



BOOKS *et al.*

*At the Edge of Invisibility* documents the vanishing ecosystems of the Arctic.

EXHIBITION

## Deep exposures

Repurposing scientific materials into works of art, an artist confronts the Anthropocene

By Deborah Dixon

**C**rySTALLINE, a new exhibition showcasing the work of Irish artist Siobhán McDonald at the Centre Culturel Irlandais in Paris, France, brings together works created from relics of past scientific ventures to the frozen north and materials developed for an upcoming exploration of the Sun. The items are recomposed into artistic pieces that convey a melancholic contemplation of human striving and its consequences and the haunting histories that science both creates and records.

The exhibition is named after a keystone piece, *Crystalline* (2016), composed of foam substrates coated with a pigment that contains carbon and charred bone developed by a company named Enbio for the European Space Agency (ESA). Inspired by the materials used by cave painters, Enbio's "SolarWhite" will bond with the titanium heat shield of ESA's Solar Orbiter, to be launched in October 2018. In *Crystalline*, the cracks and bubbles of the white tiles reference both the ice that thwarted Sir John Franklin's doomed search for a Northwest Passage and the melting glaciers of the Anthropocene.

The themes that animate *Crystalline*—the deep history of materials and their changing

states and the fragility of bodies and landforms exposed to the elements—continue through the exhibition. Deceptively simple in form, *Cyathaea australis* (2016) consists of four photogenic drawings that narrate the changing state of the Earth's atmosphere. To create them, McDonald applied fossil leaves collected by the Programme for Experimental Atmospheres and Climate at University College

Dublin to silver nitrate-infused paper, rescued from a photographer's studio in the abandoned Soviet town of Pyramiden, and exposed the paper to sunlight. In each of the drawings, the light and the atmospheric carbon dioxide content were modified to recreate the conditions of the Tri-

assic, Cretaceous, and Devonian periods, as well as the Anthropocene epoch.

The contemplation of an earthly archive is reiterated in other works such as *Appearance of that which cannot be seen* (2016), which consists of a small glass vessel containing a recreated 400-million-year-old atmosphere, and the pressed plants of *A space and time outside (I)* (2016), brought back from the 1825 to 1927 Franklin expedition to the Polar Sea. *Silent Witnessing* (2016) is made from the melanin traces left by the bodies of nymphaline butterflies pinned to cardboard and outlined by dust particles. *Solar Skin* (2016) combines seismograph markings on smoked paper overlaid by a very fine skein of woven basalt, on top of which lies a calfskin, pores visible and open to the world. Each of these materials harkens back to the deep time of

volcanicity, from the crystallization of rock to the aerosols released into the atmosphere.

Anthropogenic climate change emerges more explicitly in *The seas are warming up 1 and 2* (2016). Here, two thin aluminum blocks from Enbio have been partially dipped in a salt medium; as the water evaporates, a "tide line" gradually emerges.

Next to these materials is a circle of light in which a looped film [*At the Edge of Invisibility* (2015)] plays a record of McDonald's travels to the Arctic Circle. Repeated images of a tall ship floating in front of a glacial mass—a ghostly reminder of Franklin's wrecked flagship, HMS Erebus—are interspersed with close-ups of cracking ice. The sound of grinding and gentle howls circle round the exhibition space.

The black of the tall ship against the bone whiteness of the ice is a hauntingly beautiful image, one of several dispersed throughout the exhibition. Small-scale paintings portray a series of scenes made hazy by snow [such as *White Out* (2015), oil on paper] or the spindly fingers of trees [*The farthest North* (2016), oil on board] or lit by the pinpricks of burning meteors [*Meteorite hits Savissivik* (2016), oil on board]. Figures, if they appear, are hunched against the cold. Together, these images give a sense of lost directions amidst landscapes made strange.

Avoiding the apocalyptic imagery and the nostalgic romanticism that frame much of the creative response to the Anthropocene, *Crystalline* is a delicate, considered collection that both mourns and reanimates science's relic objects and techniques. It brings to the foreground the materials through which science knows and records the world, as well as the materials through which science constructs the world anew, and asks us to question the impetus and consequences of an often technologically driven endeavor that strives to make sense of our changing world and the cosmos within which it travels.

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The reviewer is at the School of Geographical and Earth Sciences, University of Glasgow East Quadrangle, University Avenue, Glasgow G12 8QQ Scotland. Email: Deborah.Dixon@Glasgow.ac.uk

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