

'She of the Loghouse Nest': Gendering Historical Ecological Reconstructions in Northern Ontario

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ABSTRACT: This paper brings together feminist historical geography with historical ecology as a means to integrate "gender" as a category of analysis when conducting historical ecological reconstructions. Northern Ontario's ecological past can be discovered in the vast natural history collections housed in museums across North America and the United Kingdom. Natural history specimens reveal important scientific information about past habitats, climates, and ranges and distributions of species. However, while such cumulative data have been crucial to works in historical ecological reconstructions, the ways in which such gendered knowledge has been produced and circulated remains under studied. In 1927, Swedish immigrant Louise de Kiriline Lawrence (1894-1992) settled on Pimisi Bay, Ontario, and became an authority on the breeding behaviours and ranges of several northern Ontario bird species. Material remnants of her contributions exist as records, bird skins, and nests in the Canadian Museum of Nature in Ottawa and the Royal Ontario Museum in Toronto, as well as in professional ornithological publications. As this paper demonstrates, de Kiriline Lawrence gained authority in "the field" through the domestic sphere of her "Loghouse Nest" home. Her expertise included the breeding behaviours of birds, such as courtship, nesting habits, and rearing of the young, areas deemed suitable for women in the first half of the twentieth century. De Kiriline Lawrence's natural history specimens, therefore, can also be conceptualized as cultural artefacts reflective of gendered situated knowledges, an important consideration when engaging in critical historical ecological reconstructions of past environments.

Introduction

This paper brings together feminist historical geography with historical ecology as a means to integrate "gender" as a category of analysis when conducting historical ecological reconstructions using natural history specimens. Currently, there are thousands of faunal specimens housed in museums across the globe. Zoological records and collections are important sources of data in climate change research as well as conservation and restoration ecology, especially when coupled with collectors' field journals, labels, sketches, photographs, and publications.¹ Historical zoological specimens are valuable primary sources for analyzing environmental change over time in different times and places, and for reconstructing past faunal habitats.² As a result, many natural scientists advocate for increased partnerships with natural

history museums to unlock “the collections vault” for increased research on how the biota has responded to ongoing anthropogenic climate change.³

Historical ecology has been defined as an interdisciplinary research program “concerned with the interactions through time between societies and environments and the consequences of these interactions for understanding the formation of contemporary and past cultures and landscapes.”⁴ Many scholars working in historical ecology rely on historical faunal specimens and records to determine breeding ranges and distribution of bird species for wildlife management and conservation efforts, historic animal populations for restoration projects, and the impact of human-animal interactions in the past such as the effect of urbanization on nesting patterns).⁵ Long-term datasets created through specimens, photographs, and records provide long-term ecological data for ecologists interested in studying the impacts of humans on sensitive ecosystems such as coastal habitats.⁶

While projects like these are able to recover ecological pasts from a scientific perspective, what is missing is a critical understanding of how faunal specimens, maps, photographic illustrations, and aerial photographs, have been entangled in systems of knowledge and power.⁷ Many specimens in museums across North America and Europe reflect histories of colonial expeditions, settler settlement, and resource extraction. Here, questions center on issues of situated knowledges (e.g. the role of gender) and what fieldwork practices were involved in producing and circulating scientific authority? Whose knowledges were privileged and whose were ignored or erased? As feminist historical geographers have emphasized, the production of scientific knowledge reflected not just simple representations of reality but were entangled in systems of knowledge and power associated with gender in varying places and times.

Feminist historical geographers and their scholarly allies have been at the forefront of thinking about the role of positionality or “situated knowledges” in the production of geographical knowledge in the past.⁸ Donna Haraway, a feminist scholar of science studies, was one of the first to challenge the realist approach prevalent in the natural sciences by stating that knowledge is situated in the scientists’ own circumstances and “the themes of race, sexuality, gender, nation, family, and class have been written into the body of nature in western life sciences since the eighteenth-century.”⁹ By focusing on scientific practice and scientific theories as culturally situated, Haraway states, “science is not innocent.”¹⁰

As feminist historical geographer, Karen Morin, has stated, “Authority or credibility gained by being an embodied producer of knowledge, ‘on the spot’ and otherwise, depends on what kind of body is on that spot, and it certainly does not apply to all bodies in the same way.”¹¹ Morin’s critique demonstrates the link between gender and authority in scientific fieldwork, as well as the gendering of “the geographic tradition” by re-inserting women in the formation of the discipline through travel-writing, botanizing, and teaching.¹² Missing from these works is an examination of the contributions of women in the production of faunal zoogeographies as part of histories of geography.¹³

The following paper addresses this issue by examining the ornithological specimens (skins, nests) of Swedish-Canadian Louise de Kiriline Lawrence (1894-1992) when she conducted her bird studies in Northern Ontario ca.1930-1960 (Figure 1). In 1927, de Kiriline Lawrence settled on Pimisi Bay, Ontario, and became a leading authority on the breeding behaviours and ranges of several Northern Ontario bird species during a time when men dominated the field of ornithology. Her bird skins, nests, and findings were archived at the Royal Ontario Museum in Toronto and the Canadian Museum of Nature in Ottawa. De Kiriline Lawrence would eventually publish many highly regarded scientific papers and was the first Canadian woman to become an Elective Member of the American Ornithologists Union.



Figure 1: Louise de Kiriline Lawrence's Red Crossbill Specimens housed at the Canadian Museum of Nature, Ottawa, Canada (photo courtesy of Sonje Bols).

As this paper demonstrates, the Swedish immigrant, de Kiriline Lawrence, gained authority in “the field” as a result of her positionality as a white, privileged amateur field ornithologist observing, banding, and collecting birds in her “backyard sanctuary,” where she became an expert on the breeding behaviours of birds—such as courting nuptials, nesting habits, and rearing the young.. Therefore, her bird specimens, nests, and records provide valuable insight into how gender shaped the production of scientific knowledge in the peripheral region of Northern Ontario.¹⁴

Northern Ontario's Natural Heritage

Traces of Northern Ontario's natural heritage are found in museums across North America and the United Kingdom. Information on these specimens are available online using VertNet , a NSF-funded collaborative project that makes biodiversity data free and available on the web.¹⁵ Partnering with the Royal Ontario Museum, this paper builds on current research into the gendered situatedness of cultures of science in northern Ontario through specimens in the early to mid-twentieth century. From an ecological standpoint, the project fills important gaps in the histories of species at risk under the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), an organization that produces reports on avian species at risk in the country. Most of the data collected focuses heavily on the Breeding Bird Survey (BBS) and Breeding Bird Atlases

Table 1. All birds collected in Northern Ontario pre 1900-1969, and location of collections. A summary of the Northern Ontario Bird records pre-1970s within the VertNet database. For some reason the database does not include specimens from the Carnegie Museum, The Cleveland Museum of Natural History, and the Canadian Museum of Nature (Ottawa, ON) even though these museums house bird skins from northern Ontario. Records visualized in Figure 2 (below).

Total Aves Records: 11,196		
<u>Sex</u>		
Male	Female	Unknown/Unsure
5814	3709	1673
<u>Rights Holders</u>		
ROM Royal Ontario Museum		10950
Sam Noble Oklahoma Museum		2
Yale Peabody Museum Natural History		10
Unspecified		234
<u>Institutes</u>		
Code	Institute Name	# Aves Records
CAS	(not given)	3
DMNH	Delaware Museum of Natural History	61
DMNS	Denver Museum of Nature and Science	4
KU	University of Kansas Natural History Museum	40
LACM	Los Angeles County Museum	6
MVZ	Museum Vertebrate Zoology	20
NYSM	New York State Museum	15
OMNH	Sam Noble Oklahoma Museum Natural History	2
PSM	Slater Museum Natural History, U Puget Sound	8
QM	(not given)	1
ROM	Royal Ontario Museum	10950
SBMNH	Santa Barbara Museum of Natural History	2
UF	Florida Museum of Natural History	7
UMMZ	University of Michigan Museum Zoology	53
UWBM	University Washington Burke Museum	1
WFVS	Western Foundation of Vertebrate Zoology	13
YPM	Yale Peabody Museum Natural History	10

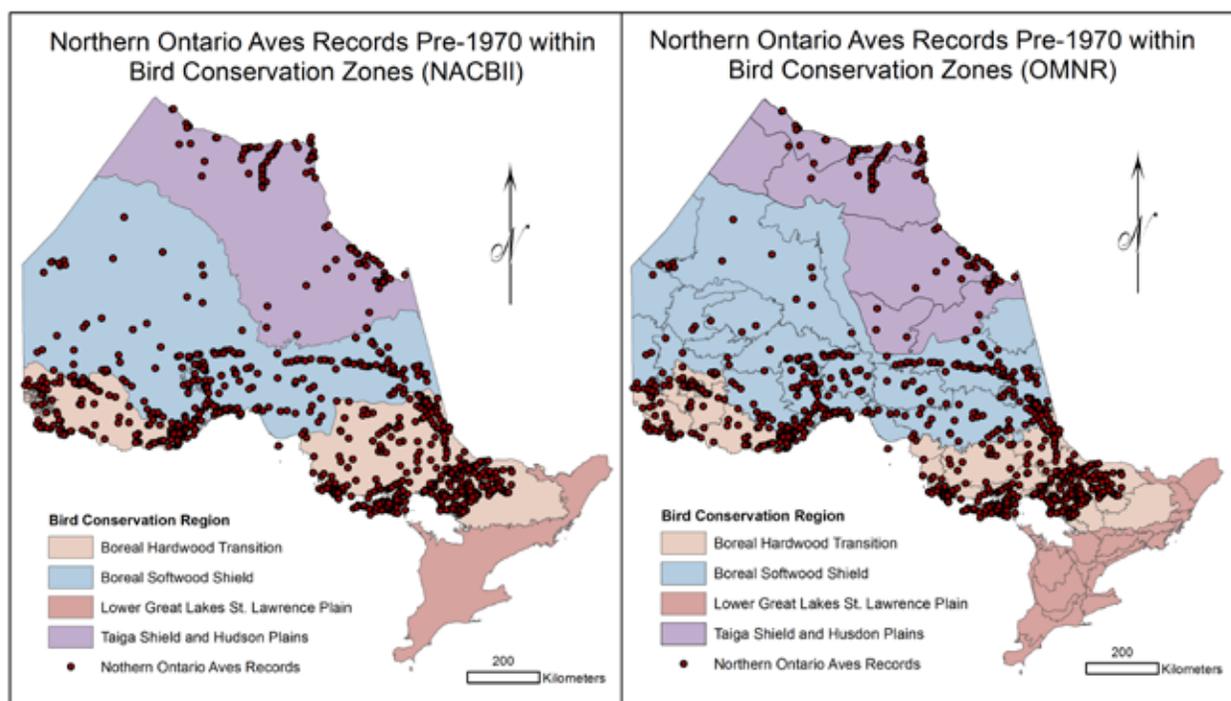


Figure 2. The cut-off for Northern Ontario includes the census districts of Parry Sound and Nipissing, as found to be the standardized cut-off in Northern Ontario maps. Note that one point may have several records associated with that exact location, due to the georeferencing techniques employed by the GIS technician who assigned the coordinates. (Megan Prescott, GIS Technician for the CRC in Global Environmental Histories and Geographies.)

to demonstrate bird species declines and habitat needs – datasets that date back only to the 1970s, at the earliest, and often leave out historical specimens from even earlier (Table 1, Figure 2).¹⁶

Researching the biographies of specimens is at the forefront of this project, linking animals to places, peoples, landscapes, institutions, and scientific concepts as well as to the histories of colonial settlement, natural resource extraction, transportation infrastructure, and the tourism industry in the opening up of northern Ontario for southern metropolitan development (e.g. Toronto, Pittsburgh).¹⁷ Many of these early twentieth-century bird collections are associated with collecting expeditions such as those connected with the Carnegie Museum of Natural History (Pittsburgh, PA), the Cleveland Museum of Natural History (Cleveland, OH), the Delaware Museum of Natural History (Wilmington, DE), the Smithsonian Institute (Washington, D.C.), and the Royal Ontario Museum (Toronto, ON), and were used to define breeding ranges of North American birds. The Royal Ontario Museum, for example, actively engaged in the formal study of northern Ontario's birds through scientific expeditions, surveys, and biology research stations starting in the 1920s. Northern Ontario presented a gap in the knowledge of bird distribution. Before these ROM surveys there were only scattered notes of the region's birds and very few birds collected, with the interesting exception of far northern Ontario due to the efforts of the Hudson's Bay Company.¹⁸

Using de Kiriline Lawrence's specimens (bird skins, nests, eggs), correspondence, and publications, our paper highlights the intersection of gender, class, and race in the production

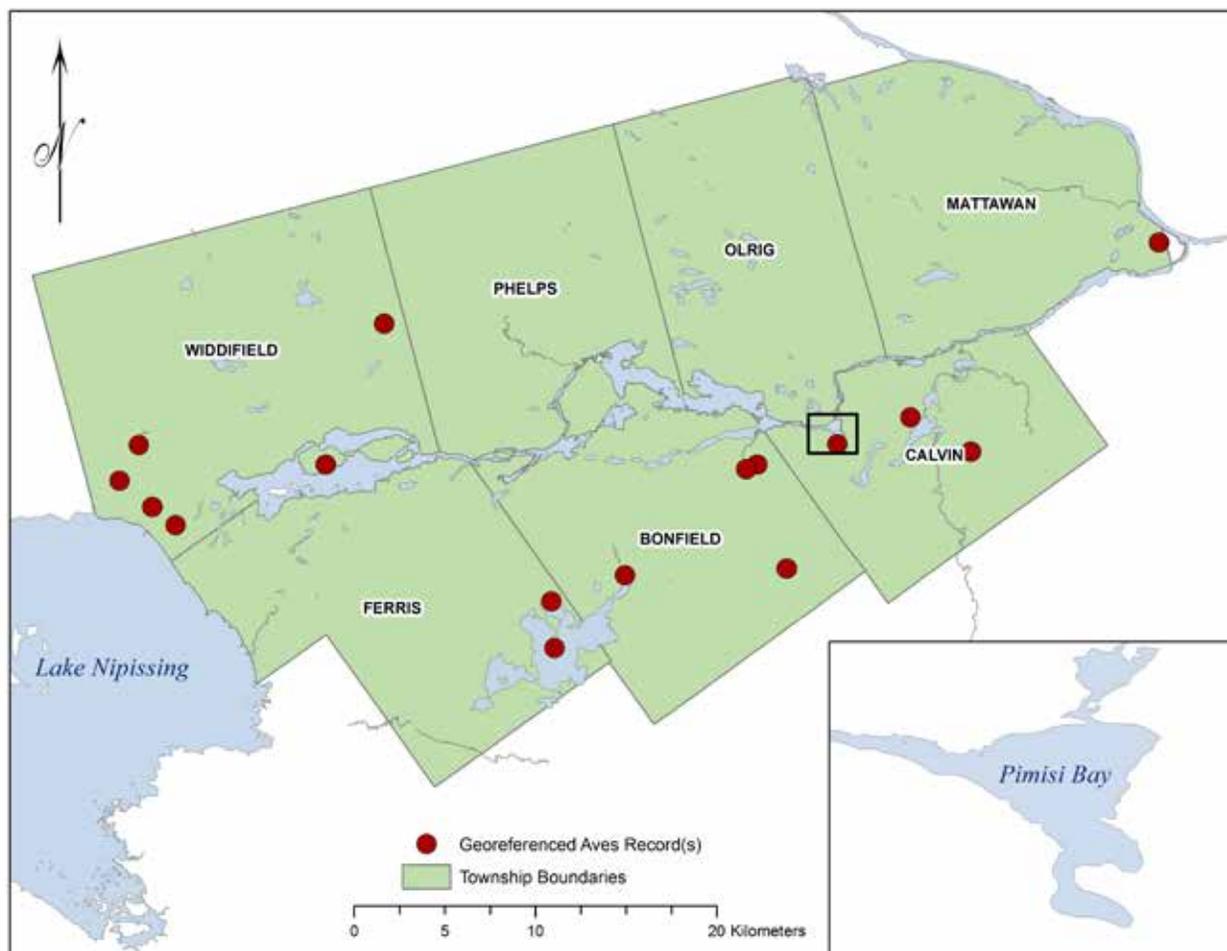


Figure 3. Bird records within townships along Mattawa River, including those of Lousie de Kiriline Lawrence collected around Pimisi Bay, Calvin Township, now housed at the Royal Ontario Museum (Toronto) and the Canadian Museum of Nature (Ottawa).

of historical environmental knowledge of Ontario's peripheral regions (Figure 4). Canada's "middle north" has been intimately tied to settler colonialism and northern natural resources extraction to southern markets via railways and roads, wilderness tourism, and settlement, all of which contributed to the dispossession of Indigenous peoples, deforestation, and ecological imperialism.¹⁹ De Kiriline Lawrence's bird-banding work contributed significantly to the understanding of the breeding ranges of North American birds within the Boreal-Hardwood Transition region in Ontario's "middle north" (Figure 3).

This paper therefore builds on previous work, "Traps and Treasures: Methodological issues in using eye-witness narratives for historical ecological reconstructions," with feminist historical geographer, Jeanne Kay Guelke.²⁰ In 1991, Guelke, then a professor in the Department of Geography at the University of Nebraska, published, "Landscapes of Women and Men: Rethinking the regional historical geography of the United States and Canada," for the *Journal of Historical Geography*. Her paper challenged the "male orientation and near-absence of material on women [First Nations women, European immigrants] in North American regional historical geography," citing canons such as Donald Meinig's *The Shaping of Atlantic America* and Andrew Hill Clark's *Acadia*.²¹ Kay Guelke challenged historical geographers to think about scale (i.e. global,

national, regional, home), and examine individual lives rather than focusing solely on large-scale communities, regions, and nations, which tended to lead to generalizations about gender in the “familiar broad-brush images of the ‘forging of Canada’” and “the shaping of North America’.”²² As historians of gender of Canada’s “provincial norths” have demonstrated, northern regions have been historically constituted and contested through the voices of marginalized groups such as First Nations women and immigrant women such as de Kiriline Lawrence.²³

A Swedish settler in Northern Ontario

Louise de Kiriline Lawrence (née Louise Vendela Augusta Jana Flach) was born in Svensksund, Sweden, on 30 January 1894, and was the eldest daughter of Hillevid Neergaard and Sixten Flach. Her childhood home, “Villa on the Hill,” two hours south of Stockholm, overlooked “the elongated fjord of Bråviken” that cut deeply into the southern Baltic coastline of Sweden.²⁴ De Kiriline Lawrence came from an aristocratic family with connections to both the Danish and Swedish nobility, and she spent her early years in the great houses of Denmark and Sweden. Her namesake and godmother was Princess Louise of Denmark, a dear friend of de Kiriline Lawrence’s mother.²⁵ In 1914, de Kiriline Lawrence was officially introduced into society in the court of King Gustav V of Sweden.²⁶

As part of her privileged upbringing, de Kiriline Lawrence was privately educated and took many excursions with her father, who was himself a naturalist and hunter. Visitors to the Flach estate included other well-known Swedish naturalists, including Bruno Liljefors, a leading European naturalist-painter. Liljefors was fascinated by the patterns to be found in nature, and he often made art out of the camouflage patterns of animals, especially birds.

After a long and tumultuous career as a Red Cross nurse in post-WW1 and Revolutionary Russia, de Kiriline Lawrence immigrated to Canada after losing her first husband, Gleb de Kiriline, an officer in the Russian White Army. It was 1927; de Kiriline Lawrence was in her thirties and ready to initiate a more peaceful chapter of her life, settling in North Bay, Nipissing District, in what considered part of the hinterland of “New Ontario.” There she nursed the small (and often poor) communities around her, including Corbeil where the famous Dionne Quintuplets were born in 1934. De Kiriline Lawrence left the Quints’ nursery in 1935, apparently in bad spirits and with a soured relationship with the Dionnes. She was uncomfortable with the publicity she and the babies were receiving. It was after this experience that she retired from nursing and moved to a modest log home she had built on Pimisi Bay, near Rutherglen in northern Ontario. In 1939 Louise married a carpenter Leonard (Len) Lawrence. They settled into a small log cabin built on six acres of land overlooking Pimisi Lake, a small body of water just east of the hamlet of Rutherglen along the Mattawa River.²⁷

De Kiriline Lawrence settled in northern Ontario during a time when the Canadian government placed tight restrictions on immigration policies based on racial hierarchies. In the Immigration Act of 1901, the Dominion of Canada omitted mostly “immigrants belonging to any race deemed unsuitable to the climate or requirements of Canada,” meaning anyone of colour from the tropical regions of the Caribbean and Southeast Asia. In addition, the Empire Settlement Act of 1922 intimately tied Canadian immigration to racism, mental hygiene, and eugenics. De Kiriline Lawrence’s Nordic heritage made her an ideal immigrant to Canada when Scandinavians were deemed just below the British in racial hierarchies of whiteness.²⁸

A surprisingly substantial portion of Swedish immigrants who settled in Ontario did so in Northern Ontario. In 1931, more than half of Ontario’s 4,708 Swedish-born had located to Northwestern Ontario with another twenty-three percent in Northeastern Ontario—nearly identical to the percentage of Swedes in Toronto. Here, they made their livelihood in industries such as resource extraction, logging, railway work and farming.²⁹ Some Swedes came to Northern



Figure 4: Nipissing University's MES/MESc graduate students at the original Loghouse Nest, Rutherglen, Ontario, as part of Kirsten Greer's graduate course on Critical Historical and Physical Geographies (February 2014).

Ontario after losing their jobs in the forestry business. The closing of a sawmill in Ljusne in 1905 resulted in 50 Swedes emigrating to Haileybury and North Cobalt to work on the construction of the Ontario Northland Railway or else to mine silver. Many Swedes came to Northern Ontario through the construction of railway lines in the early 1900s. Between 1909 and 1921, many left the province of Skåne as a result of major strikes there and moved to Canada where they worked along the northern portion of the Canadian National Railway line between Sioux Lookout and Hearst. This area eventually became host to Canada's largest Swedish community. Similarly, an earlier group worked for the CPR between White River and Chapleau and continued to immigrate to the area into the 1920s.³⁰

The site of her Loghouse Nest (Figure 4) was situated along Highway 17 (also known as the Trans-Canada Highway) that connected Montreal to Sault Ste. Marie in 1923.³¹ The highway served as another transportation infrastructure project to open up northern Ontario for resource extraction. According to her, "the west and south shores of Pimisi Bay lies the nucleus portion of our territory. The Trans-Canada highway, carried across the south end of the lake on a high causeway, cuts through the land and divides it into two sections."³² She described the landscape as "extremely rough with outcroppings of pre-Cambrian rock formations," with second growth

forest that had been impacted by fires but also the complete destruction of “the virgin forest by lumbering activities.”³³

By the time de Kiriline Lawrence settled in the Mattawa region, the area had already become attractive to prospective farmers as well as the lumber industry, which at that time was expanding its search for large white pines along the Ottawa and Mattawa Rivers. Logging continued to be a major industry in the area, with acres of trees being locally felled throughout the mid-nineteenth century to the early-twentieth century. Many local lumber mills were in operation, some, including that of J. B. Smith in nearby Callander, until well-into the 1960s. Railways were built to transport this lumber to world markets. The Central Canada Railway, intended to connect Pembroke to Parry Sound, was built as far west as Bonfield (then known as Callander Station) before being merged with the new Canadian Pacific Railway (CPR) in 1881. It was soon after decided that the railway would be built not south of Lake Nipissing but north to what would later become the town of North Bay.³⁴

Despite these forestry activities, she still viewed the region as the “unspoiled soil, the life-giving space, and the fresh winds that promote spontaneous growth” that she sought.³⁵ She described Pimisi Bay as “the lonesome uninhabited country of the northwest end of the Laurentian range ... to the Ottawa River.”³⁶ The absence of First Nations peoples in her narrative is unsurprising considering the Swedes engaged in colonial practices with the Sámi peoples in northern Scandinavia with the opening of northern hinterlands for mining, forestry, and hydropower.³⁷ The land of de Kiriline Lawrence’s loghouse nest was originally part of the Williams Treaties of 1923, which included a very large tract lying between Lake Huron and the Ottawa River bounded on the north by the Mattawa River-Lake Nipissing and French Line and on the south by earlier treaties concluded in 1818 and 1819.³⁸ The Williams Treaties involved a treaty agreement with two distinct groups of First Nations – the Mississauga First Nations of Rice Lake, Mud Lake, Scugog Lake, and Alderville and the Chippewa First Nations of Christian Island, Georgina Island, and Rama. However, it excluded the Algonquin people who have occupied the watershed since time immemorial.³⁹ According to the geographer Jocelyn Thorpe, defining northern Ontario as untouched “wilderness” and “nature” helped to erase Indigenous presence in the region for colonial settlement and resource extraction.⁴⁰

Her “Backyard Sanctuary”

De Kiriline Lawrence became increasingly curious about the wildlife—particularly the birds—around her Loghouse Nest, rediscovering a childhood love of nature. Wanting to know more about the behavior and characteristics of her backyard birds, de Kiriline Lawrence consulted a book by one P. A. Taverner, *Birds of Canada* (1934). She enjoyed the species accounts so much, she wrote to the author expressing her admiration for his writing. Not expecting a reply, de Kiriline Lawrence was thrilled when Taverner wrote to her, thanking her for her kind words. A regular correspondence began between the two, and Taverner became a mentor of sorts for the budding naturalist, encouraging her to write down her observations.⁴¹ De Kiriline Lawrence wrote to Taverner describing her excitement over his book, which she described as “a tale of fascination and vividness.”⁴² The two developed a friendship and she adopted a “new role of serious nature student,” taking in every sight and sound of the birds near her new home.

Taverner was Dominion Ornithologist at the National Museum of Natural Sciences in Ottawa (1912-1942), and an important figure in shaping public perceptions of birds as well as scientific field practices during a time when Canada made efforts to conserve birdlife.⁴³ He built up a national collection of birds by establishing a network of amateur ornithologists. With the help of other naturalist mentors, along with her undying curiosity, de Kiriline Lawrence soon

became an expert scientist, writing for reputable ornithological and natural history magazines as *Audubon*, *The Auk* and *The Canadian Field-Naturalist* on a variety of natural history topics, but usually concerning bird nesting behavior. Throughout her writings her dedication to observation is apparent: tolerating hordes of biting flies while watching a Eastern Whip-poor-will nest, placing herself in the woods a few hours before dawn to count the exact number of songs emitted by a Red-eyed Vireo for an entire day (more than 22,000), following birds for hours to find their nests, and countless other examples. De Kiriline Lawrence's bird specimens and nests are now housed in the Canadian Museum of Nature in Ottawa and the Royal Ontario Museum in Toronto.

As historians of science have demonstrated, North American women entered the field of ornithology at this time through "non-threatening" activities such as painting, describing, protecting, and popularizing birds rather than as professional scientists embedded in universities and scientific institutions such as museums and government agencies.⁴⁴ De Kiriline Lawrence was considered an excellent observer and spent hours in the field near her home at Pimisi Bay observing wildlife. Over the years, Taverner encouraged de Kiriline Lawrence not only with his letters but also with gifts of books and bird seed. The books, including *Wings at my Window* by Ada Clapham Govan (1940), added to her knowledge while the bird seed attracted more birds and allowed de Kiriline Lawrence to tame a few chickadees by encouraging them to eat the seed out of her hands. Her first natural history book, *The Loghouse Nest* (1945), details her encounters with and observations of Peet, a tame chickadee that nested close to her home. Her intimate connection with birds such as Peet provided "so many feelings of pure happiness and enjoyment recognized and shared, so many new possibilities to make my bird world limitless with fresh scope and visions."⁴⁵

De Kiriline Lawrence's approach to birds followed Ada Govan's *Wings at My Window*, a popular book among North American middle-class women interested in birdlife.⁴⁶ Govan, who was unable to leave her home due to illness, wrote the book to highlight the daily bird sightings of the natural woodland adjacent from her house. Described as her "backyard sanctuary" (e.g. Woodland Bird Sanctuary), she pursued gender defined activities such as nest watching, which centered on the household. Male colleagues deemed women as experts that could rely on the maternal instinct as a source of authority on breeding behaviours.⁴⁷ In June 1942, de Kiriline Lawrence exclaimed, "...to me this is a sanctuary now, for birds live here with me and I live with them."⁴⁸ De Kiriline Lawrence regularly observed birds alongside her domestic duties, for instance, "making pies" while following an "olive-backed thrush" looking for food.⁴⁹

De Kiriline Lawrence's cabin provided her with an intimate site to record, band, and collect a variety of bird species "day to day" over a long period of time.⁵⁰ She viewed her new abode on the Canadian Shield as "an unspoiled, tranquil spot and living in harmony with nature."⁵¹ The loghouse nest or "home" became a central site of science, where she set up a banding station in the 1940s. "The Mattawa River is born from the overflow of Trout Lake, twenty miles west of Pimisi Bay. Passing through a number of smaller lakes, it gathers on the way a considerable volume of water, which pours in a thundering fall over the lip of Lake Talon."⁵² Taverner once noted that she "must be beautifully situated for enjoying birds, - except for the black flies."⁵³

From this vantage point, she kept detailed notes and would write to Taverner, asking him what certain behaviors meant. His replies were always encouraging and informative. When asked what more she could do to contribute to the ornithological field, Taverner encouraged her to obtain a banding license. With his help, she eventually did in 1942. At that time, she had the most northerly banding station in Ontario. Often her activities centered on nest watching, a subject area deemed appropriate for amateur women birdwatchers that could rely on the "maternal instinct" as a source of authority on breeding behaviours. Over the next seventeen

years de Kiriline Lawrence would band 2,628 birds of 50 species, many of which would return year after year, providing her the opportunity to study and know them intimately (Figure 4).

For de Kiriline Lawrence, observing the birds around her little log home in the Northern Ontario bush brought her a sense of bliss and banished the loneliness brought on by the absence of her husband during the Second World War. In the winter of 1941, de Kiriline Lawrence excitedly described to Taverner a Northern Cardinal that regularly visited her feeder. She ended the letter with "Blessed be these birds! Without them it is quite impossible to feel one instant of loneliness or boredom." The red bird attracted many to her cabin, including a local French-Canadian trapper who stopped by to say: "Ah, mais ça c'est porte bonheur!"⁵⁴

Excited that the Cardinal was still being seen near her home, de Kiriline Lawrence wrote in February of 1942: "It is incredible that just a red bird could so brighten each [and?] every day. I find myself unable to see all destruction and ugliness and brutality, and courage and faith seem as natural garments for the mind as a sweater for when it is cold."⁵⁵ Her early descriptions of the birds seen around her home are largely anthropomorphic, yet demonstrate her skill as a keen detailed observer. She described the Black-capped Chickadees she saw regularly:

Now there is Joe, always black in the face from the ash pile, and Peet, thin and terribly indifferent to neatness in dress, with the air of a delicious gamin and always in the morning with a crooked tail that must have been crushed in the tightest corner of the Chickadee dormitory, and Hesitant Mary. Yes, she must be a she, for she is fat and sleek and with a definite feminine look in the brightest of eyes.⁵⁶

In later letters, she described American Crows as "horrible merciless marauders" for robbing the nest of a Blue Jay pair. She said of the event: "I thought of the conquered peoples, of ourselves, the war, the difference is not great. And the purpose - just to live."⁵⁷

Yet, her descriptions of plumage illustrate an attention to detail. As she described a Pileated Woodpecker:

Apart from the crest, his head and neck had broad stripes of white and black that followed the graceful lines of his head down to the shoulders like one great zig and arranged so that there were two white stripes with a black one in the middle. His back and shoulders were coal black and on the left wing shoulder the feathers were ruffled into a soft tuft. When perched one saw no white on the wings but when he flew to the nearest Pine, one glimpsed white like a band underneath them.⁵⁸

With this new confidence in her writing, de Kiriline Lawrence continued to publish stories (largely in *Farmer's Magazine*) and maintained correspondence with Taverner with questions and observations. At this time she was illustrating her works, and was writing a bird story that she would hope to one day make into a book, presumably the aforementioned *Loghouse Nest*. Some of these observations she wrote into little stories, which she would occasionally send to Taverner for his opinion.

Taverner also encouraged her to try bird banding, and told her where to obtain more information and bands. After obtaining her license from Hoyes Lloyd, Canada's first Dominion ornithologist, she trapped a Blue Jay in the autumn of 1942. She replied to Taverner, "What a marvellous thing you have given me to do! I am thrilled beyond words."⁵⁹ As her bird banding career progressed, de Kiriline Lawrence wrote:

I am slipping from mere bird catching and recording to a more purposeful bird-banding in which special things, such as plumages, physical condition and so forth, become things on special observation and note-taking. I am learning the elementary first rules about proper note-taking too, for that matter, and it is amazing what wide range of special things to observe open before you, like the pages of a thick and wonderful book.⁶⁰

However, de Kiriline Lawrence was quick to challenge Taverner's gendered perceptions of her character questioning, "Do you still think me sentimental?" during a time when her husband served overseas for the war.⁶¹ Writing in May 1943, she stated curtly: "No, I have no time for brooding. Between my duties as bird-bander, official air-craft observer, minkbreeder, writer of sorts, and housewife I have not time to get bushed."⁶² She often took out her frustrations with "occasional bursts of strong language alternatively in English and in Swedish," according to how she was feeling that day.⁶³ She used unabashedly foul language when frustrated with building bird banding traps for the first time or dealing with the harsh winter weather.

De Kiriline Lawrence also knew how to shoot a gun and used one regularly in the hunting season to scare away "carloads of hunters." With this she "succeeded to save many a duck's life" with her .303 Savage from her bedroom window.⁶⁴ She also used the trope of masculine explorer when likening a new bird to Nordic Arctic explorer, Roald Amundsen: "[the bird] felt no greater elation than I at that moment when he discovered the southpole."⁶⁵ The backwoods of northern Ontario allowed her the space to transcend traditional gender norms of her time such a hunting with a gun, overseeing a mink farm, and living independently in the bush.

Breeding Ranges of Northern Ontario Birds

De Kiriline Lawrence contributed significantly to knowledge of the northern limits of the breeding ranges of many North American species. The area surrounding her home sits currently within the Boreal-Hardwood Transition region or Algonquin-Lake Nipissing ecoregion along the Mattawa River in the Ottawa River watershed. The region is characterized by a humid, high-cool temperate ecozone and a dominant vegetation of mixed wood forest, including sugar maple, yellow birch, eastern hemlock, red and eastern white pine, and red oak, all of which was heavily deforested in the nineteenth century. Animals common to these forests include white-tailed deer, moose, black bears, wolves, lynx, snowshoe hares, chipmunks, and several North American breeding birds, such as the Red Crossbill.⁶⁶

The range of a bird species has been described as "the geographic area or region in which it is found" and is usually described in terms of political boundaries or major geographic areas. Thus, a bird's breeding range can be defined as the geographic area or region in which a bird breeds and raises its young. Birds, being highly mobile, have access to a wide variety of environments and often undertake seasonal movements, having entirely separate breeding and nonbreeding ranges.⁶⁷

Understanding the range of breeding has been essential to Breeding Bird Atlases, projects in which states or provinces are divided into squares that are systematically surveyed for breeding birds. The purpose of these multi-year studies is to document the presence of birds that breed within a given geographical area, usually a state, province, or county, to compare between years for indicators of habitat relationships, species distribution, and abundance.⁶⁸ The data are divided based on levels of breeding confirmation: observed, possible, probable, and confirmed. These atlases, repeated at regular intervals, are crucial in understanding breeding bird distribution and can often reveal population declines or vulnerable species.

Historically, the concept of “breeding range” can be traced to the late nineteenth century. The U.S. Biological Survey mapped the distributions of birds and mammals in the 1890s based on Dr. Clinton Hart Merriam’s “life zone” concept, which involved the summation of avifaunal distributions with vegetation, climate, and their isotherm relationships of these distributions.⁶⁹ The concept of “breeding ranges” was intimately tied to early twentieth century game and hunting practices to manage and reintroduce a game birds to particular areas.⁷⁰ The study of breeding ranges later helped to define the “flyway” concept of migratory avifauna that was integral to wildlife conservation initiatives in North America.⁷¹

Early works on the birds of Ontario’s “near North” included Stuart L. Thompson’s “The Birds of North Bay and Vicinity in 1904,” which was published in *The Canadian Field-Naturalist* in 1922. Thompson, a nephew of Ernest Thompson Seton, had documented over eighty species of birds during the years 1903–04, including a passing note on the Red Crossbill.⁷² In 1939, publication based on their ornithological fieldwork at the University of Toronto’s Biology Station at Frank’s Bay, Lake Nipissing, adding to the ranges of northern Ontario bird species based on surveys of “local faunas.”⁷³

By the late 1940s, de Kiriline Lawrence published “The Red Crossbill at Pimisi Bay, Ontario” in the *Canadian Field Naturalist*, a scientific journal devoted to the natural history of Canada. De Kiriline Lawrence documented the “winter and nesting grounds” of the small, brightly-coloured passerine bird based on her meticulous observations of the feeding and breeding behaviour of this species during the winter of 1947–48 and the spring of 1948 while living on the Canadian Shield.⁷⁴ Ornithological contributions (records, bird skins, nests) such as de Kiriline Lawrence’s Red Crossbills are currently shedding light on changes in historical faunal distributions and ranges, migration patterns, and habitats.⁷⁵

De Kiriline Lawrence had the most northerly banding station in Ontario. Writing to Taverner, de Kiriline Lawrence described how James Baillie of the Royal Ontario Museum had informed her that “the Mattawa River seems to be [the] northern limit for several species of as their nesting grounds.”⁷⁶ Central to de Kiriline Lawrence’s work was the collection and observation of breeding behaviours and nests such as the birds’ “pre-nuptial activities,” the “sanitation of the nest,” and the rearing of the young (Figure 5).⁷⁷ When studying an Evening Grosbeak, she noted, “The northern coniferous forests and the mixed forest ecotones seem to meet the nesting requirements,” stating the trees provided “good nest sites in the bushy top branches of the tall evergreens, a place it seems to favor,” “plenty of insects,” such as spruce budworm.⁷⁸ The migrant Grosbeak’s activities at Pimisi Bay occurred during the month of May to July or August.⁷⁹ De Kiriline Lawrence’s collections of nests and eggs included the Gray Jay (*Perisoreus canadensis*), Black-throated Blue Warbler (*Dendroica caerulescens caerulescens*), and the American Redstart (*Setophaga ruticilla*), all of which were donated to the Dominion Museum in Ottawa.⁸⁰

Over the course of seventeen years de Kiriline Lawrence would band 2,628 birds of fifty species, many of which would return year after year, providing her the opportunity to study and know them intimately. She wrote of her banding experiences: “[b]ird-banding brings to the bander a dual satisfaction: the sense of contributing in at least a small way to the general store of knowledge concerning birds, and the more personal satisfaction of watching the birds daily at close range.” Upon banding both a Red-breasted Grosbeak and a Ruby-throated Hummingbird, two strikingly-colourful birds, de Kiriline Lawrence wrote: “having beheld these two, I have seen the eight wonders of the world.”⁸¹

Her major contribution to the breeding ranges of birds centered on the Red Crossbill. Red Crossbills can be found throughout North America, south through Mexico and north to Canada’s



Figure 5: De Kiriline Lawrence nest specimen housed at the Royal Ontario Museum, Toronto, Ontario.

boreal forest. They are conifer seed specialists and often wander widely to locate good cone crops. The unique shape of their crossed bill allows them to pry the scale from the cone so they can remove the seed with their tongue. Their populations fluctuate with the cone crops.⁸²

De Kiriline Lawrence begins her article on this species by describing the bumper cone crop near her home, in the fall of 1947: “The trees in the Pimisi Bay stood weighted down with such huge clusters as I have never seen in the 14 years I have lived here.” She goes on to describe how quickly these crops were attacked and consumed by the Crossbills and other Winter Finches.⁸³

The article follows with descriptions of the pre-breeding and nesting behavior of the Red Crossbills she observed around her home (Figure 6). She located and described four nests—no easy feat as the nests were well-concealed and found between 23–35 feet from the ground! Two of the nests were soon abandoned and the other two successfully fledged young. Almost eighteen hours was spent watching one successful nest, but at the other, which was well-hidden and thus not-easily observed, de Kiriline Lawrence spent “only a little over 8 hours watching.”⁸⁴

By spending such a great amount of time with the nesting Crossbills, de Kiriline Lawrence gathered a mass of data on nesting chronology and nesting behaviour. She was able to track the parents’ attentivity to the nestlings from the ages of one to sixteen days, including frequency of feedings and time on and off the nest. She also describes many other behaviors including courtship feeding between the male and female, foraging behavior, and dispersion of the juvenile birds after nesting.⁸⁵

Not only are these observations crucial in understanding the behaviour and habitat requirements of the Red Crossbill, but they also constitute the earliest nest records of this species.



Figure 6: Red Crossbills (Elaine R. Wilson, www.naturespicsonline.com (higher resolution version obtained in correspondence with website owner), CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=969811>)

In the 1981 to 1985 Breeding Bird Atlas of Ontario (BBA), the Red Crossbill is described as breeding in the Great Lakes-St. Lawrence and southern Boreal Forest regions, corresponding roughly with the distribution of red and white pines. The BBA has also identified the lack of historical information concerning the breeding distribution of this species, emphasizing that only five nests had ever been reported prior to the BBA. Four of them are de Kiriline Lawrence's, from April, 1948 in Pimisi Bay. The fact that her records comprised the vast majority of historical nesting locations in Ontario confirms the importance of her observations.

De Kiriline Lawrence also contributed valuable specimens to museum collections in Ontario. Throughout her career, she collected twenty-five skins from eight species and three nests from three species, but most of her specimens are Red Crossbills. Of the thirty-two museum specimen records of Red Crossbills for the Nipissing District, fifteen of them are by Lawrence (forty-seven percent). Hers is the only nest record. De Kiriline Lawrence tended to collect her Crossbills in groups: five in late-February to mid-March 1948, five in late-November to mid-December 1950, and six in January of 1951. Many of these were birds killed by vehicles on highway 17 near her home.⁸⁶

These records have been used to determine the historic breeding distribution of Red Crossbills, but also to reveal information on the local environment: the cone crops, for example, and the presence of sub-species. Several subspecies of Red Crossbills have been recognized, all having different calls and beak and body sizes depending on which conifer seed forms the greatest

part of their diet. In the 1981 to 1985 BBA it was mentioned that six subspecies of Red Crossbill exist, with two (*L. c. minor* and *L. c. neogaea*) recorded in Ontario. It goes on to say that another subspecies (*L. c. benderei*), a Rocky Mountain race “may also have bred in Ontario.”⁸⁷ However, de Kiriline Lawrence confirms the presence of this subspecies in the winter of 1948 in Rutherglen, long before the publication of the first Ontario BBA. De Kiriline Lawrence does not mention this sub-species in her Crossbill article, so is not known if the identification to sub-species was done by herself at the time of specimen submission or at a later date by someone else. Nevertheless, her specimens provide an early record of this sub-species in Ontario.

Of the four *L. c. benderei* records for the Nipissing district, two are hers and are currently housed at the Royal Ontario Museum. Red Crossbills can breed at any time of year when sufficient cone crops exist, therefore, it is likely the birds de Kiriline Lawrence collected were local breeders because they were collected in the winter of 1948 during the aforementioned excellent local cone crop.

It is because of naturalists such as de Kiriline Lawrence that such detailed accounts of bird behaviour – obtained at no easy cost – exist, increasing our understanding of avian communities. De Kiriline Lawrence’s nest records and specimens submitted to Canadian museums continue to reveal insights into past species distributions. Resituating de Kiriline Lawrence’s gendered knowledge in the natural history archive helps us dismantle the “gender blindness” in historical ecological reconstructions, highlighting the different ways men and women in North America gained knowledge in the natural sciences in the first half of the twentieth century.⁸⁸

Conclusions

What insights from feminist historical geography can be garnered to problematize approaches in historical ecology? This paper examined gender as a category of analysis into some of the ways birds linked Swedish-Canadian Louise de Kiriline Lawrence to Ontario’s northern landscape in the early decades of the twentieth century. De Kiriline Lawrence gained authority in the ornithological field through her life histories and breeding biologies of birds in northern Ontario. At the beginning of the twentieth century, middle-class respectable women, such as de Kiriline Lawrence, made ideal observers of the life histories of bird species from their homes, especially involving the nesting and breeding behaviors of birds. Her Loghouse Nest at Pimisi Bay provided her with an intimate site to record, band, and collect a variety of bird species over a long period of time. Gender was central to her authority on the life histories of birds in northern Ontario, especially on their nesting behaviors, illustrating the continued importance of the role of feminist historical geography in understanding the history of gender and the natural sciences.

These are important considerations when working with natural history specimens as primary source materials or “data” of northern Ontario ecological past, which has the potential to re-inscribe settler-colonialism if not put in their colonial context. As critical scholars have revealed, the production of maps without understanding settler colonialism is often reflective of our country’s colonial history.⁸⁹ Such insights are crucial when engaging in the historical ecological reconstructions of Ontario’s “middle north” using historical ornithological collections and records. They also have the power to decolonize and Indigenize dominant narratives of place, offering counter-narratives as a means to reinsert earlier histories or other ways of knowing, which have been overlooked, dismissed, or erased. This paper therefore provides an entry point into opening up discussions and collaborations between natural scientists and humanities-based scholars when reconstructing historical ecologies within the context of settler colonialism, which requires further study.

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NOTES

1. Yolanda Wiersma and John Sandlos, "Once there were so many: Animals as Ecological Baselines," *Environmental History* 16 (July 2011): 400-407; Peter Alagona, John Sandlos, and Yolanda Wiersma, "Past imperfect: using historical ecology and baseline data for contemporary conservation and restoration projects," *Environmental Philosophy* 9 (2012): 49-70.
2. L.L.Snyder, "Collecting birds and conservation," *The Ontario Field Biologist* 12 (1958); Carter, H. and S. Sealy. "Historical breeding records of four species of Alcid in British Columbia and southeastern Alaska, 1858-1910," *Northwestern Naturalist* 92 (2011): 37-49; J.V. Remsen, "The importance of continued collecting of bird specimens to ornithology and bird conservation," *Bird Conservation International* 5 (1995): 146-180.
3. For papers highlighting the importance of historical natural history specimens to science and society, see: C. Colvin, *Entomological Collections - Their Historic Importance and Relevance in the 21st Century* (2014), retrieved from <http://www.dispar.org/reference.php?id=92> [Accessed January 8, 2015]; K. Winker, "Why museums matter: avian archives in an age of extinction," *Bulletin of the British Ornithologists' Club* 116 (2003): 66-94; K.G. Johnson & S.J. Brooks, P.B. Fenberg, A.G. Glover, and K.E. James KE, "Climate change and biosphere response: unlocking the collections vault," *BioScience* 61 (2011): 147-153.
4. William Balée, "The research program of historical ecology," *Annual Review of Anthropology*, 35 (2006), 75-98.
5. P.O. Dunn and D.W. Winkler, "Climate change has affected the breeding date of tree swallows throughout North America," *Proceedings of the Royal Society of London* 266 (1999): 2487-2490; Harry R Carter and Spencer G Sealy, "Historical breeding records of four alcids in British Columbia and southeastern Alaska, 1858-1910," *Northwestern Naturalist* 92 (2011): 37-49; Miguel Clavero and Miguel Delibes, "Using historical accounts to set conservation baselines: the case of Lynx species in Spain," *Biodiversity and Conservation* 22 (2013): 1691-1702; A.J. Erskine, A. J. "Man's influence on potential nesting sites and populations of swallows in Canada," *Canadian Field-Naturalist* 93 (1979): 371-377.
6. Jonas Hentati-Sundberg & Olof Olsson, "Amateur photographs reveal population history of a colonial seabird," *Current Biology* 26 (2016): R226-R228.
7. J.B. Harley, "Deconstructing the map," *Cartographica* 26 (1989): 1-20; Jeremy Crampton. "An introduction to critical cartography," *ACME* 4 (2006): 11-33; Stephane Castonguay & Daren Kinsey, "The nature of the liberal order framework," in Michel Ducharme & Jean-Francois Constant (eds.), *Liberalism and Hegemony: Debating the Canadian Liberal Revolution* (Toronto: University of Toronto Press, 2009): 221-245.
8. Alison Blunt, "Mapping authorship and authority: reading Mary Kingsley's landscape descriptions," in A. Blunt and G. Rose (eds.), *Writing Women and Space: Colonial and Post-Colonial Geographies* (New York and London: The Guilford Press, 1994), 51-72; Barbara Gates, *Kindred Nature: Victorian and Edwardian Women Embrace the Living World* (Chicago and London: University of Chicago Press, 1998).
9. Donna J. Haraway, *Primate Visions: Gender, Race, and Nature in the Modern World of Science* (New York: Routledge, 1989), 1.
10. Haraway, *Primate Visions*, 11.

11. Karen Morin, "Embodying Tropicalities," *Singapore Journal of Tropical Geography* 25 (2004): 23-25. See also: Karen Morin, *Frontiers of Femininity: A New Historical Geography of the Nineteenth-Century American West* (Syracuse, NY: Syracuse University Press, 2008).
12. Jeanne Kay Guelke and Karen Morin, "Gender, nature, empire: women naturalists in nineteenth century British travel literature," *Transactions of the Institute of British Geographers* 26, 3 (2001): 306-326; Mona Domosh and Karen M. Morin, "Travels with Feminist Historical Geography," *Gender, Place and Culture* 10 (2003): 257-264; Karen Morin, *Frontiers of Femininity: A New Historical Geography of the Nineteenth Century* (Syracuse: Syracuse University Press, 2008); Avril Maddrell, "To read or not to read? The politics of overlooking gender in the geographical canon," *Journal of Historical Geography*, 49 (2015): 31-38.
13. Birds remained central to the development of zoogeography as a field of study. See: Ernst Mayr, "History of the North American Bird Fauna," *Wilson Bulletin* 58 (1946): 3-41. Historical geographers of science have contributed significantly to "spaces" of the production, circulation, and dissemination of scientific knowledge. See David Livingstone, "The Spaces of Knowledge: Contributions Towards a Historical Geography of Science," *Environment and Planning D: Society and Space* 13 (1995): 5-34; David N. Livingstone, *Putting science in its place: geographies of scientific knowledge* (Chicago: University of Chicago Press, 2010); S. Naylor, "Introduction: historical geographies of science - places, contexts, cartographies," *British Journal for the History of Science* 38 (2005): 1-12; Diarmid A. Finnegan, "The spatial turn: Geographical approaches in the history of science," *Journal of the History of Biology* 41 (2008): 369-388.
14. For works on the historical geographies of museum collections, see Merle Patchett, "Animal as object: taxidermy and the charting of afterlives," (2006), Accessed at: www.blueantelope.info/files/pdfs/AnimalAsObject2.pdf; Merle Patchett, Kate Foster and Hayden Lorimer, "The Biogeographies of a Hollow-Eyed Harrier," in S. Alberti (ed.), *The Afterlives of Animals: A Museum Menagerie* (Charlottesville: University of Virginia Press, 2011): 110-133; Merle Patchett, "Tracking tigers: recovering the embodied practices of taxidermy," *Historical Geography* 36 (2008): 17-39; Isla Forsyth, "The practice and poetics of fieldwork: Hugh Cott and the study of camouflage," *Journal of Historical Geography* 43 (2014): 128-137.
15. The bird specimens georeferenced on VertNet were originally part of a Berkeley University initiative called ORNIS. Over 5 million bird specimens are housed in North American collections, documenting the composition, distribution, ecology, and systematics of the world's estimated 10,000-16,000 bird species. Millions of additional observational records are held in diverse data sets. ORNIS addresses the urgent call for increased access to these data in an open and collaborative manner, and involves development of a suite of online software tools for data analysis and error-checking. This project, funded by the National Science Foundation, expands on existing infrastructure developed for distributed mammal (MaNIS), amphibian and reptile (HerpNet), and fish (FishNet) databases. Today, these specimens can be found on www.vertnet.org.
16. Bird species at risk at Rutherglen are included in the following study report but do not include historical records such as de Kiriline's: Ontario Ministry of Transportation, *Highway 17 Planning Study From 2.2 km east of Highway 531 easterly to 8.0 km east of Highway 630, GWP 5670-10-00* (March 2013)
17. Forsyth, "The practice and poetics of fieldwork," 137.
18. See: Martin K. McNicholl and Jack Cranmer-Byng, *Ornithology in Ontario* (Toronto: Hawk Owl Publishing, 1994), 102, figure x.
19. Morris Zaslow, *The Opening of the Canadian North, 1870-1914* (London: Oxford University Press, 1972); Matt Dyce, "'The gateway to the last Great West': spatial histories of the Athabasca Landing Trail," *Canadian Historical Review* 94 (2013): 177-206; Patricia Jasen, *Wild*

- Things: Nature, Culture, and Tourism in Ontario, 1790-1914* (Toronto: University of Toronto Press, 1995); Jocelyn Thorpe, *Temagami's Tangled Wild: Race, Gender, and the Making of Canadian Nature* (Vancouver: University of British Columbia Press, 2012); Liza Piper, "The Arctic and Subarctic in global environmental history," in J.R. McNeill and E. Stewart (eds.), *A Companion to Global Environmental History*. (Oxford: Oxford University Press, 2012), 153-66.
20. This paper builds on Kirsten Greer's earlier work with Jeanne Kay Guelke, "Traps and Treasures: methodological issues in using eye-witness narratives for historical ecological reconstructions," *American Association of Geographers Annual General Meeting*, New York, February 2001.
 21. Kay, "Landscapes of Women and Men," 435.
 22. Kay, "Landscapes of Women and Men," 448.
 23. One of the most prominent pieces on northern Ontario's history is Viv Nelles's *Politics of Development: Forests, Mines, and Hydro-Electric Power in Ontario, 1849-1941*, first published in 1974 and republished in 2005. Nelles's book examines the role of state in the exploitation of natural resources and the reciprocal impact resource development had in shaping politics in the province of Ontario. Focused on what was known then as "New Ontario," Nelles left out the presence of Indigenous people, women, and non-white Europeans in the shaping of northern Ontario. For works by gender historians, see: Margaret Kechnie and Marge Reitsma-Street, *Changing Lives: Women in Northern Ontario* (Toronto: Dundurn Press, 1996); Katrina Srigley and Jennifer Evans, "Women of the North, who ministered in the north: space and identity in the silences and recollections of the Sisters of St. Joseph," *Histoire Sociale/Social History*, XLVII/93 (May 2014): 37-62.
 24. Louise de Kiriline Lawrence, *Another Winter, Another Spring: A Love Remembered*
 25. Wallace, Amy "Barefoot in Sapphires: Painting Louise de Kiriline Lawrence," *Bon à Tirer: The Western Undergraduate Journal of Art History and Visual Culture* (2010). Retrieved from http://www.uwo.ca/visarts/research/2009-10/bat_2010/aw.html.
 26. *Ibid.*; Louise de Kiriline Lawrence, *Another Winter*, 1-29; Mohr, "To Whom," 74-75; Edward W. Laine, "Biographical Note for Louise de Kiriline Lawrence," in *Finding Aid No. 1742* (Ottawa: National Archives of Canada, 1993).
 27. P. Berton, *The Dionne Years: A Thirties Melodrama* (New York: Norton, 1977); M. Mohr, "To Whom the Wilderness Speaks: The remarkable life of Lawrence de Kiriline Lawrence," *Harrowsmith* 13 (1989): 72-81.
 28. David Scott Fitzgerald and David Cook-Martín, *Culling the Masses: The Democratic Origins of Racist Immigration Policy in the Americas* (Cambridge: Harvard University Press, 2014), 153, 164. For works on the history of Scandinavians in Canada's north, see: J. Peter Campbell, "The cult of spontaneity: Finnish-Canadian bushworkers and the industrial workers of the world in Northern Ontario, 1919-1934," *Labour / Le Travail* 41 (Spring, 1998), 117-146; David G. Delafenetre, "The Scandinavian presence in Canada: emerging perspectives," *Canadian Ethnic Studies* 27, 2 (1995).
 29. Elinor Barr, *Swedes in Canada: Invisible Immigrants* (Toronto: University of Toronto Press, 2015), 60-62.
 30. Barr, *Swedes in Canada*, 25.
 31. Ontario Department of Public Highways, *Road Map of Ontario* (Map) (Toronto: Ontario Department of Public Highways, 1923).
 32. Louise de Kiriline Lawrence, *The Loghouse Nest* (Toronto: Natural Heritage/Natural History, Inc.1945), 23.
 33. de Kiriline Lawrence, "The Red Crossbill at Pimisi Bay," 147.

34. The Mattawan - Nipissing Colonization Road was laid out in 1853 and connected the present-day communities of Mattawa, Eau Claire, Rutherglen, Bonfield, Corbeil, Callander and North Bay, ON, providing access to the area for early settlers. The Nipissing Road, a primitive route hacked out of the forest from Rousseau to Nipissing, ON, was another important travel route. The road was authorized in 1864 and was considered "open for winter traffic" by 1873. The area was attractive to prospective farmers as well as the lumber industry, which at that time was expanding its search of large White Pine along the Ottawa and Mattawa Rivers. See: D.Clysdale, *Callander Now and Then* (Callander, Ontario: Nicky Designs, 2011), 100, 3, 66, 94.
35. Louise de Kiriline Lawrence, "Why did you come to Canada?," *Chatelaine*, October 1937: 21, 53.
36. de Kiriline Lawrence, *The Loghouse Nest*, 19.
37. Urban Wråkberg and Karin Granqvist, "Decolonizing technoscience in northern Scandinavia: the role of scholarship in Sámi emancipation and the indigenization of Western science," *Journal of Historical Geography* 44 (2014): 81-92.
38. Robert J. Surtees, *Treaty Research Report, the Williams Treaties* (1923) , Treaties and Historical Research Centre (Ottawa: Indian and Northern Affairs Canada, 1986).
39. Bonita Lawrence, *Fractured Homeland: Federal Recognition and Algonquin Identity in Ontario* (Vancouver: University of British Columbia Press, 2012), 19. For a historical overview of Algonquin traditional territory in the Ottawa River watershed, see Chapters 1 & 2 of Lawrence, *Fractured Homeland*. The Ottawa River watershed, which connects Lake Nipissing to the St. Lawrence River system, is called by the Algonquin First Nation peoples *Kiji Sibi*. The river was renamed the Ottawa at the end of the eighteenth century by the British as a way to divide the territory into Upper and Lower Canada (present day Ontario and Quebec), and to dismantle a people's traditional stronghold of the fur trade route. Today, Pimisi Bay, which connects the Mattawa River to the Upper Ottawa River, is part of the Algonquin Land Claim that began in 1992. The Algonquin Land Claim highlights the long colonial history of the Kiji Sibi watershed or, as we know it today, the Ottawa River watershed.
40. Thorpe, *Temagami's Tangled Wild*. Feminist historical geographers have been at the forefront of thinking about gender and settler colonialism. Sarah Mills helped to untangle gender and imperialism by focusing on white colonial women as both colonized and colonizer, highlighting the role of women in perpetuating settler colonialism. See: Sara Mills, *Gender and Colonial Space* (Manchester: Manchester University Press, 2005).
41. Louise de Kiriline Lawrence, *To Whom the Wilderness Speaks* (Toronto: Natural Heritage/Natural History Inc., 1989), 2.
42. de Kiriline Lawrence, *The Lovely and the Wild*, 38.
43. John L. Cranmer-Byng, "A life with birds: Percy A. Taverner, Canadian Ornithologist, 1875-1947," *The Canadian Field-Naturalist* 110, 1 (January - March 1996): 1-254.
44. Marianne G. Ainley, "Last in the field? Canadian women natural scientists, 1815-1965," *Despite the Odds: Essays on Canadian Women and Science* (Montreal: Véhicule Press, 1990), 25-62; Marianne G. Ainley, "Science in Canada's backwoods: Catharine Parr Traill," in B.T. Gates and A.B. Shteir (eds.) *Natural Eloquence: Women Reinscribe Science* (Madison: University of Wisconsin Press, 1997): 79-97; Debra Lindsay, "Intimate inmates: wives, households, and science in nineteenth-century America," *Isis* 89 (1998): 631-652.
45. de Kiriline to Taverner, 17 December 1941, Taverner Fonds, Misc D, Box 5 of 32, CM-NAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
46. Linda Lear, *Rachel Carson: Witness for Nature* (Boston & New York: Houghton Mifflin Harcourt, 2009), 128.

47. Vera Norwood, *Made from this Earth: American Women and Nature* (Chapel Hill: University of North Carolina Press, 1993), xv.
48. de Kiriline to Taverner, 16 June 1942, Taverner Fonds, Misc D, Box 5 of 32, CMNAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
49. de Kiriline to Taverner, 7 November 1940, Taverner Fonds, Misc D, Box 5 of 32, CMNAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
50. de Kiriline Lawrence, "The Red Crossbill at Pimisi Bay," 148.
51. Back of the book cover of de Kiriline Lawrence, *The Loghouse Nest*.
52. de Kiriline Lawrence, *The Loghouse Nest*, 17.
53. Taverner to de Kiriline Lawrence, 21 June 1940, Taverner Fonds, Misc D, Box 5 of 32, CMNAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
54. de Kiriline to Taverner, 17 December 1941, Taverner Fonds, Misc D, Box 5 of 32, CMNAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
55. de Kiriline to Taverner, 17 December 1941 & 26 February 1942, Taverner Fonds, Misc D, Box 5 of 32, CMNAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
56. de Kiriline to Taverner, 26 February 1942, Taverner Fonds, Misc D, Box 5 of 32, CMNAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
57. de Kiriline to Taverner, 26 February 1942, Taverner Fonds, Misc D, Box 5 of 32, CMNAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
58. de Kiriline to Taverner, 17 December 1941, Taverner Fonds, Misc D, Box 5 of 32, CMNAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
59. de Kiriline to Taverner, 30 July 1942, Taverner Fonds, Misc D, Box 5 of 32, CMNAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
60. de Kiriline to Taverner, 30 July 1942, Taverner Fonds, Misc D, Box 5 of 32, CMNAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
61. de Kiriline to Taverner, 26 February 1942, Taverner Fonds, Misc D, Box 5 of 32, CMNAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
62. de Kiriline to Taverner, 2 May 1943, Taverner Fonds, Misc D, Box 5 of 32, CMNAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
63. de Kiriline to Taverner, 2 May 1943, Taverner Fonds, Misc D, Box 5 of 32, CMNAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
64. de Kiriline to Taverner, 7 November 1940, Taverner Fonds, Misc D, Box 5 of 32, CMNAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
65. de Kiriline Lawrence to Taverner, 19 October 1943, Taverner Fonds, Misc D, Box 5 of 32, CMNAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
66. Environment Canada, "Ecozone and Ecoregion Descriptions," retrieved from <http://eco-zones.ca/english/zone/index.html> [accessed 16 May 2016].
67. C. Elphrick, C., J. B. Dunning and D. A. Sibley (eds.). *The Sibley Guide to Bird Life and Behaviour*. (New York: Alfred A. Knopf, 2001), 80.
68. L.S. Jackson, L. S., C. A. Thompson and J. J. Dinsmore. *The Iowa Breeding Bird Atlas*. (Iowa City: University of Iowa Press, 1996), 1.
69. Merriam used the San Francisco Mountains of Arizona for his life zone concept. One of the first distributional sketch of the birds of North America was produced by Allen in 1871. Clinton Hart Merriam, "Laws of temperature control of the geographic distribution of terrestrial plants and animals," *National Geographic Magazine* 6 (1894): 229-238; Clinton Hart Merriam, "Life zones and crop zones," *U.S. Department of Agriculture Biological Survey Bulletin* 10 (1898): 1-79.
70. T.H. Payne, *Game Birds and Game Fishes of the Pacific Coast* (Los Angeles: News Publishing Co., 1913); R.C. McClanahan, *Original and Present Breeding Ranges of Certain Game Birds in*

- the United States* (Washington: United States Department of the Interior, Bureau of Biological Survey, 1940).
71. Robert M. Wilson, "Directing the Flow: Migratory Waterfowl, Scale, and Mobility in Western North America." *Environmental History* 7 (2002): 247-266; Robert M. Wilson, *Seeking Refuge: Birds and Landscapes of the Pacific Flyway* (Seattle: University of Washington Press, 2010).
 72. de Kiriline Lawrence, "The Red Crossbill at Pimisi Bay," 164.
 73. The names and the arrangement used are after Taverner (1934). Collection of the Royal Ontario Museum of Zoology; Collection of Cleveland Museum of Natural History; Mounted birds in the North Bay Normal School; Mounted birds belonging to Dr. F. W. McKee.
 74. Louise de Kiriline Lawrence, "The Red Crossbill at Pimisi Bay, Ontario," *Canadian Field-Naturalist* 63 (1949): 147-160; 160.
 75. de Kiriline Lawrence's Red Crossbill studies continue to inform the COSWIC Breeding Bird Atlas. See: Mike Cadman, P. Eagles, F. Helleiner, *Atlas of the Breeding Birds of Ontario* (Toronto: Federation of Ontario Naturalists, 1987).
 76. de Kiriline Lawrence to Taverner 25 January 1946, Taverner Fonds, Misc D, Box 5 of 32, CM-NAC/96-021, Canadian Museum of Nature Archives, Hull, Quebec.
 77. de Kiriline Lawrence, "The Red Crossbill at Pimisi Bay," 148, 157.
 78. de Kiriline Lawrence, "The Red Crossbill at Pimisi Bay," 111, 113.
 79. de Kiriline Lawrence, "The Red Crossbill at Pimisi Bay," 111.
 80. The specimens include: 1. CMNAV E2285 Gray Jay (*Perisoreus Canadensis*). This is almost certainly the egg written about in Lawrence's 1947 article *Five Days with a Nesting Pair of Canada Jays*. Lawrence studied a Gray Jay pair on the nest on a friend's property in Rutherglen, ON for 5 days in the spring of 1945, keeping track of their behavior. Interestingly, both birds were observed attempting to incubate the eggs at the same time. By early May, the nest had been abandoned and only one egg remained in the nest. Lawrence mentions that the egg was "sent to Dr. Rand for examination" on May 2, 1945, which matches the date on the museum information card exactly. Dr. A. L. Rand (of the CMN) found no embryo in it. 2. CMNAV 510929 Black-throated Blue Warbler (*Dendroica caerulescens caerulescens*) nest. Collected in Rutherglen, ON in 1952. It was found June 2, 1952, had four eggs in it by June 5 and was robbed on June 19. It was located 18 inches from the ground in a Mountain Maple. 3. CMNAV 511136 American Redstart (*Setophaga ruticilla*) nest. Collected July 12, 1947 in Rutherglen, ON. Lawrence wrote about this nest in her 1968 book *The Lovely and the Wild*, 157. She located a breeding pair of American Redstarts near her home and watched the female build this nest and lay three eggs in it. A few days later, Lawrence discovered the Redstart had built another nest layer on top of her three eggs and had laid another two eggs! A total of four eggs were laid and hatched on this layered nest and after nine days the young had left the nest. Lawrence speculates as to why the Redstart would abandon her first eggs and build a new nest layer; Yellow Warblers are known to do this in the presence of a parasitic Brown-headed Cowbird egg, but Lawrence saw no such occurrence in the Redstart nest. She guesses that a possible fourth egg could have been stolen by a predator, and the shock caused the female to abandon the other three eggs.
 81. de Kiriline Lawrence, *To Whom the Wilderness Speaks*, 11.
 82. C.S. Adkisson, *Red Crossbill*. In A. Poole and F. Gill (Ed). *The Birds of North America*, No. 256. American Ornithologists' Union (Washington, D.C., 1996); COSEWIC, COSEWIC Assessment and Status Report on the Red Crossbill *Percna* subspecies *Loxia curvirostra percna* in Canada (Ottawa: Environment Canada, 2004).
 83. de Kiriline Lawrence 1949, 148.
 84. de Kiriline Lawrence 1949, 151.

85. de Kiriline Lawrence 1949, 148-151; de Kiriline Lawrence, *The Loghouse Nest*, 54-55.
86. de Kiriline Lawrence 1949.
87. Cadman, *Atlas of Breeding Birds*.
88. Kay, "Landscapes of Women and Men," 436.
89. See Matthew Sparke, "A map that roared and an original atlas: Canada, cartography, and the narration of nation," *Annals of the Association of American Geographers* 88, 3 (1998): 463-495; Emilie Cameron, "Summer stories: (Re)ordering the Canadian Arctic," *Antipode: A Radical Journal of Geography*, 41 (2009): 207-210; Alexander Cullen, "Making sense of claims across institutional divides: critical PGIS and mapping customary land in Timor-Leste," *Australian Geographer* 46 (2015): 473-490.