

Alberta Wetlands

Discovery Field Guide



Colour Me



Wetland

What is a wetland and why do they matter?

A wetland is a part of the land that holds water temporarily or permanently. They provide food, habitat, and shelter to hundreds of species in Alberta, including birds, plants, mammals, fish, amphibians and insects. Some people call wetlands “biodiversity supermarkets” because they support such a wide variety of species!

Wetlands are a crucial ecosystem not only for plants and wildlife, but for humans as well. They provide us with “ecosystem services”, which are the benefits that humans receive from nature. For example, wetlands help remove pollutants and sediment from our drinking water, they store water to prevent flooding, they provide habitat for fish that we can catch and eat, and offer beautiful scenery for us to paddle through or walk around and enjoy.

It is important to understand wetlands, and the biodiversity that lives in and around them, so that we can make good decisions about how to take care of them so that we may enjoy them for years to come.

We are going to learn about 5 different wetland types in Alberta, and the biodiversity that lives in them.

Wetland Types in Alberta

1. Bog

- Commonly found in cold wet places, like northern and western Alberta
- Water comes from precipitation, like rain and snow
- Low in nutrients
- Filled with spongy carpets of moss



2. Fen

- Commonly found in northern Alberta
- Water comes from under the ground and from precipitation
- Higher in nutrients than a bog
- Greater diversity of plant species, especially grass-like sedges



3. Slough

- Found throughout Alberta, but especially common in the prairies
- Water is shallow and can dry out in the summer
- Lots of plants sticking out of the water
- Not a lot of open water, and mostly filled with plants





4. Marsh

- Found all over Alberta
- Lots of plants sticking out of the water, especially Cattails
- Water comes from run-off, like melting snow and streams, and precipitation
- Shallower than a pond







5. Pond




- Found all over Alberta
- Lots of open water
- Filled with water all year round, often less than 2 metres deep
- Ducks love them





Wetland Facts


- About 10% of Canada's wetlands are in Alberta.
- Wetlands cover about 21% of Alberta!
- About 93% of wetlands in Alberta are peat lands (bogs and fens).
- Wetlands and surrounding riparian areas help filter sediments, pesticides, pollutants and extra nutrients out of water. This helps reduce the cost of cleaning our water before we drink it.
- Valuable source of water for livestock, especially during times of drought.
- Help to reduce the effects of flooding by storing runoff water and releasing it slowly
- They are a biodiversity supermarket! They support birds, plants, mammals, fish, amphibians and lots of insects.
- Extremely important for resting migratory birds, and provide important habitat for waterfowl that migrate to Alberta to breed.
- Important to our culture and communities.

Let's get identifying!

Mammals	Name	Latin Name	Description
	Moose	<i>Alces alces</i>	Moose are the largest member of the deer family in the whole world. Male moose can weigh over 1000 pounds! They have big, flat antlers and a large hump on their shoulders. They live across most of Alberta, but are more common in the northern parts.
	Beaver	<i>Castor canadensis</i>	Beavers are the largest rodent in North America. They are called "ecosystem engineers" because they change the landscape they live in. Beavers chew down many trees for food, and also use them to build dams on streams that create big ponds. Beavers live all over Alberta, except for high in the mountains.
	Coyote	<i>Canis latrans</i>	Coyotes look similar to a dog. They are smaller than a Wolf, but bigger than a Red Fox. They have long ears, a bushy tail, and are grey, brown or red in colour. Coyotes are good at adapting to different habitats, and can be found all over Alberta.
	Mule Deer	<i>Odocoileus hemionus</i>	Mule Deer get their name from their big, mule-like ears. Their coats are grey-brown in the winter and red-brown in the summer. They are bigger than White-tailed Deer, and have a black tip on their tail. They also have a big white patch on their back side. Mule Deer antler tines split off into 'Y's. They are found all over Alberta, especially in the southern parts.





Mammals	Name	Latin Name	Description
	Pronghorn	<i>Antilocapra americana</i>	Pronghorns are the second fastest animal in the world after the Cheetah, (who holds first place)! They are tan and white in colour, with dark marks on their head. Male and female Pronghorns have horns that branch into a single Y shape. They are different than other horns, because they grow a fingernail-like covering that falls off every year. Pronghorns live in the grasslands of Alberta.
	Snowshoe Hare	<i>Lepus americanus</i>	Snowshoe Hare live all over Alberta, and are well adapted to living in our cold, snowy winters. Their fur turns white in the winter for camouflage, and their large hind feet are covered with thick, stiff hairs that act like snowshoes. They eat grasses and leaves during the summer and buds and bark in the winter.
	White-tailed Deer	<i>Odocoileus virginianus</i>	White-tailed Deer are the most abundant hoofed animal in Alberta. They are smaller than Mule Deer, and their antler tines do not branch into 'Y's. Their tail is white underneath, which they hold up like a flag when they run away! They do not have a white patch on their back side like the Mule Deer.






Birds	Name	Latin Name	Description
	Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>	Sharp-tailed Grouse live in Alberta's parkland forests, especially in bushy areas or the edges of forests near grain fields. They eat flowers, buds, insects and seeds. Each spring, males dance to impress the females. They shake their wings and tail, hop in circles, blow up their purple neck sacks and make lots of sound!
	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	The Red-winged Blackbird is a migratory species that visits Alberta in the summertime to breed. They live around wetlands all over Alberta, but they really like marshes filled with Cattails.
	Sora	<i>Porzana carolina</i>	The Sora is a small, secretive bird that you are more likely to hear than see. They migrate all over Alberta to breed in the spring, and build nests out of dead grass and Cattails.
	Mallard Duck	<i>Anas platyrhynchos</i>	The Mallard Duck is a common species throughout Alberta, and can even be seen throughout the winter. The males have shiny green heads with a white ring around their neck, and the females are streaked with brown and gray. They are often seen at ponds in city parks, but they can be found in all sorts of wetlands.

Birds	Name	Latin Name	Description
 A photograph of a Red-tailed Hawk perched on a dark wooden ledge. The hawk is facing left, showing its dark brown back feathers, a creamy-colored body, and a red tail. The background is a clear, light blue sky.	Red-tailed Hawk	<i>Buteo jamaicensis</i>	The Red-tailed Hawk has dark brown back feathers, a creamy coloured body, and of course a red tail! They perch on top of high poles or trees then swoop down for prey like mice and rabbits. They prefer to live in the parkland or boreal forests, but may sometimes live in forested areas in the prairies.

Plants	Name	Latin Name	Description
	Small Bog Cranberry	<i>Vaccinium oxycoccos</i>	Small Bog Cranberry is a small shrub with small leaves (about 1 cm long). The flowers are white or pink, and the berries are red. It grows in moist forest habitats, sometimes on top of peat moss.
	Cattail	<i>Typha latifolia</i>	Cattails are an "obligate" wetland species. That means they can only grow in or next to water. They are a powerful species that can sometimes outgrow other plants that live in marshes. Cattails can grow 1.5 to 3 metres tall, and were traditionally used for food and medicine.
	Water Sedge	<i>Carax aquatilis</i>	Water Sedge looks like a tall grassy plant that can grow in thick, sticky mud. Sedges are different than grasses because they have triangle-shaped stems. Water Sedge plants can grow to be 10 years old!
	Smallfruit Bulrush	<i>Scirpus microcarpus</i>	Smallfruit Bulrush grows in moist wetland habitats. It is a sedge with a triangle-shaped stem, and its flowers grow in small tufts.
	Mare's Tail	<i>Hippuris vulgaris</i>	Mare's Tail is a creeping plant found in shallow water. The flowers are very tiny, and some do not grow flowers at all. The stems are tall and solid, and are sometimes curved.

Bryophytes	Name	Latin Name	Description
	Midway Peat Moss	<i>Sphagnum magellanicum</i>	Midway Peat Moss is red and purple in colour, but can sometimes look light green when it's growing in the shade. It lives in very acidic habitats, especially in the older, drier parts of bogs in the boreal forest.
	Knieff's Hook Moss	<i>Drepanocladus aduncus</i>	Knieff's Hook Moss is a green species of moss that can look very different depending on where it is growing. It gets very big and dark green in shallow ponds and ditches, but is light green and smaller in temporary wetlands.
	Tufted Fen Moss	<i>Paludella squarrosa</i>	Tufted Fen Moss is found in very wet places. It looks similar to a pipe cleaner, but if you look with a magnifying glass, you will see lots of short, pointed leaves.
	Slender Riccia Liverwort	<i>Ricciocarpus natans</i>	Slender Riccia is a liverwort species that can be found floating in still water. It is flat and green.
	Sessile Pterygoneurum Moss	<i>Pterygoneurum subsessile</i>	Sessile Moss is a species that exists around the world! It is able to live in dry habitats, so it may be found at wetlands that are sometimes shallow or dry.

Lichens	Name	Latin Name	Description
	Candy Dot Lichen (ie. Fairy Puke!)	<i>Icmadophila ericetorum</i>	Another name for Candy Dot Lichen is Fairy Puke! It is mint green with bright pink polka dots. It grows on top of mosses on rotted wood and peat.
	Powdered Sunshine Lichen	<i>Vulpicida pinastri</i>	Powdered Sunshine is a bright yellow or green lichen. It grows on bark or wood in cold northern climates, and can survive being burried by snow.
	Hooded Rosette Lichen	<i>Physcia adscendens</i>	Hooded Rosette Lichen grows tightly on bark and branches. It is pale grey, with hood-shaped tips.
	Hammered Shield Lichen	<i>Parmelia sulcata</i>	Hammered Shield Lichen is light gray and leafy looking. It can survive where there is lots of pollution and human activity, and is one of the most common lichens found around the world.

Insects	Name	Latin Name	Description
	Fly Larva	<i>Tipulidae</i>	Tipulidae look like giant mosquitoes, without the mouth part that bites you! Their larvae need shallow water to breathe, so they are often found in thick, mossy wetlands.
	Dragonfly Nymph	<i>Anisoptera</i>	Anisoptera are young dragonflies. They prowl through wetland plants, like Cattails, looking for tiny insects to eat.
	Caddisfly Larva	<i>Anabolia</i>	Caddisfly larvae build themselves cases to live inside using cut up pieces of sticks and dead grass. They can be found in all kinds of wetlands, but are more common in fens.
	Pond Snail	<i>Stagnicola</i>	Pond Snails are abundant when there is lots of algae and decaying plant and insect life in the water. They don't like to live in acidic water like bogs, though.
	Clam Shrimp	<i>Conchostraca</i>	Clam shrimp lay eggs that can survive drought, so they are common in wetlands that sometimes dry up.



Wetland Initiatives in Alberta

Check out the list below for more than 10 ideas about how you can learn more about wetlands, volunteer or help a citizen science project!

1. Learn all about wetlands in Alberta, and ways to participate, protect and conserve them, at **www.wetlandsalberta.ca**
2. Take part in a citizen science project and help monitor wetlands
 - Record sightings of biodiversity using the ABMI's *NatureLynx* App (coming soon!)
 - Report sightings of the endangered Northern Leopard Frog to **leopard.frog@gov.ab.ca**
3. Participate in Alberta Water Quality Awareness Day on June 5, or run your own citizen science project with the Alberta Lake Management Society **www.alms.ca**
4. Get involved with a local Watershed Stewardship Group or Naturalist Society. Find one near you at www.ab.stewardshipcanada.ca and **www.naturealberta.ca**
5. Visit the City of Edmonton's John Janzen Nature Centre **www.edmonton.ca/attractions_events/john-janzen-nature-centre.aspx**
6. Take a boat tour and learn about Alberta's freshwater rivers with Riverwatch **www.riverwatch.ab.ca**
7. Learn about, and keep up to date with, the Alberta Government's *Water for Life Strategy* **www.waterforlife.alberta.ca**
8. Join Ducks Unlimited Project Webfoot with your class **www.ducks.ca/education/for-educators/project-webfoot/**
9. Volunteer with the Nature Conservancy of Canada **www.natureconservancy.ca/en/where-we-work/alberta/get-involved/** or **Trout Unlimited www.tucanada.org**



The Alberta Biodiversity Monitoring Institute (ABMI) is a not-for-profit, scientific organization. We monitor and report on the status and trends of Alberta's species, habitat and human footprint. The ABMI monitors 1656 land and wetland sites across the province, then makes data publicly available on our website. Our goal is to provide scientific information on the state of Alberta's biodiversity to support natural resource and land-use decision making in the province.

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