



Audubon

ADVENTURES[®]

Ohio Series

Ohio's Wetland Wonderlands

Do you know what a wetland is? Have you ever visited one? Wetlands are just like their name. They are “wet” “lands.” They are wet or muddy, but not usually as deep as ponds or lakes.

Ohio used to have many wetlands. The biggest was the Great Black Swamp. Located in northwest Ohio, it was over 120 miles long and about 40 miles wide. This is about the size of the state of Connecticut! It took many days to cross this forested swamp. Often travelers were forced to wade through deep mud, covering only a mile a day. It was not a popular place to travel!

To Native Americans, the swamp was very valuable. It provided food in the form of ducks, geese, fish, small mammals, deer, and edible plants. Wood from the swamp was used to build shelter and canoes. Reeds were cut for baskets. Fur from beavers, muskrats, and deer was used for clothing.

Some early European settlers made a living from hunting and trapping in the swamp. Later settlers saw little use for wetlands. They built ditches to drain the land for farming. The great trees of the swamp were cut for railroad ties, ships' masts, and docks. Logs were also laid side by side to form “corduroy” roads through wet areas. Within 26 years of settlement, the Great Black Swamp was gone. Wetlands were drained for homes, roads, and businesses

Today, people are trying to protect Ohio's remaining wetlands. Ohio has several different kinds of wetlands. Some are wet for only a few weeks each year. Others hold water year-round. Some have big



trees and others are covered with grasses. Because wetlands are often flooded, most plants that grow on dry land will not grow there. But plants and animals that like the water do well in wetlands.

As a result, some very special places, like Magee Marsh on Lake Erie and Cedar Bog in Champaign county, have been protected and are open to the public. Wouldn't you like to visit a wetland and learn more about this interesting ecosystem?

Wetland Ooze



Sometimes, the green water and mud smells bad. But this ooze is not so scary. Take the sticky mud, for example. When someone digs in a wetland, or when the water dries up, the mud may smell bad. This smell is just dead plants decomposing into nutrients. Nutrients are the foods that will help new plants grow. So what you smell is really just nature at work!

What about that green stuff floating on the water? Each piece of that green carpet is actually a tiny plant called duckweed. Duckweed is one of the tiniest flowering plants in the world. Ducks, muskrats, beavers, and turtles all find duckweed quite tasty. Frogs and baby turtles hide from their enemies among these green plants.

Green Carpet



Ohio's Wetlands

There are many different kinds of wetlands in Ohio.

Swamps have trees or shrubs growing in them and are usually found along slow-moving streams or rivers.

Wet Prairies are grassy wetlands. You may have to dig down a few inches to find water during the dry season.

Marshes are covered with soft-stem plants, like cattails, and are usually flooded all year round.

Vernal Pools are small, shallow wetlands, usually found in the forest. They fill with water in the spring and then dry out.

Bogs and Fens collect large amounts of dead plant material that does not rot. This material, called "peat," can be many feet deep.

Meat-eating Plants - Most plants get what they need to grow from the soil. But some wetland soils are not very rich in nutrients. A few plants have developed unique adaptations to help them survive. They catch and digest insects to get the nutrients they need to survive.

One carnivorous plant is the **Northern pitcher plant**. This beautiful plant has leaves that look like a water pitcher. They catch and hold rainwater. The cranberry-colored top attracts insects, which often fall into the plant. Once inside the plant, they cannot climb up the sides because of sharp hairs. They fall into the water and drown. The plant then slowly digests the insect.

Another carnivorous plant, the **sundew**, has hairs all over its leaves. The hairs are covered with a sweet, sticky liquid. When an insect lands on a leaf, it gets stuck. Then the leaf slowly curls around it. More sticky drops are produced and the insect is digested. This can take up to two weeks.

Carnivorous plants are very rare in Ohio. Please observe and don't disturb!



pitcher plant flowers

What's In An Ohio Wetland?

Life in a wet place can be a challenge. Plants and animals that live in wetlands have unique adaptations for survival.

International Visitors - Wetlands attract many kinds of birds. Some live here, and others just visit our wetlands on their way through the state.

Shorebirds visit Ohio from as far away as Argentina, Brazil, and Chile. They weigh only a few ounces, yet they fly thousands of miles across the ocean without a rest. On their way north each spring to nest, they stop to rest and eat in Ohio wetlands. They arrive just as our wetlands are beginning to thaw and food is plentiful.

Shorebirds are small birds with long beaks and legs. These birds are perfectly designed for life in shallow wetlands. Long legs allow them to wade into shallow water. Long beaks allow them to search for invertebrates, such as fly larvae and blood worms, in the mud.

These travelers are called migrants. Many birds migrate, but few travel as far as shorebirds. They travel as many as 20,000 miles each year during migration! Scientists are puzzled about how they find their way over such long distances. How do you think they do it?



Construction Workers - **Beavers** are the construction workers of wetlands. They cut down trees to feed on the tender bark of upper branches, and then use the branches to build dams on small streams. These dams hold back water, making more wetlands.

Beavers also use sticks to build lodges. These thick, hollow mounds open underwater, so they must swim under water to get in or out. Beavers' flat tails and webbed feet make them excellent swimmers. Their thick fur keeps them warm even in icy winter water. Beaver furs have also been prized by humans. Native Americans from this region used these furs to keep warm during the cold winters.

With the high demand for furs, drainage of wetlands, and pollution of our waterways, beavers disappeared from Ohio during the 1800s. It was not until the 1930s that they began to move back to Ohio from other states.



A Bird On Stilts - Have you ever seen a **great blue heron**? These majestic birds stand over four feet tall. Their wings reach over six feet from tip to tip. Their voice is a loud hoarse squawk. The long legs of herons allow them to wade into the water. They stand completely still waiting for frogs, fish, or snakes to swim by. When one does, the heron stabs quickly with its beak, catching the prey.

Hérons like to nest together with other herons. These group nesting areas are called rookeries and can contain several hundred nests.

Hérons go from wetlands to river to pond to stream, feeding each day. If they cannot find food in their usual places, they will follow other herons to new areas. They can cover over 30 miles each day.



Swamp Things

Plants and animals that live in wetlands are well-suited to this habitat. Here are some of the unique ways that these plants and animals have of surviving. Write the name of the plant or animal next to each.

- I catch insects on my sticky hairs. 1 _____
- I build dams to make more wetlands where I can live and eat. 2 _____
- I catch insects by drowning them. 3 _____
- I have very long legs that let me wade into the water to look for food. 4 _____
- Although I am small, I have long legs and a long beak which help me to find food in the mud. 5 _____
- I lay my eggs in shallow wetlands. My young swim around until they grow legs and can survive on land. 6 _____

Slimy Creatures - **Salamanders** are awesome! These interesting amphibians are smooth skinned, not scaly like lizards. They must keep their skin moist to survive. Some salamanders dig holes and live underground.

In spring, many salamanders travel to small wooded wetlands to lay their jelly-coated eggs. The young develop in the water until they grow legs and can live on land. These small wetlands may dry up before the young have a chance to develop. Yet when eggs are laid in deeper water, fish frequently eat them.

Salamanders eat many kinds of insects, as well as worms. They have very slimy skin that helps them escape from their enemies. If captured by the tail, a salamander can escape when its tail breaks off. A new tail will grow in its place.

Salamanders stay underground or burrow into the mud during the winter. During the cold months, they are unable to move. To survive, they slow their breathing and heart rate nearly to a stop.



Ohio's Wetlands

What Is That Turtle Wearing?

Have you ever seen a turtle with a radio? Thanks to scientists, a few Ohio turtles are carrying small radios. These radios don't play music. They play a signal that only scientists can detect.

Dr. Tim Lewis, from Wittenberg University in Springfield, has always been interested in animals. He likes to study them and help people understand them better. Very little is known about turtles. Dr. Lewis is trying to change that. Dr. Lewis works mainly with spotted turtles. These pretty turtles are black with round, yellow spots. Since they are only 3 ½ to 5 inches long, they are not easy to find. They live in wetlands. Since so many wetlands have been lost in Ohio, spotted turtles have become rare. To find out what kind of wetlands these turtles need, Dr. Lewis gave a few of them radios.



With care, making sure not to hurt the turtle, he made a tiny hole in the shell of the reptile. The radios were attached to these holes with wire. Scientists use special equipment to listen to the radio signals. This allows them to follow the turtles without disturbing them.

Dr. Lewis hopes to find out more about what kind of home spotted turtles need. Biologists can then work to save these wetlands. They can also work to restore disturbed wetlands to provide homes for spotted turtles and other wildlife.

Birdbrain's Wetlands Match

Draw a line to connect each thing that a wetland does with a picture that reminds you of it.

Wetlands provide a place for animals to raise their young.



Wetlands provide a place for migrating birds to rest.



Wetlands capture water and re-fill our wells.



Wetlands offer us places to watch birds and wildlife.



Wetlands help prevent floods.



Wetlands provide homes for fish.



Wetlands help clean pollutants from our water.



Wetlands Make Cents!

Protecting wetlands makes sense for both people and wildlife. Some of the things they do save our communities a lot of money.

\$\$ Wetlands soak up and store a lot of water during heavy rains. This helps prevent flooding of our homes. In some places where valuable wetlands have been destroyed, expensive flood-control dams and levees must be built to keep towns safe.

\$\$ Wetlands filter pollution from our water. Wetlands help clean farm and lawn chemicals, fertilizers, and dirt from the water. Without wetlands, we would have to spend more on water treatment plants.

\$\$ Wetlands capture water and release it slowly into the ground. This clean water then filters down into our wells. Without wetlands, most water would run off of the land without soaking in. Our wells could run dry.

\$\$ Wetlands serve as nursery grounds for many kinds of fish. Ducks also raise their young in wetlands. Hunters, anglers, birdwatchers, and other nature enthusiasts spend millions of dollars each year on equipment, hotels, and food. This provides jobs for many Ohioans.

An Ohio Important Bird Area (IBA)

In 1995 the National Audubon Society started to recognize and help protect Important Bird Areas (IBAs) across the United States. IBAs are places that birds need. An IBA might be a place where birds stop, rest, and feed while on migration. It may also be a place where rare or endangered birds nest and raise their young.

Ohio has over 60 Important Bird Areas. Look on an Ohio road map and see if you can find the following IBA located in a wetland:

Lake Erie Western Basin IBA

Located near Port Clinton, Ohio, in Ottawa county

How many miles is it from where you live? How long would it take you to get there if you were traveling 55 miles per hour?

Contact Audubon Ohio, www.audubonohio.org, for more information on this special IBA. After researching information, write a report about the birds that live in this IBA. Are any of them rare or endangered?

- "Swamp Things" answers
1. sundew
 2. beaver
 3. Northern pitcher plant
 4. great blue heron
 5. shorebird
 6. salamander