Methodological Challenges in Nature-Culture and Environmental History Research

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Routledge
Taylor & Francis Group
LONDON AND NEW YORK

First published 2017
by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

and by Routledge
711 Third Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library

Library of Congress Cataloging-in-Publication Data
Names: Thorpe, Jocelyn, editor. | Rutherford, Stephanie, editor. | Sandberg, L. Anders, 1953- editor.
Title: Methodological challenges in nature-culture and environmental history research / edited by Jocelyn Thorpe, Stephanie Rutherford and L. Anders Sandberg.
Description: New York : Routledge, 2016.
Identifiers: LCCN 2016019446 | ISBN 978-1-138-95603-2 (hbk) | ISBN 978-1-315-66592-4 (ebk)
Subjects: LCSH: Human ecology—Research—Methodology. | Natural history—Research—Methodology. | Nature—Effect of human beings on—Research—Methodology.
Classification: LCC GF26 .M46 2016 | DDC 304.2072/1—dc23LC record available at https://lccn.loc.gov/2016019446

ISBN: 978-1-138-95603-2 (hbk)
ISBN: 978-1-315-66592-4 (ebk)

Typeset in Goudy
by FiSH Books Ltd, Enfield

"The book opens up a world of possibilities. Contributors invite us to rethink established modes of academic production, to decolonize our methodological inheritances, to find ways to understand and trace nonhuman actors as well as engage with the full palette of human sensory perception. Doing research requires us to take chances and to put ourselves out there – this collection does that and more." — ***Steven High, Concordia University, Canada***

"Thorpe, Rutherford and Sandberg have brought together a team of brave and gifted interdisciplinary scholars, who assiduously and judiciously scrutinize the generative intersections amongst place, body, mind and spirit. The contributors provide effective commentaries on the methodological challenges faced by scholars looking for voices beyond conventional texts and archives, and give me hope that navigating such methodological challenges will yield fresh, elegant and generative results." — ***Joy Parr, University of Western Ontario, Canada***

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3 Experiencing Earth art

Or, lessons from reading the landscape

Marsha Weisiger

At high noon, we arrive at the Cowboy Bar and Café in Montello, Nevada, a godforsaken town on the alkali flats of the prehistoric Lake Bonneville near the Utah state line. Three companions and I are making a pilgrimage to *Sun Tunnels*, artist Nancy Holt's monumental earthwork, completed in 1976, where we will observe the setting sun of summer solstice. We will not be alone. Fellow pilgrims—latter-day hippies and artsy college kids from Salt Lake City and Reno—trickle into the bar for burgers and beers before venturing back into the white heat of the Great Basin Desert. I strike up a conversation with a couple of locals, who confess that they never have felt sufficiently curious to make the half-hour drive to this major work of art, even though they admit that there is little to do here but play the slot machines and fish at a nearby reservoir. That's too bad, because *Sun Tunnels* offers the chance to see their familiar landscape anew.

As evening draws near, we head out into the desert, eager to get to our destination well before sundown. Following sketchy directions, we pass active sand dunes, bump down a series of washboard graveled roads, and miss a turn before at last we see what look like sewer pipes splayed in the distance. Just as we arrive, a hellacious sandstorm whips across denuded wastes. At first we huddle by our cars, but soon we realize the wind and sand may never let up. Reluctantly, we emerge and inspect the four concrete tubes, each eighteen feet long with eight-foot-diameter openings, configured in an open cross and aligned with the rising and setting sun of the summer and winter solstices (Holt 2011). We scurry inside one of the tunnels, where it is cool and calm. Along each of the cylinders' walls, perforations admit dappled sunlight designed to represent one of four constellations—Draco, Perseus, Columba, and Capricorn—while also serving as oculi, eyes opening to the sky. The large openings at each end align so that pairs of tunnels appear to form two rings, one encircling the other, creating an aperture that frames distant peaks. *Sun Tunnels* is thus a kind of desert observatory, connecting land and sky.

Nancy Holt designed *Sun Tunnels* so that visitors would experience both the expansiveness of the Great Basin landscape and the intimacy of specific landforms located in the circular frame (Lippard 2011). "I wanted to bring the vast space of the desert back to human scale," the artist explained in an essay in *Artforum* shortly after completing the work. "The panoramic view of the

landscape is too overwhelming to take in without visual reference points. The view blurs out rather than sharpens. Through the tunnels, parts of the landscape are framed and come into focus." *Sun Tunnels* encourages visitors to consider place, scale, the relationship of earth to cosmos, and "a sense of being on this planet, rotating in space, in universal time" (Holt 1977, p. 35). It has the power to alter the viewer's perspective.

At the moment, though, all I perceive is the wind, whipping up the ancient remnants of Lake Bonneville, coating my hair, my nostrils, my lungs, my entire being with silt.

Before long, more than fifty pilgrims have arrived, mostly twenty-somethings, who seem oblivious to the wind and sand. A number of them scale the cylinders, using the perforations as hand- and toeholds, and once on top, some dance while others extend their arms and legs in yoga poses. It is clear that for these millennials, *Sun Tunnels* is a tactile, playful construction. A small group congregates within one of the tubes and gyrates to recorded music with an African beat.

"It's like a night club in there," one of my friends remarks. The dancers seem not to notice the framed peaks in the distance or the clouds moving across the oculi. They engage in a full body experience, erotic and trippy in the swirling sand.

As the hour approaches, I circumnavigate the earthwork and then stand directly in front of the two tunnels that will line up with the setting sun, seeking the best vantage. Soon my friends join me. We wait. At some unspoken signal, the revelers stop the music, slide off the tubes, and assemble behind us in silence. We wait. And wait. Losing patience, three women walk back to the cylinders, hoist themselves on top, and trill ethereal melodies on flutes. Two men enter the paired tunnels and perform synchronized handstands. And then at long last, the moment comes. The orange orb arcs across the aligned orifices, which glow with golden light, like a pair of wedding bands. Three minutes later, it's over. The sun sinks below the horizon. The dust continues to blow.

One friend wonders aloud whether all this sand is the result of erosion created by the artist herself. Had Earth Art created Earth Damage? Constructing *Sun Tunnels* had involved road graders, ditch diggers, dump trucks, a concrete mixing truck, a crane, and even a helicopter (Holt 1977). Clearly, the ground immediately around the cylinders had been scraped bare, which undoubtedly allows the wind to lift sediment aloft. But was this earthwork ultimately to blame? I had to consider the fact that this was the former bed of a Pleistocene lake, and we had passed active sand dunes miles away. What we were witnessing was surely geological erosion at work, though no doubt accelerated by the artist and her pilgrims.

To see a work of Earth Art (also commonly called Land Art), the visitor must generally make a pilgrimage—to a desert, a forest, a quarry, a mine—and experience the work bodily or performatively by walking above it, across it, around it, through it (see, for example, Hogan 2008). In the process, the visitor engages in a direct encounter with the natural world. Earth Art transforms the visitor, as the art critic Jeffrey Kastner has written, "from observer of nature to participant in

it" (Kastner 1998, p. 16). Earth Art also illuminates what can be learned about the environmental history of a place by walking the land.

One of the research methods that sometimes distinguishes environmental history from most other historical fields is an approach, borrowed from historical and cultural geographers, that involves examining the land as a primary source. We call it "reading the landscape." Geographer Alyda C. Hanson (1922) coined the phrase, stating that it involved "seeing, recognizing, and interpreting … the natural and cultural phases" of the land, "especially their interdependence" (p. 217). It was akin to reading a book, she added, in that it could be skimmed or studied intensively. A generation later, the naturalist May Theilgaard Watts (1957) adopted the phrase and pioneered the methods we use to discern the human imprint in the mosaic of grasses, shrubs, trees, rivers, ponds, bogs, and dunes. Even today, her guidebook remains the best introduction for detecting the hidden human presence in what otherwise seem like "natural" landscapes. Geographers, geomorphologists, naturalists, and urban scholars have built on the foundation she laid, creating specialized methods for their particular disciplines. (Lynch 1960; Brown 1969; Marks and Gardescu 2001; Duncan and Duncan 2009; Brierley et al. 2013; Brierley and Fryirs 2014). It is, in fact, possible to "read" landscapes—both rural and urban—much as you would read a somewhat challenging text, so long as you have some knowledge of a landscape's ecological and physical processes, the cultures of those who worked in the landscape, changes in aesthetic fashion over time, and what the geographer D. W. Meinig called "the beholding eye" (Clay 1973; Lewis 1979; Meinig 1979; Francaviglia 1991; Cronon 2008).

Geographer William Wyckoff (2014) offers the most comprehensive field guide to reading landscapes in the United States, although its focus is on the American West. He advises us to pay attention to both geological and historical time and to be aware of the scale of a given landscape, keeping in mind that the extent of the area you can observe from a given vantage point may be smaller than the landscape unit you are studying. When you stand on the ground and look around you, what do you see? If you look down from a hill or a tall building, how does the change in scale alter your view and understanding of the landscape? If you fly over the area, how does the scale of the landscape change, and what new patterns and connections do you see? Now, observe the physical evidence of the ways that people have both transformed and adapted to the natural environment. This may be obvious or require considerable detective work, using maps, historical photographs and documents, field guides of various sorts, and an eye for anomalies on the ground. Follow the flow of water and note how it is exploited and managed. Examine the buildings, structures, and infrastructure and consider what they communicate about fashion, culture, economics, power, and connections. Notice the density of development and the transition zones between neighborhoods, between cities and suburbs, between grasslands or sagebrush and forest. Pay attention to the ways in which government or private ownership, local regulations, power, wealth, poverty, labor, ethnicity, race, gender, and cultural diffusion are manifest in the landscape. Finally, look for

symbolic expressions of nationalism, ideology, cultural identity, and nostalgia. Each landscape has different combinations of these elements, and some are more readily apparent than others.

Because landscapes are culturally and historically produced, you must be attuned to the different types of features you might encounter in a particular place. The geographer Richard Muir's guide to reading the landscapes of Britain (2000), for example, explains how to identify and interpret standing stones, Roman roads, dykes, moats, and medieval wood-management systems. Trees with numerous trunks rising from the same point and looking much like inverted octopus tentacles, for example, indicate coppicing, a medieval method of harvesting woodlands that encouraged trees to produce new shoots, which could be harvested on a regular cycle. Earthen embankments, crowned by hedges or pollards—coppiced trees with the branches high above the reach of livestock—embraced these woodlands, reflecting the trend away from commons and toward enclosures. Different landscapes offer different possibilities. And yet, as Wyckoff writes, "every landscape has a human imprint" (2014, p. 23). It is up to us to figure out how to recognize, reveal, and render its meaning (Ingold 2000).

One might think of the land as a palimpsest. Remnants of past developments form layers, one atop the other, or side-by-side. If we were archaeologists, we might dig down through the strata to develop a history of the *longue durée*. But it is also possible to examine the surface and see layers of history over time. Novices might take along an archaeologist, an ecologist, a geomorphologist, or an architectural historian, someone specially trained to read the stories inscribed, embedded, or built in the environment. The assistance of an elder from a local Indigenous community might offer especially valuable insights passed down from one generation to the next (see, for example, Breen 1989; Basso 1996). To be sure, observing landscapes is insufficient. One must look, read, go to the archives, and look again (Lewis 1979). Documentary research and the examination of historical maps and photographs are necessary to corroborate, correct, contextualize, and comprehend what you see on the ground. And yet the landscape holds many clues to the past that likely cannot be found in the written record, and walking the land can raise research questions that one would otherwise never know to ask.

I have long taken students in my environmental history classes on field trips to learn the value of reading landscapes. A recent trip near our campus in Eugene, Oregon, took us by a duck pond, which seems to emerge from underneath a shuttered Chinese restaurant. As we walked, we noted that the pond narrows into a creek, overgrown with weeds, and an old boathouse sits on one side of the water, across from the university's art studios. The creek continues for a little more than five hundred meters and then disappears among clumps of trees and a cluster of apartment and commercial buildings. We made our way toward the Willamette River, beyond a park and a strangely stagnant stream, perhaps backwater. A path carried us through a tunnel under a railroad crossing, and when we emerged, there was the river, where a sign proclaiming CAUTION, PUMP INTAKE SCREEN drew our attention. We looked through the murky Willamette and saw a rusting pipe with a screen over its open end. Further down

the path, an old graffiti-covered concrete embankment lay below us, near the stream. Here the path comes to an end near a tangle of roadways, railway tracks, and a pedestrian bridge. We took the bridge across the Willamette. But about midway, we stopped and looked back, peering through binoculars. To our right, a broken slab of concrete juts from the shore. To our left, in the middle distance, four concrete piers rise in a line across the river, and from the pier closest to the south bank, a concrete beam extends to a sand island. Several of the students mentioned that they had floated by those structures while kayaking down the river but were not sure what to make of them. Our investigation of the land raised questions but did not give us clear answers.

Fortunately, I had brought with me a collection of historical maps, which—along with investigations of photographs and the written record—revealed that the duck pond was once a millpond, and what looked to us like a creek or a stagnant stream was once a millrace. First excavated in 1851, five years after Eugene Skinner founded the town, the race once powered a cluster of mills that produced flour, lumber, furniture, doors and sashes, excelsior, and wool. The traces of these mills lie buried beneath a modern commercial district and a highway interchange, about a half-mile from the millpond. Following a series of floods between 1874 and 1890, which scoured the Willamette's channel, the owner of the millrace built a small dam to divert water from the river and increase flow into the raceway. The embankment and the concrete slab, piers, and beam are the remnants of that diversion structure. The pipe lying in the river was added a half century later as part of a pumping system to bring fresh water into the millrace, which by the 1920s—after electricity made water power obsolete—had become a popular recreational site for college students on romantic canoe rides. (Sanborn Map Co. 1888, 1895, 1902, 1925; "The 1890 Flood," *Eugene City Guard*, 8 Feb. 1890; Gill, et al. 1979; Kramer, Minor, and Toepel 2007).

Across the bridge, we found more puzzles. "Pre's Trail," named for track star Steve Prefontaine, a local legend, follows what's known as the "Canoe Canal." We assumed that this was a continuation of the millrace. It flows past some expensive-looking houses, passes through a large pond, and eventually empties into the Willamette River, across from the old mill district. Was the pond here another millpond? As it turned out, the answer is no. Aerial photographs reveal that the pond was created sometime in the mid-1970s. Moreover, the Canoe Canal is not a canal at all. It is a slough, a remnant of the braided Willamette River, which changed course in the disastrous flood of 1890 and left what modern maps label "Patterson's Slough" as a side channel (U.S. Army Corps of Engineers 1936; City of Eugene 1974; U.S.G.S. 1975, 1978). Maps and photographs helped solve some of the mysteries of this landscape, but it was through walking the land itself that we discovered our first clues.

Reading the landscape has been important not only to my pedagogy, but also to my scholarship and that of other environmental historians. Historian Mark Fiege (1999), for example, gained crucial insights regarding hybrid landscapes as he walked the irrigation canals and ditches of southern Idaho's Snake River

valley. While hiking along the Blitzen River, historian Nancy Langston (2003) stumbled on five slaughtered coyotes, which signified the vicious conflicts over land management that have shaped Oregon's high desert, for good and for ill. As for myself, reading landscapes proved crucial to my study of the environmental history of Diné (Navajo) pastoralism in the southwestern United States (Weisiger 2009). That study examined the history of livestock grazing on the Navajo Reservation and a New Deal program to cut the numbers of sheep, goats, and horses by half, in an unsuccessful effort to conserve rapidly eroding rangelands. At the beginning of my research, I was mystified as to how soil conservationists could distinguish overgrazing from the natural effects of aridity, drought, wind, and water, and how those men could produce a detailed evaluation of a landscape stretching across 25,000 square miles within only a few years. Walking through desert grasslands with range ecologists, I learned to recognize hummocky ground, snakeweed, and other plants as markers of overgrazing. Afterwards, I could not travel through New Mexico without seeing the evidence of hammered land everywhere I looked. Hiking through canyons with archaeologists, I acquired a spatial understanding of early Diné settlement and the ecological challenges of raising livestock on stingy ground. Flying in chartered airplanes over the Navajo Nation—just as New Deal conservationists had done in one of the earliest examples of aerial photographic surveys—I gained a landscape view of large-scale erosion resulting from a combination of overgrazing and climate change. But Earth Art taught me something new about reading the landscape.

Earth Art was the vanguard of an environmental art movement. It arose in the mid-1960s among a group of New York artists who shared an anti-Establishment, anti-authoritarian ethos and chafed at the commodification of art by investors (Boettger 2002). Many used remote western landscapes as their canvas so that, as sculptor Michael Heizer wrote, "the artist has no sense of the commercial or the utilitarian," which galleries and collectors favored (quoted in Wallis 1998, p. 30). The environmental art movement encompasses a wide array of approaches, ranging from Christo and Jeanne-Claude's temporary installations, such as the nylon *Running Fence* shimmering through a rural landscape in northern California, to Michael Heizer's *The City*, monumental altars in the Nevada desert that evoke the ruins of Chichen Itza, to reclamation projects, such as Nancy Holt's *Up and Under* at a sand quarry near Tampere, Finland, or Betty Beaumont's underwater *Ocean Landmark*, three miles off the coast of New York's Fire Island National Seashore (Boetzkes 2010). Some of this work helps us to see nature more clearly. Andy Goldsworthy's ephemeral arrangements of leaves articulate the turbulent current of a river, while Walter De Maria's one-mile by one-kilometer grid of stainless steel poles in the New Mexico desert makes visible subtle shifts in light from one moment to the next. What most of these artists have in common is that they facilitate a conversation about our relationships with the natural world.

Earth art emerged in the cataclysmic year of 1968, both anticipating and reflecting the rise of modern environmentalism. Robert Smithson—who would

become the movement's philosophical voice—published a kind of manifesto in *Artforum*, titled "A Sedimentation of the Mind: Earth Projects" (Smithson 1968/1969), and organized an exhibition of ten artists at the Dwan Gallery in New York City under the simple title "Earthworks." Many visitors didn't quite know what to make of that exhibit, which featured Smithson's trapezoidal arrangement of boxes of rocks and Robert Morris's formless mound of dirt, peat, grease, and felt, pierced by aluminum, zinc, copper, and brass rods, bringing to mind the messy rubbish of a construction site. None of this was the kind of art that buyers sought to acquire. That was the central narrative, but there was a subtext, too. Smithson had named the exhibit after Brian Aldiss's dystopian novel, in which a burgeoning population has so exceeded Earth's resource base that even soil is a precious commodity and the only solution to overpopulation appears to be apocalyptic global war (Wallis 1998). Within this context, then, the "Earthworks" exhibition—though not political in any conventional sense—offered a caustic commentary on American materialism and the commodification of both art and nature.

The most celebrated extant earthwork is Smithson's *Spiral Jetty*, created in 1970 near Rozel Point on the edge of the Great Salt Lake in northwestern Utah. Made of six thousand tons of basalt rock and mud, the fifteen hundred-foot-long coil seems to unwind from the shore into the lake. The lake's hypersalinity was crucial to the work. Pigmented bacteria (*Halobacterium*) and algae (*Dunaliella salina*) thrived in an environment that was transformed from highly saline to hypersaline in the 1950s, when the construction of an earthen railroad causeway isolated the lake's northern arm from fresh water inlets to the south (Post 1977). Those microorganisms gave the water a deep red hue, which contrasted with the black basalt. For Smithson, the red water evoked images of blood coursing through veins and arteries. The lake thus brought to mind, he wrote, the essence of life—not only blood, but also the "masses of cells consisting largely of water, proteins, lipoids, carbohydrates, and inorganic salts" (Smithson 1972, p. 228). At the same time, *Spiral Jetty* expressed Smithson's fascination with spirals, with geological processes, with the physical laws of entropy, and with the dialectic between nature and industry (Smithson 1971).

Smithson explicitly rejected the romanticism often associated with environmentalism. While he appreciated the sublime qualities of the Great Salt Lake, what most interested him was the juxtaposition of the sublime with signs of industrial ruin—old abandoned piers, fragments of oil rigs, a sticky black tar pool, all remnants of intermittent oil drilling operations between the 1920s and the 1980s. The site near Rozel Point, he wrote, "gave evidence of a succession of man-made systems mired in abandoned hopes" (Smithson 1972, p. 223). When people came to view his work, he hoped they would see the detritus of abandoned oil drilling operations along the way. (Unfortunately, in 2005, the state of Utah, which owns the land, hauled off the rusting junk relating to these drilling operations (Sinor 2008).) This interest in drawing attention to industrial sites later led him to create or propose earthworks at disused quarries and exhausted strip mines. Speaking of proposed projects for strip mines, he mused in an interview

with the art historian Stella Russell that it seemed that "on the one side you have ... the extreme preservationist ecology groups operating, and then on the other side you have the rather blind profiteering, and there seems to be no connection, no dialogue between the two areas. So I hope to create some consciousness in that area" (Smithson 1973, p. 2). Smithson sought to create art that would mediate the uneasy relationship between humans, industry, and nature (Jones 2005).

With *Spiral Jetty*, he also sought to reveal the nature of the Great Salt Lake. The lake changes from season to season, and from year to year. Smithson anticipated and applauded these fluctuations. In summer, he wrote, "the water evaporates and leaves the salt crystals, and the water gets redder" because of the intensified salinity (Smithson 1973, p. 1). This metamorphosis, as the *Spiral Jetty* interacted with the salt, the water, and water's erosional power, was integral to Smithson's plan. By juxtaposing black rock against red water, by making clear the changing water levels, by accumulating and then shedding salt crystals, the *Jetty* told visitors something about the material reality of the lake.

I first visited *Spiral Jetty* on a cold, blustery day in May 2008. Storm clouds darkened the sky. After first stopping at the Golden Spike National Historic Site, which commemorates the completion of the first transcontinental railroad in 1869, three girlfriends and I bumped down a rutted and rocky road for fifteen miles until it became impassable. In the far distance, we could see Smithson's earthwork uncoiling into the lake. Our first impression was disappointment. *Spiral Jetty* seemed small and insignificant. We walked along a trail for about a quarter of a mile, past an abandoned wooden jetty. As we neared, we discovered that our initial perception offered a lesson in scale. This was part of Smithson's intention. "The scale of the Spiral Jetty tends to fluctuate depending on where the viewer happens to be," he wrote. "Scale depends on one's capacity to be conscious of the actualities of perception" (Smithson 1972, p. 225). Indeed, *Spiral Jetty* brings a human scale to an expansive waterscape that seems almost limitless, despite the mountains that bound it. The rocks and the mud between them were encrusted with salt crystals, and water lapped up between the coils. "Each drop that splashed onto the Spiral Jetty coagulated into a crystal," Smithson had observed. "Undulating waters spread millions upon millions of crystals over the basalt" (Smithson 1972, p. 228). *Spiral Jetty* expressed the saline nature of the lake, exactly as the artist had envisioned. He wanted visitors to walk the length of the spiral, and so we made our way down a long basalt promenade, followed the rocky path as it wound toward the center, and then retraced our steps to the point of beginning. *Spiral Jetty* is not monumental but meditative, reminiscent of a labyrinth in a watery Zen garden.

Most importantly, it makes us mindful of the lake. The Great Salt Lake is a barometer of local climatic conditions. A closed body of water with no outlets, it is both shallow and expansive and thus fluctuates according to long-term evaporation and precipitation. Over the course of the historical record, it has varied in height by about twenty feet, from a historic low point in 1963 to a high point in 1986. (Hassibe and Keck 1991; Lall and Mann 1995; DeRose et al. 2014).

Within two years after Smithson completed his masterpiece, lake levels rose

and *Spiral Jetty* disappeared. Hidden from view for two decades, it was known only through photographs. Then in 2002, the Great Salt Lake receded, and the earthwork emerged (Merrell 2002). It disappeared again in 2005 and reappeared the following year, as the lake advanced and retreated. From one year to the next, oscillating between deluge and drought, the lake submerged and exposed the work (Loe 2016; Palmer Drought Severity Index 2002–2015). *Spiral Jetty* became a marker for visualizing a volatile climate.

And yet knowing that did not prepare me for my return trip in June 2015.

After the solstice bacchanal at *Sun Tunnels*, my companions and I drove eastward for three hours to see *Spiral Jetty*. This time, the view stunned me. The earthwork had not disappeared. The lake had. Where once waters had lapped up against my shoes as I traced the arc of the *Jetty*, now the Great Salt Lake shimmered in the distance, like a mirage, a quarter of a mile or more away. White salt flats, not red water, surrounded the coil of black rocks. Might this be the new normal in an era of climate change? It is too soon to tell, but this work of Earth Art will surely let us know.

Earth Art, to be sure, provides an unconventional path toward reading landscapes. And yet it illustrates the many ways that one can learn about the nature of the land through careful observation, combined with more familiar archival research. The landscape itself can reveal the consequences of land management policies that defy understanding when we rely solely on the documentary record. Indeed, walking the land—and returning again and again, from one season to the next, one year to the next—is essential to understanding the dynamic landscapes environmental historians often write about. And best of all, it gets you outdoors and reminds you why you chose to study environment history in the first place.

Acknowledgments

I would like to thank Kate Bonansinga, Tim Cockrum, Elizabeth Horodowich, Jarma Jones, Steven Leone, Patricia McDowell, John Nelson, Colleen O'Neil, and Rachel Stevens for assisting me with this work in various ways. I also thank Julie and Rocky Dixon, the University of Oregon, the Redd Center for Western Studies at Brigham Young University, and the Southwest and Border Cultures Institute at New Mexico State University for their financial support.

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4 A resounding success?

Howling as a source of environmental history

Stephanie Rutherford

The word howl has a particular sensuousness to it. In some ways, it is almost onomatopoeic, invoking particular affective registers in its enunciation. For most of the wolf's history in post-contact North America, its howl generated a sense of dread. While the Indigenous people in this place that came to be called Canada had a different and more ambivalent relationship to wolves, when settlers heard these vocalizations, they understood them as spectral and unsettling reminders that the wilderness remained unvanquished. Settlers' fears were often compounded by the elusiveness of wolves in the landscape, heard but not often seen. Received as a mournful lamentation or the epitome of ravening devilry, the wolf's howl was resolutely understood as a sound out of place, one that needed to be silenced through the civilization of a newly emerging nation.

A different way to approach the howl of a wolf is to focus less on the human apprehension of the sound and more on why the wolves do it in the first place. Wolves howl for a range of reasons, none of which is related to human interpretations of wickedness and depravity. Generally used as a means of communicating over distances, wolf howls can achieve a variety of aims, from chasing away rival packs to locating one another. In the end, the wolf's howl is a tool for social bonding in a species marked by its capacity to build enduring relationships through time. As such, the howl is a kind of hailing, potentially understood as a gesture of friendship (Mazzini et al. 2013). Instead of giving voice to aggression—as settlers interpreted it—wolves may howl in joy at reunion, or to show love.

What are the implications of settlers' misrecognition? And how has the wolf howl shaped how Canadians have chosen to encounter wolves? This chapter considers the role of sound as a significant—though little studied—source of environmental history and awareness. Building on the work of environmental historian Peter Coates (2005), I suggest that howling has long been important to how humans understand wolves and their place in nature, particularly in Canada where their numbers remained relatively robust into the twentieth century. What is perhaps most interesting about the howl, however, is its contingent nature: its sonorousness has not been heard the same way through time. Indeed, once heard as a sound in need of erasure, the howling of wolves has now become something of a tourist attraction. This chapter seeks to think with this shift, and