Missinihe and the metabolism of empire: Long 19th-century water mills on the Credit River

BY JOHANNES CHAN

Johannes Chan is a PhD student in science and technology studies at York University researching the environmental and social history of water mills in Ontario and their relation to British colonialism and empire. Johannes completed their BSc in electrical engineering at Queen's University and MASc in environmental engineering and international development at the University of Guelph, researching micro-hydro power in rural Nepal.

In the 19th century, water mills spread along rivers throughout Ontario and later became inscribed in the names of housing subdivisions and subway stops and on the art hung in Canadian galleries. Ontario's first Heritage Conservation District was a mill town named Meadowvale, where the Group of Seven painter A. J. Casson spent childhood summers at his grandmother's cottage before going on to paint bucolic mill sites throughout Canada (McIlwraith, 2016). Behind this idyll of memorialization lies a history of technological infrastructure that made possible the colonial project of Canada. The Meadowvale mills were among the 60 or more constructed on the Missinihe (Credit River) by the mid-19th century (Blake, 1956). These water mills were not simply processing grain and lumber for the needs of local settlers and consequently encouraging settlement. They were also highly integrated into the export-oriented processing of staples and subject to the unstable vicissitudes of global commodity markets (Fisher, 1985).

"GENOCIDE BY SAWMILL"

While processing commodities, water mills were also radically transforming river and forest ecosystems that were actively shaped by the labour of both Indigenous peoples and the many organisms they lived alongside over millennia. In less than a century, these worlds were radically transformed in a process of clear-cutting that the Anishinaabeg ethnobotanist Jonathan Ferrier (2019) called a "genocide by sawmills."

The larger research questions that concern this article are twofold. First, how were sawmills integrated into the larger project of deforestation and how were water mills more generally changing river ecologies and fish populations? Second, I am interested in the ways that water mills in "Upper Canada" facilitated the project of colonialism, Indigenous dispossession, and British Empire more broadly. The rationale for this article, therefore, is to challenge narratives of nostalgia prevalent in heritage designation schemes that uncritically celebrate colonial infrastructures by connecting the environmental legacies of water mills to both colonialism and the larger project of the British Empire abroad.

This article is informed by De Laet and Mol's (2000) work showing how an artifact like the Zimbabwe bush pump had *fluid* boundaries that extended deep into the ground, into the surrounding community of users and technicians, and into the broader national identity of Zimbabwe. Water mills likewise not only straddled both land and water but extended into the broader river and lake ecosystems they came to affect, into mill towns they assembled around them, into the forests they converted into lumber and naval power, and to processed commodities like grain that circulated throughout the British Empire.

Because the legacy of water mills in Ontario involves forms of environmental violence and dispossession, this article is also challenged by Eve Tuck's (2009) call to move away from research that centres *damage* toward that which centres *desire*. In the case of the Mississaugas of the Credit, the archival record and treaties both register a deep desire they had to maintain direct relations with their rivers and fisheries. How water mills interacted with both of these is important for any work that takes Tuck's suggestion seriously.

WATER MILLS AND SETTLER COLONIAL POLICY

The scope of my work here is focused on "the long 19th century," a periodization borrowed from Eric Hobsbawm extending from the French Revolution to the First World War. This loosely maps onto a period extending from the 1787 Toronto Purchase to the year 1910, when the Hydro-Electric Power Commission of Ontario began delivering electricity from Niagara Falls to neighbouring cities and towns (Beattie, 1967). During the long 19th century, water mills spread rapidly along rivers in Ontario, processing commodities such as lumber, grain, minerals, textiles, and paper. Sawmills and timber extraction in Canada accelerated after the Napoleonic Wars, when the British lost access to Baltic timber (Albion, 1965). Of particular interest to the Royal Navy was white pine timber for naval masts, its extraction concentrating around the St. Lawrence and Ottawa River valleys and extending into the Credit River watershed. Early 19th-century land surveys of the Credit water-

Long 19th-century water mills, page 18

Long 19th-century water mills continued from page 17

shed describe nearly complete tree cover interrupted only by infrequent beaver ponds and windfall spots. Woodland cover fell to 67 percent by mid-century, and to 9.5 percent by 1911 (Blake, 1956). The clear-cutting that sawmills facilitated was closely coupled with a rapidly increasing settler presence.

Water mills became an important focus of settler colonial policy after Lieutenant-Governor Simcoe proposed in 1791 government provisioning of materials for mill construction, which he considered "universally necessary" and "a great inducement to the settlement of lands" (Doughty, 1936). Just five years later, land surveyors were noting the impacts of water mills on fish. In July of 1796, Augustus Jones, a Welsh colonial land surveyor and the father of Anishinaabeg leader Peter Jones, had noted how there had been "a great quantity of salmon as well as other fish destroyed by the wheels of [a] sawmill" on the Humber River (Jones, 1796). Despite the state's awareness of this, mills would become ubiquitous throughout the 19th century, which would prove devastating for local salmon species, which the Anishinaabe not only depended upon for their livelihood, but also regarded as integral to the desired futures they envisioned for themselves on their land. The environmental violence of deforestation and salmon population collapses was also highly entangled with the military violence of British imperialism.

Water mills were key colonial infrastructures, funded by the colonial state to establish an increased settler presence, while simultaneously metabolizing forests and swift river currents into vessels of naval military power with global reach.

IMPERIALISM AND DEFORESTATION

There is a long history of naval warfare's intimate relationship with deforestation. Thucydides (2009), the great historian of antiquity, connected timber access with the construction of military ships and noted on multiple occasions the abundance of timber being used as a justification for conquest. The British imperial state in Upper Canada likewise recognized the military importance of forests. In May of 1806, with a layer of snow still on the ground, the colonial land surveyor Samuel Wilmot (1806) arrived at the Missinihe (Credit) to mark off the boundaries of the Mississauga's reserve extending one mile from the course of the river. While surveying with a crew of hired Indigenous workers, he received instruction to "note Timber . . . Pine & Oak for the Royal Navy south of [Dundas] Street." As he scouted out timber for the British Navy, we might wonder if he realized his role in what would become the effective extermination of local salmon populations following the construction of sawmills up and down the Missinihe.

Along the Credit, salmon populations were dwindling by 1846 and reached the point of extinction in the next decade (Smith, 2000). Confronting rapidly growing colonial settlement, deforestation, and decimated salmon populations, the Mississaugas of the Credit First Nation left the Missinihe in 1848. Soon after, in the 1850s, Wilmot would observe a significant decline in salmon numbers in the creek running through his own farm in what is now Clarington, Ontario. He would go on to become a pisciculturist, specializing in fish culture and nurseries, receiving government funding for research projects to help restore fish populations in rivers he had played a vital role in depleting (McCullough, 2003). Wilmot's pilot projects would be the precursors to projects in Lake Ontario that introduced Pacific salmon species from the other side of the continent into Credit River waters for recreational purposes throughout the 20th century (Scott & Crossman, 1973).

SALMON AS SENTINEL

One might think of salmon here as a sort of sentinel species, signalling larger processes of empire at work. The environmental violence that fish experienced cannot be fully understood apart from the imperial violence operating both in Ontario and abroad. Zoe Todd's (2018) work on Treaty Six territory has highlighted the ways in which fish as more-than-human actors have borne witness to the destruction of waterways in what is now called Canada, and have refracted the grief and dispossession that colonialism has engendered. But Todd also argues that fish and their human kin can and do conspire together to resist colonial narratives, and we might ask if this can be the case along the Missinihe as well.

In this article I have tried to situate the environmental history of water mills in a broader global context. My main argument has been that the history of water mills in long 19th-century Ontario cannot be divorced from either the local project of colonialism or the global project of the British Empire. Water mills were key colonial infrastructures, funded by the colonial state to establish an increased settler presence, while simultaneously metabolizing forests and swift river currents into vessels of naval military power with global reach. More work needs to be

Long 19th-century water mills, page 19

Long 19th-century water mills continued from page 18

done on further tracing where and how these naval ships were deployed in the service of the British Empire and how other milled commodities circulated through imperial networks. The case of the Missinihe serves as an important site to work through these questions and interrogate the nostalgia present in public history that celebrates colonial infrastructures without situating them in their fuller context of environmental change and British imperialism.

REFERENCES

Albion, R. G. (1965). *Forests and the sea power: The timber problem of the Royal Navy, 1652–1862*. Harvard University Press.

Beattie, R. N. (1967). The impact of hydro on Ontario. In E. G. Firth (Ed.), *Profiles of a province: Studies in the history of Ontario* (pp. 166–172). Ontario Historical Society.

Blake, V. B. (1956). *Credit Valley conservation report, 1956*. Ontario Department of Planning and Development.

De Laet, M., & Mol, A. (2000). The Zimbabwe bush pump: Mechanics of a fluid technology. *Social Studies of Science*, *30*(2), 225–263.

Doughty, A. (1936). *Notes on history of flour milling in Canada* [John Ross Robertson Manuscript Collection, Folder for Alfred H. Bailey]. Marilyn and Charles Baillie Special Collections Centre, Toronto Reference Library.

Ferrier, J. (2019). *Natives in "Animosh": The land of the "Dog," "Eramosa" township*. 2019 MCFN Historical Gathering. http://mncfn.ca/wp-content/uploads/2019/05/Ferrier-PPT-Credit-meeting-final-low-res.pdf

Fisher, S. T. (1985). *The merchant millers of the Humber Valley: A study of the early economy of Canada*. NC Press.

Hobsbawm, E. J. (1996). *The age of revolution: 1789–1848* (1st Vintage Books ed.). Vintage Books.

Jones, A. (1796, July 7). *Letter to acting surveyor-general D. W. Smith on July 7, 1796* [Microfilm, MS 7433]. Archives of Ontario.

Mayor, A. (2018). *Gods and robots: Myths, machines, and ancient dreams of technology*. Princeton University Press.

McCullough, A. B. (2003). Wilmot, Samuel. In *Dictionary of Canadian biography* (Vol. 12). University of Toronto/Université Laval.

McIlwraith, T. F. (2016). At work in Meadowvale Village. *Ontario History*, *108*(2), 233–254.

Scott, W. B., & Crossman, E. J. (1973). *Freshwater fishes of Canada*. Bulletin 184. Fisheries Research Board of Canada.

Smith, D. B. (2000). *Sacred feathers: The Reverend Peter Jones (Kahkewaquonaby) and the Mississauga Indians* (2nd ed.). University of Toronto Press.

Thucydides. (2009). *The Peloponnesian war*. Oxford University Press.

Todd, Z. (2018). Refracting colonialism in Canada: Fish tales, text, and insistent public grief. In M. Jackson (Ed.), *Coloniality, ontology, and the question of the posthuman* (pp. 131–146). Routledge.

Tuck, E. (2009). Suspending damage: A letter to communities. *Harvard Educational Review*, *79*(3), 409–428.

Wilmot, S. (1806). *Diary of Samuel Wilmot* [Microfilm, MS 7438]. Archives of Ontario.