

“Antarctica is a window to what’s happening on the planet”

A HUGE UNDERTAKING

It takes nerves of steel to hang over freezing waters and tag an animal the size of a bus. In Antarctica, marine biologist Dr Ari Friedlaender is using technology to understand the climate crisis.

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Marine mammal researcher
Dr Ari Friedlaender.

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In Antarctic waters, researchers tag a humpback whale.

SILENCE. HOLD BREATH. STEADY POLE. DRIFT. CLOSE. CLOSER. Focus. Lower pole. Slow. Slower. Aim. Touch. Connect. Release. Breathe. Fists pump into the adrenaline-charged air as the humpback slips through the inky water, oblivious to the small device attached to its skin ready to film its every move.

An expedition to Antarctica is already an otherworldly experience. To be alongside one of the world’s leading marine mammal scientists, Dr Ari Friedlaender from the University of California (Santa Cruz), watching him and his team tag whales, is awe-inspiring.

We’re travelling on the RCGS *Resolute*, a 146-passenger vessel operated by One Ocean Expeditions (OOE), a small Canadian-owned company committed to supporting scientific research. “By collaborating with OOE, we’re not just able to gather more data,” Ari says. “Sharing our findings with guests is a powerful way to [help them] understand the changing climate.”

A natural conversationalist, Ari is generous with his time. Through presentations, casual chats, interviews and hours crouched in a Zodiac observing, I gain an insight into the importance of his cutting-edge research.

“Antarctica is a window to what’s happening on the planet,” he says. “Here the temperature is five per cent warmer than it was 50 years ago, the number of days when sea ice covers the continent has decreased by 80 and 87 per cent of the glaciers are receding.”

From a young age whales were Ari’s destiny. Growing up in Connecticut, he was immersed in the stories and traditions of the local whaling station. “I could feel there was a deep-rooted cultural connection between whales and humans, albeit it was basically an economic one for several hundred years.” However, it was a school whale-watching trip that inspired him to study marine mammals. “When I first saw a whale up close, I remember being moved by its size and the way it glided through the water.”

During studies at Duke University, he specialised in the physiology of marine mammals, gaining his PhD in ecology in 2006. “The more I studied the more fascinated I became – whales do most things that land mammals do but underwater.” The defining moment in his career was when he took a volunteer position in Antarctica to study these huge

creatures. “Antarctica is like nowhere I could ever have imagined,” he says. “As soon as I arrived, I knew I wanted to work down here as much as possible.” A four-year position with the Australian Antarctic Division followed, enabling Ari to travel between Hobart, Antarctica and the US consolidating his future as a marine mammal researcher.

“By happenstance, those early days in my career were concurrent with the first suction cup-style tags being developed,” he explains. “I didn’t think we’d ever be able to get close enough to put a tag on a whale. However, after a few attempts I started to figure out that if we could understand the behaviour of whales we would have a better idea how to approach them.”

Since those early days, Ari has tagged more than a thousand whales including around 500 humpbacks and 200 blue whales – he was also the first person to tag a minke whale. He’s extremely proud that his research was used as evidence by the Australian Government during the International Whaling Commission’s hearing to stop whaling in the Southern Ocean: “Tagging proves scientific research on whales can be conducted using non-lethal methods.”

Working in collaboration with Australian company CATS (Customised Animal Tracking Solutions), the suction cup tags Ari uses are designed to slide off the animal after 24 hours and be retrieved using GPS. In addition to the tags, Ari’s team also deploys drones to measure the size of whales and uses darts to collect skin and blubber samples.

“We’re trying to create a baseline so we can see what happens when conditions change,” he says. “With less sea ice along the Antarctic Peninsula, humpbacks are staying longer to feed before migrating north. For minke whales it’s the opposite – they need sea ice to thrive. Central to all baleen whales’ diet is krill, which also relies on sea ice. Eventually, if the krill is depleted, there’s not going to be enough food to support these animals.”

In my last conversation with Ari, I ask him what he sees when he looks into the eye of a whale. “I know something is looking back that has a high level of intelligence, is curious and aware. They allow us to get close and sometimes it almost feels like they know we’re trying to understand them so we can change what’s happening to our planet.” ☼