



The dam,

the myth, the legend

AN EXPLORATION OF THE BUCK-TOOTHED, FLAT-TAILED,
LANDSCAPE-SHIFTING ICON CELEBRATING 50 YEARS
AS CANADA'S NATIONAL SYMBOL: THE BEAVER

BY BRIAN BANKS

IT STARTED, IRONICALLY, WITH AN AMERICAN. In January 1975, New York State senator Bernard Smith, a noted environmental champion, introduced a bill to officially recognize a new state animal: the beaver.

Prompted by a local newspaper columnist asking if Canada had a more deserving claim, Sean O'Sullivan, a 23-year-old Conservative member of Parliament from Hamilton sprang into action. O'Sullivan, the youngest-ever MP when first elected in 1972, drafted a one-sentence private member's bill — "An Act to provide for the recognition of the Beaver (*Castor canadensis*) as a symbol of the sovereignty of the Dominion of Canada" — that had its first reading in Parliament that same month.

On the bill's second reading, O'Sullivan spoke about why Canada needed to adopt the beaver as a national symbol.

"There must be more to life than just financial facts and figures," he told the House of Commons. "There must be things to touch one's soul and heart and emotions, if we are to be complete persons and a whole nation. That is the importance of symbols." His fellow MPs and colleagues in the Senate agreed. On March 24, 1975, the National Symbol of Canada Act received royal assent.

This spring marks 50 years since the beaver reached this exalted status. Were O'Sullivan alive today, he'd surely be gratified by its persistent grip, literally and figuratively, on our collective soul and heart and emotions. Beaver imagery permeates every aspect of our culture: clothing, food, art, advertising, branding, entertainment. More than 1,000 places in Canada are named for the beaver. On the land, beavers continue to shape and reshape terrain,



in ways that are both challenging and instructive. They may even have a role to play in helping the country move forward with some of the most important issues of the day: reconciliation, halting biodiversity loss and coping with a changing climate. Little wonder that in a poll done for Canada's 150th birthday in 2017, the beaver was chosen as the "most Canadian" animal.

Yet commemorating this milestone is also a tricky task. The 1975 act may have given the squat, brown, furry,

flat-tailed, buck-toothed, dam-building rodent official national symbol status, but by then the beaver's potency as a national icon was already deeply entrenched, some of it predating Canada's creation by centuries. Parliament declaring it just made it official.

Much of that earlier imagery was directly tied to Canada's colonial history. Beavers were the prized commodity that drove the fur trade, propelling Europeans ever deeper into the interior to collect pelts to make fashionable men's hats

back across the Atlantic. The Hudson's Bay Company's coat of arms, presented in 1671, a year after the company's founding, sports four beavers. Canada's first postage stamp, issued in 1851, 16 years before Confederation, was the Three-Pence Beaver; it was based on a sketch of the beaver by Sandford Fleming (no small figure who also invented time zones and engineered some of Canada's early railways).

Part of the story stretches back even further. The beaver — *amik* to the

Beavers "R" Us

In the last 75 years, Canadians have embraced the beaver as a symbol of our identity in countless ways. Here are six.

Aircraft: In 1947, de Havilland Canada unveiled the Beaver, a single-engine, all-metal bush plane, designed for short takeoff and landing on skis, wheels or floats. Nearly 2,000 were built, with sales to 62 countries. In 1987, the Beaver was named one of Canada's top 10 engineering achievements of the 20th century.



A beaver swims beneath the ice in a frozen river in Quebec (LEFT). The species can hold its breath for up to 15 minutes. A beaver (RIGHT) carries sticks back to its lodge in the Meewasin Valley in Saskatoon, Sask.

Anishinaabe, *amisk* to the Cree — and beaver imagery, that of the ubiquitous, wise and resourceful landscape engineer have been part of Indigenous traditions and teachings on this continent for millennia. The beaver is the “one that brings the water,” as described by Michi Saagiig Nishnaabeg writer Leanne Betasamosake Simpson in *A Short History of the Blockade: Giant Beavers, Diplomacy, and Regeneration in Nishnaabewin*. Indigenous Peoples in North America also invented the canoes that were adapted and exploited to become the main vehicles of the fur trade. And these two Canadian symbols, the beaver and the canoe, have been intimately linked since.



ANOTHER COMPLICATING FACTOR:

Beavers may be the “most Canadian” animal, but that doesn’t mean they’re the most popular. Often, the emotions they stir are frustration and anger.

“They’ll cut down the birch trees in your front yard, flood farmland, put water over the top of roads,” says Ojibway wildlife biologist and artist Rick Beaver, of the Alderville First Nation in

Ontario. “Here on the west end of our reserve, there’s a nice, beautiful culvert that funnels Stoney Creek down into the marshland into Rice Lake. And every spring, the beavers have got that just plastered full of mud and logs. They keep the township and counties busy making sure that the water still flows.”

As a keystone species that protects groundwater and creates unique wetland and riparian forest habitat for everything from moose and deer to amphibians, insects and other furbearers, beavers

“need to be here,” he says. “But that’s a hard thing to explain to a property owner who has lost road access or a farmer who has lost part of his acreage to floods.”

The cost to manage the beaver’s impact in Canada each year is substantial. Glynnis Hood, professor emerita of ecology at the University of Alberta and author of *The Beaver Manifesto*, did a study in 2018 that found municipalities in Alberta spend more than \$3 million annually on beaver-related repairs and



CLOCKWISE FROM TOP LEFT: NATURE PICTURE LIBRARY/ALAMY STOCK PHOTO; KELVIN AITKEN; SIDEBAR: BEAVERVENDING.COM; ROBERT FROLA/WIKIMEDIA COMMONS; BACKGROUNDS BY MATTHEW BILLINGTON



Vending machines: For kids in the 1960s, the word “beaver” was synonymous with candy dispensers with glass globes and metal crank coin slots made by a company called Machine-O-Matic. Founded in 1963, it first made parts for other manufacturers, then launched its own machine, the “Round Beaver 16,” in the mid-’60s. It was renamed Beaver Machine Corp. in 2000.



flood mitigation. And that's "a conservative estimate," she says. "You've got an animal that will engineer no matter what it sees. I've seen beavers chew into fibre optic lines. I've seen PVC pipe incorporated into their lodges. They will take whatever is useful to them."

This conflict takes its toll on beavers, too. Many provinces and municipalities offer beaver "bounties" to keep

their numbers in check, with tens of thousands killed annually.

If putting bounties on a national symbol sounds wrong, at least there's this: beavers are problematic only because they've made a spectacular recovery from near-extinction at the beginning of the last century. Estimates of the beaver population when Europeans first arrived in North

America run anywhere from 100 million to 400 million. But after 300 years of the fur trade, wars between Indigenous nations, the French, the British and the Americans, and then land clearance and drainage for agricultural settlement, beavers were wiped from much of the continent. Today, Canada's beaver population is estimated at six million to 12 million — a healthy

Entertainment: In the early 1970s, lawyer-comedian Hart Pomerantz played the Canadian beaver in a series of CBC TV specials made with partner Lorne Michaels, before Michaels went on to launch *Saturday Night Live*. On the west coast, Ontario-born Judith Stein launched a 40+ year burlesque career while at the University of Oregon. Known as "Mama Beaver," she was the first Canadian inducted into the Burlesque Hall of Fame in Las Vegas.



A large lodge (LEFT) rules a flooded marsh in Lake of Bays, Ont. A busy beaver slides over a small waterfall (RIGHT) in the Speed River, Guelph, Ont. A beaver stands (BOTTOM, RIGHT) at the edge of a frozen Beauvais Lake, Alta.



total, though still a fraction of their numbers pre-Contact.

Beavers were so scarce by the early 1900s that trapping was banned or restricted in many areas. At the same time, the early vestiges of the conservation movement were also taking shape. When the Dust Bowl hit in the 1930s, turning the Great Plains into a virtual desert, some connected the dots between the extreme drought and the loss of beavers and their role in enhancing wetlands. In the 1940s, beaver reintroduction programs became common on both sides of the border, including high-profile destinations like Elk Island and Wood Buffalo national parks, where they arrived by rail and air, respectively. “Part of it was in response to the drought, and part of it was a response to the idea that we’d pushed nature too far,” says Hood.



THE BEAVER'S GRADUAL RECOVERY as a species and its emergence as a symbol in 20th-century Canadian culture were closely linked, with major Canadian institutions setting the tone. From 1886 to 1929, the Canadian

Pacific Railway’s logo included a beaver (added shortly after Donald Smith, co-founder of the railway and Hudson’s Bay Company governor, was immortalized as the driver of the Last Spike in 1885); Parks Canada (then the Dominion Parks Branch of the Department of the Interior) unveiled its

first beaver logo in 1933; and in 1937, the Royal Canadian Mint issued a new Canadian nickel with the same image of a beaver on a log that is still in circulation today.

Then there was Archibald Belaney, the English conservationist who falsely claimed his mother was Apache and



Fashion: Two years before the beaver became an official symbol of Canada, Michael Budman and Don Green launched Roots, first to sell shoes, then other clothing. The company’s iconic beaver logo was designed soon after, but only introduced chain-wide in 1985. The Roots logo achieved true Canadiana cred when the company outfitted Canada’s Olympic team for the 1998 Winter Games in Nagano.



later adopted the name Grey Owl when he began writing about beavers and conservation. After his death in 1939, Belaney's fraud was exposed. But in life, he helped put *Castor canadensis* on the map as a symbol of Canadian culture. His fame peaked after he was hired by the Parks Branch as

"caretaker of park animals" in 1931 and lived for several years in Prince Albert National Park in Saskatchewan. There, he, his Algonquin-Haudenosaunee wife Anahareo and their pet beavers, "Rawhide" and "Jelly Roll," hosted a steady stream of visitors. "People came in droves," says Hood.

In the decades that followed, Canada boomed. And so did our continued embrace of the beaver, in commerce, performance, even athletic competition (see sidebar). However, learning, or in some ways re-learning, how to live with the beaver has been a slower process. Yet it's one area where some say

Fast Food: Would any other country invent a fast-food item made of fried dough flattened and stretched to resemble beaver tails? The first Beaver-Tails shop opened in Ottawa in 1980. It served its most famous customer in 2009, when U.S. President Barack Obama dropped in en route to the airport. It now has 140 franchise and licensed locations in six countries.



Clockwise from TOP LEFT: A beaver and its young share a meal in Forillon National Park, Que. Young beavers stay in their parental colonies for two years; in mid winter, a beaver uses its strong and constantly growing teeth to chew through a small tree on Oxtongue Lake, Ont.; the photographer spotted this beaver crossing a road to a small pond in Lac La Biche, Alta., in early May; *Castor canadensis* on the banks of the Ottawa River during a spring sunset.

greater urgency is needed — and with it, a new way of looking at the beaver and what it might symbolize — as impacts of climate change, particularly drought, more intense rainfall and warming of the Far North, grow more severe.

Consider drought and Simpson's description of the beaver as "the one that brings the water." Glynnis Hood came to see what this meant while doing PhD research in Alberta in 2002. "We had the worst drought on record. I happened to be doing field data collection, and I was like, 'these ponds are disappearing.' Then I started to notice that the ponds with beaver still had water in them." Further study across the province revealed that ponds with beavers had nine times more open water than those without.

The difference is due partly to dams. But another beaver skillset is equally important: they excavate pond bottoms and dig canals into the surrounding landscape. "In certain types of wetlands,

they dig kilometres of canal systems," says Hood. When there's rain after a drought, it's these canals that bring the water.

At the other extreme, these same beaver-engineered landscapes also show a capacity to reduce severe flash floods caused by intense rainfall. In 2013, when Calgary suffered its worst flooding in over a century, Cherie Westbrook, an ecohydrology professor at the University of Saskatchewan who had been doing field work in the Kananaskis region, discovered it could have been even worse were it not for the beaver dams upriver from the city.

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Despite the deluge, roughly seven of every 10 of those dams upriver remained intact and were still holding back water after the storm. Today, Hood and Westbrook are doing joint research to learn more about this capacity. Hood says conventional wisdom still argues for beaver dam removal in the belief that they will all

give way in storms, making flooding worse. "We're trying to put a scientific evaluation on that, rather than just a rhetorical one," she says.

That's not to say there isn't a place for some simple human engineering to make coexisting easier. One solution: pond-levelling devices that regulate water levels in beaver ponds to prevent uncontrolled flooding, eliminating the need for dam removal or killing beavers. They also counter the beaver's instinctual drive to dam up any place where they hear running water by using submerged pipes called "beaver deceivers." Hood partnered with an

economist to do a cost-benefit analysis comparing their use to tearing up dams with backhoes or dynamite. "We found that they saved tens of thousands of dollars," she says, while also preserving all the ponds' ecological benefits, which also include carbon storage and, in some areas, reducing wildfire risk.

The changing climate also means beavers are moving farther north as the limits of shrub and tree growth extend poleward. Researchers are working with Inuit in northern communities to better understand how the beaver's outsized impact will affect permafrost, fish populations and other local ecosystems. Right now, those outcomes are unknown.

For his part, Rick Beaver sees a solution to the broader question of coexistence with the beaver in Canada's growing willingness to seek



Olympic Mascots: When they're hosting the world, what countries choose as Olympic mascots says a lot about their national identity. So it was that Amik the beaver was selected for the Summer Games in Montreal in 1976. In Vancouver in 2010, the official mascots were characters melding local wildlife with First Nations stories and mythologies. But beavers still got their due. Corporate sponsor Bell Canada ran ads before the games featuring animated talking beavers (Frank and Gordon in English Canada; Jules and Bertrand in Quebec). Oversized versions also appeared in the closing ceremonies, described in the moment by NBC announcer Bob Costas as "the always enjoyable giant inflatable beavers."



Two beavers sit on the banks of the Bow River in Calgary at sunset.

Indigenous cooperation and heed Indigenous traditional knowledge in dealings with the environment. “It’s a question of acknowledgment that we are part of the landscape, as are beavers.”

“There is an Ojibwe word for the relationship of all things,” Beaver continues. “It’s Gidinawendimin. It means we are all related, that there’s this holistic identity that we are a part of. And as we consider solutions to current environmental issues, one of our objectives is to get back to that, to make people aware of their belongingness to all things. In that sense, I think it’s appropriate to

think of the beaver as a national symbol which harkens back to our traditional teachings about who we are, and what we belong to and what belongs to us.”

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