

INTRODUCTION

POLAR ECOMEDIA

..... decrease in the number of blizzards, failure of the Ross Sea to freeze, absence of very low temperatures on the Barrier

..... bitterly regretted their failure to keep Meteorological records.....
records of the British Antarctic expedition were unearthed from the highest shelves of the lumber rooms of the libraries and were perused with avidity ...

..... the great question of the day was, Does climate change?

— GEORGE SIMPSON, "Fragment of a Manuscript Found by the People of Sirius 8 When They Visited the Earth during Their Exploration of the Solar System," *South Polar Times* (1911)

The ocean has a very poor respect for daily papers.

— WILLIAM HENRY GILMAN, *Letters Written Home* (1858)

Polar exploration produces writing. Whether from the Northwest Passage-seeking Arctic voyages of the early nineteenth century or the "heroic age" of Antarctic ventures in the early twentieth, the most consistent outcomes of historic polar missions were not expeditionary feats but narrative accounts of the voyages. Expeditions were not particularly successful if judged by the standard of whether or not they fulfilled their voyage objectives; nearly all historical British and American polar missions can be said to have failed if our evaluative criteria are whether parties navigated the Northwest Passage, flagged the North or South Poles, or traversed Antarctica. As a geologist who participated in two Antarctic expeditions (and who contributed articles to both expeditions' winter quarters publications, *Aurora Australis* and the *Adelie Mail and Cape Adare Times*) characterized

it, the four phases of polar exploration history are "(a) The voyage south from civilisation. (b) Winter and summer at winter quarters. (c) Spring and summer sledging. (d) The catastrophic phase. (May or may not occur)."¹ Loss and death thinned many voyages, which were salvaged in the public imagination by tales of valor or endurance. Expeditionary writing told these stories. In 1880 an American naval officer and North Polar explorer, George De Long, entered in his journal, "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."² Yet continue to write he did. And even after his ship *Jeanette* was annihilated by the ice and twenty of the thirty-three men aboard had perished—De Long himself among the dead—his journals remained in circulation. What do the narratives of polar exploration tell us? In large part, stories of extremity. In their meteorological, geographical, and political remove from the usual variances among nation-states or global precincts, the polar regions have been figured as impossibly remote. Today rapidly accelerating anthropogenic climate change (the evidence for which has been particularly stark in the Arctic, and increasingly in Antarctica as well) has rendered the atmospheric state of the planet itself extreme. As a result, human futurity too is in a state of extremity. Among proliferating challenges, our Anthropocenic moment has produced a crisis in how scholars think and write about humans, the nonhuman world, and the earth itself, in imagining both our present and across time.

Of all the responses to extreme environmental conditions that were attempted by polar expedition members of the long nineteenth century, perhaps the least known are a body of printed ephemera and other tenuous informational media created aboard icebound ships in the darkness of high-latitude winters. These ephemeral works include a rich, offbeat collection of Arctic and Antarctic ship newspapers, as well as notes in bottles, letters and cairn messages, rescue notices printed on silk and lofted by fire balloon, playbills, songs, menus, and maps constructed of organic materials, all of which polar sailors used to mark time and communicate information. *The News at the Ends of the Earth* studies transitory printing and textual circulation amid extreme climate processes, in moments when human life itself has seemed ephemeral, whether during a British Northwest Passage expedition in the 1820s, an American search for missing Arctic explorers in the 1850s, a Norwegian sprint to the South Pole in the 1900s, or in the face today. In the polar regions the production of works of textual ephemera is

a testimonial to (and fuel for) resilience, perhaps counterintuitively. As a category of transient objects and evidentiary media, ephemera record temporary moments, instances in time; the material artifacts and texts themselves are neither crafted to last nor presumed to warrant preservation. The etymology of the term for the genre itself bears a special charge when invoked in the polar regions: "ephemera" comes from the Greek ἐφήμερος, or *ephēmeros*, lasting only one day. At latitudes approaching 90° N or S in the lands of the midnight sun and the polar night, the sun rises and sets only once per year, and thus the single day that ephemera are meant to last can have a duration as long as six months. In polar spaces outside of conventional diurnal measures of time, where human life is difficult to sustain and where resources are both scarce and endlessly sought, explorers consistently turned to fugitive modes of written expression. When safely back home, expeditions may have produced weighty volumes of their voyages in substantial print runs, yet while icebound during a winter darkness that lasted for several months, expeditions printed nonce works. Their reasons for doing so, and to what effect, are the focus of this book. Arctic and Antarctic sailors made a conscious genre decision in choosing to print newspapers and other forms of ephemera: in a polar environment, newspapers no longer regulate diurnal time but instead call attention to (and help relieve) its attenuation. The paradox of printed ephemera—which have the seeming permanence of print but are in their form designed to be dispersed and disposed of—registers the variable, atemporal challenges of life, humanistic thought, and global ecology in the Anthropocene.

The texts and other varieties of media that emerge from and describe Arctic and Antarctic conditions take many forms; the frozen zones have been generative of written and other communicative media by and for travelers, indigenous residents, imaginative writers, scientists, and artists, past and present. Indeed the resources, hydrography, geography, and climatology of the polar regions have been of persistent interest throughout modernity. Scores of expeditions have traveled to the Far North and South since the sixteenth century, in the name of discovery and science, primarily, although imperial and commercial missions (largely unsuccessful) underwrote their attempts. Martin Frobisher's voyages in the 1570s to the southern part of what is now called Baffin Island were sponsored by the Muscovy Company, for example: Henry Hudson's 1610 expedition to the bay he named was supported by the British East India Company and the Virginia Company; and William Baffin (1616) sailed up the coasts of Greenland and Baffin Island in the aspirational name of the Company of Merchants of London,

Discoverers of the North-West Passage. The force of polar attention among Europeans and Americans was felt most keenly in the nineteenth and early twentieth centuries, however. Polar expeditions in the long nineteenth century included those helmed by the Americans Charles Wilkes, Elisha Kent Kane, Isaac Israel Hayes, Charles Francis Hall, Adolphus Greely, Anthony Fiala, Matthew Henson, Robert Peary, Donald MacMillan, George De Long, and Frederick Cook; the Germans Carl Koldewey and Erich von Drygalski; the Britons William Edward Parry, John Ross, John Franklin, George Back, John Clark Ross, Edward Belcher, Horatio Austin, John Rae, Francis Leopold McClintock, George Nares, Robert Falcon Scott, and Ernest Shackleton; the Frenchman Jean-Baptiste Charcot; the Norwegians Fridtjof Nansen, Otto Sverdrup and Roald Amundsen; and Douglas Mawson, an Australian. The majority of these ventures were sponsored by their national governments in a tradition associated with British and Norwegian exploration. Relatively elite compared to other nautical missions, polar crews ranged in size from a dozen to almost two hundred men; most took fewer than fifty men, and Hall initially traveled alone in his first expedition, before joining an Inuit community on Baffin Island. The launches and returns of these voyages were closely followed by the Western public, and polariana appeared in a variety of literary and visual cultural forms, from poetry and panoramas to magic lantern shows and the lecture circuit. The practice of the expeditions generally followed this protocol: after sailing as far north or south as possible during the brief polar summers, polar crews would plan to winter over in a harbor with relatively stable ice, their vessels encased by the frozen ocean. The men lived aboard ship or in huts during the total darkness of polar winter months and prepared for overland and ice sledging operations (either dog-, pony-, or man-hauled) in early spring, for the purposes of hydrography, meteorological research, scientific experimentation, or a sprint to "flag" the poles. The latter feat took nearly one hundred years of steady attempts.

While quartered in the land-, ice-, and seascapes of the polar regions, expedition members—mostly white Westerners not indigenous to the frozen zones—produced an enormous volume of writing (and, eventually, photography, videography, and many other forms of data and textual production) in order to document what they saw, felt, heard, missed, experienced, counted, observed, and lost. The chapters that follow attend to the written materials created and circulated by American and European polar expedition members between 1818 and 1914 that exclusively originate in and have a special circulation amid the polar regions. (These writings histori-

cally complemented the similarly huge output of scientific recordkeeping done by polar voyagers, including magnetic dip observations, hydrography, geological sampling, zoological collection, core sampling, and temperature readings—many of which serve as data records for present-day climate scientists. Such scientific literature constitutes a genre of evidence that has supplemented this book but does not play a central role in it.) I concentrate instead on the print production and forms of writing that were generated in the polar regions by Europeans and Americans with the express design for circulation within the polar regions alone, among exceptionally constrained publics composed largely of the members of the expeditionary ships themselves. Such texts are informed by Inuit, Yupik, Inupiat, Sami, and other Arctic indigenous knowledge and histories, even when this body of knowledge is not always explicitly credited by white Westerners. Central to the polar texts under discussion in this book are the series of little-known and rarely (if ever) studied Arctic and Antarctic newspapers written by expedition members for distribution among each shipboard community's "private family circle," as one Arctic newspaper described it, or what another paper called "*our own little circle*."³ I study not just the content of the writings, but also the way they were made, used, collected, organized, printed, circulated, saved, or discarded. My interest is in the production and means of distribution of this media, whether in the form of the newspapers exchanged aboard isolated, icebound ships among members of a crew, or in the form of the notes and letters thrown to the commerce of the frozen North, such as messages left in cairns, cast adrift in bottles, or launched in hydrogen gas balloons. From the nineteenth century to today, as I argue more broadly, the planetary implications of these texts and print media paradoxically emerge from their very non-util, motile, ephemeral, iceboundness.

In our contemporary Anthropocene moment of accelerating Arctic and Antarctic polar ice sheet collapse, human life on Earth can itself feel ephemeral, both because of and despite humans' irreversible impact on global climate and the geological record. The evanescent printed records generated in polar extremity, I argue in this book, offer conceptual and formal devices for describing, comprehending, and, most ambitiously, surviving climatic extremity. These texts, which constitute one form of what I call *polar ecomedia*, are examples of environmental writing by which, in turn, we might imagine—and with hope mediate—climate change and ecological extremity today. One broader critical question animating this study of Arctic and Antarctic printing and ephemera, in other words, is what genre of writing, what communication medium, emerges from and is demanded by

the Anthropocene?⁴ The story I tell in this book draws from but does not recapitulate historical expeditionary accounts of endurance and privation. I instead explore what literary and communicative forms the outlandishness of Arctic and Antarctic conditions inspire and, more important, what kinds of textual and media circulation they can sustain. Such media are "socially realized structures of communication," in Lisa Gittelman's terms; in this book, and in the Anthropocene epoch in which the news at the ends of the earth bears heavily on all life on the planet, media must be understood to be realized both socially and environmentally.⁵ The ecomedia materials under discussion in this book occur in different narrative, textual, or circulatory forms than those typically associated, critically speaking, with the polar regions or other ecological spaces, and will likely be new to readers for these reasons. My focus is on projects such as Ernest Shackleton's editorship of the *South Polar Times*, a typescript newspaper published in Antarctica beginning in 1902 for Robert Falcon Scott's crew (among whom Shackleton was initially third officer), rather than on *South* (1919), his popular first-person narrative of the *Endurance* expedition. In the same vein, I study Charles Francis Hall's technological contrivances for writing in igloos in -40° temperatures, as detailed in the hundreds of ephemeral notebooks that survive his seven years of residence with the Inuit, rather than his published personal narrative, *Life with the Esquimaux* (1864), or the various accounts of his final, shattering voyage. I devote attention as well to other archives and forms of thought that organized themselves around the poles, whether messages left in cairns and other provisional caches fashioned from rock and ice, oceanic dead letters, "open polar sea" and hollow earth theories, or Inuit epistemology and indigenous lifeways.

What white Westerners thought of as communication had to adapt to the ecological realities of polar communication. Polar voyagers did not immediately or automatically become producers and consumers of ecomedia upon reaching the icefields, and their experiential transformation is part of the story of this book. For example, Anglo-American expeditions built cairns from local rocks, inside of which they stored messages and supplies. But for the Inuit, cairns, or Inuksuit, transmit messages in their very shape and construction; they are sufficient unto themselves as communicative media, and do not encompass written information. What Inuksuit communicate, however, was not legible to British expeditions engaged in Franklin searches, which often destroyed the rock forms in hopes of finding letters or a food cache. (In response to a lecture I gave on this material, media studies scholar John Durham Peters quipped, "Destroying cairns in search of a message is the *point*

of media studies.") But if polar expeditions have functioned in Western history as impetuses for generating narratives, writing on ice and about ice in the Anthropocene may be scarcely more legible than writing on water.

In attending to today's breaking news from the polar regions while tracking down historical polar expeditionary newspapers across dispersed archives, I have kept in mind the motivation governing David H. Stam and Deirdre C. Stam in staging their *Books on Ice* exhibition over ten years ago: the notion that within expeditionary history, "books seem to have been as essential as pemmican, primus stoves, fuel, and furs."⁶ The resources (fuel, dried meats, skins) invoked in the Stams' comparison are all demanded by and, in some ways, emerge from the polar regions. What I propose is that the media of production and distribution, survival and loss that constitute polar writing, in the form of newspapers, cairn messages, and other ephemeral inscriptions in icebound regions, are Arctic and Antarctic resources as well. In studying writing from the geophysical ends of the earth—at this moment of climate-focused news envisioning the anthropogenic ends of the earth—I argue for finding unexpected resources for futurity in forms of polar evanescence.

Ice Cycles

Ice bears its own temporality, in nonlinear cycles. European polar exploration began in early modernity as a search for faster routes to new commercial markers via a Northwest Passage; industrialization in the late eighteenth and nineteenth centuries drove both the colonialist imperatives and resource needs that have today led to fossil fuel scarcity. Human overconsumption of resources has been unequally distributed globally, as the developing world bears the brunt of anthropogenic climate change and has benefited the least from the industrializing forces that have caused it. Temperature increases register differently in the polar regions as well. The Paris Agreement of the United Nations Framework Convention on Climate Change (2015) seeks to limit temperature rise in the next century to 1.5– $<2^{\circ}\text{C}$ above pre-industrial levels. Yet the Arctic is a climate multiplier: a 2° global rise in temperature would actually result in an increase of 3.5–5°C in the Arctic.⁷ The very global warming propelled by fossil fuel usage in the past few hundred years is now melting the Arctic regions and enabling oil- and gas-hungry nations to bring new extractive technologies to bear in the Far North. In other words, the global trade interests of early modernity, which launched the first Northwest Passage expeditions, in turn inaugurated

industrialization's appetite for fossil fuels and increased human energy consumption. The oil and gas deposits now targeted for extraction would not be accessible had not the carbon usage that necessitates their mining produced the irreversible warming effects presently melting the polar ice sheets.

records reveal; in 1960 "no less than nine records are known to have been found in the Arctic Archipelago, seven from expeditions taking part in the search for Franklin."⁸ These include a land possession claim to the region first in 1851 by the Briton Erasmus Omannay of the *Assistance*; various occasional notes and lists of provisions cached in 1853 by his countryman Edward Belcher's Franklin search; a declaration of "possessions of all the Canadian Joseph-Elzéar Bernier; and a 1917 note from an American, Donald MacMillan, that his Crocker Land expedition had recovered messages from George Nares's 1875 British Arctic expedition.⁹ (Crocker Land itself turned out not to exist.) There is no telling what future fossil fuel extraction in the Arctic will exhume, or what or whom it will bury.

The polar expeditions launched by Europeans and North Americans beginning in 1818 are usually historicized within the context of the broad exploration and colonization projects of the long nineteenth century. Although the initial Arctic ventures of the period were inaugurated and enabled yet the initial Arctic ventures of the period were inaugurated and enabled in some ways, by short-term global climate change. As reported by members of the Anglo-American Arctic whaling fleet in 1816 and 1817, a couple of years commonly warm winters off the west coast of Greenland produced greater reduced sea ice in Far Northern waters. Likely a result of the varying global climate effects resulting from the massive eruption of Mount Tambora in Indonesia in 1815, this meteorological anomaly is more commonly identified in America and Europe for its cooling effects, which produced the non-

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ous "Year without a Summer" in more temperate climes in 1816. (The very cold, rainy summer kept inside a summer pleasure party that included Mary Shelley, who then began composing *Frankenstein*, the frame narrative of which features an Arctic expedition to find a warm open polar sea.) The warmer than usual temperatures in the Far North that were produced by this temporary oceanographic anomaly buoyed nineteenth-century theories of an open polar sea beyond the northern ice and aided the transit, for example, of William Edward Parry's 1819-20 Northwest Passage expedition. Parry's advances, in turn, gave encouragement to future expeditions, which fared less well as Arctic ice coverage returned in subsequent decades. But if short-term global climate change launched Anglo-American polar exploration when the idea of an open polar sea was only a fantasy, today global warming has turned the dream of a warm Arctic into a reality. The Northwest Passage is increasingly ice-free in the summer, and several circumpolar nations are refurbishing Arctic bases that had been abandoned in the Cold War, ostensibly to protect future Arctic trade via the Northern Sea Route.

The medium of ice is itself only one incarnation of a substance that takes three seemingly incommensurate forms: liquid, gas, solid. As such, ice is both ephemeral and durable. Ice in the Arctic and Antarctica appears both silent and still and yet is spectacularly on the move, and not just in epochs of climate crisis; in its vibrancy ice carves valleys, levels mountains, and deposits moraines over hundreds of miles. "Here was a plastic, moving, semi-solid mass," Elisha Kent Kane wrote of a glacier in Greenland, "obliterating life, swallowing rocks and islands, and ploughing its way with irresistible march through the crust of an investing sea."¹⁰ Beyond even a planetary scale, the melting of the polar ice sheets has in fact measurably changed the tilt of the earth. Elizabeth Leane and Graeme Miles find in this shift a profound reorientation of humans' relationship to the planet itself: "At a time when we are still confronting the impact of our actions on the biosphere, this realization of our ability to inadvertently change the orientation of our planet in space, even by a tiny amount, gives a new dimension to the Anthropocene: we live not so much *on*, now, but in uneasy partnership *with* a body spinning through space."¹¹ In the polar regions ice groans, cracks, screams, hisses, forms and liquefies in hours. For the Inuit of Kangiqsujuaq, ice even provides temporary caves beneath the surface of the ocean into which hunters can crawl to harvest mussels. Ice also tells stories that are hundreds of thousands of years old. Those who study paleo-oceanography (the history of the ocean) and paleoclimatology (the history of the earth's climate) can read in ice core samples narratives of past volcanic eruptions,

forest fires, rising seas, and flowers. As this book details, the variable elements of the polar environment bring into stark relief how textual and other media forms communicate in extremity.

While it may be a given to recognize that the past bears lessons for the future, this book does not and cannot observe linear temporality on a human-centered scale, both in topic and in evidentiary material: thanks to the more or less simultaneity of all human activity within the scope of planetary time, plus the acceleration of melting ice, one measure of the period of measurable human geological impact on the earth, we are forced to reckon with other geological scales of time, those that go beyond the human. *Homo sapiens*, for example, evolved 250,000 to 400,000 years ago, and within that frame the distinction between 1818, 1914, and 2017 CE barely registers. Furthermore, in terms of planetary time—scientists now calculate the earth's age at 4.55 billion years—400,000 years is itself a relative blip. Perhaps this is why it is famously difficult to envision or otherwise represent the temporal scale of the earth outside of the compass of human action and thought. Often these visualizations are keyed to a human scale, such as in Stephen Jay Gould's well-known metaphor in *Time's Arrow, Time's Cycle*: "Consider the Earth's history as the old measure of the English yard, the distance from the King's nose to the tip of his outstretched hand. One stroke of a nail file on his middle finger erases human history."¹² Such images represent a characteristically Anthropocentric imagination of the inhuman scale of deep time.¹³ Given this context, what we understand as artifacts of history necessarily register within different scales of pastness and require variable indices of temporal dynamism. The work of interpreting such artifacts is not just a matter of being mindful of the conditions that produced them and the forces that make them available to be read today; the very temporalities of that pastness must collapse.

The visual forms emerging from the polar regions today—a polar bear clinging to vanishing ice, a blighted industrial drilling site atop the permafrost—in some ways bear the metaphorical legacy of nineteenth-century racist stereotypes of the “vanishing” Native, made pathetic, distant, and inevitable in his twilight. As such, the only narrative they provide is one of inevitability. They are clichés in other ways, too; a *New York Times* staff photographer working to visualize climate change via drone imaging suggested, “A lot of the iconography that we've seen depicting climate change

has been very similar. I think many people feel oversaturated with images of glaciers calving into the ocean and polar bears on a piece of ice floating in the sea.”¹⁴ The media perspectives usually granted of the polar regions in their moment of exhaustion, of vanishing, have not yet found a narrative frame sufficient to their oceanic and planetary contours. Climatic specificity matters here: as regions simultaneously fluid and terrestrial, inhabited and not, stateless and multiply contested, the Arctic and Antarctica (while emphatically not the same geographically or demographically) provide different substrutures than the rest of the terrestrial earth for knowledge repositories and circulation. Here is an example of these very qualities of the icebound world, as illustrated by the contemporary poet and naturalist Elizabeth Bradfield in her poem “Polar Explorer Robert Falcon Scott (1912).” Bradfield captures the mortility of the body of the doomed explorer while in Antarctica. On their mission to reach the South Pole, Scott and his Southern Party companions trudged across the frozen continent, “man-hauling” sledges in defiance of climate adaptation strategies before dying on the ice. Their bodies could not be recovered and were heaped with stones in lieu of burial by their reserve crew a year later. Denied a seaman’s traditional sea burial, Scott rests atop frozen water. But Bradfield reminds us that his body is nevertheless on the move in death too:

his body, still wrapped in its reindeer bag, still swaddled

in his tent’s frayed silk, flag still tattering, his body
may have reached the Ross Sea

through the slow torrent

of the ice shelf. All the days he plodded,
the land was sliding back beneath him, treadmill
to the sea where he at last is given

a sailor’s burial,

maybe today, sunk and drifting.¹⁵

Even in Antarctica, the polar region anchored by a land mass, there is no terrestrial fixity for burial; the dead can no more stay put than can an Antarctic ice sheet. If we think of Scott’s body as a communicative medium, as Bradfield’s poem imagines it, we can make connections to other stories: to nautical traditions of sea burial, to the deadly consequences (in both directions) of a colonial subject’s maladaptation to local conditions, to nonlinear understandings of movement in time and space. Polar ecomedia, I argue, allow us to apprehend the archive of human toil and tragedy—and,

significantly, the nonhuman processes of accumulated and diminishing ice—that constitute the news at the ends of the earth.

For a model of polar ecomedia and its arbitration by ice, consider George Murray Levick's photographic notebook. Levick was a zoologist, surgeon, and photographer on Robert Falcon Scott's British Antarctic expedition and four companions famously died on the ice on their disappointed return from the pole, having learned that Norwegian Roald Amundsen had reached 90°S thirty-four days before them. Levick stayed in reserve to study Adélie Penguins and thus survived the expedition as part of the Northern Party. Along with the geologist Raymond F. Priestly, Levick produced a Northern Party newspaper, the *Adélie Mail and Cape Adare Times* (1911–12); his pen name was "Bluebell." The handful of Northern Party readers of the *Adélie Mail and Cape Adare Times* would have learned of ongoing penguin mischief at Cape Adare from the paper's "Police News," which was dominated by accounts of domestic violence, such as the following: "Tubby Flipper was charged with severely illtreating his wife, who, it appears, is a very industrious woman and much liked by her neighbors.... Judge C. no sooner heard the case read over than he sentenced the prisoner to 21 days hard labour, the judge remarking that he intended to put a stop to the disgraceful habit of wifebeating which had become the habit at Cape Adare. The prisoner was removed swearing horribly."¹⁶ Upon his return from Antarctica Levick wrote a then-scandalous pamphlet—in Greek—titled "Sexual Habits of the Adélie Penguin," in which he accurately described autoeroticism, necrophilia, homosexuality, and nonprocreative sex among the penguins. The pamphlet was denied publication but circulated privately; it was excavated and published in 2012.¹⁷

But Levick's provocative penguin studies are not my ecomedia focus or archaeological practice here. Levick's less vivid writings included a journal listing the details of his photographic exposures. When the expedition left its base hut at Cape Evans, Levick left the notebook behind, by design or chance; its existence became lost to the historical record, for a time. Global warming has led to more extensive summer thaws in Antarctica, much as it has throughout the planet. In recent years the New Zealand-based Arctic Heritage Trust has unexpectedly found photographic negatives from Shackleton's Ross Sea Party of 1914–16. (Media reports of their rediscovery were sent to me by friends who know of my research; nearly every week, still, they resurface to my attention via Facebook's "On this Day" feature, making the news seem ever-new.)¹⁸ Also found were five crates of whisky and

brandy from Shackleton's *Nimrod* expedition of 1907–9.¹⁹ In the summer of 2013, exactly one hundred years after the *Terra Nova* expedition had ended in tragedy, the icemelt runoff around the hut at Cape Evans (also managed now by the Antarctic Heritage Trust) exposed a notebook. Levick's photographic notebook, still legible. It was restored, digitized, and then returned to the hut at Cape Evans—returned, that is, to the ice, just as the three bottles of Shackleton's whisky were returned to his Cape Royds hut after analysis and chemical reproduction.²⁰ The reinstatement of Levick's notebook in Antarctica was a source of surprise and consternation to some responders to news reports in October 2014 on the discovery of the notebook. While it is not my scholarly habit to cite internet commentary, I was struck by the observation of a commenter writing as "Sage-on-the-Hudson" in a comment echoed by others: "After being placed in a new binding, the notebook was sent back to Antarctica. Why? To be read by the penguins? Since there are no museums, libraries or permanent settlements on the continent, that might not have made use of the archival resources I analyze in this book, he could have tarried a while at Cape Evans virtually: Scott's hut has been made available to digital travelers in extraordinary detail via Google Street View. In nonpolar spaces, the program's mapping function allows one to walk through a neighborhood, a route, or a streetscape, even if one cannot deviate from the road or sidewalk, cannot penetrate most buildings or go off road. In Antarctica, though, the only viewing option is interior (at least it was in 2014, when Sage-on-the-Hudson left his comment). The Street View of Scott's Antarctic hut to which one has access offers remarkable detail of the well-maintained stores in the hut, but the route beyond the hut is arrested at the lintel. Google Street View shows one limitation of nonpolar modes of thought: rather than giving us magisterial vistas of Antarctic icescapes, our view is bounded by terrestrial infrastructure.²² Subzero temperatures are a great preservative, which is why Scott's supposedly temporary hut remains intact a century later, as does one at Cape Royds built by Shackleton a few years later. While the two explorers' huts may not be "permanent" in any human-scaled temporal sense, their preservation (both by Antarctic climate and by the Heritage Trust) ensures that the Cape Evans and Cape Royds huts are, in fact, "museums" and "settlements" in all the ways that count in the polar regions. And as *The News at the Ends of the Earth* will show, they are libraries as well, storehouses of ecomedia circulation.

Levick's notebook is an exemplar of polar ecomedia. A manuscript notebook of photographic data collection, it was buried in the ice in one

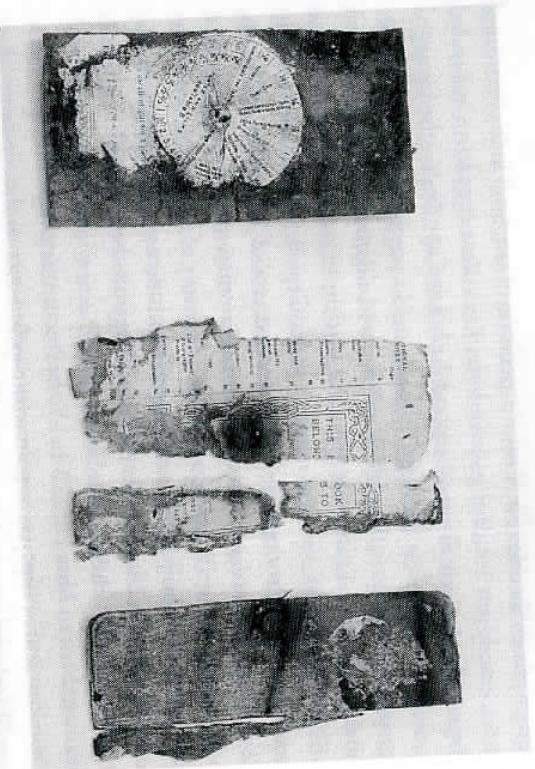


FIG INTRO.1 — George Murray Levick's photographic notebook before restoration.
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polar age and offered up by the ice a century later as a result of the climatic change induced by the very industrialization that now drives polar resource extraction and of which polar expeditions were a part. But the notebook is not a museum artifact, abstracted from its polar milieu and catalogued as ephemera, even as it is available digitally. It is back at the scene of its original circulation as expeditionary media, a record of data production tracking the habits and conditions of nonhuman populations in Antarctica. Unlike Western modernity's history of envisaged resource extraction in the polar regions, Levick's notebook is a polar resource that has been put *back* on the ice. Who—or what—will next take it up from the melting ice to read anew?

Polar Periodicals

Levick's notebook is continuous with other forms of polar recordkeeping, both in its creation and circulation and in its mediation by polar climate. The chapters that follow turn more specifically to texts that not only remained in (or, in the notebook's case, were returned to) the polar regions but were created and printed there. Beginning in 1848, the year of the first Franklin searches, many expeditions brought printing presses, which are

not usually classed among nautical supplies. With such presses, polar-voyaging sailors wrote and printed newspapers, broadsides, cairn messages, and other reading matter beyond the Arctic and Antarctic Circles. The polar expeditions I discuss range from William Edward Parry's first Arctic voyage on the *Hecla* and *Griper*, which launched in 1819, to Douglas Mawson's Antarctic voyage on the *Aurora*, which concluded in 1914. There were at least twenty-seven newspapers published by expedition members during this period. In addition to the *Illustrated Arctic News* (HMS *Resolute*, commanded by Austin, 1850–51), the newspapers I read include the *North Georgia Gazette, and Winter Chronicle*, the first Arctic newspaper (HMS *Hecla* and *Griper*, Parry, 1819–20); the *Flight of the Plover, or the North Pole Charivari* (HMS *Plover*, Moore, 1848); the *Aurora Borealis* (HMS *Assistance*, Ommanney, 1850–51); the *Weekly Guy* (HMS *Plover*, Maguire, 1852–54); the *Queen's Illuminated Magazine* (HMS *Assistance*, Belcher, 1852–54); the *Polar Almanac* (HMS *Enterprise*, Collinson, 1853); the *Port Foulke Weekly News* (United States, Hayes, 1860–61); the *Discovery News* (HMS *Discovery*, Nares, 1875–76); the *Arctic Moon* (*Protress*, Greeley, 1881–84); the *Midnight Sun* (*America*, Baldwin, 1901–2); the *Arctic Eagle* (*America*, Fiala, 1903–5); the *South Polar Times*, a lavish, extensive newspaper published by Scott's National Antarctic expedition on the *Discovery*, as well as the expedition's offshoot, a more informal newspaper called *The Blizzard*, for pieces deemed unsuitable for *South Polar Times* inclusion (1902–3); the first book published in Antarctica, *Aurora Australis*, written and printed by members of Shackleton's 1907–9 British expedition aboard the *Nimrod*, who also created the newspaper *Antarctic Petrel* (1907–9); the *Adelie Mail and Cape Adare Times*, written by the Northern Party on Scott's second, fatal expedition on the *Terra Nova* (1910–13); and *Adelie Blizzard* (*Aurora*, Mawson, 1911–14). In several instances, newspapers were suppressed by commanders (such as the underground papers *Gleaner* and *Minerva* (*Resolute*, Austin, 1850–51) or did not come to planned fruition (such as the *Polar Pirate* of Fiala's 1903–5 mission). Periodicals were not confined to Anglo-American ventures; the German Arctic expedition led by Carl Koldewey aboard the *Hansa* (1869–70) published the *Ostgrönlandische Zeitung*, and the Norwegian Fridtjof Nansen's *Fram* expedition (1893–96) circulated the manuscript newspaper *Framsjaa*. Mawson's Australasian Antarctic Expedition was the first to establish a radio link to the outside world; the *Adelie Blizzard* is thus the first paper to include news of the outside world via cable reports, and the last paper, chronologically speaking, that I treat in this book.

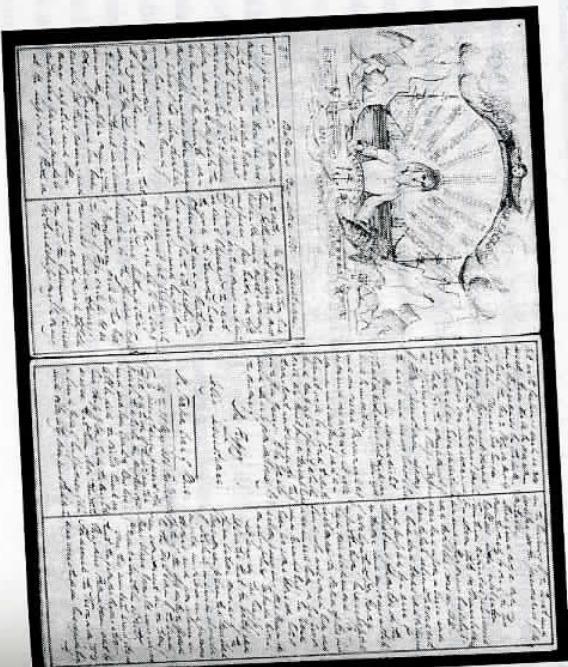
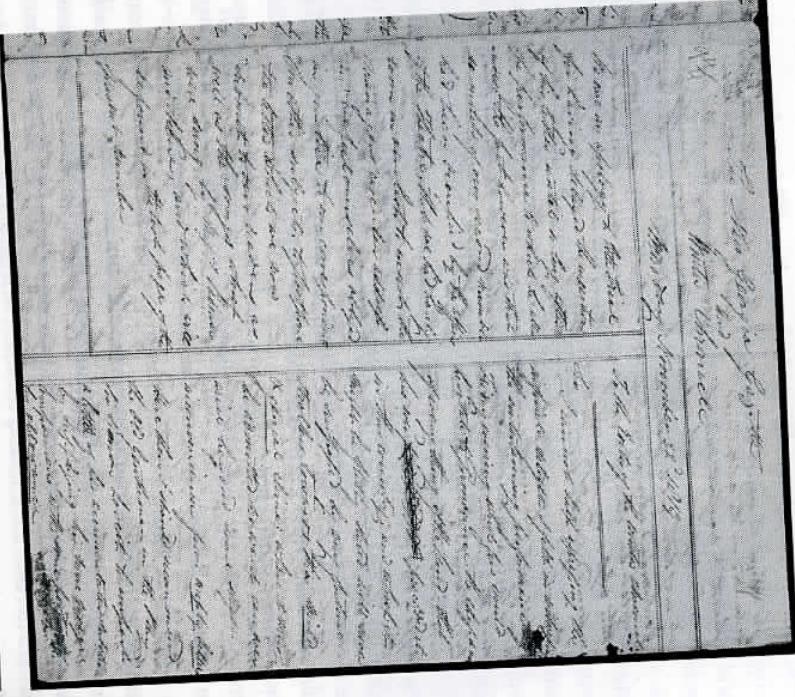


FIG. INTRO.2 — (opposite, top) Copy of *New Georgia Gazette* given to Sir John Franklin. Pasted in *Sir John Franklin, the Discoverer of the North West Passage, Original Letters Written during His Arctic Expeditions*, FRN/A.1, NATIONAL MARITIME MUSEUM

Opposite, top Copy of the original document given to Sir John Franklin
Pasted in *Sir John Franklin, the Discoverer of the North West Passage, Original Letters
Written during His Arctic Expeditions*, FRN/1, © NATIONAL MARITIME MUSEUM.

GREENWICH, LONDON.

FIG INTRO.3 — (opposite, bottom) Inaugural issue of *Aurora Borealis*, shipboard newspaper of HMS *Assistance*. MSS. 75/0614. © NATIONAL MARITIME MUSEUM, GREENWICH, LONDON.



203.

124 MARCH, 1944

gratio.

Milk that was sold. See article
One Captain holding both his sides.

卷之三

North Star Chapter

卷之三

卷之三

*Flight of the
Pigeon*

卷之三

Line

Dr. H. Peter Mazzoni.

THE WEEKLY GUY.

POLAR ALMANAC,

for the

No. v.] Friday, Dec. 3, 1852. [Globe.

Having made the 'ancient' honorable at the conclusion of our paper, by apologizing for its late appearance last week, we little thought any further allusion to the subject would befit it, is perhaps conforming undue importance to a contemptible joke, perpetrated against us on Monday, in the shape of a report indignantly calculated to the effect, that our 'Guy' had gone to an untried end, having been stolen, or strayed, or otherwise made away with. Possibly in this case as in many others, 'the wish was father for the thought.' But it is the very reverse of any feeling of alarm, or one that induces us now to add to the subjects on the contrary, we heartily thank the perpetrators for the alarm, and would feel great pleasure in bestowing on them our need of praise, if we could but discover a single gleam of wit in the joke, either to the matter, or the manner thereof. We must therefore content ourselves with the expression of

YEAR OF OUR LORD 1854,
being the seventeenth year of the reign
of
HER MAJESTY QUEEN VICTORIA.
Latitude 70°08' North. Longitude 145°29' West.
by
Henry Hester Captain Coxswain,
Vivat Regiae,
Caudan Bay

Printed on board
Her Majesty's Ship Enterprise,
in
of
the
HMS ASSISTANT - PUBLISHER

FIG INTRO.5 — *Weekly Guy's* (3 Dec. 1852), John Simpson Papers, 1825–1875, DAVID M. RUBENSTEIN RARE BOOK AND MANUSCRIPT LIBRARY, DUKE UNIVERSITY.

FIG INTRO.6 — *Polar Almanac*, John Simpson Papers, 1825–1875, DAVID M. RUBENSTEIN RARE BOOK AND MANUSCRIPT LIBRARY, DUKE UNIVERSITY.

These publications were produced in great part for a reading audience of the mission's crew members. As Lara Langer Cohen has argued about amateur newspapers in the 1870s and 1880s in the United States, such communities are "not just an *effect* of print"; "community is also the *cause* of print."²³ The logic applies to polar newspapers as well. Concocted originally as a stratagem to combat the physically and mentally debilitating trials of a sunless polar winter, the newspapers generated near the poles were generally comic or parodic. The *Port Foulke Weekly News* of Isaac Israel Hayes's United States expedition, for example, facetiously adhered to periodical expectations. As Hayes described it, "There is a regular corps of editors and reporters, and office for 'general news,' and 'editorial department,' and a 'telegraph station,' where information is supposed to be received from all quarters of the world, and the relations existing between the sun, moon,

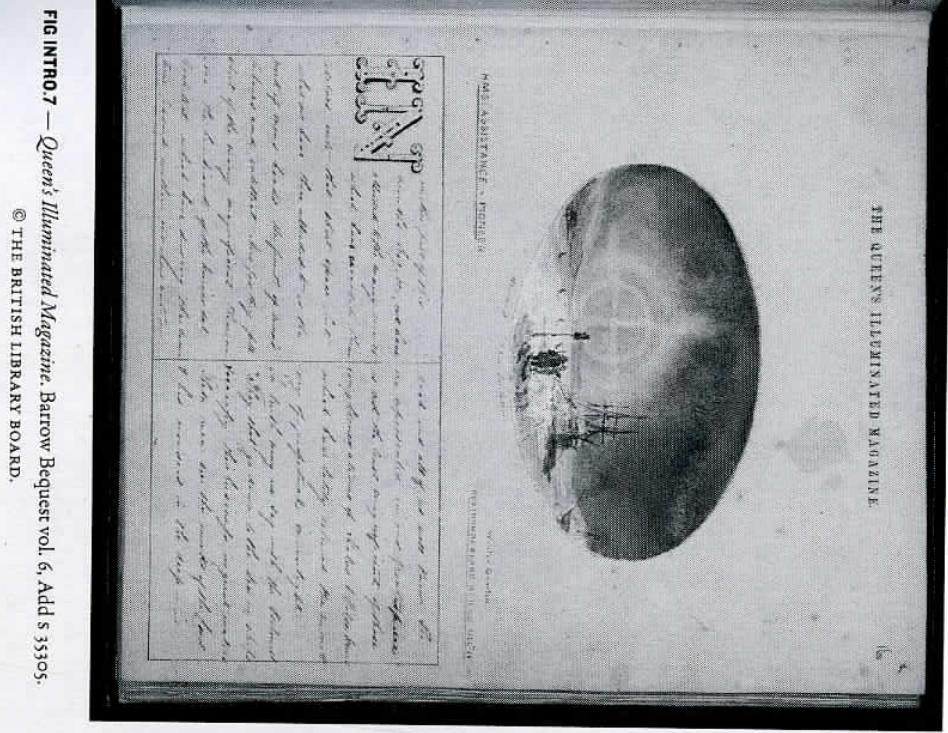


FIG INTRO.7 — *Queen's Illuminated Magazine*, Barrow Bequest vol. 6, Add.5 35305.
© THE BRITISH LIBRARY BOARD.

and stars are duly reported by 'reliable correspondents'; and pictorial representations of extraordinary occurrences are also received from 'our artist on the spot.' (This expedition consisted of only fourteen men; it should go without saying that there was no "telegraph station" at latitude 81° N in 1860.) The *Port Foulke Weekly News* was not alone in its "farcical" inhabitation of the expected beats for a newspaper, and Hayes's description of its contents can stand for a general one: "There is a fair sprinkling of 'enigmas,' 'original jokes,' 'items of domestic and foreign intelligence,' 'personals,' 'advertisements,' &c., &c., among a larger allowance of more pretentious effusions."²⁴ Hayes's quotation marks designate the different sections of the

THE DISCOVERY NEWS.

SATURDAY NOV. 27, 1875.

All readers of this "News" will learn with astonishment that so large a section of its readers as the whole of the Nor-Westerly Community have as yet found no subject upon which to dilate in its pages. Many causes may be assigned for this state of affairs, but doubtless it would be hard to find the real one, a multiplicity is no doubt at work, and the result is the rather melancholy one that our wittiest humor column remains unfilled. Least said is however soonest needed, and it may be that the intellectual charms of that district are even now mustering themselves to storm the maiden fortress, we will therefore not give way to green-sickness but smilingly and blushingly await the onset, in full hopes that another week will have brought a conclusion to the preparatory measure hitherto at work.

It is a beautiful and instructive thing to observe the artificers at their labours under the masterly direction of our skillful architect. The theatre, at which their time is now employed, is almost complete, and its appearance already goes far to verify the prediction as to its success uttered in this paper last week.

It is considered advisable by a correspondent that in future no one journey to my distance from the ship greater than a hundred yards unarmed noise have been heard in the wardroom at night, unless unlike any a dog can make and yet evidently issuing from a large and powerful animal; a sort of a medium between the meowings of a drowsy cat and the contumacious grunts of a pig, those must have been wanted by a Polar bear; those who will persist after this warning in circummanipulating the mile wide do well to begin at the other end, and thereby elude the animal's observation, they would moreover find it a pleasing change in the monotony of that somewhat unromantic trudge.

The public will be glad to learn that Dr. Numbis has kindly consented to furnish the Discovery News with a weekly weather notice, the only true and authentic account will considerably enhance the value of our paper.

We beg here to state that the thanks of all on board are due to the unflagging industry and zeal of their printer Benjamin Wyatt; without his unflinching attention to the work which he has performed, it would have been impossible for this

paper to have gained the popularity and success it has met with.

Thoughts on the Floe

I consider the aspects of nature here, are more impressive than in many other regions.

The snow-clad mountains in their shadowy darkness at even-tide, the brilliant moon surrounded by a clear and cloudless sky, and which silks illumes and shadows all, impart a to all

countless myriads of such as we, have been swept from this earth out of sight, and not a

single natural law been disturbed, or a moment's cessation been caused in the silent march of creation. Our civilization and familiarity, certainly have a tendency to make us pass with little thought or notice the wonderful works of

nature on earth and air; but I think it is almost confined to the few who visit these regions, to observe the Majesty of the Great Creator as exemplified on the third natural element.

As the majority of our ideas of grandeur and importance are formed from comparisons, so from a falling brook or rivulet we build up our imaginations, until we eventually form an idea even of the great Niagara; familiarity having made us conversant with the devious and uneven course of our brook or rivulet through all its vicissitudes; and thus we allow our mind to multiply and create the magnitude and phenomena of bodies of water, and often err but little. Furthermore we ought to bear in mind when viewing this scene, that the potent force of these immense masses of ice is equal to that of a grandeur and sublimity; the expansive force of water when freezing being known to rend asunder the stoniest rocks and strongest vessels in which it may be contained. The motive force imparted to it by wind and waves is directly in union with its other characteristics, this force being such that no floating construction known or likely to be known can withstand it, its solid and firmness of flotation (by virtue of its formation) being proof against any resistance

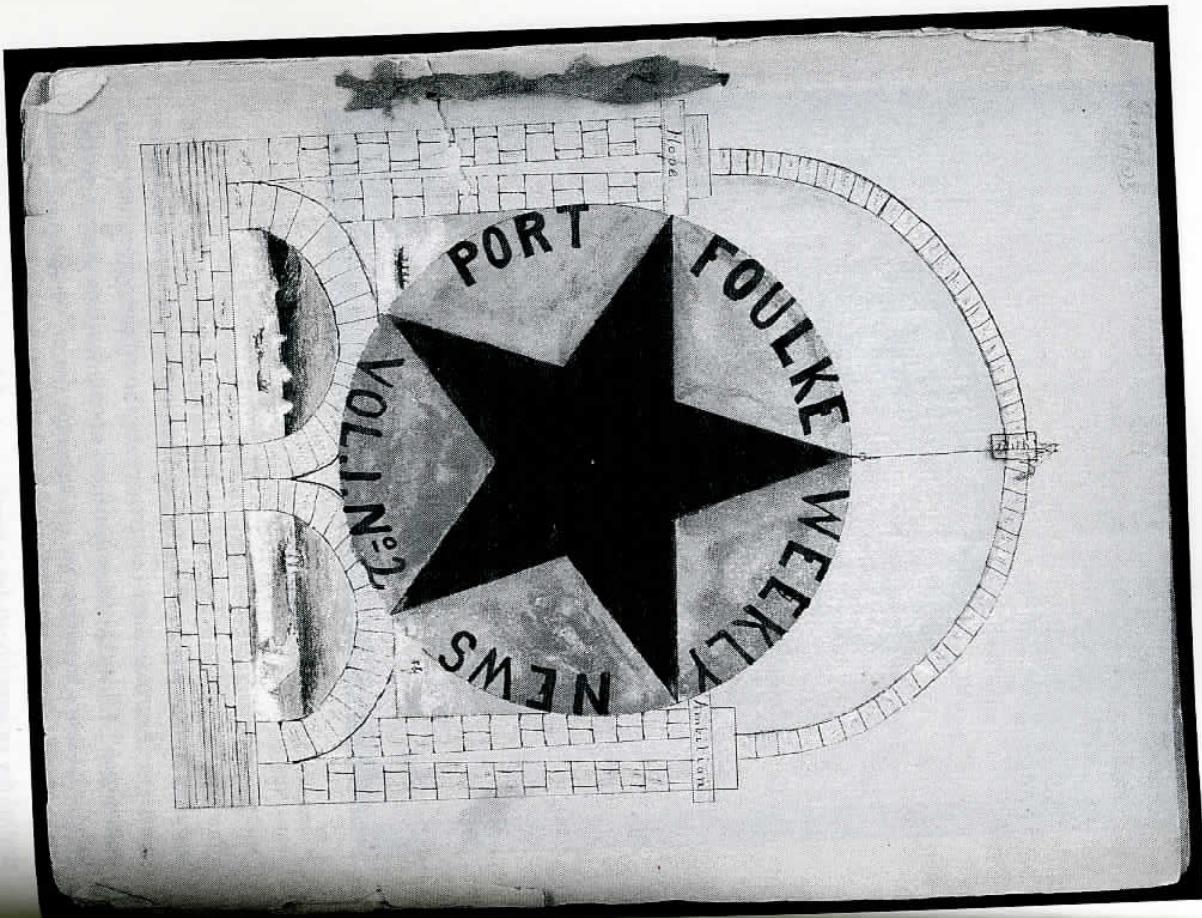


FIG INTRO.8 — *Port Foulke Weekly News*, Manuscript newspaper aboard *United States*, Isaac Israel Hayes's Arctic expedition, 1860–61. NEW-YORK HISTORICAL SOCIETY.

FIG INTRO.9 — *Discovery News*, PRIVATE COLLECTION OF DOUGLAS WAMSLEY.
USED WITH PERMISSION.

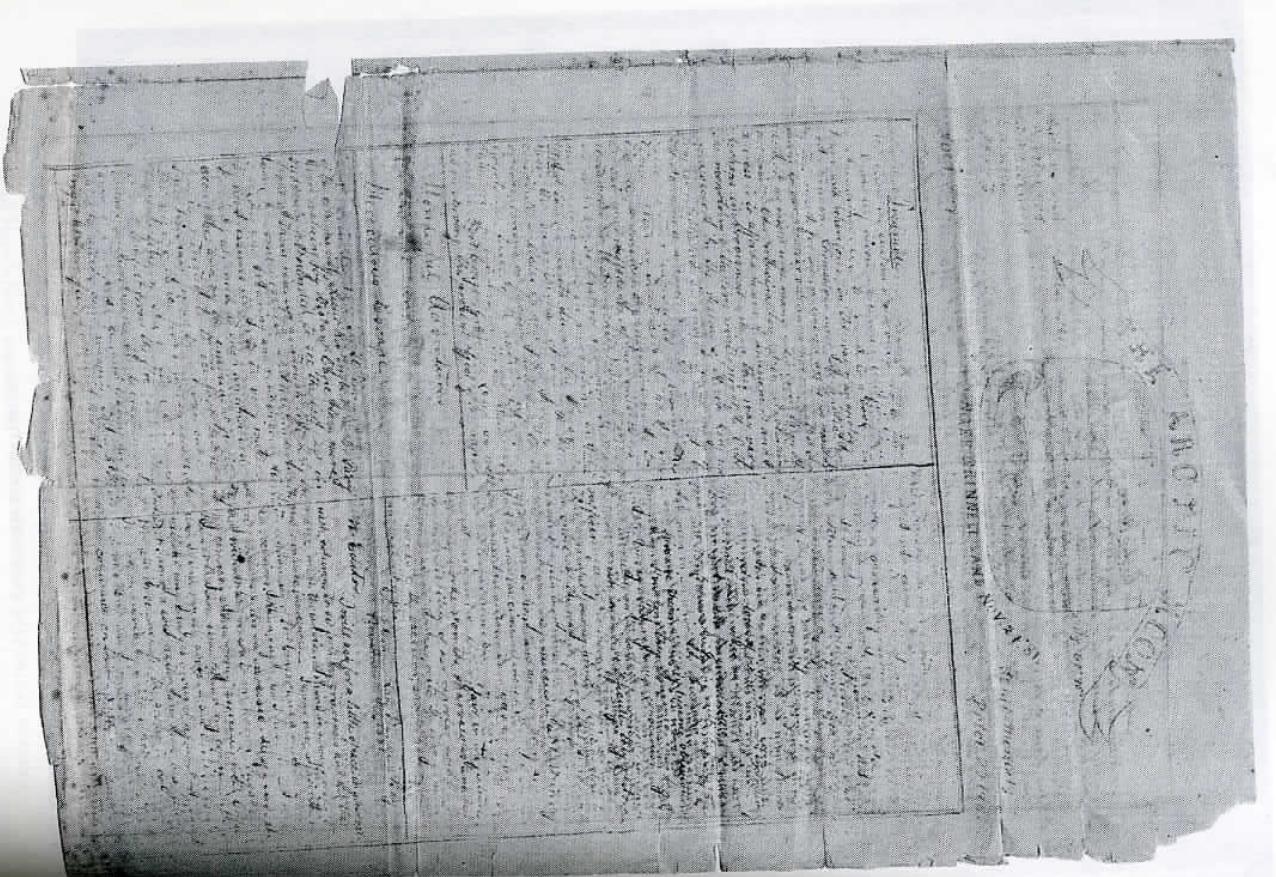


FIG INTRO.10 — *Arctic Moon*. Adolphus Greely Papers, 1846–1973. COURTESY OF DARTMOUTH COLLEGE LIBRARY.

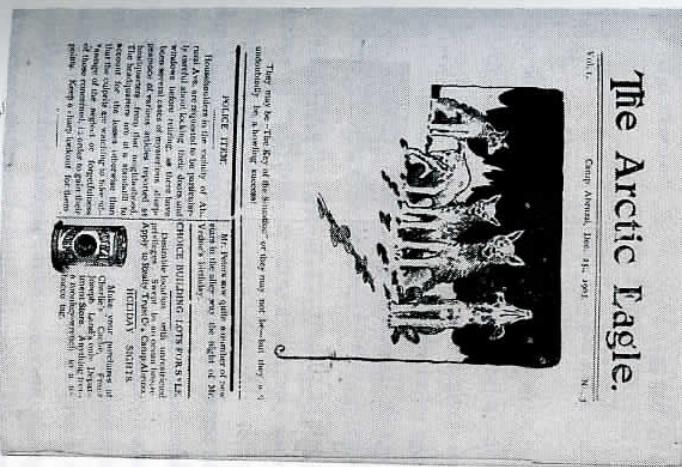


FIG INTRO.10 — *Arctic Moon*. Adolphus Greely Papers, 1846–1973. COURTESY OF DARTMOUTH COLLEGE LIBRARY.

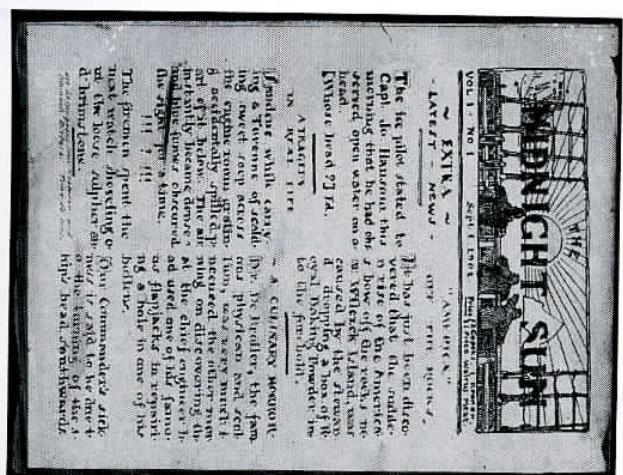


FIG INTRO.11 — *Midnight Sun*, Ernest deKoven Leffingwell Papers, 1900–1961. COURTESY OF DARTMOUTH COLLEGE LIBRARY.

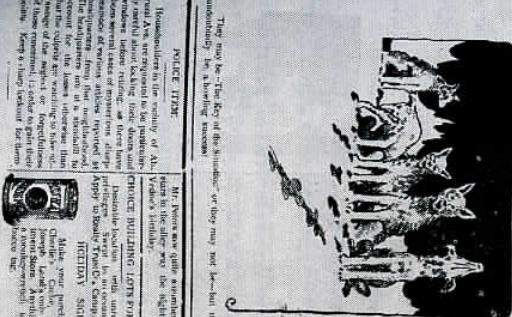


FIG INTRO.12 — *Arctic Eagle*. Harry H. Newcomb Papers, 1897–1958, MS 257. GEORGE J. MITCHELL DEPT. OF SPECIAL COLLECTIONS AND ARCHIVES, BOWDoin COLLEGE LIBRARY.

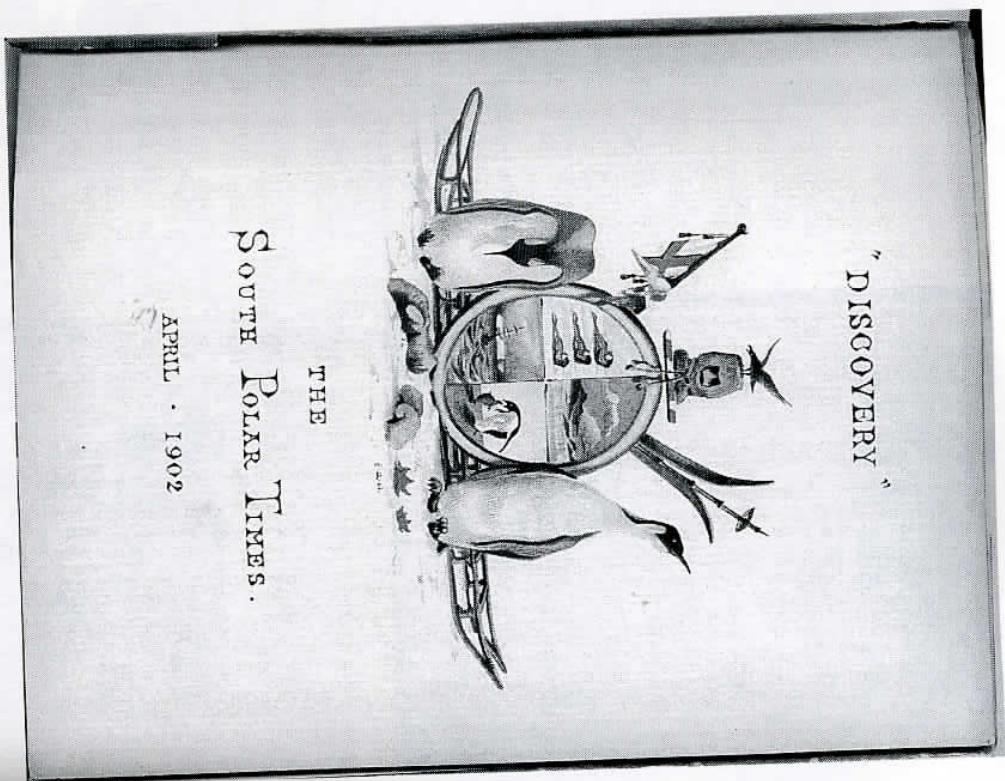


FIG INTRO.13 — *South Polar Times*. COURTESY OF DARTMOUTH COLLEGE LIBRARY.



FIG INTRO.14 — *The Blizzard*. MS 856. SCOTT POLAR RESEARCH INSTITUTE,
UNIVERSITY OF CAMBRIDGE.

the end of a contribution to *Aurora Australis* explains, “but rather in the contemplated meteorological, geological, and mineralogical memoirs of this expedition.”²⁵ The poetry that appears in Arctic and Antarctic printing is droll and aspires to wit; it includes special-occasion menus in verse (“The Dessert’s much as usual—you’ll all know the reason/ ‘Tis difficult here to get things out of season”);²⁶ complaints about polar problems such as condensation (“And in the middle of the night/ In our sleeping bags there’s a riot./ Someone turns and screws about,/ And gets in such a pet,/ Says he cannot sleep any more,/ ‘Cause his sleeping bag is wet”);²⁷ and parodies of well-known literature (“Once more unto the beach, dear friends, once more/ Or live for ever on the legs of crabs”).²⁸ And yet this content amplified—even as it was designed to ease—the time and distance between the expeditions’ location and resources and the usual journalistic and literary center of the metropole.

But if polar newspapers were a form of social media, a collective production of unbounded diffusion while in extremity, then they embody pages of the gazettes. “The place for scientific results is not here,” a note at paper, of course, but they also serve as ironized scare quotes referring to the performance of quotidian habit in the Arctic. In many ways we might see newspapers as the social media of polar expeditions. Contributions to polar newspapers, for instance, focused on interpersonal or canine affairs (intrigues among the sled dogs were a popular topic); the scientific and exploratory aims of the missions rarely made the pages of the gazettes. “The place for scientific results is not here,” a note at

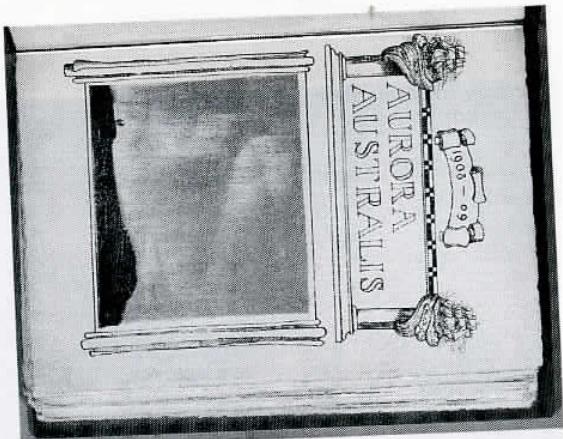
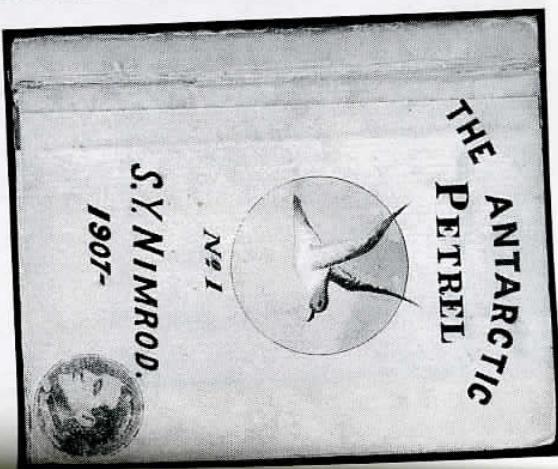


FIG INTRO.15 — Ernest H. Shackleton, ed., *Aurora Australis* (Antarctica: Printed at the Sign of "The Penguin" by Joyce and Wild, 1908). JOHN CARTER BROWN LIBRARY.

FIG INTRO.16 — *Antarctic Petrel*, no. 1, British Antarctic Expedition, 1907–9. MS.0261. ALEXANDER TURNBULL LIBRARY, WELLINGTON, NEW ZEALAND.



boundedness at the same time, as their producers were literally confined to ships while wedged in ice. Produced in regions and at times of year hostile to demarcations of hour, day, and global positioning, Arctic and Antarctic publications did not regularize time so much as they marked its dilation. Polar newspapers did not regulate space either, as they became an alternative medium by which expedition members worked through questions of time, space, and human geography. The Arctic and Antarctic regions have long duration in climatic extremity. The Arctic and Antarctic regions have long presented imaginative and strategic impediments to stable possession, given the geophysical challenges of sustaining human life. But when faced with the natural antagonism of the extremity of polar conditions, nineteenth-century expedition members did not draw blanks; they printed gazettes. The very act of *printing* texts in the Arctic and Antarctica represents an attempt to make a mark in an icy, oceanic environment hostile to customary forms of inscription, whether locational, imperial, or infrastructural.

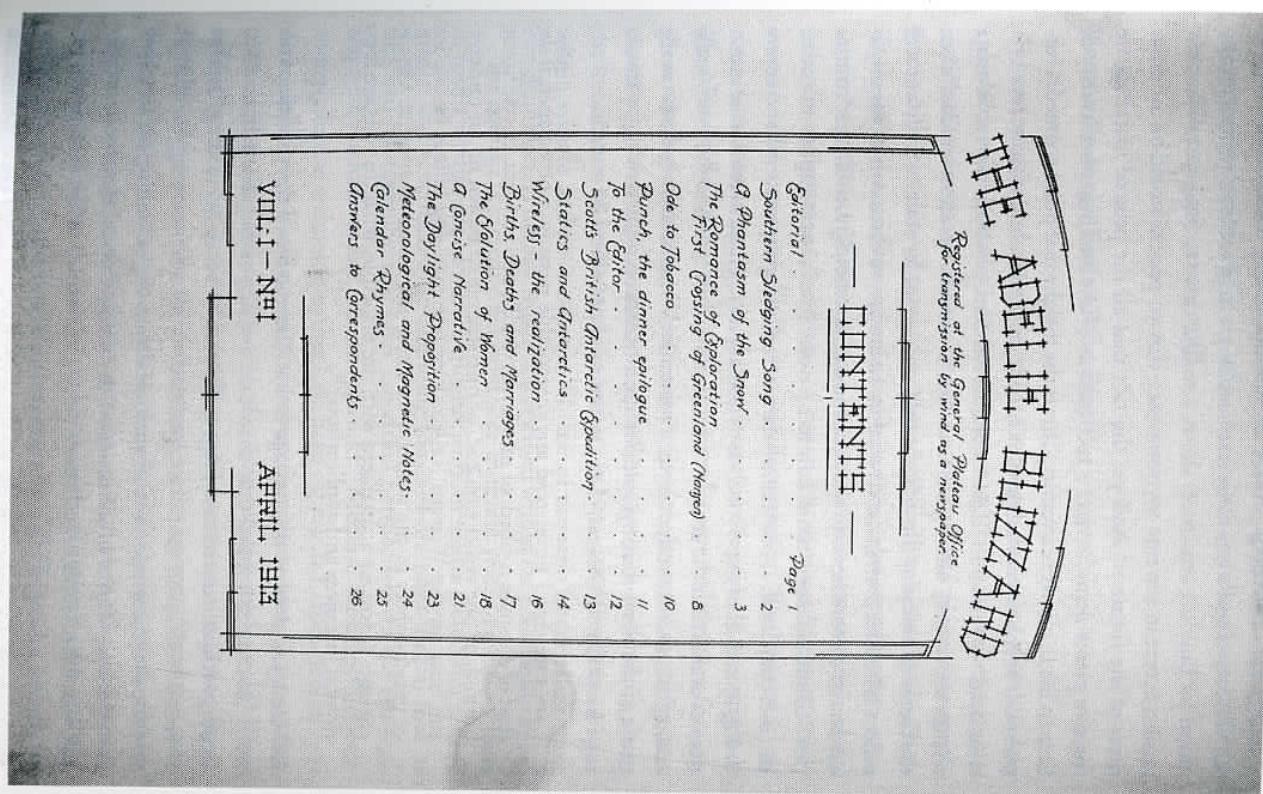


FIG INTRO.17 — *Adelie Blizzard*. SOUTH AUSTRALIAN MUSEUM, AUSTRALIAN POLAR COLLECTIONS.

(Analogously, a robotics project by scientists at the University of Southern California and NASA aimed at installing a large-scale 3D printer on the moon for building structures shows a similar drive to imagine production infrastructure in extreme environments; that 3D printer would be the polar press of the future.)²⁹ And yet the fact that all the printed materials are fugitive pieces demonstrates a recognition of the fleeting ephemerality of human life in climate extremity. This is the insight that polar ecomedia furnishes: it is ephemera designed to encode its motion and its ice-carved retreat in its very creation. If, in Stephanie LeMenager's observation, "climate change represents, among other things, an assault on the everyday," then the forms of everyday life will not only change under climate crisis but will reflect it in their content and creation. In her astute extension of the implications of climate news to the very form of *news* itself, LeMenager continues, "Climate change 'news' fails to be 'news' insofar as it implies an end to the everyday itself.... Extreme weather, including superstorms and severe drought, and all of these conditions that are taking hold as *conditions* rather than as events shift the ground of habit and call attention to the profoundly ecological, interdependent state of humanity."³⁰ LeMenager introduces the genre of the news to conversations about Anthropocene writing by invoking Henry David Thoreau's lofty rejection of periodical information:

I am sure that I never read any memorable news in a newspaper. If we read of one man robbed, or murdered, or killed by accident, or one house burned, or one vessel wrecked, or one steamboat blown up, or one cow run over on the Western Railroad, or one mad dog killed, or one locust of grasshoppers in the winter—we never need read of another. One is enough. If you are acquainted with the principle, what do you care for a myriad instances and applications?³¹

LeMenager's gloss on this passage is that Thoreau hated the concept of the news "because it implied that 'the world' is a disposable externality, a serial fiction with an iterative and forgettable plot."³² Yet to my reading Thoreau (who was well up on the polar expeditions of his time) is noting the collapse of temporal distinctions, read ecologically, as well as calling for serial—if asynchronous—forms of information to emerge from the natural world itself.³³ In other words, he calls for those in "the world" to be attentive not just to the natural world, but to the natural world-as-media. In the polar regions, the genre of the news and the medium of the newspaper are self-conscious registers of the ephemerality of life in climate extremity. Rather than the banal, quotidian repetition that tires Thoreau, the evanescent nature of

news is the subject of polar papers. If climate change disrupts the notion of the everyday, then we might see in the extremities of polar climate a disruption of diurnal timescales, as well.

Ecomedia at the Ends of the Earth

By naming icebound newspapers, cairn messages, and other expeditionary ephemera *polar ecomedia* I do not intend to argue simply that these polar exploratory communication materials are the bits and pieces that constitute a different class of ecomedia. More broadly, I am interested in how we might understand the ephemera of historical polar expeditionary communities within ongoing scientific and humanistic conversations about how the environment and forms of communicative media are mutually constituted—and mutually in flux and degeneration. The continuity of these questions across historical time is one of the primary arguments of *The News at the Ends of the Earth*. The term "ecomedia" denotes, for one, the technological media used to register complex systems of ecological and environmental change. It indicates as well an approach to thinking about the imbrication of media forms (whether art, film, data visualization, etc.) within systems and environments. My use of the term understands these two definitions as fundamentally intertwined within the polar landscape.³⁴

The coinage "ecomedia" has been used in recent years by some scholars in media studies (in conversation with work in media archaeology, dead media, and ecocriticism) in analyzing forms of nonprint media, such as film and photography, that offer ecocritical perspectives on the relationship between humans and the natural world.³⁵ Media archaeology uncovers communicative technologies that have been superseded, discarded, or rendered obsolete, on the logic that narratives of supplanted media can inform our understanding and deployment of communicative media today. They *inform* both in the sense of providing information and in giving form, revealing the processes by which historical media are constituted and subsequently dismantled or preserved. In Jussi Parikka's account, media archaeology understands "media cultures as sedimented and layered, a fold of time and materiality where the past might be suddenly discovered anew, and the new technologies grow obsolete increasingly fast."³⁶ The practice of media archaeology seeks to disrupt narratives of smooth technological advancement told by conventional progressive histories. "If history" is a term that means both what happened in the past and the varied practices of representing that

past,” Lisa Girelman writes of media and history, “then media are historical at several different levels.” Media are artifactually of the past, for one, but they also produce a sense of pastness—and thus a temporal collapse—as “using media also involves implicit encounters with the past that produced the representations in question.”³⁷ What distinguishes polar expeditionary media from other forms is that their very creation and reproduction occur under conditions of transience and displacement. Not confined to the standard ephemeral genres they inhabit (the newspaper, the blank form), polar ecomedia are produced—and subject to modification and obsolescence alike—in extremity, ecologically and geophysically. Their inevitable desuetude occurs within an environment in which human life and nonhuman geological and aqueous processes alike are precarious. Yet for all this precarity, polar ecomedia such as periodicals and blank forms presume a futurity, readers and writers to come. Within such extreme environments, polar ecomedia are not just responding to climate conditions but encoding their effects within the very evolution of the media themselves.

In *The News at the Ends of the Earth*, my extraction of works of polar ecomedia from expeditionary history is in part an attempt to imagine sustainable communication cultures, ones whose revelatory power emerges in concert with the ecologies in which they are produced. In his work on “ecosonic media,” Jacob Smith argues for a “green-media archaeology,” in which the exhumation of abandoned technologies likewise functions “as part of a search for more sustainable media cultures of the future.” Smith cautions scholars of media archaeology, though, not to relegate the communication devices of the past to some “quirky” cabinet of curiosity; they persist.³⁸ Polar ecomedia are situated in the time of the Anthropocene, and as such are continuous both with an arc of modernity predicated on resource extraction and global commerce and a futurity that must reckon with their planetary effects. I join media archaeologists in affirming the weird temporalities of polar communicative texts. Telling stories like these, Parikka writes, requires beginning “in the middle—from the entanglement of past and present, and accept[ing] the complexity this decision brings with it to any analysis of modern media culture.”³⁹ If, as Siegfried Zielinski writes, “media worlds are phenomena of the relational,” then the ecomedia produced *within* conditions and locations of climate extremity communicate *about* climate extremity, both in form and content.⁴⁰ In his striking work on elemental media environments, John Durham Peters characterizes media as “vessels and environments, containers of possibility that anchor our existence.” In arguing that environments can be seen as media (just as media

are themselves environments), Peters proposes that media “not only send messages about human doings and our relations with our ecological and economic systems; they are also . . . constitutive parts of those systems.”⁴¹ It is in this sense that polar ecomedia differentiate themselves from contemporary works of ecomedia, which strive to represent or communicate ecological conditions to its viewers, auditors, or readers. Polar ecomedia surpass representation to exemplify in their very ephemerality the processes of drift, erasure, acceleration, and change endemic to Anthropocene life.

Writing about and in the Anthropocene is a “question of *mediation*,” or how “media operate conceptually in geological time,” as Tobias Boes and Kate Marshall stipulate, and the work of media archaeology in this sense is, in part, to excavate the layers of accumulation even while recognizing that such conceptual work only contributes to the accretion.⁴² Mediation in this case is not arbitration or resolution but rather a condition that forms (or calls into awareness) a connection.⁴³ The term “polar ecomedia” likewise does not necessarily refer to the mediating element itself but rather to the aggregate product of the intercession between the nonhuman environment and the human agents existing within and shaping it. In this book I am working from and speaking to the fields of the environmental humanities, material textual studies and the history of print, oceanic studies, and the literature and history of polar exploration; my reworking of ecomedia in a polar context reflects this critical genealogy throughout the book.⁴⁴

Questions of linguistic or conceptual insufficiency have been occupying environmental humanities scholars and others attentive to climate change in recent years. On the one hand, as Dipesh Chakrabarty has argued in a foundational essay, the crisis calls for academics to set aside disciplinary distinctions—to rise above their disciplinary prejudices—as all human history, from the vantage point of the Anthropocene, is contemporary.⁴⁵ On the other hand, as Rob Nixon writes, the Anthropocene presents a broader representational challenge: “how to devise arresting stories, images, and symbols adequate to the pervasive but elusive violence of [the] delayed effects” of “slowing unfolding environmental catastrophes.”⁴⁶ One appeal of Anthropocene-framed thinking to humanities scholars is its necessary disruption of modes of inquiry organized around disciplinary boundaries, as Tobias Menely and Jesse Oak Taylor observe. By understanding “the Anthropocene as a narrative,” they propose, we recognize the “inherently fictional and yet epistemologically productive quality of any periodizing marker.”⁴⁷ Academic distinctions are not the only categories reshaped by Anthropocene-thinking; the nature of knowledge itself is at issue. “What

does it mean to generate knowledge in the age of climate change?" ask Ian Baucom and Matthew Omelsky, observing that "climate change discourses have reshaped the contemporary architecture of knowledge itself, reconstituting intellectual disciplines and artistic practices, redrawing and dissolving boundaries, but also reframing how knowledge is represented and disseminated."⁴⁸ In her work on climate fiction and the Anthropocene, LeMenager sees in climate change a "struggle for genre," or "the struggle to find new patterns of expectation and new means of living with an unprecedented set of limiting conditions." The concept of the "everyday," in turn, "frays in this unique moment of global ecology," an observation that has implications for understanding polar newspapers, as I discuss further below.⁴⁹

Scholars working in the environmental humanities have been bringing humanities methodologies and critical thinking to information generated, in part, by the sciences and other disciplines. One of the benefits of this approach, as Nixon says, is that "creative people are using objects to try to release stories about the Anthropocene that have the capacity to inform and surprise."⁵⁰ For LeMenager and Stephanie Foote, a key to this "capacity to inform and surprise" is the humanist's skill with storytelling, a narrative and argumentative strategy that "provides adaptable points of view, ways of seeing the world that can be picked up, pieced apart, borrowed and bricolaged into modes of resistance and response."⁵¹ Genre fiction and other modes of art and expression have been responsive to climate change for several decades, even if Amitav Ghosh questions why "serious fiction" has not made climate change a topic worthy of the imagination.⁵² As Foote suggests, one question might be whether aesthetic production is even the way to approach slow-moving climate change; Timothy Morton proposes that climate change is too enormous a concept or reality for the human mind to grasp fully;⁵³ What these various interventions share is an interest in the play of narrative form, a commitment to disciplinary heterogeneity, and a conviction of the inadequacy of previous timescales, whether academic or geological.

Polar media require different critical modes. Although their production and circulation is exceptionally constrained in practice, the sphere of their influence is oceanic in its implications. In examining écomedia and other polar circuits of knowledge, I am alert to literary and textual production and circulation in oceanic terms, on a scale beyond the human and outside of linear time and space. In considering what epistemic forms and practices are sustainable in the Arctic or Antarctica, I explore what forms of oceanic exchange (both imaginative and material) are continuous with polar écomedia—that is, exchange not defined by relations between nation-

states or by linear trajectories.⁵⁴ Oceans cover 71 percent of the earth, but human visualizations of the globe insistently privilege a terrestrial perspective; most students are trained to recognize the shapes of continents, but not the bodies of water that give them form. As the seas are rising as a result of the melting of polar ice caps, the contours of the land that interrupts the aqueous globe are themselves transformed, whether low-lying islands or coastal cities. Oceanic studies is invested in recognizing the artificiality and intellectual limitations of certain kinds of boundaries—national, political, linguistic, physiological, temporal—in studying forms of literary and cultural influence and circulation.⁵⁵ The sea must be "a space of circulation because it is constituted through its very geophysical mobility," in Philip E. Steinberg's formulation.⁵⁶ A fundamental premise of oceanic studies is that familiar patterns of relationality (capital, national, planar, human) dissolve in the space and time of the sea. If, in other words, many scholars now view history from the bottom up, or nations in terms of their transnational or hemispheric relations, or the colonizer as seen by the colonized—to gesture to just a few reorientations of critical perception in recent decades—then what would happen if such scholars took the oceans' nonhuman scale and depth as a first critical position and principle? While transnational forms of exchange (whether cultural, political, or economic) have historically taken place via the medium of the sea, only recently have humanities scholars paid attention to that medium itself: its properties, its conditions, its shaping or eroding forces. The sea is "continually being reconstituted by a variety of elements: the non-human and the human, the biological and the geophysical, the historic and the contemporary," as Steinberg characterizes it, and in turn modes of oceanic thought are themselves predicated on relations whose unfixed, ungraspable contours are ever in multidimensional flux.⁵⁷ Still, much as the polar regions are oceanic spaces that frustrate imperial or national ambitions, they are governed by geophysical forces and biological habits different from the fluid, unfrozen nautical world. In this sense, the question governing this book is not just *what* is the news at the ends of the earth, but *when* and *where* is the news at the ends of the earth.

Oceanic spaces are not friction-free, as the examples in this book demonstrate, and nor are the other environmental channels that support communications infrastructure, as recent critics have noted. The need for study of the very materiality of the infrastructure supporting networked communications—a materiality too often de-emphasized or hidden—is perhaps most evident in the rhetorical erasure of the hardware that enables the cloud to exist in wireless communications. Media and communication

studies, as Nicole Starosielski writes, have “focused on the content, messages, and reception of digital media and paid less attention to the infrastructures that support its distribution.”⁵⁸ An example of a counterpoint to such neglect is Michael Warner’s recent work on the power grid (and on what it means to go offgrid). He highlights the pervasive abstraction of the idea of the grid, an abstraction that does not make visible what form of primary energy—oil, gas, coal, solar, wind, or geothermal—fuels the secondary electricity in use when flipping a light switch, say.⁵⁹ In her work on undersea cables, Starosielski too observes that when “communication infrastructures are represented, they are most often wireless . . . directing our attention above rather than below and reinforcing a long-standing imagination of communication that moves us beyond our worldly limitations.”⁶⁰ In bringing into relief the apparatuses that undergird resource and media networks, both Warner and Starosielski note that these circuits are imagined as frictionless. Or, as John Durham Peters puts it, “Infrastructuralism shares a classic concern of media theory: the call to make environments visible.”⁶¹ In Starosielski’s formulation, the result is “a cultural imagination of dematerialization: immaterial information flows appear to make the environments they extend through fluid and matter less.” In arguing against the notion that a “fluid” environment is smooth or turbulence-free, Starosielski is not using fluidity as a metaphor; she is analyzing the actual oceanic environments through which digital cables pass. But these are not stable or untroubled environments, as she argues in her description of the “turbulent ecologies” of digital media: “Turbulence is a chaotic form of motion that is produced when the speed of a fluid exceeds a threshold relative to the environment it is moving though. . . . Turbulence is rarely a direct and purposeful opposition to flow. Rather, it describes the way that social or natural forces inadvertently create interference in transmission simply because they occupy the same environment, in the end contributing to the network’s precariousness.”⁶² In conceiving of the undersea world as part of the network of contemporary digital communications itself, Starosielski provides a schematic for thinking of Arctic and Antarctic spaces too. The polar regions are both fluid and ice-stalled; while geophysically re-moved from modern trade routes, the Arctic in particular has nevertheless been a speculative global passage for many centuries, a fantasy of planetary access that global warming is increasingly making a reality.

The ephemera and other forms of polar ecomedia created by polar expedition members provide a provocative model for understanding the oceanic contours of literary exchange. What forms and practices of thought are

sustainable in the Arctic or in other regions beyond the political world, in the actual Ultima Thule? What do these knowledge practices tell us about human acts of inscription in and on a natural world under increasing threat? Polar exchange in the form of newspapers is, on one hand, the most quotidian in the world; the distance between the *Illustrated London News* and the *Illustrated Arctic News* is not that great. On the other hand it can be seen as the most eccentric, in the sense that the supposed blankness and barrenness of the polar regions both exceed the kinds of traffic we think of as part of global or intranational exchange and also stand as its limit.

Ultima Thule

The polar regions are ever in the headlines. Interest in the Arctic and Antarctica is at a new pitch in our present moment of anthropogenic climate change and resource depletion. The late eighteenth-century advent of industrialization marks the beginning of the Anthropocene, in some accounts, and the measurements for such study are geometrically proliferating in our present moment.⁶³ For one, Arctic ice is melting at potentially catastrophic rates as a result of climate change, turning the warm open polar sea of nineteenth-century fancy into an oceanic reality in parts of the Arctic North in recent summers. Circumpolar oil and gas reserves are increasingly targeted for mining in response to human fossil fuel overconsumption. Five nations (Canada, Denmark, Norway, Russia, and the United States) have coastal claims to the North Pole, and thus by extension to any mineral rights in its radius. Russia even planted a titanium version of its national flag on the seafloor at the North Pole to secure its assertion. The Canadian discovery of one of John Franklin’s ships on the seafloor in the summer of 2014 prompted that nation’s prime minister Stephen J. Harper to avow that finding the British ship, lost for 169 years, “strengthened Canadian sovereignty in the North,” which had been one of the Harper administration’s broader aims.⁶⁴ (Indeed in 2017 the U.K. Ministry of Defense transferred ownership of the two ships to Canada.) In May, 2015 U.S. President Barack Obama authorized the oil giant Shell to resume drilling in the Chukchi Sea off the Alaskan coast, although Shell ultimately pulled out after accruing over \$4 billion in exploratory costs. Obama did conclude his presidency with sweeping environmental protection orders for the Arctic and other U.S.-claimed oceanic spaces under the power of the Outer Continental Shelf Lands Act (a law that came into being in the mid-twentieth century

to secure U.S. oil and gas drilling rights, ironically); Donald Trump granted new Chukchi Sea well permits to an Italian oil company in July 2017, however, and in early 2018 moved to open to drilling all U.S. claims to Outer Continental Shelf lands. Russia and other Northern powers have been re-opening circumpolar naval bases and commissioning new icebreakers for their northern fleets. At the same time, in unanticipated news, a substantial portion of the immense West Antarctic ice sheet was determined in 2014 to be on the verge of unstoppable disintegration, which will lead to a precipitous rise in global sea levels; in 2017 it was reported that “miles of ice [are] collapsing into the sea.”⁶⁵ Satellite footage of the Yamal peninsula in Siberia has shown giant new holes in the earth, and while the initial images looked as if they could have been created by hoaxical hollow earth websites, the craterers seem to have been caused by methane gas explosions triggered by the thawing permafrost and rising air temperatures caused by climate change.⁶⁶ As the methane holes in Siberia warn us, holes in the earth are not only the cause of climate change (via drilling and other modes of resource extraction), but also the product of it, as methane gas is released from the softening permafrost. Long-dormant diseases are rising from the thawing permafrost as well. However remote and inhospitable Antarctica and the Arctic might remain for the lived experience of most humans, the global significance of the regions registers across space and time—well beyond our present moment, even as the Arctic, in particular, has been in many ways an Anthropocene bellwether.

Recent literary and theoretical explorations of the environmental humanities, oceanic studies, deep time, environmental justice, and planetarity all reflect a growing interest in the long-reaching global effects of recent human actions, for human agency in the Anthropocene, as Boes and Marshall have argued, must be “radically open to nonhuman influences.”⁶⁷ At the same time Dana Luciano cautions us to be mindful that “the ‘Anthropocene’ was not brought about by all members of the species it names”; the human toll in the Anthropocene is more commonly visited upon indigenous people and those in the developing world, populations not always included in notions of a “humanism” figured as universal but shored up by racial and imperial violence.⁶⁸ Stacy Alaimo has similarly maintained that “questions of social justice, global capitalist rapacity, and unequal relations between the global North and the global South are invaluable for developing models of sustainability that do more than try to maintain the current, brutally unjust status quo.”⁶⁹ These and other critical interventions recognize the finitude of human technical and mechanical control over and

around the globe. For historical polar explorers, these mechanical limits existed to be tested. Today the insatiable demands by industrialized and developing nations for fossil fuels have refigured the Arctic and Antarctica again as bountiful—at least for capitalism. The early nineteenth-century mania for Arctic exploration, the early twentieth-century obsession with Antarctic missions, and our present turn to both polar regions in an attempt to maintain human resource-consuming habits all coalesce around resources, whether natural or intellectual, and include a recognition of their limits. The news reported from the ends of the earth has consequences not just for the North and South Polar regions themselves but for the planet.

The polar regions might be said to speak in the sense that their ecological mortality discloses information about our planet’s past and threatened future. The Arctic and Antarctica are, in turn, given expression by humans in various forms of writing and other media. These have included voyage accounts and expeditionary diaries, such as Parry’s *Journal of a Voyage for the Discovery of a North-West Passage from the Atlantic to the Pacific* (1821), Elisha Kent Kane’s *Arctic Explorations: The Second Grinnell Expedition in Search of Sir John Franklin* (1856), and Apsley Cherry-Garrard’s *The Worst Journey in the World* (1922); poetry, fiction, and film on ice as sublimity or terror, such as Samuel Taylor Coleridge’s “Rime of the Ancient Mariner,” John Carpenter’s *The Thing* (1982), and Elizabeth Bradfield’s *Apocalypse Ice* (2010); Arctic indigenous communications, trade routes, and travel networks, such as the Inuit navigational landmark cairns known as Inuksuit; data and accounts from climatologists, ecologists, glaciologists, biologists, and other scientists, such as the information used to track anthropogenic climate change; and visual and plastic artistic creation, such as the paintings of William Bradford and Peder Balke, the films of Guido van der Werve, the photography of An-My Lê, the installations of Olafur Eliasson, and the printmaking of Pitseolak Ashoona.

In nineteenth-century fiction and poetry, the realms of ice were imaginatively encountered beyond the reach of geophysical or temporal regulations. Readers could travel to the milky, boiling South Polar seas of Edgar Allan Poe’s *Narrative of Arthur Gordon Pym* and the warm open Arctic sea that was Captain Walton’s objective in *Frankenstein*; stand poised on the verge of the hollow earths of “Adam Seaborn’s” *Symzonia* and James De Mille’s *Strange Manuscript Found in a Copper Cylinder*; or step out of nation-time in Harriet Prescott Spofford’s “The Moonstone Mass” and in Captain Littlepage’s Arctic reveries in Sarah Orne Jewett’s *Country of the Pointed Firs*. Polar sublimity in works of fancy drew from the published

journals and voyage narratives of Arctic and Antarctic explorers in the period. While the extremities of the actual worlds described in expeditionary accounts of the frozen zones may not have reached the fanciful pitch of their fictional interpreters, the voyage narratives, too, brought news of a region outside of easily classifiable Western notions of geoplanetary space or diurnal time. The poets and novelists of the nineteenth century turned to the language of the Burkean sublime to frame their imaginary encounters with the Arctic, drawing from polar expeditions' extensive coverage in print. They emphasized the North's frigid stillness, and in an ideological move analogous to that of early Europeans in the Americas, inaccurately described the Arctic as an uninhabited wasteland.

Actual expeditionary venturers, on the other hand, met the unutterable or annihilating aspects of polar experience not with the awestruck silence of the sublime but with a density of textual production, in a variety of genres. The *Illustrated Arctic News* and the nearly thirty other shipboard newspapers and other polar ecomedia that I have researched across dispersed archives constitute one form of text through which sojourners to the Arctic and Antarctica mediated their experience. While researchers in media studies have been in rich critical conversation with ecocritics, scholars of book history or the history of the material text have had relatively few sustained engagements with the environmental humanities. This book aims to kindle more such dialogue by attempting to reconcile the structural estrangement of print culture from ecocriticism. In its isolation from industrial centers, Arctic coterie publishing and other forms of ephemeral inscription are positioned to provide fresh perspectives on the polar regions and print spheres alike. Arctic and Antarctic printing also gives us new ways to think about literary publics. If, in Michael Warner's provision, a public "comes into being only in relation to texts and their circulation," then what kind of public is constituted by a newspaper created by and for thirty-odd men on a single frozen-in ship, a thousand miles from the nearest English reader?⁷⁰ If for Benedict Anderson a newspaper produces imagined communities, what happens when those communities are not anonymous or broadly dispersed but constitute the entire "nation" in a single intimate body?⁷¹

The Arctic and Antarctica have functioned as teloses for conceits of global influence from early modern mapmaking to our resource-hungry present. The extent and implications of this reach—from polar vortices to rising seas—is only increasing, and oceanic forms of ecomedia demand that we reconceive of the relationship between message and audience, as geographical as well as temporal remove. The geophysical distance of the

Arctic and Antarctica from standard or expected print and communication spheres is one condition of this reorientation. The modes and organs of transmission of texts within polar and oceanic environments are often incommensurate with our usual understanding of print circulation. Polar news emerges from and records other temporalities, whether in the form of lost expeditions, the geologic history discernible in polar ice, or the future global destruction scoured in melting ice. In these ways we might think of polar news as always belated, or ever frustrating linearity.

Questions of resource identification and management, Arctic and Antarctic preservation and exploitation, and climatic variation have ever been the lede for stories about the polar regions. How did the first largely white, Western voyagers beyond the Arctic and Antarctic Circles understand the scale of their own news as it circulated within the geophysical space of the poles? *The News from the Ends of the Earth* takes that question literally, exploring the difference in resources—both material and intellectual—presented by polar spaces. By *resources* I refer both to the ecological substance of the polar regions, in their remove from predictable routes and terms of exchange, and to the imaginative and ecomedia output of polar exploration, which is often ephemeral and itself does not follow recognizable circuits. *The News at the Ends of the Earth* is attuned to the tension between the oceanic or global ambitions of polar voyages and the remarkably tenuous and circumscribed conditions of their practice.

I open this book with three chapters on the newspapers and other printed materials created in the Arctic and Antarctica and discuss how expedition members used the generic form of the periodical to work through questions about their time, place, and impermanence in the polar regions. The final two chapters turn to forms of ecomedia such as Arctic dead letters and Inuit knowledge circulation, both of which have broader critical and theoretical implications for the study of the environmental humanities and literary history alike. The chapters do not strictly observe chronological order, for polar history is not a narrative of linear progression, as I have been suggesting. Accounting for polar ecomedia, from the nineteenth-century expeditionary age to the present, demonstrates instead the asynchronous nature of oceanic forms of exchange. Both the evidentiary basis and intellectual ambitions of this project argue for the revelatory force of ephemera. The first Arctic newspaper, the *North Georgia Gazette*, and *Winter Chronicle* of Parry's first Arctic expedition (1819–20), was a novelty and

provoked some unexpected questions about how expedition members contributed (or else acted as NCs or noncontributors) to the shipboard community. Yet as I discuss in chapter 1, “Extreme Printing,” the availability of printing presses aboard Arctic-voyaging ships beginning in 1848 transformed the practice of newspaper production among polar sailors. The output from Arctic presses was conditioned by and responding to specific polar environmental conditions, I argue. The genre of the newspaper—an ephemeral form associated with diurnal time—was put to use by Arctic- and Antarctic-voyaging sailors in their meditations on polar temporality, community, and circulation. Once tabletop printing presses found their way aboard ship, expedition members adapted them to their literary and theatrical ends. Chapter 2, “Arctic News,” examines the rich variety of post-1848 Arctic newspapers, including the *Weekly Grey*, the *Discovery News*, the *Port Foulke Weekly News*, the *Arctic Eagle*, the *Illustrated Arctic News*, and the *Aurora Borealis*, newspapers by ships engaged in the search for Franklin in the early 1850s, as well as other forms of printing related to shipboard theatrials and entertainments. The forms of exchange that took place within the pages of these newspapers in the second half of the nineteenth century had a more expansive sense of contribution and collective exchange, both within the expeditions themselves and within the polar regions more generally.

Expeditions to Antarctica in the early twentieth century—the so-called heroic age of exploration—produced the most lavish of all polar publications. Shackleton was central to two of the most elaborate ventures: the *South Polar Times*, which he edited while an officer on Scott’s British *Discovery* expedition of 1901–4, and *Aurora Australis*, the first book printed in Antarctica, which was published by members of Shackleton’s own *Nimrod* expedition of 1907–9. The book, published in about one hundred copies, of which eighty-plus are extant, consists of 120 pages of mixed-genre material, bound with the materials that were at hand, from orange crates to horse halters to boxes that once contained strewed kidneys. The heightened professionalization of the book arts practiced by Antarctic voyagers is just one distinction between publications of the North and the South: the subject matter of Antarctic periodicals turns more explicitly to climate change and environmental science, and chapter 3, “Antarctic Imprints,” examines the increased expertise of the onetime amateur polar publishers within the context of an increase in narrative accounting for the planet’s climatic variability.

Newspapers were not the only media to circulate among polar expedition members, as the second part of *The News at the Ends of the Earth*

details. Chapter 4, “Dead Letter Reckoning,” ranges widely over a form of ecomedia that I call “Arctic dead letters.” These consist of the cairn messages, notes in bottles, cached documents, mail, and other periodic circuits of delivery or connection in geophysical spaces that would seem otherwise to frustrate human exchange networks. Polar expeditions were required to leave messages in cairns or other outposts at regular intervals, in multiple copies, often on preprinted forms in six languages. Other official documents were printed aboard ship. Even though thousands of bits of paper were distributed throughout the Arctic in the nineteenth century, it was exceptionally rare for one of these messages to be found or received; most remained in circulation for an open-ended period of time and may yet emerge today, as ice melts and permafrost thaws. In their risk of annihilating dispersion and their potential for ceaseless drift, Arctic dead letters exemplify the unboundedness of polar ecomedia in its attenuated temporality, randomness, and morility.

The career of the unconventional American Charles Francis Hall is a somewhat different example of an exchange of knowledge whose circuits are both routine and extravagant within and without the Arctic regions in the long nineteenth century. The fifth chapter, “Inuit Knowledge and Charles Francis Hall,” focuses on Hall’s accounts of the circulation of subsistence and intellectual knowledge as well as historiography between himself and Inuit residents of the Arctic regions. Hall was unusual among most nineteenth-century Anglo-American explorers in choosing to adapt to indigenous lifeways; his relationship to nautical epistemology as practiced by white sailors was more complicated (and violent). His exceptional path to and within the Arctic, accompanied along the way by the Inuit couple Ipiirviq and Taquilitruq (or Ebierbing and Tookoolito, as they were known to the American public), helps to delineate how Arctic indigeneity has been figured within oceanic models of intellectual circulation.

I close *The News at the Ends of the Earth* with a brief coda on a thwarted Arctic expedition and on matters of life and death. Subsistence and mutual cooperation have become especially urgent issues in the Anthropocene. But although the temporalities of life and death are usually conceived in human terms, this book joins other humanities work on the Anthropocene in shifting our scales of relation from the human to the nonhuman, from the global to the planetary, and, in my argument in particular, from the terrestrial to the oceanic.

The course of my work on this project in some ways mirrors the trajectory of the British and American explorers I study. Initially I brought to my

polar archival findings a scholarly approach practiced in my earlier work in oceanic studies, maritime narratives, and material text studies. The topography of this research, however, has demanded additional methodologies for my critical navigation, drawn from the environmental humanities, Anthropocene studies, and media studies. The archives of ice ring with a special ethical urgency today. I thought my preoccupation in recent years with the news coming out of the Arctic and Antarctica was a consequence of being an ecologically concerned citizen in the Anthropocene, a by-product of my historicist impulses; it turns out, though, that the archive of news from the polar regions in the past several hundred years (and across geological time) was speaking to me as well. It is my hope in this book to amplify what that deep and mobile repository of polar ecomedia can tell us.

ONE

EXTREME PRINTING

Captain Parry! Captain Parry!
Thy vocation stops not here:
Thou must dine with Mr. Murray
And a quartto must appear.

— SAMUEL TAYLOR COLERIDGE, "Captain Parry" (1825)

... North Cornwall has not had as yet its Caxton.
— advertisement for *Queen's Illuminated Magazine* (1852)

Polar newspapers were created and printed in conditions of extremity in multiple senses. The expeditions for which newspapers formed the shipboard social media, for one, were journeying toward latitudinal extremes approaching 90° S or N. Polar expeditions had infrequent contact with an Anglophone public after a point, and thus the potential for circulation of the media they produced was necessarily exceptionally limited. While their isolation was not complete—in the Arctic, Anglo-American explorers had frequent contact with Inuit and other indigenous peoples and routinely employed Inuit guides—Western expedition members, in their cultural chauvinism, imagined themselves at a supreme distance from others. The meteorological conditions and attendant environmental hardships of life in the polar regions are also notoriously extreme; the mechanical acts of writing and operating printing equipment become challenging in turn.

This chapter describes how sailors came to print at the polar ends of the earth, concentrating on the outfitting, mechanics, and production of presses