CONCLUSION

MATTERS OF LIFE AND DEATH

> Over the eons of time the sea has grown ever more bitter with the salt of the continents.
> — RACHEL CARSON, *The Sea around Us* (1951)

In September 2018 I was scheduled to join an Arctic expedition sailing through the Northwest Passage. The warm open polar sea of nineteenth-century speculation has become a reality: once unattainable, the Passage has been transformed by anthropogenic climate change into ice-free open water in many recent summers. Northwest Passage Project expedition members included STEM students, scientists, and a documentary film crew; I signed on to be the ship's "Arctic humanities scholar" during the venture's second leg as we explored the effects of climate change on the Far North and the Northwest Passage with the support of the National Science Foundation and a collection of university and museum partners. In preparation for the Arctic expedition, I recorded a webinar on ice in the Western imagination and closely followed the science team's extensive preliminary work surveying contemporary student and public knowledge on climate change and the Arctic regions.

On the morning of the second day of the expedition, the ship—the Finnish-built *Akademik Ioffe*, an ice-strengthened cruise ship sailing under a Russian flag and crew—ran aground in the Canadian Arctic archipelago.

After a tense day, all passengers and staff on the listing, compromised vessel were safely rescued, cruising cancelled for the season.[1] While the cause of the ship's accident has not been determined as of this writing, less than 10 percent of the North American Arctic is sufficiently charted, even after half a millennium of exploratory voyages to the region by Europeans and North Americans. There is more than one way for a ship to run aground; this was to be the Northwest Passage Project's second attempt at Arctic transit, in fact. The voyage was first scheduled to occur in summer 2017, but two months before it launched the contracted tall ship unexpectedly pulled out of the project, and the expedition was postponed a year.[2] As my disappointment in not heading north in 2017 or 2018 began to ease (I live in hope for 2019!), it struck me that the grounded Arctic expedition was another polar cautionary tale: here we were spending years marshalling resources, recruiting patrons, and laying the scientific and scholarly groundwork, but were thwarted—like centuries of explorers before us—by the capriciousness of polar conditions.

Accounting for the persistent insufficiencies of Western methods has historically been one way to gauge the climatic and geographical extremity of the Arctic. Consider the lament made by an open polar sea exponent and Arctic explorer, George De Long: "I frequently think that instead of recording the idle words that express our progress from day to day I might better keep these pages unwritten, leaving a blank properly to represent the utter blank of this Arctic expedition."[3] De Long's U.S. Arctic expedition aboard the *Jeannette* was cataclysmic; the ship was trapped by ice, adrift for two years before being crushed and sunk. De Long was among the twenty men who died of a crew of thirty-two; his journal was preserved by the survivors. The emblematic "blank of [his] Arctic expedition"—swallowed by ice, ruinous—masks the "unfathomable force" of the terraqueous world that seethes beneath the representational text. Like the whiteness of Ahab's "pasteboard mask" in Melville's *Moby-Dick* or the "shrouded human figure" with skin "of the perfect whiteness of snow" that rises from the warm polar South to engulf the travelers at the end of Poe's *Narrative of Arthur Gordon Pym*, De Long's blank indicates the inadequacy of standard literary forms of textual media to speak for oceanic and polar extremes.[4]

In the twentieth century the logic of exploration has been associated with the rationale given by George Mallory for his attempts to ascend Mount Everest: "Because it's there." Mallory never returned from his 1924 venture to the summit; his broken body, complete with snow goggles and camera, was identified on the mountain's ice face in 1999. It is tempting to

see Mallory's corporeal reemergence after more than seventy-five years as a kind of Himalayan dead letter, giving mountaineers and historians new data for the "there" to which the Englishman was seeking access. (And since bodies on Everest cannot effectively be removed, the mountain has become an above-ground frozen graveyard for the hundreds who have died in summit attempts in the past century.) The logic of "Because it's there" registers differently, if it applies at all, in polar terms, however; the "there" is not fixed. The South Pole flag is restaked every year to account for the ice sheet movement that renders the polar marker's previous Antarctic location obsolete. The North Pole is not on land and thus cannot be flagged at sea level. On 2 August 2007, however, a Russian submarine reached 14,000 feet below sea level at the North Pole and planted a titanium flag on the Arctic seafloor. The flag remains at an invisible remove from the world, seen only through the undersea video taken by expedition members.[5] None of these points are stable other than by the abstraction of longitude and latitude lines; even the magnetic North and South Poles are located several degrees away from the geophysical poles. The vague, shifting locations underscore the ephemeral nature of the polar "there." Everest too, the great Chomolungma, is on the move: plate tectonics ensure that Everest is adding—or subtracting—height by a few millimeters a year, and shifting horizontally. Nineteenth-century polar imaginaries of blank spaces, holes in the terrestrial verge, or an open polar sea are a kind of polar magical thinking: they are fantasies of circulation that run into trouble because the points of the axis of the spherical globe are ever in retreat.

Throughout *The News at the Ends of the Earth* I have discussed ephemeral modes of polar ecomedia created by Arctic and Antarctic expedition members as they sought to represent, in textual form, the space and time of climate extremity. Yet as I have argued, representation alone is often not what constitutes the data of polar ecomedia. Elements of polar ecomedia are rather the shifts, gaps, interrupted circuits, and representative failures that are themselves recorded (whether gathered or memorialized) as a collection of data. In a moment when human and nonhuman life feels increasingly ephemeral within the broader scope of planetary climate crisis—even as human actions have propelled these extreme conditions—polar and oceanic perspectives offer representational keys with which we might begin to find conceptual language instrumentalizable to life (and endurance) in the Anthropocene.

One template for Anthropocenic accounts is the work of Rachel Carson, that exemplary theorist of oceanic spaces. In *The Sea around Us*

(1951), Carson is interested in deep time from the perspective of the sea. In a textual instantiation of geology that anticipates Dana Luciano's work on rocks as Anthropocenic media, she proposes that "the story of how the young planet Earth acquired an ocean . . . is founded on the testimony of the earth's most ancient rocks."[6] In a similar vein, the sedimentary layer of the sea floor, which in Carson's quietly moving image accretes as if the longest imaginable snowfall, likewise bears witness, this time in verse: "The sediments are a sort of epic poem of the earth. When we are wise enough, perhaps we can read in them all of past history. For all is written here. In the nature of the materials that compose them and in the arrangement of their successive layers the sediments reflect all that has happened in the waters above them and on the surrounding lands" (76).[7] Carson reads both the rocks themselves (which present "a sort of epic poem") and the shifting seas, ice floes, and human and nonhuman matter that surround them. Not a metaphor, "the book of the sediments" (76) provides its own thin leaves to the skilled interpreter, much as ice core samples do for glaciologists and paleoclimatologists tracking global warming trends, or atmospheric evidence recorded in the earth's stratigraphic record does for geologists determining epochs of geological time.

Deep time also provides a way for Carson to comment upon contemporary trends in global warming and sea level increases. Consider the cool observational pleasure that she takes in documenting warming temperatures and rising seas before the mid-twentieth century, when *The Sea around Us* was published. This tone is characteristic of her luminous yet spare prose; a systems thinker, interested in cycles, Carson notes the function of the oceans as a "global thermostat" and finds that "the evidence that the top of the world is growing warmer is to be found on every hand" (182). What is more, she writes, "we live in an age of rising seas" (97). This "is an interesting and even an exciting thing because it is rare that, in the short span of human life, we can actually observe and measure the progress of one of the great earth rhythms. What is happening is nothing new" (97). What is arresting about rereading this argument today, when rising seas are projected to whelm major world coastal cities within the next hundred years, is in part its seeming prescience. Will soon "the surf . . . break against the foothills of the Appalachians," Carson wonders. With a shrug, she says simply, "No one can say" (98). What is equally startling to realize about her rising seas meditation, however, is that the logic of rhythmic return ("nothing new," another cycle of planetary time) is also the rejoinder made by climate change deniers (nothing new, natural variability) to the alarms about global

warming raised by the very environmental activists and climate scientists to whose movement, and to whose research, Carson has been foundational.

Carson's cycles recur in the writing of contemporary environmental humanists. Oceanic forms of thought lend themselves to spiralizing notions of time—time understood "not as laminar flow, but as spiral of unforeseen propinquity," as Jeffrey Jerome Cohen stipulates. "Water does not periodize like stone or landlocked texts," Cohen writes. "Its archive eddies, whirls, conveys dangerously, transforms the submerged into the rich and strange."[8] The Anthropocene demands that we reject linear progression, must look for new models of accounting. In both Carson's and Cohen's imagination, inspiration for these new models is found in the medium of water. Water is not an indiscriminately fluid medium, however, as the hydrography of the polar regions underscores. For even in their power, the seas are responsive to the lands that interrupt them. Sea water is salty, for instance, because of terrestrial mineral diffusion and circulation. As Carson explains, "From the moment the rain began to fall, the lands began to be worn away and carried to the sea. It is an endless, inexorable process that has never stopped—the dissolving of the rocks, the leaching out of their contained minerals, the carrying of the rock fragments and dissolved minerals to the ocean." It is difficult, reading *The Sea around Us* in the twenty-first century, not to attach new meaning to Carson's words: that the leached minerals stand in for oil and gas resource extraction in the Arctic Ocean, or that the fragments carried to the sea substitute for plastiglomerates or other hybrid bits of organic and inorganic waste, as Stacy Alaimo warns.[9] These very minerals have brought salt to the sea, "and over the eons of time," Carson writes hauntingly, "the sea has grown ever more bitter with the salt of the continents" (7). The very practices of resource extraction that have helped demarcate the Anthropocene have accelerated the processes by which the salt tang of the seas has become instead something too warm, too polluted, too bitter to contemplate. The seas, human and nonhuman life itself, may be spiraling out of our grasp; do we still we recognize our earth, and the sea around us, as our home? For how much longer will humans exist to call it such? Estranged from the cyclical renewal of an earth that in Carson's time was in less overtly cataclysmic climate crisis, we now find that we cannot count on an idealized terrestrial home, an engulfing Mother Earth. This does not make our planet an utterly alien one, however; we need to form new relationships to and with it, new forms of stewardship and perspective.

I have sought to tell survival stories in *The News at the Ends of the Earth*, even when prospects might seem dim. Historical polar voyagers struggled

to survive; expedition members battled to subsist, to preserve their records. The polar ecomedia they circulated was largely ephemeral; some examples endure, many do not. The question for humans in the Anthropocene is whether we too can write a survival story while in extremity. Perhaps some of the practices of polar expedition members—their triumphs and mistakes, yes, but also their ecomedia production and reproduction processes—can provide a model and some hope. These are matters of life and death.