

GREENLAND

SHARKS

by GRAHAM DICKSON

BASE CAMP BUZZED WITH EXCITEMENT AS DIVERS RUSHED TO GEAR UP. MOMENTS BEFORE, A LAZY MORNING HAD BEEN SUDDENLY INTERRUPTED BY ANDREW, ONE OF OUR INUIT GUIDES, WHO POKED HIS HEAD INTO OUR TENT AND EXCLAIMED "BIG FISH!". THOSE WORDS WERE ALL IT TOOK FOR US TO JUMP OUT OF BED AND SCRAMBLE INTO THE BLINDINGLY BRIGHT SUNSHINE OUTSIDE.

We all knew exactly what it meant and with eager anticipation I peered through a crack in the ice only twenty yards from our base camp. Sure enough, below the two feet thick ice, a large tail flicked slowly from side to side. It was hard to believe only metres from our camp swam one of the most elusive of all sharks.

Our adventures had started over ten days before as we flew north from Ottawa. Our Boeing 727 covered over 2000 miles (3000 km) in six hours finally leaving us in a small mining town where we traveled another 100 miles (160 km) past towering cliffs along the northwestern coast of Baffin Island. We set up base camp on sea

ice less than a thousand miles (1600 km) from the North Pole. Our camp positioned us right in the middle of one of the most ecologically alive areas of the arctic. Swimming with the white beluga whales, the legendary 'unicorn' tusked narwhals and the 90-ton bowheads were just some of the memorable moments we'd experienced in this arctic wonderland. Previous encounters with walrus by the thousands and polar bears on many occasions left the Greenland shark as the final large arctic marine animal to photograph.

The Greenland shark is the largest of all deepwater fish, the largest fish to inhabit the arctic and one of the world's largest

sharks. Greenland sharks commonly reach anywhere from eight to fourteen feet in length. The largest ever measured was twenty-one feet putting it fourth in line behind the whale shark, basking shark, and the great white. It is the only shark to live year-round in the cold waters of the arctic and because of the remote habitat, the Greenland shark remains for the most part unknown and unstudied. Nick Caloyianis took the first underwater photographs of the shark, which were published in National Geographic in 1998. Adam Ravetch, one of the most experienced arctic filmmakers, accompanied Nick and has subsequently filmed the Greenland shark on other occasions. With a little insight from Adam

and the experience of our Inuit guides, our group of recreational divers and photographers would be the first sport divers to swim with the 'greenie'.

In the Arctic Ocean, the thick sea ice thins slightly from the increasing spring temperatures and stress from wave action forms cracks called leads. Leads eventually connect to free enormous floes of ice that drift off into the open ocean. Our base camp was located on the sea ice directly behind the second major lead from the floe edge where the open Arctic Ocean begins. As each enormous piece of ice must break off in sequence to free the one behind, we would have to move camp farther back

if the floes in front of us drifted away. It was precisely this crack in the sea ice, running right along our camp, where the Greenland Shark now swam.

Our small group of eager divers from England, Australia and Japan gathered for a pre-dive briefing unlike any they had heard before. We were getting ready for an ice dive with a shark that is rarely seen and has only been dove with a few times. Also known as the sleeper shark, this giant of sharks is apparently lethargic and slow moving. It is a mystery, however, how it has eaten seals, sea lions and even reindeer given its apparent sluggish and inoffensive nature. Perhaps it scavenged dead ones off the sea floor or maybe the sharks lumbering movements disguise its ability to strike quickly and suddenly, in short bursts of movement. Unconfirmed reports of sharks grabbing caribou drinking from the shore and pulling down swimming caribou raise uncertainty about the Greenland shark's true nature and a recent discovery documentary entitled "Catching a Killer" theorizes that the Greenland shark has mutilated hundreds of grey seals whose bodies wash up on the shores of a small island in the North Atlantic. The Inuit do not fear the shark and consider it a pesky scavenger and a nuisance rather than a danger and the few known encounters with divers support this view.

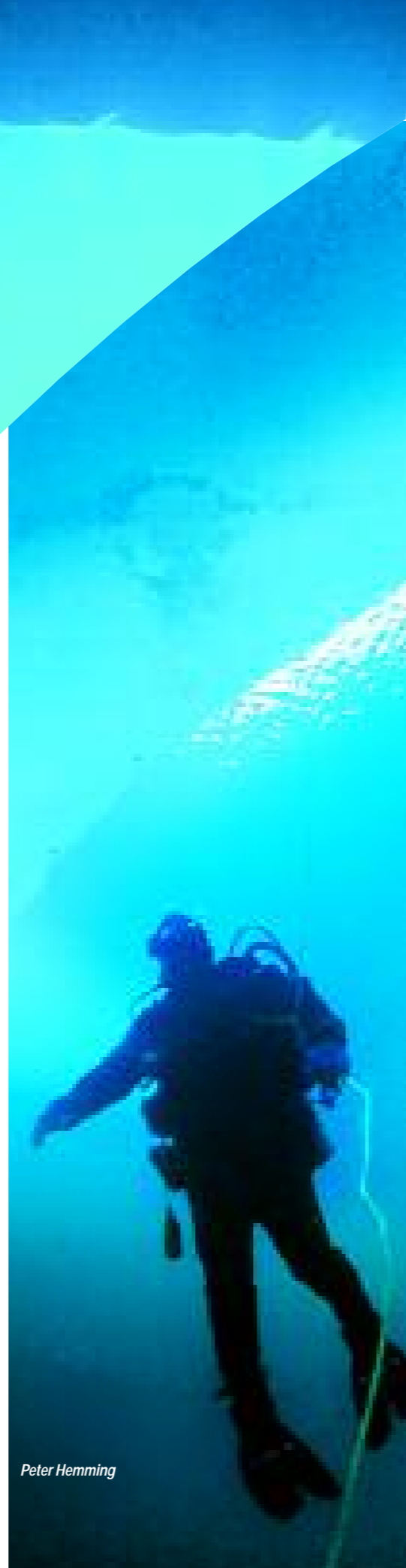
To be one of the very few to ever see this shark much less dive with it was an opportunity nobody on the expedition had expected but everybody was eager

to experience. We had collected scraps of seal meat from carcasses that an Inuit hunting party had left behind at the start of the expedition and lowered them over a thousand feet beneath the ice so the scent could be carried by the deep oceanic currents in the hope it would attract this mysterious shark. The Greenland shark is a scavenger and is attracted in large numbers by the smell of blood around whaling stations, whale kills and ice floes with skinned seal carcasses. Day after day on our way to the floe edge to swim with whales, we would retrieve the thousand feet of line that suspended the carrion by walking back along the ice while pulling up the cord. No reel is large enough to hold the length of line that we needed and the simplest solution is often the most effective. A few times we found the meat had vanished and the metal leaders used to tie it on were bitten straight through! Reinforcing the leaders each time we would try again hoping to keep the bait in tact so that we could raise it to lure the shark to the surface. It was on day ten of our two-week expedition that our persistence finally paid off.

Leads open and close slowly with the rising and falling of the tide. To our chagrin, the morning the shark arrived the lead was slowly closing limiting our window of opportunity to access the sea below. As I sat on the edge of the crack staring down towards this creature cruising the crystal clear water, I couldn't help but marvel at the arctic ecosystem, which contains so much extraordinary life that we know so little about. Planting my hands on the ice for



a seated entry, I rotated around and into the water. The shark remained docile and apparently indifferent to my presence. As I released the air from my drysuit and started to sink towards this unknown creature waiting below the ice, I couldn't help but consider the apparent absurdity of our actions. Many people who don't scuba dive consider any kind of diving to be claustrophobic and the completely unfounded paranoia of sharks feeds upon this fear of the unknown. Cold water diving discourages many an active tropical diver who have never experienced the ease and warmth that drysuit diving provides. Diving below the ice takes cold water diving to the extreme and introduces an overhead environment that could be claustrophobic to many. And here we were, thousands of miles from the nearest city, deep within the arctic circle, descending through the arctic ice into bottomless water thousands of feet deep to see a species of shark that is virtually unknown. I was completely in my element and alive in every sense of the word! I have never been afraid of sharks and have admired and swam with many different species all over the globe. To swim beneath the ice with the Greenland shark, however, was different from all the previous encounters. It stirred my emotions in a way not possible with the well-established encounters in other



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parts of the world. Encounters in such a spectacular environment as a glowing lead cutting through the ice fed the sense of adventure, exploration, and awe that is, perhaps, the very essence of diving.

The shark barely seemed to notice my presence. Not moving away from me defensively or towards me aggressively. As with other animal encounters, as the time continued, my comfort level with the animal's behavior increased and I ventured closer. The crystal clear water offered hundreds of feet of visibility and the bright arctic sun shone through the 1.5 metre crack wonderfully illuminating the shark. Further behind us stacks of piled-up, tightly compressed broken up ice thrust down sixty feet below the waterline providing a breathtaking backdrop, although the lighting was better for photographing upwards from below the shark. As others within our group descended to see the shark, a few free flows may have indicated an increased breathing rate as we swam with the arctic's largest cold-blooded animal. The shark's indifference and sluggishness was an enormous contrast against the speedy and playful encounters with belugas and narwhals and made me wonder if the subfreezing 31°F cold water slows the shark's metabolism down so much that the hypothetical aggressive behavior is only in warmer waters.

Kayaking on a calm day is a great way to get a perspective from farther away (so far we have not brought motor boats to Arctic Bay as all of the wildlife is right around the floe edge).

This page top: Also known as the sleeper shark, the Greenland shark appears lethargic and slow moving. It is a mystery how it has eaten seals, sea lions and even reindeer given its apparent sluggish nature. A mystery that must sit prominently at the back of any diver's mind fortunate enough to see one!

Leads are cracks in the ice used to enter the sea. Leads open and close with the tides and so their expansion or contraction is both gradual and predictable. Diving through leads requires a constant eye on the crack to make sure divers exit before it becomes too narrow!



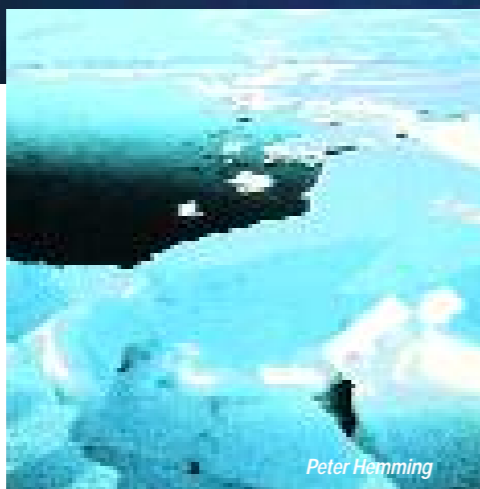
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As the crack continued to close above us, we had to cut the dive short to ensure it didn't get too narrow to exit. It had been a remarkable experience to be one of so few people to see this deepwater arctic shark. On a personal level, having led successful arctic sport diving expeditions starting in 1999 to focus on and photograph all of the large arctic marine animals, the Greenland shark was especially significant. Arctic Kingdom Expeditions had now achieved extended sport diving encounters with all of the big animals of the Arctic Ocean. The expedition itself was also very special for we saw every type of animal from the playful belugas and narwhals to the school bus sized bowheads to a few polar bears, walrus and last but definitely the most unique – the elusive Greenland shark. Now whenever the topic of shark diving arises, the first image to jump to mind is that of the Greenland shark cruising below the arctic ice.



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Just as a beach divides land from sea, the floe edge is the boundary between ice and sea. Beyond the edge lies the open Arctic Ocean while behind the floe edge solid sea ice extends all the way back to land. The floe edge may sit over tens or thousands of feet of water and can range from a few inches thick to a small wall dropping over twenty feet. The brilliant sunlight and difference in refraction through the ice clearly differentiates open water from the ice cap

Author Biography

Graham Dickson is the Chief Expedition Leader for Arctic Kingdom Marine Expeditions, the world's only arctic animals specialist which has led successful diving expeditions for all the Arctic's marine animals. A PADI Master Instructor, he's been diving for over a decade. He successfully led the first sportdiving expedition to Nunavut to dive with walrus in 1999 and has since led expeditions for bowhead whales, narwhals, belugas, polar bear and the Greenland shark. Graham is an avid and active diver and, prior to starting Arctic Kingdom in 1999, led expeditions all over the world - shark diving in the Bahamas and Australia, American east coast shipwreck dives, and cave diving in Florida and Mexico. Graham founded the University of Pennsylvania Scuba Club in 1994, which grew to more than 300 divers in three years and has worked with stores in Philadelphia, New York City, Toronto and Ottawa. He teaches many specialties including photography, wreck, drysuit, enriched air (Nitrox), deep and ice diving and is trained in cave diving through the National Speological Society (NSS-CDS) and underwater archaeology through the Nautical Archaeological Society (NAS). Graham is a Medic First Aid/CPR Instructor and teaches Rescue Diving and DAN Oxygen Administration. He also authored the scuba section in the popular *The Worst Case Scenario Survival Guide*. Graham is Canadian and shares his time between Ottawa & Toronto. He speaks English, and basic French, Spanish and Italian and holds a Bachelor of Applied Science in Mechanical Engineering and Economics from the University of Pennsylvania.