

Bronson's
BEAVER
FACTS



BRONSON BEAVER BUILDS A ROBOT
COMPANION BOOKLET

AMERICAN BEAVER

SCIENTIFIC NAME:
CASTOR CANADENSIS

CLASS:
MAMMALIA

ORDER:
RODENTIA

RANGE:
NORTH AMERICA

HABITAT:
WETLANDS & FORESTS

DIET: (VEGETARIAN)
TREE BARK

- ALDER
- ASPEN
- BIRCH
- BEECH
- COTTONWOOD
- MAPLE
- WILLOW

LEAVES

TWIGS

GRASSES

FERNS

WATER LILIES

SIZE:
33-46 IN.

WEIGHT:
40-60 LBS.

TAIL:
8-12 IN.

LIFESPAN:
15-24 YEARS

GROUP NAME:
COLONY OR FAMILY

INVENTIONS:
DAM

POND

LODGE

CANAL

FOOD CACHE



OVERVIEW

The American beaver is North America's largest rodent. Its scientific name is *Castor Canadensis* and is considered a keystone species. Beavers typically live near rivers, streams, and ponds throughout most of North America in Canada, the United States, and Northern Mexico. The beaver is primarily an aquatic mammal. Adult beavers can be up to 4 feet long and typically weigh 40 to 60 pounds but can weigh as much as 100 pounds. Beavers mate for life and live in family groups or colonies. Beavers are industrious natural-born builders. Their young offspring, called kits, enter the world instinctively, trying to build things. Beavers also have unique hydro-engineering skills, which they use to control water, create ponds, and develop wetlands that increase biodiversity. Like humans, they have a remarkable ability to alter their environment to suit their own needs.





FUN FACT

Beavers create an underwater refrigerator called a food cache for the winter. They do this by making a massive pile of sticks underwater and anchoring them in the mud on the bottom of their pond. So when their pond is fully iced over, they have enough food to survive during the winter.



DIET

Bronson loves eating things like aspen bark toast, BBQ birch chips, and tree bark jerky. Beavers love to eat tree bark in the natural world too. The bark's *cambium*, to be exact, which is the sweet white layer just below the rough bark layer. Some of their favorites are aspen, willow, cottonwood, maple, beech, birch, and alder trees. Beavers are herbivores, so they live a strict vegetarian lifestyle. They don't eat fish or any other animals but enjoy eating leaves, twigs, grasses, ferns, water lilies, and other aquatic vegetation.





FUN FACT

Beavers have a special gland at the base of their tale that produces oil (like hair gel), which they comb into their fur with their claws to waterproof it.



SPECIAL FUR

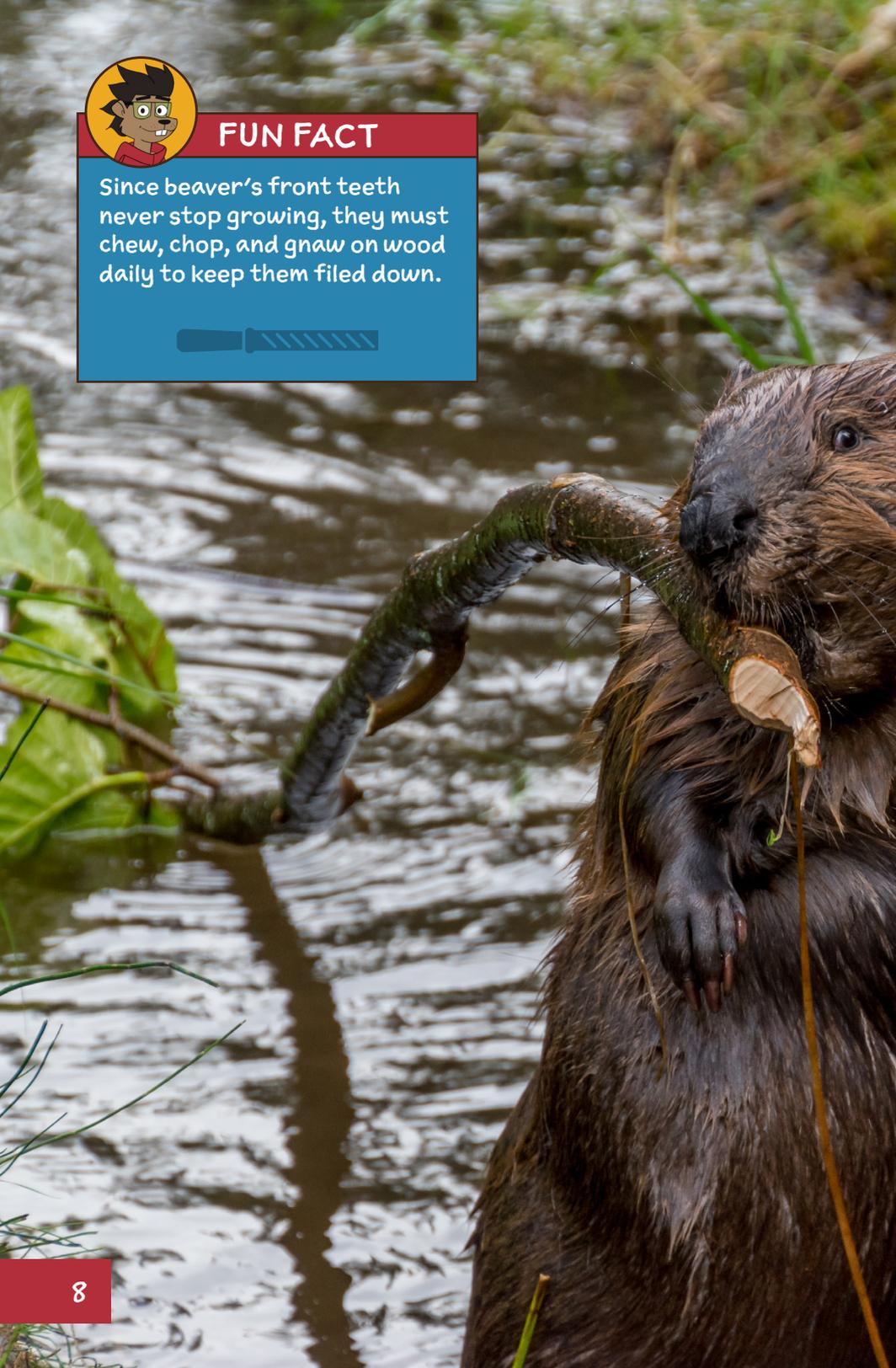
Bronson has messy brown fur, his father has lighter brown carefully-groomed fur, and his mother has thick, luxurious dark brown fur. In the natural world, a beaver's fur ranges from reddish-brown to blackish brown. Their thick and oily coat combines short fine hairs for warmth and long hairs for waterproofing. Beavers are known for their daily grooming ritual and often groom each other to keep their fur waterproof.





FUN FACT

Since beaver's front teeth never stop growing, they must chew, chop, and gnaw on wood daily to keep them filed down.



TOOLS OF THE TRADE

Bronson uses tools and materials he's gathered and stored in his family's toolshed to build his inventions. In the natural world, a beaver's tools are its teeth and claws. Their four front teeth are called incisors, which self-sharpen as they chew. Their teeth have hard (iron-fortified) orange enamel on the outside and softer dentin on the back. So, as the more delicate side wears down, it creates a chisel-like edge. They use their sharp, chisel-like teeth and strong lower jaw muscles to cut through trees. They have hand-like front paws with strong claws that allow them to tunnel through mud and dirt and handle large or small objects with great ease.





FUN FACT

The beaver's tail has many uses. It serves as a boat-like rudder to help them steer when swimming, a cushion to set on while grooming, a prop to help keep its balance while cutting down trees, and an alarm paddle to slap the water's surface to warn other beavers of danger.



AQUATIC FEATURES

There's a reason why Bronson's mother, Beverly, was a world champion Swimmer! In the natural world, beavers can hold their breath underwater for up to fifteen minutes. They have sleek, waterproof fur and webbed hind feet, which help propel them through the water up to five miles per hour. Beavers also have transparent goggle-like eyelids so they can see underwater and special flaps that close inside the nostrils and ears to keep water out. They also have a second set of lips that close behind their front teeth so they can swim carrying sticks in their mouth without choking on water. And their large, hairless, flat tail acts like a boat rudder while swimming.





FUN FACT

The longest beaver dam in the world is 2,788 ft. It is located in Wood Buffalo National Park in Alberta, Canada. It's more than twice the Hoover Dam's length and is the work of several generations of beavers, who have probably been working at the site since the mid-1970s.



DAMS

Bronson's responsibilities included making repairs to Beaver Valley Lodge's complex network of century-old dams. For beavers in the natural world, building and repairing their dams is the way of life. They build dams in streams made of branches, sticks, stones, and mud to create a large deep pond. The dam size depends on the stream width but averages about 5.5 ft. tall, 3 ft. wide, and 12.5 ft. long. The pond serves as a safe place for them to build their lodge and store food for winter. Much like a moat was used for a castle, the pond helps defend beavers against predators.





FUN FACT

In autumn, beavers plaster the outer walls of their lodges with a thick layer of mud. This plastering helps thicken the walls to increase the warmth and insulation. It also freezes rock solid during the winter and becomes a powerful armor to keep predators out.



LODGES

Bronson lives with his parents in a two-story, twelve-room pine-log lodge. Built over 150 years ago by Bronson's distant relative Barret von Beaver to help protect his furry family members from the harsh winters. In the natural world, beavers also build and maintain houses called lodges to protect them from the cold of winter and hungry predators. These dome-shaped structures, constructed on islands in their ponds, on the banks of their ponds, or lakes' shores, are made of branches, sticks, grass, moss, mud, and stone. They usually have two underwater entrances and two rooms—one room for drying off and the second room for living. Beavers are also known to live in underground dens, which they build into the banks of rivers.





FUN FACT

Beavers are four-legged hydrologists who not only create and expand wetlands. They also help slow down water and control flooding after storms. And help store that extra water underground, which provides an adequate water supply and normal stream flows during droughts.



CANALS

Bronson is an inventor and natural-born engineer who builds things that make his family's work easier and more efficient, like his Pancake Maker Pro and Robot. Beavers in the natural world are also engineers who have mastered the art of efficiency. They build long narrow canals that sometimes connect one pond to another. They also allow water to flow from their pond to other places in the forest where they want to harvest trees for food and building materials. Creating the channels enables them to bring trees back to their pond more safely and efficiently by floating them down the canal waters.





FUN FACT

Beaver dams and ponds serve as the earth's kidneys by generating cleaner, higher quality water downstream. Beaver dams help filter out toxins while pond algae and sediment absorb and dissolve nutrients and process organic waste.



KEYSTONE SPECIES

Bronson's family built and established their lodge, restaurant, and town market to help support their community's inhabitants by providing them with a source of food, shelter, and entertainment. In the natural world, beavers are classified by biologists as a keystone species. Their presence in nature increases the quality of their habitat and promotes biodiversity. It has a large effect on other wildlife in their environment. Beavers build dams that form ponds and wetlands. These ponds and wetlands provide water habitat and food for a wide variety of animals, including Moose, Birds, Frogs, Ducks, Otter, Salamander, and Fish, to name a few.



BRONSON BEAVER™ BUILDS A ROBOT



✖ **TEKO BERNARD** ✔

ILLUSTRATED BY HOWARD RUSSELL

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