



Icecapades

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The sea ice is about 2m thick above frigid Arctic waters more than 300m deep - and we're camping on it! It's a strange sensation, knowing that there is nothing but frozen water between you and water so cold it kills in less than four minutes. This clearly had an effect on one member of our group, Martin, a Swedish photographer who had a nightmare on his first night out on the ice. 'I dreamed that my body heat was melting the ice underneath me and my sleeping bag was about to sink into the depths,' he said. 'I'm glad I woke up.'

Having left Ottawa in the throes of a sultry 28°C heat wave the previous day, our first landing was at Iqualuit, some four hours later, where a quick foray outside for a cigarette confirmed our arrival in the freezing temperatures of the high Arctic. After a couple of other stops in Nunavut, a Canadian territory home to the Inuit people, and six hours after leaving Ottawa, we landed near the village of Arctic Bay where the temperature hovered around zero amid flurries of snow in the weak spring sunshine.

Everything we needed for the next two weeks, from shelter, food and bedding, to compressors, fuel and generators, had to be taken with us. The logistics were formidable but Graham has been running expeditions here for five years and knows what he is doing. We were venturing 100 miles out into the arctic wilderness to Lancaster Sound, near the spot where Sir John Franklin and his men perished in the search for the Northwest Passage in 1847.

Our first crack at a dive site starts with the largest Stihl chainsaw in the world - a 1.2m monster. Unfortunately, the easiest ice-diving option was not to be, as after cutting three different holes near to an ice fracture beside camp, it is clear that the chainsaw is not up to the job.

We load all the gear, cameras, tanks, ropes, on to the komoteks or sleds, and head off to our next dive site option - a 'lead' 10km away. A lead is a crack in the sea ice that has opened and frozen shut, leaving an area where the ice is much thinner - thin enough that we can break through a hole to enter the water. This is a serious overhead environment and safety is at the centre of our planning. 'Everyone will be roped and dive in pairs initially, the second diver is responsible for signals to the rope tender on the surface,' says Graham, to groans from the photographers who hate both ropes and diving with a buddy. 'And if all goes well we'll see about solo diving on the ropes.'

The water is a cool -1.8°, as cold as seawater can get before freezing. 'I've never found the cold much of a problem,' says Australian photographer Kelvin Aitken, 'but then I do have a lot of natural insulation there,' pointing to his belly and laughing.

All goes well on our first under-ice exploration. The underside of the crack is intricately scalloped and corrugated by water and pockets that are home to brown algae, which are sometimes dislodged in clouds by our bubbles. The lifeblood of the whole ecosystem, the pinkish krill are easily recognizable, whizzing about like prawns on adrenaline. There are also many beautiful invertebrates, jellyfish pulsing slowly and weird pteropods, a kind of snail that swims by with two gracefully flapping 'wings'.

Later, when diving the lead close to shore, we have a chance to investigate the bottom. It is teeming with life - brittlestars number more than 50 to the square metre, and tubeworms, nudibranchs and filter feeders of all sorts carry on their business next to red and green seaweeds. Far from mirroring the relative scarcity of species in the Arctic desert above, this is an ecosystem exploding with life. Why didn't I bring a macro port for my camera? Next time, perhaps.

Our next encounter goes some way to making up for my bad packing - this is wide-angle action all the way. Having baited the water, we are on the lookout for Greenland sharks. It's an exciting prospect, but I have to admit to having private doubts about diving into the unknown with a shark capable of growing larger than a great white - an animal that has the reputation of being a slow-moving, deep-water scavenger, but ends up with fast-moving prey such as salmon, seals and even reindeer in its stomach. Anything could happen.

The excitement was palpable when the shout went out that a Greenland shark was nearby. Slipping into the water, 30m-plus visibility reveals our shark swimming lazily, its dark, mottled body stark against the blue ice. I approach the business end cautiously, keen to photograph the parasitic copepod that is found on each shark's eye. Sure enough, there it is. It is believed that the parasite blinds the shark over time, but the huge nostrils - the largest of any shark's - are its main feeding sense in the dark water.





Our visit in May is timed to coincide with the advent of the Arctic spring, when the sea ice begins to fracture as it thins and reacts to the stress of tidal movement and warming temperatures. When large sheets of ice break off, a floe edge is created, forming the boundary between ice and sea. Light can suddenly penetrate the frigid waters triggering a plankton bloom that fuels the return of the whales feeding on fish attracted by the plankton.

We've waited more than ten days for a floe edge to form, so when Tommy, our Inuit wildlife officer, powers back into camp after a recce on his snowmobile, we all want to know what he has to report, 'It's there, the ice has broken off,' he shouts with a toothy grin. This is the moment we've all been waiting for - to swim with Arctic whales.

First come the narwhal, mottled grey and white. I'm snorkelling about 20m out from the ice edge when a family group of six passes directly below me, singing to one another as they go, the males with their distinctive tusks spiraling out in front of their heads. The sight takes my breath away. The narwhals are clearly aware of the strange neoprene objects at the surface, but aren't stopping to investigate.

At last, a group of belugas approaches. Belugas have unfused cervical vertebrae and so can turn their heads to follow our every move, as they swim along below us on their backs, shadowing our every twist and turn. Known as sea canaries to early sailors, the beluga's whale song reverberates through your body so you can both hear and feel the song. Paul Jackson, an Australian acoustics nut, has brought along his hydrophones to capture their sounds, and sits on the floe edge, smiling to himself as he makes his recording. The rest of us are snorkelling at the surface or free-diving down.

The floe edge works as a whale highway as the animals use them on their northward spring migration, sending out regular patrols to search out safe new leads for the pod to follow. On a good day, hundreds of whales cruise by, including groups of up to 20 narwhals and pods of curious white beluga.

The Arctic is not the most obvious of dive destinations. But simply being there offers an incredible experience. Having a chance to meet experienced Inuit guides and benefit from their knowledge is a real plus, but being able to venture below the ice is the ultimate adventure, to feel and be part of an ocean rich with life. To see arctic whales, hear their sounds in the water, through the ice and through your body, and to connect in a way impossible to describe, is a real privilege. I'll be back as soon as I can.

Meltdown

Sights such as this polar bear, which died of starvation, could become common as the polar ice melts and the animal's seal prey becomes less accessible. It is forecast by scientists that warming will occur in the Arctic regions at twice the rate of the rest of the planet, with indigenous peoples receiving lifetime doses of ultraviolet (UV) radiation, more than 30 per cent higher than before destruction of the UV-screening ozone layer.

Extra freshwater from the Arctic melt could easily disrupt the conveyor belt of deep currents that drive the Gulf Stream and moderate northern Europe's climate, plunging us into permanent severely cold winters and raising sea levels everywhere.

Changes in temperature and ice cover could threaten polar bears and most Arctic seals with extinction, altering the way of life of the Inuit people whose culture depends on their ability to hunt.

