

OCEAN STORYTELLING
WRITING GRANT
2022
F I N A L I S T S

Finalist – Madison Churchill

‘Caves are like museums of natural history. I have always been drawn to them as a source of mystery. I swim through the veins of Mother Earth, exploring the shadowy recesses inside planet Earth.’

Jill Heinerth is one of the world’s most accomplished cave divers. She was the first person to ever dive inside an iceberg cave. She has pioneered 3D mapping technologies that allow us to see imagery from the inside of the earth. As a groundbreaker in rebreather technology, her dive surveys have helped the world see and understand the most remote spaces of our planet. From the inside of caves out to the public, her photography, mapping, writing and speaking have allowed her to spread her conservation messages far and wide.

‘The dark portals of caves repel most people. Imagine yourself squirming through a coffin-like corridor, relying on technology to provide your next sustaining breath, and you have my workplace,’ Heinerth said. With rebreather technology, she is able to stay underwater for hours. This has allowed her to explore thousands of kilometres of cave networks around the globe. She has seen the planet in a way no other has. However, this groundbreaking work does not come without risk.

Within the dark recesses of her office, life hangs in a finite balance between fear and discovery. A bad decision at work will cost her life and add to the long list of cave divers who have perished in the blackness. Cave diving has brought Heinerth to remote corners of the earth in search of ecosystems never seen by the human eye. In her book *Into the Planet*, she tells of her diving journey, and how it brought her to the world’s most vulnerable ecosystems – the insides of glaciers.

Heinerth was part of the first expedition inside Antarctica’s B15 iceberg. Diving inside glacial ice has allowed her to witness climate change on a level no other had before her. She has experienced the ice melting around her from within. From this secluded pocket of the earth, she brings an important conservation message.

‘Our cryosphere is sick,’ Heinerth said. ‘Each time I photograph an iceberg I feel like it is an endangered species, but it is the base of the Arctic food chain and it is disappearing fast.’ She uses her photos from the darkness to bring these issues to light. She mesmerises people with her incredible shots, and uses that curiosity to spread a strong environmental message. Her work inside underwater caves has offered scientists a window into climate change. She has found animals and species, never before documented, that give us an idea of the conditions which fostered the first life on earth. Caves have a way of preserving history, helping us to understand the evolution of our planet.

Returning to the same polar ecosystems year after year, the ice gets visibly thinner. There is less wildlife than there used to be. The icy season gets measurably shorter. Thinner ice brings higher risk when diving inside glaciers, but she keeps returning to

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document. She says ice-diving allows her to see the greatest and most rapid ecological changes, in the areas where humans have the least access.

‘Diving inside an iceberg is like going to another planet – remote and inhospitable but alluring. The multi-hued ice displays every colour of blue and white imaginable,’ Heinerth describes. ‘We descend through a crevasse, hearing cracks and groans and in some cases, the iceberg is grounded on the seafloor. Some icebergs hop along the seafloor like giant piledrivers sending up massive clouds of silt and kelp as well as ice shards with each passing wave. The larger bergs are affixed to the floor but are fizzy, melting and cracking as we go inside.’

Through her work, Heinerth shows us we are all connected. Every human, every drop of water. She has travelled through freshwater caves that cycle into the water we use and drink every day. She is a firsthand witness to threats to our very survival.

‘Inside caverns measureless to comprehension, I swim back in time, through your drinking water, revealing all that we have wrought upon our land. Seeping through the sponge-like earth, everything we do is eventually returned to us to drink. Our water planet is not just lakes and oceans, it is the very matrix that knits us together. The essence of life.’

She speaks to freshwater pollution she’s witnessed firsthand in some of these caves. Agricultural runoff, pesticides, and other chemicals can be seen even in the most remote pockets of the earth. She follows these chemicals on their journey through freshwater systems and waterways, and uses this information to advocate for better water quality regulations. By protecting the ocean, we save ourselves.

In her book she talks about exploratory dives under the earth’s surface, tracked by 3D GPS mapping. The tracker follows her under box stores, parking lots, homes and towns. Communities are completely unaware of the intricate cave systems beneath their feet. Sometimes journeying five or more hours into the core of the earth through tubes and tunnels barely big enough to squeeze through. Recently, she has helped develop AI technology and robotics to allow scientists to explore even more intricate cave systems that are too small or dangerous for humans.

Jill often refers to cave diving as swimming through the planet’s veins. They are the circulatory system that carry fresh water around the world, much like our veins and arteries carry blood throughout. Jill is using her work to take part in clean water initiatives to help improve the health of our waterways.

For decades, Heinerth has been the eyes for scientists, climatologists, archaeologists and engineers. She has led thousands of exploratory dives. This unique view of the world has empowered her to protect these spaces and advocate for the world’s oceans.