



Ice Station Edinburgh

Ice diving is popular
around the world but
opportunities to try
out the art in
Scotland are limited -
so when Steve
Millard heard about a
course in Edinburgh
he couldn't resist the
temptation to find
out what it was all
about ...

IN EARLY February, with most of Scotland in the icy grip of winter, many were turning up the central heating and snuggling down under the duvet with a steaming mug of hot chocolate. However a small band of dedicated divers had rather different ideas.

Travelling from almost as far as possible within the UK from the north (Shetland Isles) and the south (Brighton), divers converged on Edinburgh to participate in the first ice diving course to take place 'under ice' in Scotland. The course was organised by larger than life Ben Panter, who for the last five years has made these things happen faraway in the Austrian Alps. However this time it was different ... we were going to try and experience an ice-diving course in Scotland.

We all realised from the start that this was going to be a gamble. Winter weather in Scotland is often sub zero and frozen lakes and quarries are hardly uncommon, but it is a different matter to guarantee that any particular site is going to have a frozen surface for a specific weekend, planned months in advance. There were in fact two Scottish ice diving courses organised for consecutive weekends. Unfortunately, the unlucky divers participating in the first course had icy winter conditions but no actual ice covering the surface of the dive site. They had to make do with standing on frozen puddles and imagining an ice ceiling during the practical diving exercises.

The second course brought its own

challenges in just getting to Edinburgh. Severe cold weather and snowy conditions during the previous week made for difficult travel, especially from the north of Scotland. However, all six divers rose to the challenge and successfully arrived on Saturday morning for the start of the ice diving course. In spite of the weather conditions, none of us knew whether we would actually have ice to dive under for the practical Sunday training. In hopeful anticipation we viewed spectacular features from previous Austrian expeditions, showing high alpine lakes, mountain scenery and of course diving under the frozen surface.

From the comfort of a warm room, theory lectures covered the physiological and psychological hazards of diving in severe low temperature conditions, suitable personal diving equipment and safety rope procedures. In addition we learnt about rope signals and emergency rescue drills in the event of a lost diver. We hoped that these would never need to be put into practice!

Following these theory lectures, we ventured outside and practised the roped diver, buddy and tender procedures on an adjacent lawn, much to the amusement and curiosity of local residents. Finally we got exciting news from the dive site itself. A local inspection reported that the surface was indeed frozen. A mobile phone photograph confirmed this, showing a large black dog walking on a snowy surface of the quarry dive site. The ice dive was on!

An early start on Sunday saw us

converging on the quarry site of Powmill Quarry in Fife (60 minutes north of Edinburgh - www.congeralley.com/sites/powmill.htm). This site was chosen for good access and because it had a relatively shallow maximum depth of six metres and was quite small. This last factor we had learnt was important to ensure rapid freezing of the surface. A large lake would more likely have the surface ice broken up by wind. Also a deep lake could take much longer to freeze over.

The promised easy access only went as far as driving up to the site entrance. Walking with full diving kit up to the edge of the quarry was made quite hazardous by extensive sheet ice and a steep access path. Although there were no serious mishaps or injuries, there were certainly a number of slips and bruises with accompanying red faces! Eventually we all got together with our dive kit at the agreed access point.

The ice itself was quite impressive. From a clear water surface just one week earlier, the quarry had developed a substantial ice covering of about 5cm thickness. This was not just thick enough to walk on; it was difficult to break through. The energetic use of an ice axe and enthusiastic employment of body weight (Ben is a big lad!) eventually prevailed and we broke away an entrance hole adjacent to the edge.

First under the ice was qualified ice diver, Sarah Conner, who was assisting Ben with the course. Sarah demonstrated the technique of leaning gently

backward into the water and immersing the first stage before inhaling from the second stage, to prevent a freeze free-flow. After ascertaining that the ice diving conditions were safe and suitable, Sarah was joined by Jerry Sutton, acting as trainee dive buddy and ice diving novice.

We all watched with anticipation as the pair disappeared beneath the surface of the water and ventured under the ice. The bubbles could be clearly seen through the ice spreading out under the surface. Wayne Murray acted as tender and gave roped communications under the guidance of Ben. Ian Stewart was fully kitted and waited by the entrance, ready to go in if needed as the rescue diver.

The pair soon returned and everyone rotated into their next role, with Ian now taking his turn under the ice and Steve Millard waiting as rescue diver. Steve was the only diver using an Evolution rebreather. In spite of using a more freeze-resistant rebreather, he had some problems with a free-flowing second stage on the rebreather mouthpiece. However this was quickly resolved by pouring copious volumes of hot coffee over the mouthpiece. It was a shame not to drink the coffee but the free-flow was fixed and the mouthpiece retained its nice coffee taste for the rest of the day.

Steve was next under the ice, followed by Wayne and then finally Rachel Hope got her turn to venture under the frozen surface and experience the thrills of this esoteric minority sport. The sixth course participant, Heike Weichert was unfortunately unable to join us under the ice, due to recovering from a recent PFO closure. However she provided moral and Sherpa support and kept our mascot black dog, Masie entertained and quiet.

What was it like under the ice? I have to say that it was an experience not to be missed. Surprisingly, it was not as cold as expected. The water temperature was around 4°C, certainly no worse than other cold water dives I have experienced. It was very light under the ice as it was a sunny day and the sunlight

easily penetrated through the surface covering.

However the most striking impression was of the clear underwater visibility. We had learnt during the course that this was due to all the sediment particles in the water each acting as an ice crystal seed. This resulted in all these particles rising to the surface, leaving exceptionally clear water below. The other striking spectacle was the sight of bubbles rising to the underside of the ice and then flowing out like mercury in all directions. I could easily have watched this for a long time without thinking about the cold. All too soon the time was up and we had to follow the rope back to the exit hole.

Once we had all completed our first ice dive as trainee ice diving buddies, the course was structured so that we would all dive again, but this time taking responsibility as leader to the dive. The second dive was a little more relaxed and we had time to take photographs, try and walk upside down on the ice and generally have fun. Also included in the training was the giving of an emergency signal by the ice dive leader, followed by a rapid pull-out from the dive tender. This was fun - a bit like a fast drift dive but you had to be careful not to hit or snag the ice surface.

Soon, it was all over and we had a hard slog of transporting all the dive kit back to the quarry site entrance and de-kitting. The day never really warmed up and we were all happy to get back into warm dry clothing. After debriefing the dives and swapping photographs in the local Powmill Milk Bar, we set off for our respective journeys back to the extremities of the UK.

All in all it was a very rewarding and satisfying weekend. If you ever get the opportunity to dive under ice then I would thoroughly recommend it. It's

not for the fainthearted but with the right equipment and training it can be done safely and enjoyably. Top marks to Ben and Sarah for all the hard work they put in developing, planning and running this innovative new course.

FACT FILE

For further information about ice diving training both in Scotland and Austria, contact Ben Panter: ben.panter@bsac.com

Note

Powmill Quarry is located on privately owned land. Anyone planning to dive there should first request permission for diving access with the owner, Roy Ronaldson.



Above: Ice dive tender & overpage: Rope line back to safety



Cutting the ice dive entrance



Coffee fix!