

STRÝTAN CHIMNEY, ICELAND: 11,000 YEARS IN THE MAKING

By Kevin Martin

Iceland is in recent times getting known less so for economic meltdowns and plane grounding volcano eruptions and more so as a popular diving destination. The Silfra Crack dive site located about an hours drive from Reykjavik is surely becoming one of the best known cold water dive sites in the world. Many thousands of divers are now coming to Iceland each year to experience the 'unlimited gin-clear' visibility underwater, which the site offers. Once out of the freezing glacial waters, whilst they are thawing out, a common query from the many shivering, chattering mouths of the more experienced cold water divers I have taken into Silfra on my dive tours is "Whats next, where else can we dive here in Iceland?"

The sunlight and shadows at play in Nesgjá Crack. Photo: Kevin Martin.

Strýtan Chimney



Always on the lookout for its next meal - North Atlantic Wolffish at Strýtan. Photo: Kevin Martin.

For those divers still left wanting more after Silfra there is an answer:

STRÝTAN. Icelanders tend to be quite pragmatic when naming things and they were no different when naming Strýtan which translates as a cone or something which is tall and narrow.

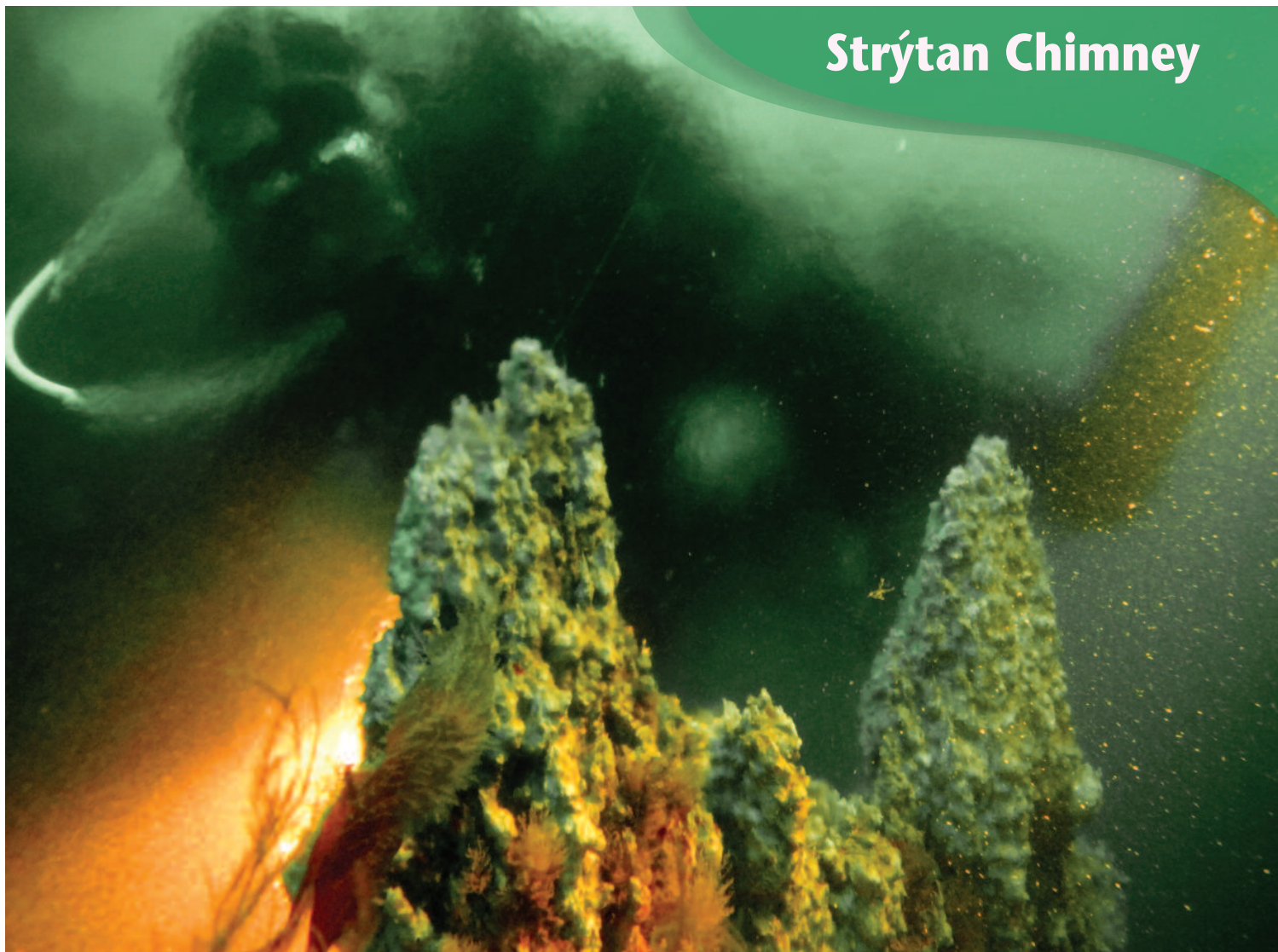
Strýtan is an enigma. It is like something straight out of an ancient Icelandic Saga or Norse legend. What makes it so special is the fact that Strýtan has the worlds only known scuba dive-able hydrothermal vents. Typically these vents are situated many thousands of meters deep and are only reachable by ROV's or submarines. There have been two main types of vents identified: Black smokers & White smokers. Strýtan is a white smoker and its form is that of a cylindrical chimney or cone.

The immediate area around the Strýtan Chimneys had been known about by local fishermen for centuries as a productive fishing grounds and often their nets would snag around the

cone. They knew something big was down there but were not sure what it was. It wasn't until 1997, that local diver Erlendur Bogason, descended down a shotline over the site and to his astonishment at 16m depth, caught sight of the pointed top of an enormous cone rising up from the depths below. What he had discovered was the top of a giant hydrothermal stalagmite of solidified magnesium-silicate; 55m tall, 10-15m in diameter ascending directly up from the 70m deep sea floor below. The hydrothermal cone is the product of over 11,000 years of natural mineral deposition. The hot water emerging from the top of the chimney contains the magnesium-silicate minerals which once in contact with the surrounding cold salt water solidify and over time extend the chimneys height. In total three chimneys have been discovered at the Strýtan site: the largest one described above is the main one which is dived and two deeper chimneys,

each about 20m and 10m tall, the tops of which are at 50m depth.

Following its discovery the site was subjected to a lot of marine biology research and was measured to be pumping out up to 100 litres/sec of 75°C fresh hot water into the surrounding sea. In fact, the water coming out of the cone was calculated to be 1,100 years old! The big chimney was measured to be growing at a rate of approximately 1m every 200 years. So presumably sometime in the year 5212AD (3,200 years from now) it will have extended up to the surface. So then, no time to lose in booking a trip over to Iceland to dive it. In 2001, the Strýtan chimneys and its surroundings was declared a protected marine area by the Icelandic State meaning that fishing around it was prohibited and that now it is clearly marked on marine charts. Thankfully recreational diving on the site is not prohibited and the site is fast becoming established as a world class diving site in its own right.



Diver swimming through halocline/thermocline at the top of the Strýtan Chimney. Photo: Kevin Martin.

Diving Strýtan

Whats required? Excellent drysuit buoyancy control, a bright torch, UW camera and a cool head underwater. There can be strong currents at the surface so being at a good fitness level is advisable. A look but don't touch policy applies to diving the site as with diving in sensitive coral reefs. Although parts of the chimney are literally 'rock solid', the new areas which are being formed are not and are extremely brittle.

Best times to dive it? Strýtan can be dived all year round subject to local weather conditions and generally has the best visibility in the winter months (Oct-April) though the trade off is that there is less marine life around. Expect 10-15m visibility in the summer and 30m+ in the winter.

I first dove the site in 2010 and even though I have been back to dive it numerous other times since, that first dive has left a lasting impact on me. I

had up until then only heard stories about a giant hot water chimney in the North of Iceland and was fascinated to get up there and see if for myself. The description below is a summary of what you can expect on the dive and how to get the best out of the experience.

Strýtan is situated in Eyjafjörður (Island Fjord), Northern Iceland just below the southern limits of the Arctic Circle at around 66° Degrees North. Iceland's second largest 'city' Akureyri with a population of 18,000 is situated at the neck of this fjord. This many people living in one area of Iceland constitutes a city as there is only 320,000 in the entire country! Akureyri is approximately 400km/5hrs drive north from the capital Reykjavik.

The chimneys location is marked on the water surface with a luminous buoy and to facilitate diving and further marine biology research on it, a thick steel shot line runs from the buoy down 70m to the seabed. At around 25m deep a line out runs from the shot

line directly over to the main chimney and for many divers it is at this point they first catch sight of the dark silhouette of the enormous cone ahead of them.

During the dive to get the best overview of the scale of Strýtan and depending on visibility conditions and diver experience its best to descent further down from 25m to around 40m and swim slightly away from the chimney looking up and hold your position for a few minutes just to take everything in.

From around 40m the diver should ascend upwards slowly circling the chimney. In places on the way up its possible to see hot water escaping through small vents/cracks and for photographers who shoot in macro-scale these vents are a hive of activity of micro marine thermophilic organisms (organisms which thrive at high temperatures) most of whom are unique in the world and are only found living around the vents here. It is also

Strýtan Chimney



Lumpsucker Fish guarding its eggs on the Little Strýtan Chimney. Photo: Kevin Martin.

very common to see large schools of cod and pollock circling the chimney. A number of large wolffish (known in Icelandic as Steinbítur or stone biter) have also made their homes here and the best advice is not to get too close to them and to keep your fingers well clear of their powerful jaws and menacing teeth. The wolffish or wolfeels as they are also sometimes called can grow to a very large size (the largest one caught measured 1.5m long and over 18kg). The ones living on the chimney are not that big thankfully but still look fearsome. They can be somewhat territorial creatures and interestingly are one of only a few fish species which mates for life. So it seems then deep down they are just big romantic softies after all!

From about 20m depth up the chimney starts to narrow and its pointed top should start coming into view. At this point again good

buoyancy control becomes essential as some divers become a little disorientated and on occasion have had inverted feet first ascents at this point along the dive. A natural reaction if/when this happens is to grab anything around to stabilize and right oneself. However, on Strýtan this is not an option as the only thing available to grab a hold of is the top of an 11,000 year old stalagmite which when still not solidified is very brittle and would simply snap off in your hands.

If buoyancy is under control a memorable experience here is to stick your face right into the venting 1,100 year old 75°C hot water and feel it warm your skin up. The visible thermocline & halo-cline at the top also makes great opportunities for some stunning underwater photographs. Many divers also pull off a glove at this point and warm their hands. Having your hands and face warmed up after a

long 45min dive in 4°C water is a welcome relief and its easy to understand why so many organisms live around the hot water vents. Even though the water is 75°C when it emerges from the chimney it will not burn your skin as the cold sea water cools it instantly down. The best way to finish the dive is to descend back down the chimney to 25m, across the connecting cable to the steel shot line and from there carry out a slow controlled ascent to the surface and fulfill any required decompression stops. After the dive on the boat ride back to the harbor its sometimes possible to be lucky enough to see whales breaching near the boat.

Diving Strýtan is a unique experience. To get so close to this amazing natural phenomenon that began to form before the end of the last Ice Age and will hopefully still be growing and 'smoking' long after we are gone is a very humbling thing. For those divers who are up for a challenge, diving this site will not be disappointing and for those interested in the natural world, diving the site is a must.

Little Strytan (Arnarnesstrytan)

The Norse gods in their infinite wisdom saw fit to make not just one dive-able hydrothermal chimney vent site in the fjord, but also created a second mini-version close-by. Little Strýtan discovered more recently, while nowhere near as impressive as its bigger brother provides for a very interesting dive experience with normally having a very large concentration of local marine life around it. In terms of exposure to depth, strong currents and overall dive difficulty this site is much less exposed than the bigger chimney site and has a maximum depth of about 25m to the seabed. As well as wolffish, cod, pollock and jellyfish (of which I have encountered some enormous examples) a number of lumpsucker fish also call the site home and lay/harvest their eggs right next to the venting hot water. Little Strýtan can also be used as a checkout dive to get buoyancy perfected for diving the bigger Strýtan.

Strýtan Chimney

Other dive sites worth checking out in Northern Iceland:

Nesgjá Crack – Located about a 1.5hr drive northeast from Akureyri, this is a very similar dive to the Silfra Crack dive but in some ways much more unique. For starters this is not a busy dive site. So chances are high when you dive it you will have the place totally to yourself unlike in Silfra. The Nesgjá crack was formed by the Mid Atlantic Ridge plate tectonic action but it is much shallower than Silfra with a max depth of 4-5m. The walls of the crack however are near vertical columns of black volcanic basalt rock which look like they have been chiseled by hand. The visibility in Nesgjá is phenomenal and the sunlight which filters through the water combined with the shadows from the walls creates a stunning atmosphere to take photos in. This is one of my favorite sites in Iceland for photography and its shallow depth means you can stay as long as you like or at least as long as you can bear the 2°C water! ■



Cluster of Frilled Anemones at 40m deep on Strýtan Chimney. Photo: Kevin Martin.

Kevin Martin is an Archaeologist & Diving Instructor/Guide based in Iceland. Originally from Cork he learned to dive with the 'salty sea-dogs' of Marlin SAC, Dublin. He is currently developing his own dive guiding company and would be delighted to hear from CFT members thinking of diving in Iceland. So if you need further information about diving there don't hesitate to get in touch with him: irisharch@gmail.com/003547734748.

Red Sea History

Why has no one in Ireland heard of Colona Divers Egypt before? They have been established as a liveaboard operator in the Red Sea since 1977 and Colona Dive Club, Sharm opened its doors in 1992! That's a lot longer than some of the "famous operators".

I'll tell you why..... Scandinavians! They know how to keep a secret! For 35 years they have been keeping Colona under wraps so they can enjoy the Red Sea diving, in comfort and all important, Scandinavian safety.

Colona's philosophy of a small friendly run operation is still true today. In the 35 years of operation we have avoided the supermarket type of diving where you are just a number on a boat, in favour of the more personal style of Dive Club. In fact the more you dive with us the cheaper it gets! But please don't ask the repeat divers from the 70's and 80's how much they pay. Some secrets will never be revealed!

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Naama Bay 1977



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