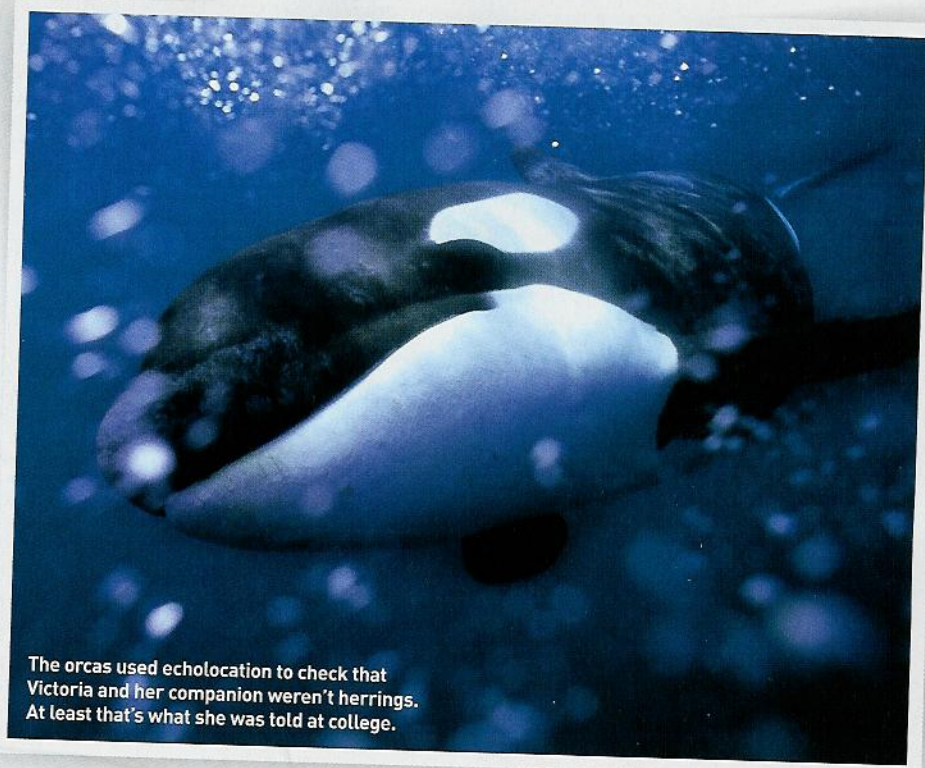


Northern delights

Despairing of seeing orcas, Victoria put the high-pitched whistles down to her dinner of jellied fish. Then she was treated to a performance that eclipsed the *Aurora borealis*.



The orcas used echolocation to check that Victoria and her companion weren't herrings. At least that's what she was told at college.



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THE SICKLY YELLOW lights of Kjøpsvik and its cement factory threw the dark granite banks of the fjord into sharp relief. It was late December 1991, and we had spent the past five weeks hauling our diving equipment, recording media and hydrophones (home-made from drainpipes, gear oil and rubber teats that resembled cows' udders) around Arctic Norway in a fruitless search for orcas.

My mood had not been improved by comments like "you should have been here yesterday – there were millions of them" from amused locals, nor by the predictable team-member tensions, nor by my digestive system, which was seriously unhappy after an evening meal of *lutfisk* (jellied, alkaline boiled fish).

I went for a walk. It was numbingly cold, so I dug a hole in the snow and lay down, brooding. A dull, nebulous glow appeared in the blackness above, temporarily obscuring the

stars. The gleam started pulsing and spat out a green, sinuous light that slowly meandered across the sky, hissing as it swept back and forth. Momentarily wondering if the sound was down to the *lutfisk*, I was comforted when my friend joined me and agreed that he, too, could hear the *Aurora borealis*.

Soon, green was superseded by red, orange and blue, all weaving serpents in the sky, while the background changed to an incandescent,

Their tall fins glinted as they sliced through the haze, and we slid into the icy water to face them, like hypnotised prey.

green rippled curtain, shot through with rainbows. It was like spilled oil on calm water. We were riveted. "I need to go diving," I said.

We drove a few miles to Kikvika, a small promontory where the fjord walls dropped off vertically to depths of more than 900 metres. We wriggled into our drysuits, still cold and damp after that day's dive, and were just

zipping each other up when I realised I'd left my torch in the car, back up the hill.

My diving buddy kindly went to retrieve it. The Northern Lights were now obscured by clouds, so I sat down with my legs dangling over the fjord's ledge and gently swirled the inky black water to stimulate the large, circular blobs of bioluminescent plankton. Suddenly, I could hear faint, high-pitched whistles emanating from beneath me.

I thought it might be another *lutfisk* moment, but then my partner yelled "They're here!"

A MAGICAL, WHEEZY 'pah' was followed by a chorus of 'pahs' echoing off the fjord walls. The clouds cleared, revealing the misty breaths of at least 50 orcas just 20 metres away. Their tall dorsal fins glinted as they sliced through the haze, and we slid into the icy water to face them, like hypnotised prey.

Things were equally spectacular under water. At 25 metres, we could see ledges in the wall strewn with apparently lifeless herrings – possibly stunned by the orcas' flukes – on which these giants were feeding. My ears were assaulted by whistles and clicks, but turning to face the open ocean, I could see nothing except the occasional burst of bioluminescence. Then, my buddy thrust his face into the glare of my torchlight, his expression one of thrill rather than panic, as he brought his fist repeatedly to his chest. My confusion evaporated as I felt a curious vibration and clicking in my sternum. Adrenaline surged: an orca was investigating me using its sonar – I was being x-rayed with sound!

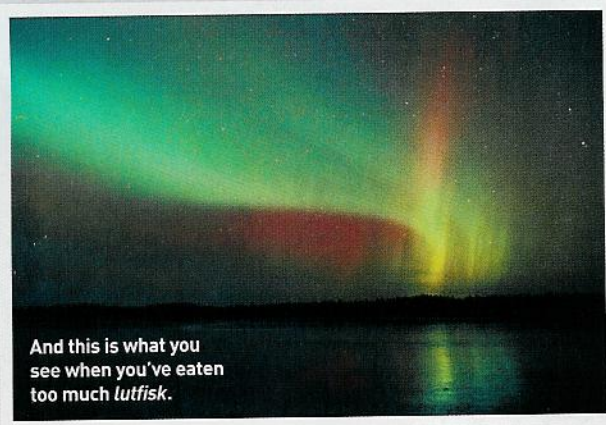
Orcas are intelligent animals with exceptional echolocation, so we knew that there was no danger of us being mistaken for tasty herrings. Or should I say that, as young marine biologists, our knowledge of these mammals helped to reinforce the belief that we were safe. Did I really think that? Don't try this at home...

We surfaced some 50 minutes later. The orcas had moved on and the night was once again silent and overcast. The New Year's magic was over, and we did not find it again that trip. It was a once-in-a-lifetime experience.

Years later we discovered that the hissing we had heard was, in fact, the *aurora* eliciting plasma discharges in pine needles. Nevertheless, I'm still off the *lutfisk*.

Jorma Lutha/naturepi.com

Hiroa Minakuchi/SeaPics.com



And this is what you see when you've eaten too much *lutfisk*.