



Audubon

ADVENTURES[®]

Ohio Series

Ohio's Prairies – Native Grasslands



Early French explorers discovered vast grasslands in central North America in the late 1600s. Having no word to describe them, they called them “prairies,” a French word meaning meadow. Prairies are much different than man-made meadows or fields which you might find on a farm. To experience a prairie is to

encounter a special ecosystem unlike any other. Grasses reach to the sky, colorful wildflowers wave in the breeze, and animals of all kinds live there.

Did you know that prairies are native to Ohio? When the first settlers moved to Ohio in the late 1700s, they found over 300 prairie openings surrounded by forest. Most of the prairies were located in the western half of

the state. It is thought that over 1,000 square miles of prairies once existed in Ohio.

Ohio's prairies are referred to as tallgrass prairies. Plenty of moisture allows several kinds of grasses, such as big bluestem and Indian grass, to grow up to 9 feet tall. Prairies are an exciting part of the natural heritage of Ohio.

Fire On The Prairie



Fire is important to prairies. Without fire to kill invading woody plants, a prairie would eventually turn into a forest through a process called succession. Prairie plant roots that go deep into the prairie soil are protected from the fire.

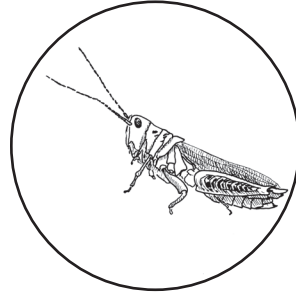
Soon after a prairie fire, an exciting rebirth occurs. The ash-blackened earth absorbs heat from the sun, which helps certain seeds to germinate. Important nutrients from the burned plants are released into the soil and help to fertilize the growing prairie plants. Soon the prairie will be green and lush with growth with little evidence that a fire has occurred.

Prairie Animals

Animals are an important part of the prairie community. They are vital to the prairie nutrient (food) cycle. Plant-eating animals (herbivores), such as butterflies, grasshoppers, sparrows, and squirrels, help to convert prairie grasses and forbs into animal tissue. Meat-eating animals (carnivores), such as snakes, hawks, falcons, shrews, badgers, and coyotes, continue the prairie food chain by eating the herbivores. When animals die, decomposers such as bacteria help to return nutrients back to the soil for plants to use, completing the prairie nutrient cycle.



Grasshopper Sparrow – These sparrows are named for their song, which is much like the buzzing sound of an insect, particularly a grasshopper.



Grasshopper – Grasshoppers are well adapted for life in the prairie grasses. Their jaws help them chew off leaves and their legs help them jump away from danger.



Thirteen-Lined Ground Squirrel – These squirrels have a wonderful adaptation for getting water in dry prairie conditions. They actually get most of the water they need from the food they eat.



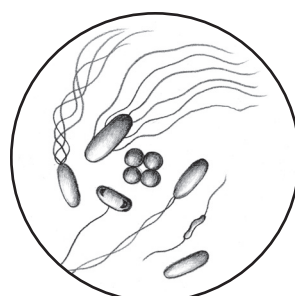
Northern Short-Tailed Shrew - Shrews are the smallest mammals living in Ohio. Very secretive, shrews prefer to remain hidden from predators by traveling in shallow tunnels through the grass.



Badger – A very strong digger, the badger makes its home under the prairie. Sharp claws on the front legs help the badger dig a den system three to four feet deep.



Earthworm – Earthworms eat dead plants in a prairie. Waste products they leave behind after a meal help fertilize the soil.



Microscopic Organisms – Soil is not dead – it's alive! It holds a whole world of life, so small that you need a microscope to see it.

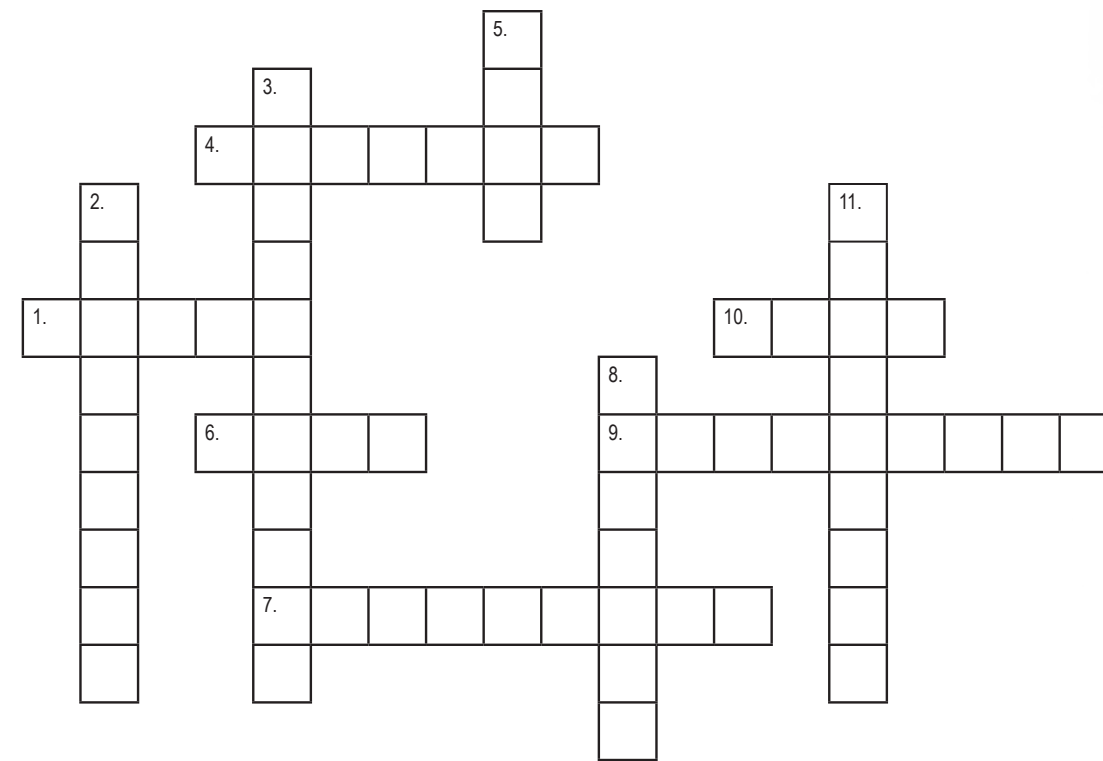
What's In an Ohio Prairie?

Prairie Diversity

A prairie is an exciting world filled with many living things. Biologists (people who study living things) sometimes inventory (count) all of the living organisms in a particular place, like a prairie. This helps the scientists to know exactly what is living there and how best to protect them.

Pretend that you are a biologist who studies prairies. Take an inventory of all the different kinds of prairie animals living in the prairies on these pages. Remember: worms, insects, reptiles, birds, and mammals are all animals.

I have surveyed the prairies on these pages and have found _____ different animals living in them.

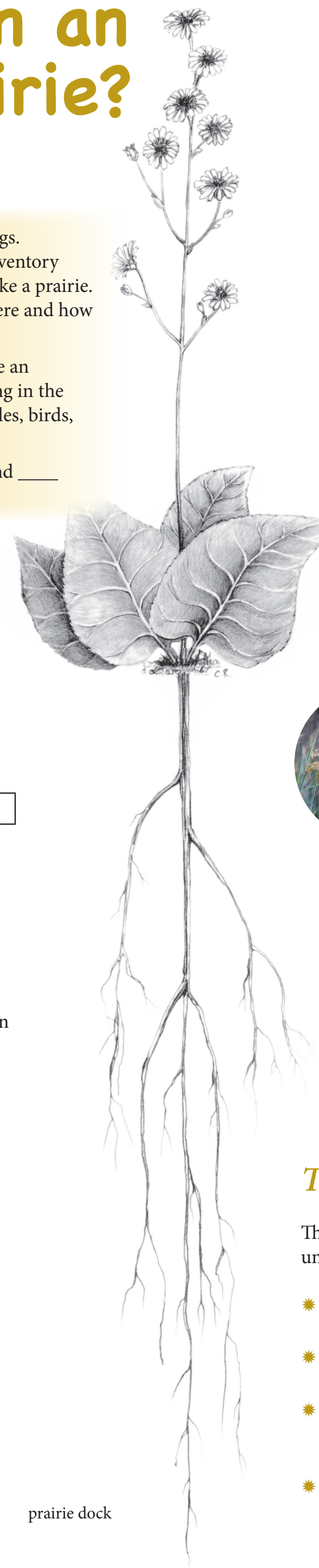


Across:

1. Big bluestem is a type of prairie _____.
4. A _____ is a native North American grassland.
6. A flowering plant that is not a grass in a prairie.
7. This animal lives underground, eats dead leaves, and helps process soil.
9. An animal that eats plants is called an _____.
10. Prairie plants, with their deep roots, are able to survive a _____.

Down:

2. A plant that lives for more than one year is called a _____.
3. A prairie insect that can jump away from danger.
5. Plants get their nutrients from the _____.
8. An underground stem.
11. An animal that eats meat is called a _____.



prairie dock

Prairie Plants

Most prairie plants are perennial. This means that they will continue to grow for many years. Trees are good examples of perennial plants. Grasses are one of the most common perennial plants in an Ohio prairie. Grasses are very distinctive plants. They have round, hollow, jointed stems; narrow leaves; flowers without petals; and hard, grain-like seeds. Grasses use the wind to pollinate their flowers. Bees or other insects are pollinators of prairie flowers.

Flowering plants other than grasses are called forbs. Most forbs have showy petals that help the plant to attract insects for pollination. Beginning in mid-summer, forbs such as sunflowers, coneflowers, and goldenrods add a beautiful splash of color to the prairie.



Big Bluestem – Named for its tall growth and bluish-purple joints on the stems.



Indian Grass - A golden-yellowish coloration gives this plant another common name, "gold stem."



Purple Coneflower – Brightly colored orange flowers which form a cone shape are surrounded by up to 20 reddish purple drooping petals. The sweet nectar of this plant attracts many butterflies.



Prairie Dock – The thick, leathery leaves of this plant feel like sandpaper. The sap was sometimes chewed as gum by the early settlers.



Stiff Goldenrod – A beautiful mustard-yellow flower. This goldenrod has stiff, fuzzy leaves and stems which help prevent water loss.

The Prairie Underground

There is more to a prairie than meets the eye. If you could explore the tallgrass prairie underground this is what you might find:

- ✦ About 1/3 of a prairie plant (stems, leaves, and flowers) grows above ground and 2/3 (roots and underground stems called rhizomes) grows underground.
- ✦ Rhizomes (underground stems) spread through the soil just beneath the surface. Rhizomes store nutrients (food) and send up new grass shoots each year.
- ✦ Prairie grasses usually don't compete with prairie wildflowers for moisture because they often send their roots much deeper into the ground. Prairie grass roots may go down ten feet or more, and some reach down over twenty feet!
- ✦ Some prairie animals, such as the thirteen-lined ground squirrel and badger, find refuge from hot summers and cold winters underground.

Ohio's Prairies

A Famous Ohio Prairie

In 1903, Orville and Wilbur Wright succeeded in becoming the first individuals in history to fly a heavier-than-air machine on the wind-swept coast of Kitty Hawk, North Carolina. But the Wright brothers did not fully learn the secrets of flying until they returned to their home in Dayton, Ohio.

In 1904, the Wright brothers found a wide open prairie area east of Dayton, known as Huffman Prairie, to be an excellent location to practice and improve their flying skills. During summer flying sessions, beautiful prairie grasses and wildflowers waved in the very same winds that lifted the Wrights' airplane to the sky.

Today, Huffman Prairie is part of the sprawling Wright-Patterson Air Force Base in Fairborn, Ohio. Huffman Prairie is the largest remaining native tallgrass prairie in Ohio. Biologists have identified many interesting kinds of plants and animals living in this special prairie, some of them endangered in Ohio.

Because of its importance in history and the rarity of native prairies in Ohio, 109 acres of Huffman Prairie were dedicated an Ohio Natural Landmark in 1986. You can visit this prairie today and walk where the Wright brothers once flew!



Special Collections and Archives, Wright State University

One of the Wright brothers in flight over Huffman Prairie in 1905.



Dan Patterson

Mark Dussenberry flies his reproduction of the Wrights' plane at Huffman Prairie in 2007.

Birdbrain's Prairie Brainteaser

Based on what you know about prairies, examine the following statements. If you think that a statement is true, put a check in the YES box. If not, check the NO box. If a statement is incorrect, cross out a word and replace it with one which will make the statement correct.



Yes No Italian explorers first encountered the vast native grasslands of central North America in the late 1600s and called them prairies.

Yes No When the first settlers moved into Ohio in the late 1700s, they encountered over 6,000,000 prairies that ranged in size from several acres to many square miles.

Yes No Grasses use the wind to pollinate their flowers.

Yes No About 2/3 of a prairie plant (stems, leaves, and flowers) grows above ground, and 1/3 (roots and underground stems called rhizomes) grows underground.

Yes No The name for the grasshopper sparrow comes from its song, which is much like the buzzing of an insect, particularly a grasshopper.

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 prairie:

Killdeer Plains – Big Island IBA Killdeer Plains / Big Island Wildlife Areas

Located east of Kenton, Ohio, in Marion and Wyandot counties

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

Crossword Puzzle Solution
Down
1. Grass
2. Perennial
3. Grasshopper
4. Prairie
5. Soil
6. Forb
7. Earthworm
8. Rhizome
9. Herbivore
10. Fire
11. Carnivore

Prairie Brainteaser
no (French), no (300), yes, no (2/3 underground), yes

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