 mins into a dive at a depth of 22m. One of the pair noticed a restriction to inhalation through his regulator. The next breath was even more restricted and on the third he was not able to get any air. He approached his buddy and they made an air shared ascent. Inspection at the surface showed that his air cylinder still contained 160 bar. When tested the regulator fluctuated between no air and free flow.

**June 1999** **99/231**

Two pairs of divers were conducting a dive, each covered by a boat. Both pairs were using SMBs. One SMB moved away from the intended dive area and one of the boats followed it. The first boat stayed in the dive area and was recovering the first pair when they heard shouts nearby. They discovered that it was the second pair of divers. All divers were safely recovered, and it was found that the SMB of the second pair had become detached from the line because of an eyelet failure. The second boat had been following the drifting SMB, not realising that it had become detached.

**July 1999** **99/209**

At the beginning of a dive, at a depth of 6m, a diver's regulator hose burst at the junction with the first stage. He made a rapid, controlled ascent to the surface, breathing from this regulator. No ill effects were reported.

**July 1999** **99/179**

Two divers conducted a dive to 11m. A few minutes into the dive, one of the pair looked at his contents gauge which was mounted in a console and noticed that the high pressure hose was kinked at a right angle. As he moved the hose it suddenly burst allowing air to escape violently. The two started an ascent and half way to the surface he took the alternative air source from his buddy as his own regulator was becoming hard to breathe from. They arrived safely at the surface, with a total dive time of 5 mins. The 10.4l cylinder had started at 215 bar and finished with 50 bar.

**July 1999** **99/180**

An instructor and two trainees were descending a shotline to a wreck. At 4m they stopped while one of the trainees cleared his ears. At this point the weightbelt fell away from this diver. The instructor grabbed hold of the trainee and held him to the shotline. They then made a controlled ascent to the surface. The weightbelt was subsequently recovered and it was found that the belt had come undone from the buckle, the buckle was still correctly fastened to the clip at the other end of the belt.

**August 1999** **99/357**

A solo shore diver panicked and made a rapid ascent when his suit became very uncomfortable. He was assisted to the shore by another group of divers. An ambulance was called, but the symptoms disappeared when the ill fitting drysuit was removed. It beggars belief! (Coastguard report).

## Miscellaneous

November 1998

99/393

Lifeboat launched to locate missing diver(s). False alarm. (RNLI report).

June 1999

99/421

Lifeboat launched to locate missing diver(s). False alarm. (RNLI report).

February 1999

99/083

Two divers descended to 27m where one became dizzy, and lost sight of his buddy. He lost buoyancy control and sank to 31m where they met up again. They made a faster than normal ascent. The dizzy diver sought medical advice and was found to have compacted wax in his left ear and a middle ear infection.

July 1999

99/425

Lifeboat launched to assist dive boat. False alarm. (RNLI report).

April 1999

99/288

Report from a dive charter vessel that a diver had lost his decompression gas and may be in difficulty. Another cylinder was lowered to him and the situation resolved itself without further incident. (Coastguard report).

July 1999

99/337

Two divers were reported overdue by their shore contact. Upon investigation they were confirmed safe - they had forgotten to call in. SHORE CONTACTS WORK! (Coastguard report).

August 1999

99/434

Lifeboat launched to locate missing diver(s). False alarm. (RNLI report).

May 1999

99/407

Lifeboat launched to locate missing diver(s). False alarm. (RNLI report).

September 1999

99/385

Coastguard investigated reports of divers diving on a protected wreck site. Snorkellers were discovered hoping to swim with seals. False alarm with good intent. (Coastguard report).

May 1999

99/414

Lifeboat launched to locate missing diver(s). False alarm. (RNLI report).

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## Overseas Incidents

### Fatalities

January 1999 99/063

Two pairs of divers descended to a depth of 37m to enter a large wreck. One diver became separated from her buddy and surfaced alone, the other three continued together. After a total submerged time of 22 mins one of the three surfaced and was seen to be in trouble. Another dive boat recovered this diver and he was found to be not breathing and had no pulse. Resuscitation was immediately started and the casualty taken by boat and ambulance to hospital. He was declared dead shortly after arrival. The remaining two divers completed 13 mins of decompression stops. The casualty's two dive cylinders were subsequently found to contain 0 and 5 bar; at the start of the dive both were at 200 bar.

January 1999 99/074

Two divers entered the water to commence a dive on a rock pinnacle, a moderate current carried them away from the rock and they had to swim hard, on the surface, to get to the mooring line of the boat. They recovered their breath and dived to the seabed 18m below the boat. They swam along the bottom, attempting to get into the lee of the pinnacle. They struggled against the current and one of the divers, who didn't have gloves, cut his hand on a sea urchin and rocks. Without warning this diver stopped breathing and became limp and unresponsive. His buddy attempted to inflate the casualty's BCD but it didn't operate. He offered his alternative air source but got no response. He then took hold of the casualty and, inflating his own BCD, brought them both to the surface. The casualty was recovered into a boat and oxygen enhanced resuscitation attempts were started. He was taken by boat and ambulance to hospital where he was pronounced dead. On subsequent examination his cylinder was found to be empty. The buddy had 50 bar remaining, their dive time had been 14 mins. It is believed that a post mortem indicated death by natural causes.

March 1999 99/105

Two divers were diving on a wreck at a maximum depth of 30m. 25 mins into the dive, at a depth of 20m they were approached by a third unknown diver. This diver was without a fin and did not have his regulator in his mouth. One of the pair gave this diver his octopus regulator, he took several large breaths of air and started to gag. The rescuing diver led them back to the shotline where they were joined by other members of the distressed diver's party. Just before the shot was reached the distressed diver stopped breathing. The rescuing diver and the leader of the casualty's party made a rapid ascent to the surface with the casualty. The casualty was recovered into the boat and resuscitation started. The casualty was taken back to the shore but failed to recover. The casualty had run out of air and is reported to have had a heart attack.

September 1999 99/255

Three divers conducted a dive to 61m. 15 mins after they had left the surface, two other divers also started their dive. Both groups used a shotline to descend and ascend. The three divers were decompressing on the shotline when the pair ascended to make their stops. At 20m, one of the pair stopped ascending and his buddy re-descended to assist him. The diver who had stopped had only 50 bar remaining in his cylinder and the buddy could not make him ascend. He put air into the

diver's BCD but he would not ascend. At this point the troubled diver ran out of air and his buddy supplied his octopus regulator. The buddy then noticed that the diver's leg was entangled in the shotline, but he was not able to free it as the octopus hose prevented him from reaching down. At this point the buddy's air supply also ran out. The other three divers realised that there was a problem and came back down to assist. One of the three provided the buddy with an octopus regulator but the entangled diver was unconscious and unable to accept an air supply. Another of the three divers cut the shotline and, because of the inflated BCD, the casualty and two others were carried directly to the surface. They were all recovered into their boat. Resuscitation techniques were applied to the casualty, he started to breathe and was placed in the recovery position. The casualty then turned himself onto his back and was heard to be groaning. He was flown by helicopter to hospital but was found to be dead on arrival. None of the other divers suffered any symptoms.

### Decompression

November 1998 99/058

A diver started a dive but at 16m it was aborted after a problem with her buddy's neck seal, and they returned to the surface. 12 mins later this diver dived again to a depth of 31m for a dive time of 26 mins with a 1 min stop at 6m. She later suffered DCI and required recompression treatment.

December 1998 99/067

Two pairs of divers conducted a dive to 35m. One diver lost control of his buoyancy during the ascent and missed 2 mins of stops. It is thought that lack of familiarity with his drysuit dump valve and carrying an SMB reel may have contributed to this. The divers were placed on oxygen as a precaution. A leaking valve meant that all of the oxygen was consumed in 10 mins. 11 mins after surfacing one of the other divers complained of back pain and then 'pins and needles'. No further oxygen was available and he was taken to a recompression facility. Both divers were recompressed, although the first had no symptoms. The second diver received two further treatments. A possible back injury was cited.

May 1999 99/178

Two divers completed a dive to 30m for a duration of 30 mins. Some time later they dived again to 32m for 35 mins, and completed 7 mins stops at 6m. 1 hour later one of the pair complained of a numbness in his limbs. He was placed on oxygen and the Coastguard contacted. The diver was examined by a doctor and transferred to a recompression facility for treatment. His buddy was recompressed with him as a precaution. The following day he received a second recompression treatment. This diver had been diving with Nitox 32, his buddy was using air.

June 1999 99/318

A diver diving on the French side of the English Channel, dived to 48m but missed 21 minutes of stops due to buoyancy problems. The result was DCI. Solent CG responded to the Pan Pan broadcast and arranged for a French helicopter to airlift her to a hyperbaric unit in Le Havre. (Coastguard report).

August 1999 99/243

A diver completed a dive to 37m for 35 mins with 7 mins decompression stops. 5 hours later he dived again to 41m for 30 mins with 7 mins decompression. Whilst waiting to be picked up he swallowed some seawater. He was recovered into the boat and 10 mins later began to be seasick. He complained that he felt dizzy and lay down. He was taken to a recompression facility and recompressed several times over a 5 day period, he returned home and received two further periods of recompression. He was diagnosed as having an inner ear bend and advised to stop diving.

## Injury/Illness

**January 1999** 99/085  
Two divers conducted a 42 mins dive to a maximum depth of 30m including a 2 min precautionary stop. At the surface one diver discovered an itchy skin rash on both upper arms. An allergic reaction or a skin bend is thought to have been the cause. The rash disappeared after 2 hours 30 mins. No further effects were noted.

**January 1999** 99/091  
A diver completed a dive to 12m for a total of 35 mins. The dive included a number of training drills. After the dive he complained of a pain in his right ear. He received medical attention and the symptoms slowly resolved. It is thought that the eardrum became stretched during the ascent.

**April 1999** 99/110  
Two divers were conducting a dive to 19m. After 8 mins one of the pair experienced problems with his mask and they decided to abort the dive. They made a normal ascent and completed a 1 min safety stop at 6m. On surfacing the diver complained of dizziness and a numb upper right forearm. He was placed on oxygen and taken ashore. Medical advice was sought and it was decided to monitor the casualty. A full recovery was made. It is suggested that an overly small wetsuit and tight BCD shoulder straps caused circulation problems to the arm.

**May 1999** 99/141  
A diver complained of difficulty clearing his ears during the second dive of the day. The following day he dived to 20m without problem. 3 hours later he dived again to 20m without problem. On surfacing it was found that he had blood and mucus in his mask. Subsequent medical examination revealed a ruptured eardrum and a burst sinus. He recalled having difficulty clearing his ears on the first dive of the day.

**May 1999** 99/139  
A diver was climbing a ladder to get back into a boat at the end of her dive. At the top of the ladder the index finger of her left hand was trapped between the ladder and the boat and crushed. Limited first aid equipment was available in the boat. The diver was treated for shock and given oxygen for 15 mins. On return to shore she went to hospital and eight stitches were used to close the wound.

**August 1999** 99/213  
A diver on a nitrox course completed a dive to 29m for 27 mins using nitrox 33. His dive profile required 1 min stop at 6m, and he actually completed 8 mins at this depth practising gas switching. On surfacing he complained of cramp in his leg, slight nausea, and of 'seeing stars'. He was recovered into the boat and given fluids. During the return journey he began to feel worse and he was placed on oxygen. Once ashore he was

taken to a medical facility for examination. The problem was diagnosed as dehydration and the diver recovered after 2 hours.

**August 1999** 99/247  
A diver completed a dive to 38m for 43 mins with 6 mins decompression at 6m. 1 hour 11 mins later he dived again to 30m for a total of 44 mins including 8 mins decompression at 6m and 4 mins at 3m. Later, on the boat, he felt dizzy and nauseous, his pupils were pinpointed and his skin was clammy. His pulse was strong. He was given oxygen. He vomited. He was taken to hospital and placed on oxygen and given IV fluids. ECG and chest x-ray were satisfactory. He remained in hospital for observation overnight.

**September 1999** 99/254  
A diver surfaced after completing a training lift from 3m and complained of dizziness, visual disturbances, slight nausea and cramp. He was placed in the shade and given fluids. He soon recovered. This had occurred before, and the diver reported that he had had difficulty breathing in a regular and relaxed way whilst underwater. The diver sought medical advice.

## Boating / Surface Incidents

**October 1998** 99/025  
A snorkel diver was hit by a large wave. Her mask was filled with water and she gasped for breath. Her buddy tried to assist but she became exhausted and started to sink. Two other snorkellers pulled her to the surface and got her into the boat where she recovered. (Newspaper report only)

**October 1998** 99/138  
On completion of a dive, a diver was back in a small boat stowing his equipment when the cox started off at full speed. The diver was unbalanced and dropped his kit into the boat to hang on. A large wave hit this diver and he was thrown into the water, together with some of his kit. He pushed himself clear of the boat as he fell in. The boat stopped and he and others recovered all of his kit, except his mask, which sank and was lost. The diver reported no injuries.

**October 1998** 99/057  
Two divers had completed a dive to 30m and were hanging onto their boat's anchor line decompressing. One diver released the line and was making his way to the side of their RHIB when an outboard engine was heard. Their boat was flying an 'A' flag and they paid little attention to the sound. Suddenly one of the pair saw a fast approaching propeller and pulled his buddy down, injuring his shoulder in the process. The propeller passed beside this diver's head and he felt the wash from it.

**March 1999** 99/107  
Two pairs of divers were operating from a boat close to a reef with an unmanned lighthouse in a remote area, 37 nautical miles from the coast. One pair was underwater when a sudden squall and high waves broke the mooring line and swamped the boat. The two in the boat tried to manoeuvre it to tie it to the lighthouse platform. One climbed onto this platform but the line parted again and the boat was washed away and capsized; one of the pair stayed with it. The two divers underwater heard the boat engines being started and surfaced. They swam to the light platform and climbed onto it. The alarm was raised when

the boat was realised to be overdue and several boats and three helicopters were launched. In darkness the upturned boat and the crew in the water were spotted using night vision equipment, a liferaft was dropped and this person was subsequently recovered by one of the search craft. The three on the platform were also spotted from a helicopter and they too were recovered. All were treated for dehydration and sunburn, and one for ingestion of fuel.

mins into the dive the trainee indicated that there was something wrong with his regulator and switched to his octopus regulator. He then spat this out and attempted to rush to the surface. The instructor took hold of the trainee and attempted to give him his alternative air source. This was refused and the trainee swam to the surface with the instructor. At the surface he recovered. He stated that he felt that his regulator had become flooded. An inspection of the regulator did not reveal any fault.

## Ascents

August 1999

99/218

Two divers conducted a dive to 24m. 16 mins into the dive one of the pair was unable to control their buoyancy and they made a rapid ascent to the surface. At the surface, 10 mins after surfacing, the other diver complained of a pain in his left arm, and was taken to a recompression facility for treatment. It was subsequently concluded that this pain was not DCI.

## Equipment

November 1998

99/055

Two divers were 15 mins into a wreck dive with a maximum depth of 23m. One indicated that he had 100 bar remaining in his cylinder. 3 mins later he was down to 50 bar. They decided to abort the dive and commenced an ascent up the anchor line of their boat. During the ascent the diver indicated that he was down to 25 bar and bubbles were seen to be coming from his instrument console. His buddy gave him his alternative air source and they completed a normal ascent with a 1 min safety stop. A damaged 'O' ring seal was subsequently found. No subsequent ill effects were reported.

## Technique

July 1999

99/199

A trainee and an instructor were diving at 14m as part of a crossover course. The trainee was diving without a hood. 4

May 1999

99/167

A diver was descending to a wreck in a depth of 39m. At 18m he saw one of the weight pouches from his weightbelt dropping to the seabed. He and his buddy aborted the dive and they returned to the surface, attempting to control their ascent rate. The buoyant diver's computer indicated a warning. No subsequent ill effects were experienced.

## INCIDENT REPORTS

If you would like to add to, correct or place a different interpretation upon any of the incidents in this report please put your comments in writing and send them to the following address:

***The Incidents Advisor,  
The British Sub-Aqua Club,  
Telford's Quay,  
Ellesmere Port,  
South Wirral,  
Cheshire,  
L65 4FY.***

For new incidents please complete a BSAC incident report form and send it to BSAC HQ at the address shown above.

**All personal details are treated as confidential.**

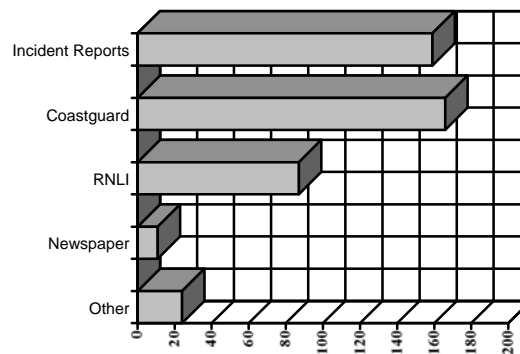
Incident Report Forms can be obtained free of charge by phoning BSAC HQ on **0151 350 6215**  
or from the BSAC Internet website.

## Numerical & Statistical Analyses

### Statistical Summary of Incidents

	1991	1992	1993	1994	1995	1996	1997	1998	1999
Incidents Reported	199	123	263	385	351	315	397	452	397
Incidents Analysed	199	123	263	385	351	315	370	431	382
UK Incidents	170	98	236	322	318	295	349	404	357
Overseas Incidents	24	14	21	9	33	20	21	27	25
Unknown Locations	5	11	6	54	0	0	0	0	0
BSAC Members	111	110	146	164	157	136	101	135	128
Non-BSAC Members	18	13	19	8	20	4	29	52	47
Membership Unknown	70	0	98	213	178	175	219	217	182

### Incident Report Source Analysis



Total Reports: 447  
Total Incidents: 382

### History of UK Diving Fatalities

Year	Membership	Number of Fatalities	
		BSAC	Non-BSAC
1965	6,813	3	-
<b>1966</b>	<b>7,979</b>	<b>1</b>	<b>4</b>
1967	8,350	1	6
<b>1968</b>	<b>9,241</b>	<b>2</b>	<b>1</b>
1969	11,299	2	8
<b>1970</b>	<b>13,721</b>	<b>4</b>	<b>4</b>
1971	14,898	0	4
<b>1972</b>	<b>17,041</b>	<b>10</b>	<b>31</b>
1973	19,332	9	20
<b>1974</b>	<b>22,150</b>	<b>3</b>	<b>11</b>
1975	23,204	2	-
<b>1976</b>	<b>25,310</b>	<b>4</b>	<b>-</b>
1977	25,342	3	-
<b>1978</b>	<b>27,510</b>	<b>8</b>	<b>4</b>
1979	30,579	5	8
<b>1980</b>	<b>24,900</b>	<b>6</b>	<b>7</b>
1981	27,834	5	7
<b>1982</b>	<b>29,590</b>	<b>6</b>	<b>3</b>
1983	32,177	7	2
<b>1984</b>	<b>32,950</b>	<b>8</b>	<b>5</b>
1985	34,861	8	6
<b>1986</b>	<b>34,210</b>	<b>6</b>	<b>9</b>
1987	34,500	6	2
<b>1988</b>	<b>32,960</b>	<b>10</b>	<b>6</b>
1989	34,422	4	8
<b>1990</b>	<b>36,434</b>	<b>3</b>	<b>6</b>
1991	43,475	8	9
<b>1992</b>	<b>45,626</b>	<b>9</b>	<b>8</b>
1993	50,722	3	6
<b>1994</b>	<b>50,505</b>	<b>6</b>	<b>6</b>
1995	52,364	9	9
<b>1996</b>	<b>48,920</b>	<b>7</b>	<b>9</b>
<b>1997</b>	<b>48,412</b>	<b>4</b>	<b>12</b>
<b>1998</b>	<b>46,712</b>	<b>6</b>	<b>16</b>
<b>1999</b>	<b>46,682</b>	<b>8</b>	<b>9</b>

**LIST OF ABBREVIATIONS USED IN THE INCIDENT REPORT**

AV	Artificial ventilation
BCD	Buoyancy compensation device (e.g. stab jacket)
CAGE	Cerebral arterial gas embolism
CG	Coastguard
CPR	Cardiopulmonary resuscitation
DCI	Decompression illness
DDRC	Diving Diseases Research Centre (Plymouth, UK)
ECG	Electrocardiogram
Helo	Helicopter
ILB	Inshore lifeboat
IV	Intravenous
m	Metre
min(s)	Minute(s)
MRSC	Marine Rescue Sub Centre
PFO	Patent foramen ovale
POB	Persons on board
RAF	Royal Air Force
RHIB	Rigid hull inflatable boat
RNLI	Royal National Lifeboat Institution
SAR	Search and rescue
SMB	Surface marker buoy
999	UK Emergency phone number