



Актуальні питання науки

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I Міжнародної науково-практичної інтернет-конференції
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ЗМІСТ

БІОЛОГІЧНІ НАУКИ. ЕКОЛОГІЯ.

Kotliarova Oleksandra, Pet'ko Lyudmila	
Wuthering Heights and Rose Emily Brontë Named After Celebrating the Bicentenary of the Birth of the Novelist	8
Nakonechniy Yaroslav, Pet'ko Lyudmila	
Bees do Matter for Humans	18
Novak Tatiana, Pet'ko Lyudmila	
The Beaver as a National Symbol of Canada	26
Stepanchenko Daryna, Pet'ko Lyudmila	
The Rose Sweet Juliet is a Tribute to Young Love.	36

ДЕРЖАВНЕ УПРАВЛІННЯ ТА ЕКОНОМІКА

Вашека Г.В.	
Бюджетна складова економічного розвитку	47
Канєва Т.В.	
Бюджетна політика у країнах з розвинутою економікою	50
Супрунова І.В.	
Економічний спад та тінізація економічних відносин як наслідок поширення пандемії коронавірусу у світі	53
Ходаковський В.В.	
Фінансове забезпечення соціально-економічного розвитку країни	55

ІСТОРИЧНІ ТА ЮРИДИЧНІ НАУКИ

Коваль О.С.	
Загальний огляд методів запам'ятовування історичних подій	58

МИСТЕЦТВОЗНАВСТВО

Кривонос М.М.	
Педагогічна концепція музичного фольклору у творчій спадщині українських композиторів-класиків	61
Панасюк Т.Ю.	
Педагогічні ідеї М.Д.ЛЕОНТОВИЧА у розвитку шкільної музичної освіти України	64

THE BEAVER AS A NATIONAL SYMBOL OF CANADA

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Historically, *castor canadensis* was central to Canada (Fig. 1) beginnings. Beavers [Fig. 3] became the wildlife most wanted in the 1600s and early 1700s when fur hats became exceedingly au courant in the world of European fashion. Because North

America had a massive beaver population to exploit, soon both English and French traders were selling pelts at 20 times their original purchase price from North American aboriginals. This lucrative fur trade was the basis of the North American colonies, and accordingly, the image of the beaver popped up frequently over the years: on the Hudson's Bay Company's coat of arms in 1678, on the armorial bearings of Quebec City and Montreal (in 1678 and 1833 respectively) and on Canada's



Fig. 4. Map of Canada.

first stamp in 1851 (Fig. 2, video [17]) [21].

The postal and philatelic history of Canada concerns the territories which have formed Canada (Fig. 1, video [6]). Before Canadian confederation, the colonies of British Columbia and Vancouver Island, Prince Edward Island, Nova Scotia, New Brunswick and Newfoundland issued stamps in their own names. The postal history falls into four major periods: French control (1604–1763), British control (1763–1841), colonial government control (1841–1867), and Canada, since 1867 [16].

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Fig. 2. The "Threepenny beaver" stamp of 1851.



Fig. 3. *Castor canadensis*.



Fig. 4. Memorial sign.



Fig. 5. The beaver: pure gold coin.



6. Beaver poster.

We found an Act to provide for the recognition of the Beaver (*Castor canadensis*) as a symbol of the sovereignty of Canada. 'It is hereby recognized and declared that the Beaver (*Castor canadensis*) is a symbol of the sovereignty of Canada and it is proclaimed that any representation of the Beaver (*Castor canadensis*) when used by Her Majesty in right of Canada shall be so used and so regarded' [14].

The lowly beaver is an official symbol of the sovereignty of Canada, having received royal assent in 1975. But its presence on our communal cultural radar is spotty at best, limited to currency (the nickel), camping ailments (beaver fever) and sugary fried bread snacks in the nation's capitol (beaver tails).

The North American beaver (*castor canadensis*) is the national animal of Canada, but it is not uniquely Canadian. It was given official status as an emblem of Canada when "An Act to provide for the recognition of the beaver as a symbol of the sovereignty of Canada" received royal assent on March 24, 1975.

The mighty beaver is only as Canadian as the Canada goose, Canada jay, Canada lynx, and many other animals living in Canada, the US, and elsewhere. It is, however, a widely accepted national symbol, as demonstrated in this sculpture above the entrance to one of the Canadian Parliament buildings (Fig. 7, 10, 11). The beaver image is embossed on the reverse side of the Canadian coins (Fig. 5) and its image is seen on several Canadian postage stamps. It is featured on coats of arms like that of the city of Toronto (Fig. 8, 9) and it is also the mascot or emblem of many cities, universities and other institutions in Canada [25].



Fig. 7. Beaver sculpture. Fig. 8. Coat of arms of Toronto. Fig. 9. Toronto.

When the French first settled Canada, the economy of their new colony became centred around the fur trade. At around the same time, the British opened up fur trading posts on Hudson's Bay (video [9; 12; 20]). Intrepid fur traders from French Canada and Hudson's Bay later went on to explore much of Canada's hinterland in search for more beaver pelts. From the early 17th century, up until the early 19th century, the trade in beaver pelts was the centre of Canada's economy. It is because of this history that the beaver is the mascot of Canada [25].



Fig. 10. Beaver sculpture above the entrance. Fig. 11. The Canadian Parliament buildings.

The Centre Block of the Canadian Parliament buildings (video [15]) is often referred to as a symbol of Canadian democracy and certainly the Peace Tower is

recognized throughout Canada as a symbol in own right. Like a finely crafted piece of jewelry the building and Tower abound with objects, paintings, sculpture and other objects that each reflects an element of long history as the focal point of parliamentary democracy in Canada. Similar to a good story, the tone is set at the very beginning [13].

The main entrance of the Centre Block is imposing structure, comprised of the arched base of the Peace Tower followed by the pair of bronze double doors. A visitor approaching from Wellington Street walks along the broad ceremonial walkway and then must climb some twenty steps to arrive at the top of the Vaux Terrace, or the Drive, immediately in front of the building. Ahead is the main entrance and 10 more steps leading to the graceful arch made of Wallace sandstone from Nova Scotia and the Peace Tower soaring a little over 92 meters overhead [13].

Amidst all of mythical creatures and symbols, the beaver actually created quite a commotion when the original design was initially reported in the newspapers of the day. What is most interesting about the uproar was not the selection of the iconic beaver, but how the beaver was to be represented. Cleophas Soucy's original design was of a more symbolic nature in that it was to depict a mother beaver surrounded by nine young beaver kits, each baby beaver representing the nine provinces and Canada itself. This was certainly a creative design to fit into the existing symbolism found on the Hill and in the building. A number of newspaper articles reported on the design in January 1938 and even depicted photographs of the plaster design that Soucy had prepared for his carvers [13].

It would appear from the correspondence that followed that Public Works made additional inquiries with a specialist at the Victoria Museum, today's Museum of Nature, to determine if a female beaver could produce a litter of nine kits or not. According to their findings Ms. Whitton's facts were not entirely correct; while nine kits were in the realm of possibility, it could not be confirmed to any degree of certainty. Consequently, at the beginning of March 1938, the Prime Minister was briefed on the matter and a proposal was put forward that the mother beaver with kits would be replaced by a single beaver, alone [13].

On September 12, 1938 Soucy's design of a single beaver, approximately a meter in height, supporting a shield had been approved for carving (**Fig. 7, 10**).

Standing high above the entrance, seventy-five years later the beaver continues to survey Parliament Hill, a distinctively Canadian symbol greeting alike common citizens, monarchs, presidents, and Prime Ministers, albeit alone [13].

The beaver an industrious, semi-aquatic mammal with excellent engineering skills. A furry, monogamous creature that smacks its tail on the water when frightened. A buck-toothed rodent whose anal sacs contain castoreum, a substance used to make perfume.

The beaver cuts down trees with its teeth, while supporting itself on its tail (**Fig. 12**). Incisor teeth never stop growing and chewing on trees wears them down. Beaver teeth marks can be seen on logs and stumps it has chewed on. Contrary to popular belief, the beaver doesn't know where the tree will fall. As the tree is falling, the beaver dives into the water for protection. Still, beavers are sometimes injured or killed by falling trees [7], **video [2; 8]**.



Fig. 12. The beaver cuts down trees.



Fig. 13. The beaver teeth.

Beavers are primarily nocturnal. They are only occasionally seen during the day, usually around dusk. Beavers travel good distances from their homes to find food. If they find a good source, they build canals to the food source as a way to float the food back to their lodges. Logs and twigs are often stored underwater for winter feeding [8].

Sir David Attenborough narrates this fascinating animal video recording the way in which beavers build a lodge in just 20 days (**video [11]**).

Beavers are the largest rodents in North America, and they spend most of their time in the water. To protect themselves from the cold and wetness they have waterproof reddish brown or blackish brown hair. They have small, round, brown ears, and powerful back legs for swimming. A beaver's front legs are not as large or as strong as its back legs.

Beaver skulls and teeth are very big (**Fig. 13**). The two front teeth are orange colored, and they can be up to 5 mm wide and between 20 and 25 mm long. These teeth grow throughout the animal's life, and they are used for cutting wood. Without these teeth beavers could not cut down or eat trees and wood. Beavers also have see-through eye lids, and closable nostrils and ears for swimming underwater. Beavers also have anal and castor glands, which they use to mark their territory. These glands are located beneath the tail. A beaver's tail is broad, flat, and covered with large black scales [1].

Beavers are found throughout all of North America except for the northern regions of Canada and the deserts of the southern United States and Mexico.

Beavers live in lodges. They will either live in one built on an island, one built on the shore of a pond, or one built on a lakeshore. The lodge has one main room with its floor above water. There are two entrances to the lodge.

The lodge is oven-shaped, and is made of sticks, grass, moss, and mud. The inside room may be 8 feet wide and up to 3 ft high. Over the years beavers add more sticks and mud. This makes the lodge larger. The floor of the lodge is covered in bark,

grass, and wood chips. Beavers are monogamous, but if one mate dies, the other will "remarry", or seek out a new mate [1].

Beavers are driven away from their colonies usually around their second year of life, right before a new litter is born. Female beavers are sexually mature when they are about 3 years old. They give birth to one litter each year, usually between April and July. Baby beavers develop inside their mother for about 3 months. Baby beavers are called kits (**Fig. 14**). When they are born they already have all of the fur and have their eyes open. At birth kits are usually around 38 cm long including their tails. They tend to weigh from 250 to 600 grams and can be red, brown, or almost black. Both male and female beavers will care for their young for up to two years. To prepare for new kits, a mother beaver will make a soft bed on the floor of the lodge [1].



Fig. 14. Kits.

beech, birch, alder, and aspen trees. Beavers also eat plants that live in the water, including root and flower [1].



Fig. 15. The beaver dam.

to the threat which man poses on beavers [1].

Beavers are beneficial to the environment, they can destroy it also. Dams slow the flow of water in fast streams, changing the flora and fauna and sometimes creating silting. They may flood low-lying areas, sometimes causing extensive loss of timber [1]. In **Fig. 15**

Beavers usually live in groups with their relatives called colonies. These groups can have up to 8 beavers in them. Younger siblings stay with their parents for up to two years, helping with infant care, food collection, and dam building. Beaver families don't interact with other families, and they defend against each other.

Beavers eat bark and cambium, the soft wood underneath bark. Their favorites include maple, willow,

Young beavers are very vulnerable, and are threatened by bears, wolves, wolverines, lynx, fishers and otters. An adult beaver's size is a deterrent to most predators, and though natural predators pose a very real danger to kits, man has proven to be, by far, the most dangerous predator to beavers. Killing beavers for their pelts, disrupting them through a change in habitat, and slowly poisoning them through pollution, which

is known to infect wounds, all have lead

we can see Beaver Lodge in eastern Ontario 2018 in the midst of a marshland. The beaver created a dam to raise water level so they can build a lodge with a water entrance beneath it, and created water access to nearby trees.

This video by Rick Smith documents a Beaver Dam collapse and rebuild on his property in Northern Minnesota. This is an update video depicting the beavers progress 1 1/2 years after a total dam collapse. The dam was an engineering marvel as it was a double decked holding back over 9 ft of water. The collapse was spontaneous and a total shock to people. They just happened to be there when it gave way. The collapse was caused by heavy rains the week earlier and not human intervention (**video [4]**).

Beaver have also become problematic in other areas. In the Interlake farming region of Manitoba, about 200 kilometres north of Winnipeg, people have been complaining about the pesky rodents flooding pasture land... In the 2015-16 fiscal year, the provincial government spent about \$160,000 removing dams along with some 5,600 nuisance beavers.

The situation is far worse much much farther south at the tip of Argentina where Canadian beavers were mistakenly imported decades ago in an idea to create a fur industry there [4].

In the contents of our article we've remembered a movie *White Tuft - the Little Beaver* (French title: **Mèche Blanche, les aventures du petit castor**) is a family adventure film released February 22, 2008 in Canada and distributed by Alliance Atlantis. The film is directed by Philippe Calderon. The film follows the adventures of a small beaver called White Tuft (**video [17; 18; 23; 24]**). Young beaver White Tuft grows up with his mother and sister after their father was devoured by wolves. After a bear's weight causes a large gap in the dam where they live, he's dragged away by the torrent. He meets and befriends a grumpy old beaver, they save each-other's lives from attacking wolves. Later they wander back to mother's lake just when the dam is blazing in a forest fire.

To sum up, the beaver became a national symbol of Canada because of the fur trade. But the fur trade was definitely a significant factor in the selection of the beaver as an official emblem of Canada... The use of the beaver as a symbol stems back to the main players of the fur trade, the Hudson's Bay Company (**video [10; 19; 21]**), who put the animal on their coat of arms in 1621.

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