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AS THE WORLD MELTS, AN ARTIST FINDS BEAUTY IN ANCIENT ICE

By Carolyn Kormann February 9, 2018



Peggy Weil's "88 Cores," a video installation now on view in downtown Manhattan, takes viewers deep into Greenland's ice sheet—and tens of thousands of years back in time.

Photograph by Lisa Goulet / Courtesy the Climate Museum

In the early nineteen-fifties, the United States government embarked on a top-secret endeavor to build a network of nuclear-missile launch stations beneath Greenland's ice sheet. The initiative, known as Project Iceworm, faced a long list of challenges, chief among them a lack of essential knowledge about the deep structure of glaciers. At the time, sophisticated techniques for efficiently tunnelling through the cryosphere—the frozen parts of Earth's surface—did not exist. A team of scientists and engineers set about tackling the problem, removing long cylinders of ice, known as ice cores, from

the sheet for study. The cores, they found, were made up of layers, each one formed in a single winter, rather like the concentric rings of a tree. Trapped within the layers were bubbles of gas, such as carbon dioxide and methane.

Eventually, researchers realized that these pockets of ancient air offered a chronological record of atmospheric conditions stretching back hundreds of thousands of years. Though Project Iceworm was eventually scuttled, the funding it had provided made American scientists some of the world's earliest experts at boring holes in polar glaciers. As the historian D. Graham Burnett observed, in an article for *Cabinet* magazine, in 2015, ice-core science “nursed at the warm and flowing teat of the Cold War military-industrial complex.” The U.S. government's collection of columnar frozen water, gathered over the past six decades, is now stored at the National Ice Core Laboratory, near Denver. It is the biggest such repository in the world.

When the artist Peggy Weil first learned about the National Ice Core Laboratory, a few years ago, she was captivated. She contacted Geoffrey Hargreaves, the lab's curator, and soon found herself inside a giant freezer, bundled in an Arctic-ready parka. (The temperature was minus thirty-eight degrees Fahrenheit.) With the help of lab assistants, she loaded up a cart with cannisters made of thick cardboard, each containing a small segment of a two-mile-long core from the Greenland ice sheet. Weil trundled her specimens to a cylindrical scanner and photographed them in high resolution. Eventually, she strung together eighty-eight scans, top to bottom. Then she animated them and added an accompanying score, creating a four-and-a-half-hour video, designed to be projected onto a wall.

“What if the redwood trees only existed in cannisters?” Weil asked me recently. She was sitting in the Arnold and Sheila Aronson Galleries, at the Parsons School of Design, in downtown Manhattan. “Wouldn't you want to see them all just once?” She hopped to her feet. “I just wanted to put them back together again.” Weil, who lives in California, had recently come to New York for the world première of “88 Cores,” which was playing on a wall in front of us. Watching the video felt like being inside an elevator going down a narrow, icy borehole in slow motion. Each core segment was different, depending on when it was scanned (and the technology used) and how it was stored. Some had a ghostly blue-gray cast; others were almost sea-green. Weil pointed out a

thick, dark band in the segment scrolling by. “That’s a layer of volcanic ash,” she said. “From fifty thousand years ago.”

When Weil first conceived of the project, she planned to make a video that showed all of the core’s more than three thousand segments. It would have lasted seven days. Instead, she decided to pick a series of representative segments, starting at the top of the core, with the youngest ice, and ending at the bottom, more than three thousand metres down. The teams of scientists who drilled the core, from 1988 to 1993, painstakingly counted the layers as they hauled the segments up. The deepest ice, their tally showed, froze a hundred and ten thousand years ago.

Weil’s video installation is the highlight of “In Human Time,” the first exhibition to be mounted by the New York Climate Museum. Conceived by the former social-justice lawyer Miranda Massie, the museum has yet to establish a permanent, physical home. Since 2014, Massie and her colleagues have been laying the groundwork—forming an advisory board that includes scientists, curators, activists, and financiers; obtaining a charter from the state; surveying the public; hosting panels; and, inevitably, fundraising. “In Human Time” will be on view through February 11th, and Massie is already planning more events, which will take place in loaned, shared, and public spaces.

“It’s a huge honor to be part of this,” Weil said, back in the gallery. She was squinting slightly at the video, which she was playing in the space for the first time. Though there were shades over the windows, noonday sunlight was flooding the room, reducing the projection’s contrast with the white wall. “It’s so bright,” Weil said, somewhat dismayed. The music—a looping, hypnotic progression of droning glissando scales, commissioned from a sound artist named Celia Hollander, who happens to be Weil’s daughter—was not yet hooked up to the audio system, so it played quietly from a small speaker on the floor, lending a pleasant sense of doom to the proceedings. “The importance of a climate museum is huge,” Weil went on. “I’m interested in indicators. Like, how do we know what we know?” She paused. “I think designers and artists have a role to play in this larger story. Climate change occurs at the extremes of scale. Designing something that shows when things have gone too far, or veered from the norm, might be helpful.”

At the show’s opening, among the hundreds in attendance was a scientist named Christopher Shuman, who, in 1992, was part of a team that drilled one stretch of the core now pictured on the wall—from fifteen hundred metres down to twenty-two

hundred metres, or nine thousand years ago to forty-two thousand years ago. Shuman lingered in front of a display containing a skinny notebook, open to a page that was marked at steady intervals with lines and numbers. “This is the first time I’ve looked at these in twenty-five years,” he told me. It was his notebook—his method for counting each layer of core as it was excavated. Weil had obtained it from another scientist; Shuman had had no idea that it would be part of the show.

Ice cores are now almost universally considered to be among the best evidence of climate change. But their existence, and the lengths to which scientists must go to retrieve them from the world’s highest altitudes and latitudes, before they melt, is little known. “88 Cores” unburies these ghostly hieroglyphs, offering up their precarious beauty, reminding us that time is running out to decipher their meaning.



Carolyn Kormann is a member of The New Yorker’s editorial staff. [Read more »](#)

Video

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