

# NORTHSCAPES

## History, Technology, and the Making of Northern Environments

Edited by Dolly Jørgensen and Sverker Sörlin



UBC Press · Vancouver · Toronto

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## INTRODUCTION

# Making the Action Visible Making Environments in Northern Landscapes

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DOLLY JØRGENSEN and SVERKER SÖRLIN

Is there a history of the North? Since ancient times, the answer to this question has been no. History was the narrative of human action, and where human action seemed to cease in cold and ice there could be no history. This notion, derived from Hippocrates and Aristotle, who favoured the temperate zones, lived on well into the twentieth century. Alaska was a place of “cold, darkness, and monotony” wrote environmental determinist geographer Ellsworth Huntington, causing strain and inaction even on those who could have fostered “progress” in the far North. Therefore, “the man of action generally leaves Alaska because he is the one to whom the strain of inaction is least endurable during the unduly long winter.”<sup>1</sup>

In world historiography, the North has remained of marginal importance up until recent times, largely for the same reason: the stereotype of inaction, of little being at stake. With a few exceptions, the history of northern exploration, which already a full century ago was the subject of mighty tomes and an emerging literature on economic development in the far North, served precisely as the opposite of history: a non-history of no events and the silence that preceded action.<sup>2</sup> The people who happened to live there, few as they were and with unclear origins, were just another example of what anthropologist Eric R. Wolf would much later call the “people without history” – perhaps one of its most perfect examples.<sup>3</sup>

When history, later than most other academic disciplines, discovered the North, the kind of action historians were sensitized to from their studies of

action elsewhere came to light: political contestation, economic rivalry, diplomatic pursuits, violence and power, and the presence of government, Church, or military. Yet, what failed these historians was by and large a clear idea of the environment not as the restraining, deterministic factor Huntington saw it but as part of a relational human history where societies, cultures, and their natural conditions are studied in an integrated fashion.

Historians discovered the environment long before they took the North seriously, even though the idea that the environment as an integral part of history likewise entered historiography quite late.<sup>4</sup> The Marxist doyen of British historiography in the postwar period, E.H. Carr, wrote in his seminal Trevelyan lectures of 1961 that it was the task of the historian in “the study of man on his environment and of his environment on man ... to increase man’s understanding of, and mastery over, his environment.”<sup>5</sup> That was a brief and somewhat skewed foreboding of environmental history, which would soon burst out in earnest, starting with epic histories of environmental ideas by Clarence Glacken and Roderick Nash in the late 1960s.<sup>6</sup> After the Mediterranean awakening with the *Annales* School, a wide sweep across imperial geographies, and an array of smaller regional attempts in a number of disciplines, including geography and anthropology, as well as American geographers and ecologists writing an environmental history of sorts, the time was ripe in the 1980s and the following decades to write histories of various world regions. Environmental historians have now studied numerous regions of our planet, including Australia, the Pacific, parts of Africa, Latin America, Mexico, Southeast Asia, and even northern Europe, including Scandinavia, as well as written emerging environmental histories of entire nature types, such as oceans, mountains, marshes, forests, and deserts.<sup>7</sup>

Still, the North remained an empty space not just for environmental historians but for most historians. A general history of the North, or of the circumpolar regions, is yet to be found. The reason is not hard to see: apart from the old stereotype of emptiness and silence, the global North has not, until quite recently, been a region in its own right.<sup>8</sup> Divided into national spheres of influence and colonial possession, it has lacked unity and commonality in conventional political and economic terms. It has been perceived as not holding one history but many histories, and although these have been increasingly told in recent decades – as extensions of various strands of historical approaches, be it economic, technological, environmental, or political – virtually no one has attempted a common historical frame on a professional scholarly level.<sup>9</sup>

This book is an attempt to take up the challenge. Perhaps it is no coincidence that it is an attempt initiated within a network of environmental historians in a part of the world that is in itself part of the North. The idea, though raised a couple of years earlier, was adopted in the Nordic Environmental History Network (NEHN) in 2009, and a call for papers led to a selection of authors from around the northern hemisphere assembling for a three-day workshop in Stockholm in October 2010.<sup>10</sup> That environmental historians and historians of science and technology were keen to come together to discuss histories of the North shows that the kind of histories written in these fields have an eye to the qualities of the past that extend beyond political boundaries and are the products of human wayfaring and subtle relations between humans and the lands that surround them – qualities that can be hard to see for some but that are visible for those with the special skills to see how even the seemingly most empty space is also part of the human sphere, or the “life-world.”<sup>11</sup> This, of course, is also a kind of action, if only you can see it. In that sense, this is a book about writing – that is, making tangible – a history that is just about to be seen; it is a work on emergence.

### **What Is North?**

In the northern reaches of the northern hemisphere, nature poses unique challenges and provides unparalleled opportunities. Long, dark winters alternate with sun-filled summers, at least some years. Light is low, shadows long, as are the hours of dusk and dawn; in the furthest north they make up entire seasons of hazy half-light between day and night, a kind of third time. Ice, snow, and mountains seasonally restrain, seasonally facilitate inland travel; abundant seas act as highways for commerce and populations. The North is sparsely inhabited yet geographically vast, with large shares of both land and ocean. From the volcanic soils in Iceland to the boreal forests of Fennoscandia and Russia to the Canadian Shield, northern geography offers riches, but these do not come easily. Northern populations have over millennia and centuries carved out culturally and technologically functional life forms, which in turn shaped long-lasting environments. People who have come to the North in more recent times, whether they stay or move on, create distinctive northern environments of a different kind by adapting to its climatic and geographic conditions and at the same time turning landscapes to their own needs with new sets of technologies, trade, and social organization.

We recognize that North itself is not a single, definable concept. For our purposes, North is more than the Arctic (the subject of an increasing number of history volumes), but it is difficult to say where North begins on a map.<sup>12</sup> The attempts that have been made are not convincing, and the latitudinal limit, at any rate, varies considerably between nations.<sup>13</sup> In Scandinavia, with the warm Gulf Stream, North tends to overlap by and large with the official definition of the Arctic, which although defined as everything above sixty degrees north latitude, does not sit well with Scandinavian ideas of “arcticity.”<sup>14</sup> In the continental climates of Russia and North America, North is often located more southerly than sixty degrees north latitude. Rather, North is a space imagined by people themselves, part of an identity, or state of mind, that is held not just by individuals but by institutions and entire organizations.

We have taken this approach and considered North from our historical subjects’ perspectives. In spite of the difficulties of defining the geography exactly, North is a place where challenges of geography and climate are typically related to cold and inaccessibility, especially as seen from the outside, or to home, hearth, and in certain periods (like the present) even warming. Something inherent in these challenges creates similarities in the shaping of northern environments across the globe. We believe that North, then, is a valuable analytical framework that goes beyond nation-states and transgresses borders set up by previous politics and historical scholarship, which up until recent times have tended to focus on the respective North of each northern nation, mostly because each North has been ruled from a capital centre in the south.<sup>15</sup> This is in sharp contrast to the natural sciences, which for a long time considered, if not the entire North, at least the Arctic as a far more unified region, worthy of study for its exceptional properties and its cross-regional commonalities, an interest that has to some extent been shared by archaeologists and anthropologists but rarely by historians. That seems now to be changing, likely as an effect of the rise of the Arctic as a region of global economic and environmental significance, even going through a period of regionalization in the 1990s, a marked difference from the obscure and shrouded Cold War Arctic, which was in large parts closed off as a potential theatre of war.<sup>16</sup>

Our emphasis on the emergence of northern environments does not in any way overshadow the fact that the North and the Arctic have been for a long time squarely situated in geopolitical realities. On the contrary, these storylines concur; it is when the environmental significance of the North grows through colonization, resource exploitation, or climate change that

strategic and political interest intensifies. Thus, in the circumpolar north, environmental history has co-evolved with economic, diplomatic, and geopolitical history to an extent that is true of few other regions in the world. This also means that the North is simultaneously a region of the world, a global asset, an indicator for climate models, a cornucopia of natural resources, and an arena for security arrangements, in particular during the Second World War and the Cold War but in our days once again with recent northern military buildup by several Arctic states.<sup>17</sup> These processes of global geopolitics, strategic positioning, industrial infrastructures, and physical exploitation of critical resources require technologies and science that ultimately shape the North into an environment. Modernizing technologies stand in relationship to Aboriginal technologies and knowledge systems, creating tensions that have been a dominant force, and a recurring concern, in northern societies.

### **Technology and the Making of Environments**

We chose this volume's subtitle – "History, Technology, and the Making of Northern Environments" – to imply a creative process: technology over time actively makes environments. This contention deserves some exploration. First, we have consciously used the word "environments" rather than "nature." Although nature as a physical entity has existed in the past without human intervention and would still continue to exist should humans disappear from the universe, as long as humans are in the picture, there is no pure and untouched nature out there. As has become clear in twenty-first-century research on climate change, even the most remote parts of the globe have been and are still affected by human hands, even if the activities take place thousands of kilometres away. As a historical category of analysis, we turn instead to environments, which are produced out of the shifting relationships between humans and nature.<sup>18</sup> Nature can exist without people, but environments cannot; environments are places "out there" brought into the human realm. Environing is the process of domesticating nature, the moulding of places where we humans perform our actions, where we live and work and play. Thus, to understand not only what environments are but why and how they are – indeed, when they are – we need a historical perspective; we need to understand how people have historically related to northern nature to make sense of the environments we may now take for granted. Note that in this proposition we have not used the singular word "environment." This is because we realize there is not one environment – it varies over space and time. Humans have created a mosaic of environments

that have mutated and shifted in response to natural forces, cultural change, economic adjustments, and technological development, to name a few of the factors involved in the process of enviroing.

Second, in this volume we have chosen to focus on one of the factors in the creation of environments: technology. Technology at its most basic encompasses objects, such as tools and machines, but it also includes activities – the process of design, production, and maintenance – and knowledge.<sup>19</sup> Technology in a sense, then, is part of all things human. It is also involved in the relations that humans have between themselves and with the natural world, regardless of whether this is described in the traditional dualistic way as humans leaving an “impact” or a “footprint” or whether you emphasize the relational and integrated relationship that the concept of enviroing implies.<sup>20</sup>

Environmental history as a discipline is well positioned to investigate the ways that northern landscapes have been read, created, modified, and even destroyed with technological tools, resulting in new and constantly changing northern environments. Interest in the intersection of technology and environmental history has been booming in the last decade.<sup>21</sup> Scholarship stressing technology as a primary force in creating new environments for good or bad is, however, older, as evidenced in classics of environmental history such as Donald Worster’s *Dust Bowl* and Richard White’s *Organic Machine*.<sup>22</sup> At their core, these works consider the profound changes that humans make in the non-human world through technological objects and practices, as well as knowledge. As the historian of technology Thomas P. Hughes has observed, the world is built of “intersecting and overlapping natural and human-built systems, which together constitute eco-technological systems.”<sup>23</sup> Technology in action creates environments, and often in ways and with results that were not intended. This makes it critical for environmental historians, as well as for scholars from other environmental humanities disciplines, to critically examine the ways in which humans introducing and using technologies of all sorts intentionally or unintentionally participate in the formation of new spaces and places.

### **The Technology-Environment Nexus in the North**

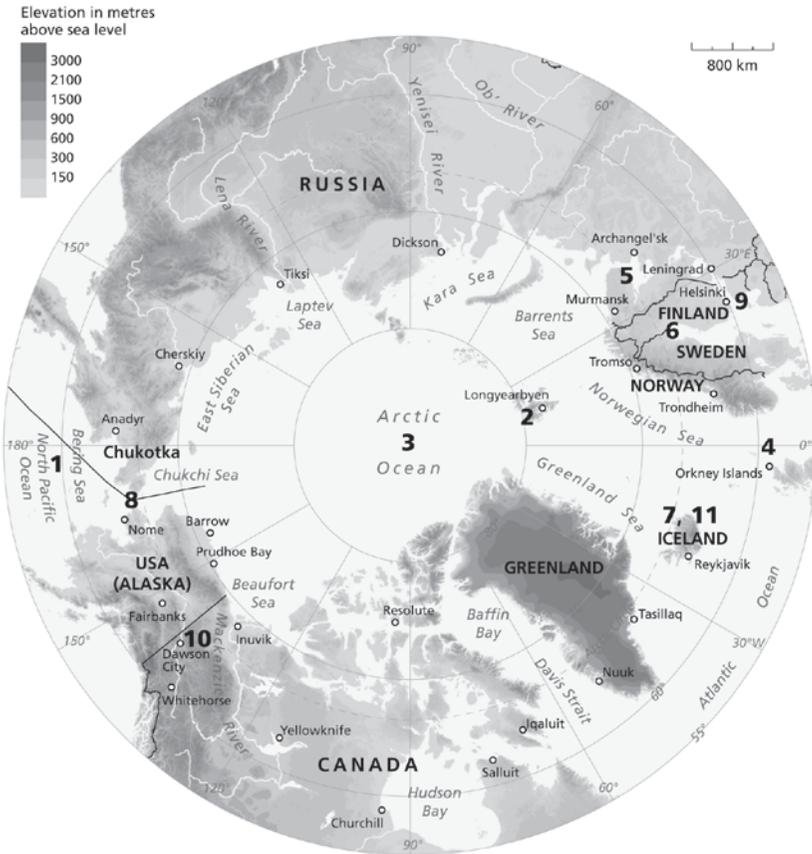
The challenges of northern nature have encouraged a historical reliance on technology to understand and overcome them. Although technologies are deployed across the globe, in northern settings these tools are often relied on to extremes. Scientific investigations of northern nature, from marine

life to glaciers, have categorized, catalogued, and ordered a seemingly disordered new world of the North. Technologies – from agricultural practices to home-building techniques to travel methods – have aided people migrating to and living in extreme and very variable climates, with climate changes reinforced by the so-called Arctic amplification. People have not always been successful in their northern ventures – facing famine, environmental degradation, and their own culturally rooted maladaptation to social-ecological circumstances – but they have continued to try. Hunting and gathering nomads, migrating settlers, enduring pastoralists, Arctic explorers, and indeed even modern states have all relied on a technological toolbox to function in the North. In so doing, people have brought new northern environments into being, both in the physical sense and in the ways that they have reshaped their real and imagined life worlds and their travelled lines and itineraries through language, skills, texts, and images. Thus, the environments we refer to here are in a sense wider and deeper than the environment “out there,” with all the human pursuits and their traces and relations configured into them.<sup>24</sup>

This volume presents how unique northern environments have resulted from the relationship between humans, technology, and northern nature. Using environmental history approaches, the chapters examine a broad range of geographies, including Iceland and other islands in the northern Atlantic, Sweden, Finland, Russia, the Pacific Northwest, and Canada, and cover a wide time span, from AD 850 to 2000 (Map I.1). The contributors are primarily historians, but chapters by an archaeologist and an anthropologist expand the methods employed to tell these stories of environing beyond the typical historical sources to archaeological digs and contemporary interviews. All of the chapters are bound together by an intellectual project of investigating North as both a shaped environment and an imagined space, particularly through the deployment of technology.

The chapters have been divided into four themes: Exploring the North, Colonizing the North, Working the North, and Imagining the North. Although the chapters could have been divided in many other ways, and they often deal with more than one theme, we think these four themes provide an overarching framework for the types of environing happening in the North.

In the first section, three chapters investigate exploration and expansion into northern environments from the eighteenth through twentieth centuries. The construction and mobilization of scientific knowledge and



Map I.1 The geographical spread of the cases examined in the chapters in this volume, shown in circumpolar view

technological tools aided in accessing and understanding northern nature, creating opportunities for the making of new environments. As we see in the chapters by Ryan Tucker Jones and Seija Niemi, scientific exploration of the North Pacific and the fossil-rich Arctic caused scientists to rethink not only the nature of the North but also natural history at large, including climate history and evolutionary development. Northern places became critical to understanding how life has evolved, how geological and climatological processes have shaped history, and how the North fits into these global processes. These scientists employed technologies of sorting and classification to make sense of their world, which as Geoffrey Bowker and Susan Leigh Star have argued, is a ubiquitous human trait.<sup>25</sup>

Northern environments became a place of conquest and expansion, used both as a means of foreign policy and as a demonstration of techno-scientific prowess domestically.<sup>26</sup> When expanding into northern places, scientists, technocrats, and government officials alike searched for analogues and models to understand the North. In Jones's story, early biogeographers attempted to place northern species and places into worldwide patterns using technologies of categorization – stressing at first their similarity to other animals and places around the globe, then later emphasizing their differences. In Richard Byrd's adventures detailed by Marianne Cronin, we see a drive to compare the hardships of airplane travel to older transportation means in creative ways in order to maintain the idea of the heroic explorer. Comparison to the previously known, whether those references come from different spaces, times, or technologies, seems to be a common pattern in the framework of northern exploration.

As people reached out to understand northern places, they invariably reshaped those same spaces. The northern Pacific environment was irreparably modified with the extinction and near extinction of marine mammals and indigenous cultures by hunting and colonization practices that developed along with exploration. Cronin's technological approach to the history of the well-known explorer Byrd reveals how exploration *created* environments as much as *discovered* nature. The deployment of new technologies drew the North distinctly and surprisingly early into the sphere of modernity, and even served as one of its vanguard arenas.

In the second theme, Colonizing the North, two chapters focus on the ways in which people moved to the North, fashioning environments along the way. Jane Harrison, through her archaeological investigation, reveals the ways that Vikings adapted their landscapes in the North Atlantic for both practical and social ends. The Vikings brought existing building technologies with them to their new settlements but deployed them in unique ways. Julia Lajus reveals a similar pattern in Russian extension into the Murman coast region, with the Russians at first finding models for railroad and colonial expansion from Norway and Canada, then later rejecting these models in favour of their own distinctive development pattern. Technology remade the Kola North, which was criss-crossed by the railways, harvested for fish and minerals, and settled by colonists and convicts.

People in the North have exhibited great resilience and power to create livable environments, as stressed by the four chapters grouped under the theme Working the North. Social and economic landscapes were built and broken in the often harsh North, sometimes resulting in environmental

disaster, as the chapter on the Icelandic sheep-raising highlands posits. The issue of Icelandic soil erosion reminds us that the environments of the North were fragile, yet historically people continued to survive and even thrive in northern spaces: Finnish and Swedish farmers modified their agricultural technological packages to cope with environmental challenges, as detailed by Jan Kunnas, and urban women faced challenges unique to northern cold climates in the story of Helsinki's washerwomen, as told by Simo Laakkonen. Technologies used to modify the living conditions of the North often had migrated from elsewhere, as we see in both the Viking mound-building technologies of the Orkney Islands and the transferred slash-and-burn and peatland cultivation agricultural techniques in the Gulf of Bothnia region. But when these technologies were employed, the environments they created were uniquely local, with social and economic consequences for local inhabitants. Bathsheba Demuth certainly reminds us of these local differences in her chapter on reindeer herding, which took very different paths in two places not spatially distant but ideologically polar opposites. It is a story of the kind of mega-schemes that states often organize, but as Demuth tells us, it is not enough to "see like a state" – in James C. Scott's sense;<sup>27</sup> it is also necessary for the state and, indeed, for commercial actors to write previous history out of the landscape. A placeless nature, without prior narrative, is more readily transportable and able to forge, but this comes with a cost. The technologies at work in these cases are not particularly glamorous – they are the hand tools of farmers, herders, and washerwomen – and because of that relative anonymity, they have been easy for historians to overlook as forces of environmental change. Yet, the chapters in this section show how integral they are in making northern environments.

Living in the North is also a state of mind: North is a place of *imagining* as much as it is a place of being, as the two chapters in the final section reveal. These works on Dawson City, Canada, by Lisa Cooke, and on preserving the integrity of nature in the eastern highlands of Iceland, by Unnur Birna Karlsdóttir, take us beyond the physical challenges of exploring, colonizing, and making to the ways that North can be conceptualized as home – a home of ancestors, a place of belonging, and a cultural keystone. As we see in Cooke's anthropological take on northern Canada, North is not just a place but an idea of a place that has deep roots in Canadian culture. As Cooke points out, national-cultural narratives can be "deployed as technologies in the making of this environment" as much as railroads, agricultural tools, and houses can be. Although the environment of Dawson City, with

its mining history and Old West town, has been shaped in the past by physical technologies, the idea of the Klondike Gold Rush as a national heritage now has been produced through narrative technology. This turning of technological landscapes into heritage landscapes (and vice versa) is likewise the story of the battles to develop or preserve Iceland's waterfalls. On this isolated land mass in the Atlantic, North takes on special meaning because of a conjunction of Iceland's settlement history, culture, and climate. Karlsdóttir reveals how that northern natural heritage and national heritage are tightly intertwined in Icelandic ideas of hydropower development and protests against it.

Finally, Finn Arne Jørgensen brings us full circle to reflect upon what future these chapters about the past might bring. He argues that these tales reveal that North is a networked region with worldwide tendrils that extend production and consumption far beyond its own hybrid landscapes. There is a place, then, for both histories of the North and the North in history.

What these chapters collectively achieve is to demonstrate that the northern environment is not a given, fixed condition. It is a constantly changing phenomenon, moulded and shaped by societies and cultures – one that's bound to keep changing, as the region is now facing perhaps the most comprehensive resource extraction bonanza ever as fossil fuel prices rise and new sea routes open up as a consequence of climate change. Historical insights thus follow closely on the heels of current developments and could, in the best of worlds, be of use as governments, local residents, NGOs, and other actors try to navigate change in northern environments in the twenty-first century with both the advent of new technologies and the continuing productive use of many of the old ones.

#### NOTES

- 1 Ellsworth Huntington, *The Character of Races, as Influenced by Physical Environment, Natural Selection and Historical Development* (New York: Scribner's, 1924), 67.
- 2 One such tome is Fridtjof Nansen, *In Northern Mists: Arctic Exploration in Early Times*, Engl. trans., 2 vols. (London: William Heinemann, 1911). First published 1910.
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- 5 Edward Hallett Carr, *What Is History? The George Macaulay Trevelyan Lectures Delivered at the University of Cambridge, January-March 1961* (New York: Vintage Books, 1961), 111.

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**Library and Archives Canada Cataloguing in Publication**

Northscapes : history, technology, and the making of northern environments /  
edited by Dolly Jørgensen and Sverker Sörlin.

Includes bibliographical references and index.

Issued in print and electronic formats.

ISBN 978-0-7748-2571-9 (bound); ISBN 978-0-7748-2573-3 (pdf);

ISBN 978-0-7748-2574-0 (epub)

1. Arctic regions – Environmental conditions – History. 2. Arctic regions –  
Discovery and exploration – History. 3. Human ecology – Arctic regions – History.  
4. Technology – Arctic regions – History. 5. Arctic regions – Historiography.

I. Jørgensen, Dolly, writer of introduction, editor of compilation II. Sörlin, Sverker,  
writer of introduction, editor of compilation

G606.N67 2013

909.09113

C2013-905265-8

C2013-905266-6

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Canada

UBC Press gratefully acknowledges the financial support for our publishing program  
of the Government of Canada (through the Canada Book Fund), and the British  
Columbia Arts Council.

UBC Press

The University of British Columbia

2029 West Mall

Vancouver, BC V6T 1Z2

[www.ubcpres.ca](http://www.ubcpres.ca)

Sample Material © 2013 UBC Press