Teaching Unit Number 1 - Ecological Imperialism

Network in Canadian History and Environment (NiCHE) - Environmental History
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This university-level teaching unit is designed to be easily scaled up or down regarding class time consumed, or difficulty, as appropriate for the individual course context. The material in this unit has a strict focus on Canada (specifically the North), though instructors in other locations are encouraged to improvise on their own, using this module as a base, to insert a comparative element and make connections to other places or themes.

Learning goals.

- Introduce the themes of ecological imperialism and the Columbian exchange
- Contextualize the manifestation of ecological imperialism in Canada’s north
- Familiarize the student with archival sources that inform historical narratives of colonization and environmental change
- Encourage students to connect these concepts with their own experience of the world

This teaching unit is composed of six resources:

- An open source journal article, to be assigned as a reading
- Discussion questions focused on the reading and the video
- A contextual essay, around which instructors can build their own lectures or share with Teaching Assistants working outside their area of expertise
- Primary sources, in this case photographs from Library and Archives Canada, and a text courtesy of the online “Canadiana Collection,” to be deployed as best suits the purposes of the instructor
- Suggestion for two online streaming videos from the National Film Board of Canada, either of which can be shown in class, or assigned to students as homework
- A glossary of “Canadian” terms and concepts, to support a non-Canadian, international audience

Resources:

2) Article Discussion Questions
Q. What is the dominant historical narrative of Ecological Imperialism proposed by Alfred W. Crosby? How do Piper and Sandlos question and expand this model in their case study of the Canadian North?

Q. Piper and Sandlos suggest that disease, in and of itself, was not solely responsible for decimated populations. Instead, they posit a domino and circular effect, which began with disease and resulted in more disease and poor rates of recovery. How did disease negatively affect other aspects of Inuit and First Nations ways of life, and render those ways of life unsustainable during a period of disease?

Q. In their case study, Piper and Sandlos challenge Lower's belief of a “new colonial frontier based on agricultural development.” To what extent do they perceive the uptake of agricultural practices in the North, and where and in what context do they situate it?

Q. Piper and Sandlos contend that Ecological Imperialism in the Canadian North was largely stymied by bio-climatic features of geography. How did the environment halt and delimit encroachment of alien species, be they flora or fauna? What were some of the agrarian interventions introduced by the newcomers? Consider their successes and failures. What impacts did they have on indigenous ways of life?

Q. What is Ecological Imperialism's legacy? Does it still remain with us today? Is it ever appropriate to introduce alien species into foreign environments? What are the potential risks and rewards?

Q. What is meant by the term ‘Virgin Soil’ and why is it, at best, only partly accurate in this case?

Q. How successful have Piper and Sandlos been here, at bringing science and the humanities together, to tell a narrative?

3) Contextual essay
In their co-authored article, Piper and Sandlos invite readers to recognize the role of alien species in attempts to colonize the Canadian arctic.

Alien species are animals, plants, fungi and micro-organisms introduced outside of their native habitat. They reproduce rapidly in their new ranges, out-competing native species for food and habitat, resulting in reduced biodiversity.

In the early 1970s American historian Alfred Crosby coined the term “The Columbian Exchange.” He used it to refer to the exchange of diseases, animals, plants and human populations, between the American and Afro-Eurasian hemispheres, following the voyages of Christopher Columbus in 1492.

A related term, “ecological imperialism” is a set of biological and geographical explanations as to why Europeans were able to colonize neo-Europes with such
apparent ease. The neo-Europes were temperate locations colonized by Europeans, such as Australia, North America, and southern South America.

Rather than allowing for innate European superiority, Alfred Crosby argued that the extended close proximity of European humans and domesticated animals (and their associated germs and diseases), gave rise to some level of European immunity to diseases such as measles and smallpox. When Europeans travelled to the neo-Europes, they brought a portmanteau, or suitcase, of biota with them, including diseases, plants and animals. Because the hunter-gatherer indigenous inhabitants of these Neo-Europes did not have any historical exposure to these diseases, the resulting illnesses spread quickly among aboriginal populations, for whom they were overwhelmingly lethal. Thus weakened (or eliminated), native populations could not repel the newcomers from encroaching on their traditional territories.

Customary understandings of ecological imperialism have tended to discount the higher latitudes as having participated in the Columbian exchange. Piper and Sandlos make the case that while the Canadian north did not experience the same scale of environmental change as more temperate regions, colonization attempts here did coincide with species introductions. In their article, Piper and Sandlos explore these ideas via three case studies: disease, animal and plant introductions.

4) Primary Sources with Discussion Questions
Textual primary source

If assigning to students as a parallel primary source reading, only pages 107 - 121 are relevant. The remainder of the document focuses on mineral wealth.

Q: After skimming this piece, comment on the range of sources that Dawson has compiled to inform his impressions. Pay particular attention to the role that uncertainty plays in his narrative.

Q: Crosby’s ecological imperialism thesis seems to imply that the application of the newcomer’s portmanteau of biota was a trivial procedure. Comment on this suggestion, having read Dawson’s account here.

Q: After your reading, would you have been convinced by Dawson’s conclusion, that “it would be premature to allow that the climate of the Peace River is inferior to that of region about Edmonton or Saskatchewan” (p. 119)?
Photographs
Piper and Sandlos’s article describes the introduction of reindeer to the Mackenzie Delta. Library and Archives Canada hold digitized photos of these activities in an album. Instructors can use these images to bring this episode to life for their students.

From LAC's album metadata: “This album, comprised of 66 pages on which 268 photographs are mounted, consists solely of images of reindeer from Alaska and the government Reindeer Station that was set up in the Northwest Territories by the Department of the Interior. There is also scenery and landscapes of the area near Reindeer Station." “The following events can be found in the album: unloading lumber off of boat; reindeer being herded from Alaska to Reindeer Station; snowmobile/tractor pulling a load; 'cut-out' scenes and herding in corrals; digging meat cellar; reindeer in water; sled deer in training."

The following URLs were created using LAC’s “link to this page” generator. While supposedly permanent, they may change. Images can also be found using LAC’s search engine.

Album:
LAC MIKAN no. 204916

Individual photos:
Album 32, page 27 (1937). MIKAN no. 4326719, Reindeer herd on a range and in a corral, probably Richards Island, N.W.T.

5) Video Resources with Discussion Questions

These National Film Board films bring alive the narrative of northern introduced diseases, in a way that an article cannot. Whereas the article describes the consequences of disease in more distanced, academic form, these two short films provide a synthesized version of some gripping stories of epidemic at the personal level. They can be shown in class, or assuming that students have access to high-speed Internet connections at home, assigned for students to watch on their own time. One is longer, the other shorter. Both explore the same themes in two different contexts, Labrador and the Northwest Territories.
The Last Days of Okak, Anne Budgell & Nigel Markham (1985). 23 min 52 s.
<http://www.nfb.ca/film/last_days_of_okak>

From the NFB’s description:
Only grass-covered ruins remain of the once-thriving town of Okak, an Inuit settlement on the northern Labrador coast. Moravian missionaries evangelized the coast and encouraged the growth of Inuit settlements, but it was also a Moravian ship that brought the deadly Spanish influenza during the world epidemic of 1919. The Inuit of the area were decimated, and Okak was abandoned. Through diaries, old photos and interviews with survivors, this film relates the story of the epidemic, with its accompanying horrors, as well as examining the relations between the natives and the missionaries.

Q. As you watch the video, keep an accounting of introductions other than disease. Were the impacts of these introduced material/cultural features trivial or profound? [For example, the rhubarb patch, the Moravian brass band, etc].

Or, for classes with more time, the longer and more detailed Coppermine is another excellent option.

<http://www.nfb.ca/film/coppermine>

From the NFB’s description:
The Copper Inuit of the Coronation Gulf region of Canada’s Northwest Territories were among the last aboriginal groups to be contacted by people from outside, mainly during the early years of the 20th century. When Doctor R.D. Martin arrived in Coppermine in 1929, he had to deal with one of the consequences of that contact, a tuberculosis epidemic.

Q. “There can be no doubt that the Coronation Gulf Eskimo [sic] need protection, for they are today free-er from serious disease than any other people in Canada.” What do you think of Vilhjalmur Stefansson’s plea for a medical authority to regulate who could and could not enter this area of the arctic? Can you understand the protestations of contemporary missionaries, etc?

Q. Were there any differences between earlier epidemics, as described in Piper and Sandlos’s article, and the introduction of TB as depicted in the film?

Q. Explore the competition for souls, as evidenced by the rivalry between the Anglican and Catholic Churches.

Q. The film is highly critical of the Canadian federal government. Are there any elements of environmental injustice at play? If relevant for your particular class, compare with Tina Loo’s article (unit 6 in this series of teaching modules).
<http://environmentalhistory.net/teaching-eh/nr-6-environmental-justice/>
6) Glossary
Arctic circle: A parallel of latitude 66° 32’ N, north of which the sun does not rise during winter (perpetual darkness), and it does not set during summer (perpetual daylight). This occurs because the Earth's axis of rotation is tilted relative to the plane of its orbit around the sun.

60th parallel: Forms the present boundary between the southern provinces of British Columbia, Alberta, Saskatchewan and Manitoba, and the northern territories, The Yukon, The Northwest Territories, and Nunavut.

Permafrost: Ground that remains frozen below 0°C, continuously, for at least two years.

Far north/high arctic: Region of sparse vegetation, and the wildlife it supports is more limited because of colder summers (2-5° C warmest month), a short growing season (1.5-2.5 months), and low precipitation (100-200 mm).

Boreal forest or Taiga: This vegetation region encircles the Northern Hemisphere between the treeless Arctic Tundra and the more southerly mid-latitude broad-leaved forest zones. The largest vegetation region in Canada, it experiences cool, short summers and long, cold winters.

Subarctic: The northern third to half of the Taiga, which has a shorter summer and colder climate than more southerly regions. This portion of the Taiga is transitional to Arctic Tundra where trees and woody plants are almost entirely absent.

Petit Nord: French, meaning the “little north;” the area between the Great Lakes, Lake Winnipeg, and the Hudson Bay Lowlands.

Middle north: The boreal fringe in the northern areas of Canada’s central and western provinces.

Great Lakes: A collection of five freshwater lakes in Northeastern North America. They drain into the Atlantic Ocean via the St. Lawrence Seaway.

St. Lawrence River Corridor: The region that lies alongside the waters of the St. Lawrence River as it flows northeast from Lake Ontario to the Gulf of St. Lawrence

Prairie provinces: Specifically, Manitoba, Saskatchewan, and Alberta.

The Canadian Shield: A physiographic region, also known as the Precambrian Shield, or the Laurentian Plateau, being a very large area of exposed igneous and metamorphic rock, the oldest part of the North American crustal plate. It was the first part of the continent to be permanently raised above sea level, and represents half of Canada, most of Greenland, and part of the northern United States. Over much of the Shield there is only a thin layer of soil, and much exposed bedrock, caused by severe repeated glaciation that flattened mountains and scraped the rock clean.

Manqué: French, meaning failed, missed, or lost.

Alaska Highway: Constructed by the US Army during the Second World War, this American financed road connects Alaska to the rest of the US, through the Yukon and British Columbia. It was opened to the public in 1948, the Canadian portion having been turned over to the Canadian government in 1946.

Mortality/morbidity: Mortality refers to the number of deaths in a population, whereas morbidity describes the number of individuals who are sick.

HBC: The Hudson’s Bay Company, having been incorporated by Royal English charter in 1670, is the oldest commercial corporation in North America, and was at one time the largest landowner in the world. It operated as the de facto government in parts of North America, until those areas were relinquished to the Dominion government, or claimed and occupied by the United States. Originally a fur trading business, today “The Bay” operates retail stores in Canada and the United States. It is currently managed by the American private equity firm NRDC Equity Partners.

Anti-scorbutic: Effective in the prevention or relief of scurvy.

Dominion government: In the text “Dominion” refers to the federal government of Canada. Specifically alludes to autonomous polities nominally under British sovereignty. The phrase “Dominion of Canada” was employed as the country's name after 1867.

Sami: The Sami people, also Sámi or Saami, are the indigenous people of arctic Scandinavia.

Exogenous disease: A disease that enters a closed biological system from the external world (i.e., outside the body). However, used here to refer to a newly introduced disease from elsewhere.

Department of Indian Affairs: The federal department responsible for policies regarding Canadian aboriginal peoples, including First Nations, Inuit, and Métis.
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Forest History Society (foresthistory.org)