Strýtan - diving iceland's hydrothermal vents

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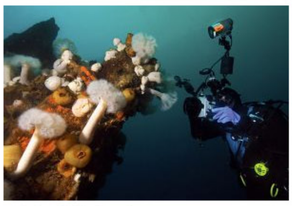
'Normally, divers in very cold water never remove their gloves – but at Strý tan, things are a bit different!' MICHAEL SALVAREZZA & CHRISTOPHER P WEAVER report from the only hydrothermal vent accessible to scuba-divers

THE WATERS OF THE Eyjafjordur Fjord were still and calm. There was a sharp crispness to the air, and snow covered the hills lining the shore. Except for the gentle lapping of water against the sides of our inflatable dive-boat, the world around us was utterly silent.
To the north, we could see heavy grey clouds hanging low to the horizon, the first signs of an approaching storm undoubtedly born in the Arctic wilderness just a few miles away.
In a few short hours, the weather would turn bad and diving would become impossible. For now, all was calm, and we were focused on preparations for an underwater adventure to an alien world.
In 1997, Erlendur Bogason and his friend Árni Halldósson discovered an amazing hydrothermal vent in the dark waters off the shores of Hjalteyri, a fishing village near the town of Akureyri in Iceland.
Strýtan, as this location has been named, is a towering chimney-like geological formation rising more than 230m from the ocean floor to nearly 15m below the surface.
Hydrothermal vents have been discovered in many parts of the world, usually along continental rift zones, but they are generally many thousands of metres deep.
Strýtan is the shallowest known vent in the world, and the only active one on which scuba-divers can actually dive.
A "white smoker", Strýtan is a set of chimneys that continually emit very hot water (75°C) at an estimated rate of 100 litres per second.
These geological features are formed by smectite, a white clay material that mixes with other crustal elements and minerals as it circulates through the oceanic crust under very high pressure and temperature.
When this material mixes with the cold ocean water after emerging from the ground, it coagulates, hardens and forms the chimney. Strýtan started forming at the end of the last Ice Age, 10,000 years ago.
Divers can explore these towering formations and will marvel at the marine life that abounds in these waters.
Our dive began with a routine back-roll into the teeth-chattering 1°C water. Instantly, our eyes adjusted to the dim light of the greenish-black water. Peering down through 15m visibility and searching for something to help us orient ourselves, we focused first on the downline.
Bogason, who operates the nearby Strýtan Divecenter, has installed a mooring buoy to ensure the protection of this delicate environment, and to help divers find their way to the site.
Descending into the fjord, our eyes opened wide as the first glimpse of the chimney came into view.
At first, Strýtan appears as a tall, narrow spire – rocky, covered with multi-coloured plumose anemones but otherwise somewhat uninteresting. Until you get close. After just a few minutes, we became aware of hazy, "out of focus" water – the tell-tale sign of hot fresh water mixing with cold salt water.
These haloclines and thermoclines were easy to spot, and were the best evidence of the rushing geothermal water flowing into the fjord. Scientists studying this phenomenon estimate that the water emerging from the cone is about 1100 years old.
Normally, divers in very cold water never remove their gloves – but at Strýtan, things are a bit different!
Divers here can carefully remove their gloves and warm their hands in the hot water flowing out from the cone, a unique method of body-warming on a coldwater dive!
In addition to geological marvels, Strýtan is home to a wide array of interesting marine life. Macro enthusiasts will spot colourful Flabellina nudibranchs, along with crustaceans, sponges, starfish and anemones.
Swirling around the chimneys are schools of cod and pollack, and sharp-eyed divers will also encounter starry rays, the curious lumpsucker and the ferocious-looking wolf-fish.
Strýtan is the first protected underwater area in Iceland, gaining this status in 2001. This unique location has received worldwide scientific attention, as well as being filmed by Bogason for National Geographic.

DESPITE ITS RUGGED APPEARANCE, this is actually a fragile environment. Careless divers who don't pay attention to proper buoyancy can quickly damage rock formations that have taken thousands of years to form, and visitors are strongly advised to be careful and respectful.
Nearby in the same waters are other dive sites well worth visiting.
Arnarnesstrýtur, sometimes referred to as Little Strýtan, is a cluster of smaller hydrothermal vent cones covering an area of 400,000sq m, with an amazing variety of marine life.
It became the second protected underwater area in Iceland in 2007.
The French Gardens is a sublimely beautiful, though rarely visited, site consisting of additional cones and vents.
Diving in northern Iceland is a unique adventure. Here, divers can experience the wonders of Earth's geological forces not only by visiting the underwater hydrothermal vents but also by diving in Nesgla, a crack or fissure in the Earth's crust formed through tectonic activity and flooded with water of unbelievable clarity.
Opportunities also exist to dive with spawning cod in early April, and to experience diving seabirds off Grimsey, a small island north of Iceland, right on the Arctic Circle.
And in the harbour near Akureyri, the wreck of the Standard lies in shallow water. A German barque, Standard was built in 1874, sunk in 1917 and discovered in 1997.
If you are an experienced coldwater diver in search of underwater geological adventures, put northern Iceland high on your list. Where else can you take a Thermos on your dive, fill it with hot, geothermal water, and make some hot chocolate with 1100-year-old water before returning to the dock?


exploring Strýtan's vents


The ferocious-looking but harmless wolf-fish


Photographing the marine life on Strýtan's chimneys


Travelling through northern Iceland


Divers prepare for their coldwater adventure


starry ray


lumpsucker


anemones


nudibranch


hermit crabs abound on the chimneys


Diving in the Nesgla fissure


sleds


Entering the Nesgla fissure


Michael Salvarezza


Christopher P Weaver

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FACTFILE

GETTING THERE Flights to Keflavik Airport. No visa is required for visits under three months. There are domestic airports in Reykjavik, Akureyri and several other towns, otherwise hire a car. Drive time from Reykjavik to Akureyri is 4-5 hours, while air travel takes 45 minutes.
DIVING DIVE.IS is a PADI 5* centre in Reykjavik, offering a variety of multi-day tours and single-day dive opportunities, along with training and equipment rental (www.dive.is).
Strýtan Divecenter in Hjalteyri, near Akureyri, is owned and operated by Erlandur Bogason, www.strytan.is
ACCOMMODATION The Skjaldarvik Guesthouse is a good place to stay when diving Strý tan, with good homemade food and comfortable rooms, say the authors, www.skjaldarvik.is
WHEN TO GO At its northernmost point, Iceland is only 30 miles south of the Arctic Circle so winters are long, generally from September to April. In deepest winter daylight is almost non-existent and in summer the days are almost 24 hours long. However, thanks to the Gulf Stream winter weather in the south can be milder than in New York or Zurich. Winter is harsher in the north, with fierce storms, wind-driven snow and low temperatures. Temperatures are lowest in the highlands.
MONEY Icelandic krona, but US dollars and euros are often accepted.
HEALTH Reykjavik has a recompression chamber.
PRICES Return flights from around £200 with SAS. From May Dive.Is offers a five-day Highlights of Iceland Dive Tour including B&B, six dives and a snorkel for 1890 euros pp. Skjaldarvik Guesthouse costs from £104 per night (two share).
FURTHER INFORMATION
www.visiticeland.com