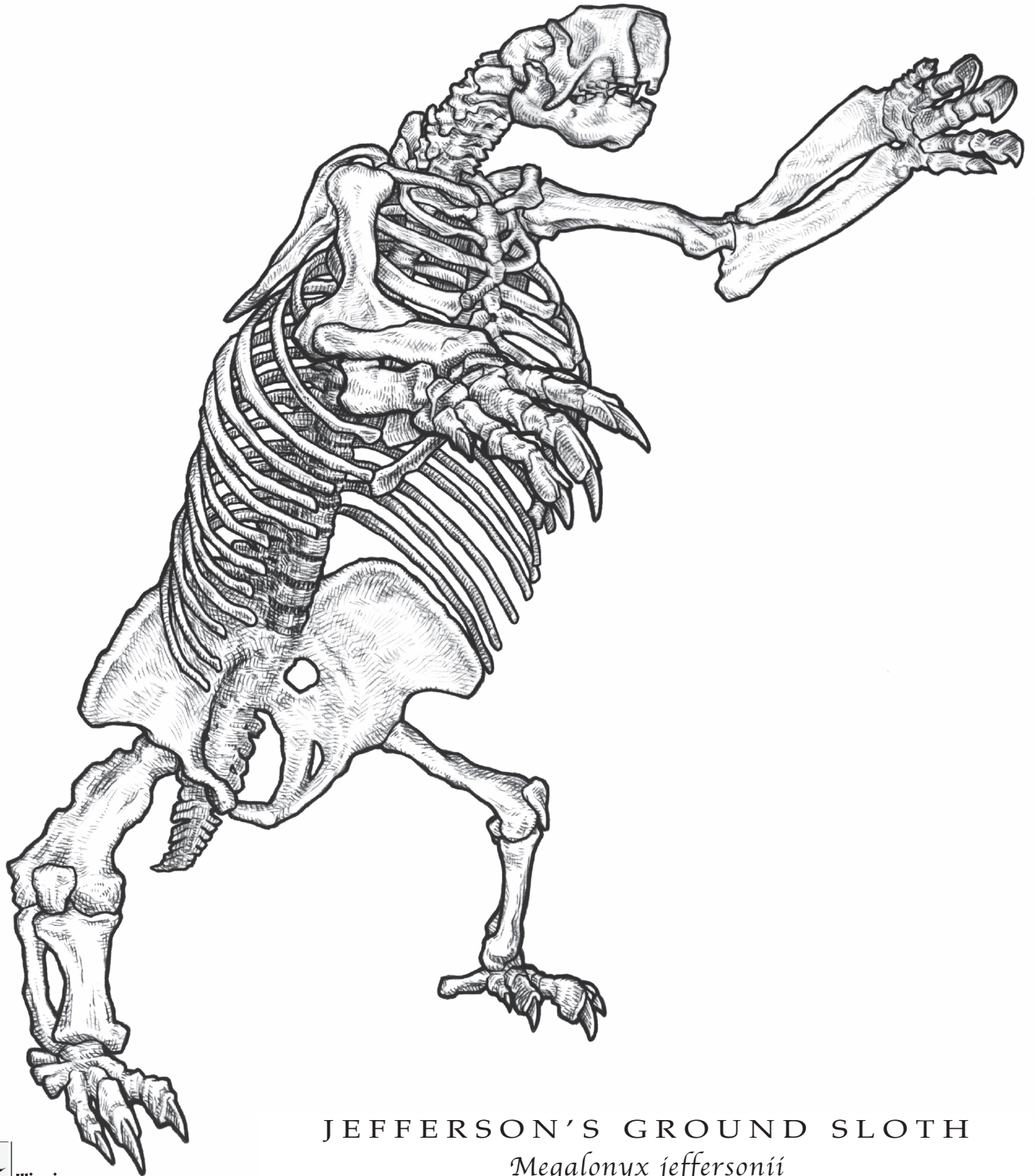




Mammals from Illinois' Past



JEFFERSON'S GROUND SLOTH

Megalonyx jeffersonii

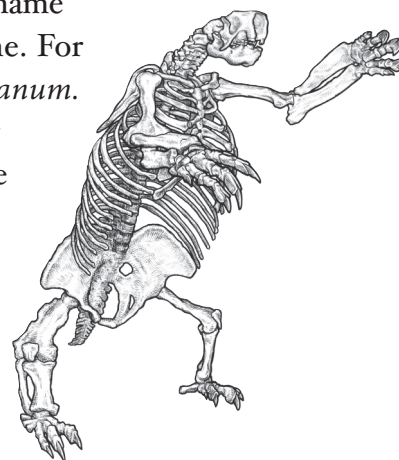


Using this Activity Book - For the Educator

The *Mammals from Illinois' Past* activity book from the Illinois Department of Natural Resources (IDNR) is designed to supplement your curriculum in a variety of ways. The information and activities contained in this publication are targeted to grades **kindergarten through three**. For information about other educational materials available, contact the IDNR Division of Education (217-524-4126; dnr.teachkids@illinois.gov) or visit <https://www2.illinois.gov/dnr/Pages/default.aspx> or <https://dnr2.illinois.gov/teachkids/>.

Scientific Names

You will find scientific names used in this activity book. The scientific name will be in italics and will immediately follow the animal's common name. For example, the American mastodont's scientific name is *Mammuth americanum*. Your scientific name is *Homo sapiens*. Scientific names are used so that scientists can communicate with one another and know that they are talking about the same species. These names are based on a Greek or Latin system.



Illustrations by Mr. C. Johnston unless otherwise noted.

Resources

- Burt, William H. and Richard P. Grossenheider. 1980. *A field guide to the mammals*. Houghton Mifflin Company, Boston, Massachusetts. 289 pp.
- Collinson, Charles. 2002. *Guide for beginning fossil hunters*. Illinois Department of Natural Resources, Illinois State Geological Survey, Champaign, Illinois. Geoscience Education Series 15. 49 pp.
- Frankie, Wayne. 2004. *Guide to rocks and minerals of Illinois*. Illinois Department of Natural Resources, Illinois State Geological Survey, Champaign, Illinois. Geoscience Education Series 16. 71 pp.
- Hoffmeister, Donald F. 1989. *Mammals of Illinois*. University of Illinois Press, Urbana and Chicago, Illinois. 348 pp.
- Killey, Myrna M. 1998. *Illinois' Ice Age legacy*. Illinois Department of Natural Resources, Illinois State Geological Survey, Champaign, Illinois. Geoscience Education Series 14. 67 pp.

Equal opportunity to participate in programs of the Illinois Department of Natural Resources (IDNR) and those funded by the U.S. Fish and Wildlife Service and other agencies is available to all individuals regardless of race, sex, national origin, disability, age, religion or other non-merit factors. If you believe you have been discriminated against, contact the funding source's civil rights office and/or the Equal Employment Opportunity Officer, IDNR, One Natural Resources Way, Springfield, IL 62702-1271; 217-785-0067; TTY 217-782-9175.

Mammals from Illinois' Past © 2020, Illinois Department of Natural Resources

Printed by the Authority of the State of Illinois • 08/20 • DNR-ED-210010 • web 

Mammals from Illinois' Past

What are mammals?

Mammals are animals that:

- have fur;
- give birth to their young;
- feed the young with their mother's milk for a time;
- have a body temperature that stays about the same no matter what the outside temperature may be;
- have a large brain.

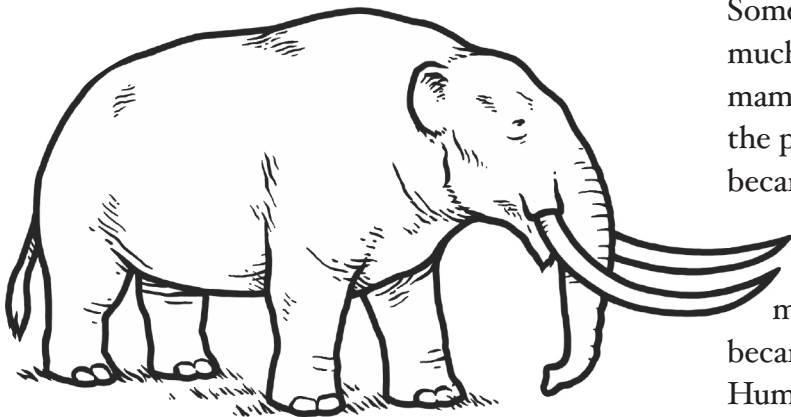
Mammals of Illinois

Today in Illinois there are about 60 different kinds of mammals. You have probably seen a white-tailed deer. Coyotes, raccoons, Virginia opossums, house mice, gray squirrels and fox squirrels are all mammals, too. There have been other mammals in Illinois' history. Some of those mammals no longer live here. You will learn more about them in this activity book.



Why are some types of mammals gone from Illinois?

Some mammals lived in Illinois long ago. It was much colder here all year than it is now. These mammals were able to live in the cold and feed on the plants that grew here. Over time the weather became warmer and different plants grew. Some of the mammals did not eat these plants and could not live in the warmer climate. These mammals moved away from the area or became extinct (no longer live anywhere). Humans have caused some mammals to be gone from the state. Some other mammals were no longer able to live here because humans changed their habitats too much.



Mammals of the Ice Age

- Mammals have lived in what is now Illinois for the past 100 million years. Some of them are only known from their fossils. Many of the fossil mammals are from a time when glaciers covered much of Illinois.
- During the Ice Age, thick sheets of ice (glaciers) covered four-fifths of the state. Almost all parts of the state were covered in snow and ice. The plants growing in Illinois were not the same as those found here today. The area was much like northern Canada and Alaska. Spruces, sedges and other plants that grow in cold places were common.
- Mammals, such as the American mastodont, mammoth, giant beaver and others you'll read about on pages six through nine, lived in this cold climate and fed on the plants. These mammals are all now extinct (no longer live anywhere).
- Other mammals, like the snowshoe hare and arctic shrew, lived here in the Ice Age but now are only found north of Illinois. The black bear, gray wolf and wapiti lived in Illinois in the Ice Age and were found in Illinois until our recent past. Eastern cottontails, deer mice, gray squirrels, white-tailed deer and raccoons are some of the mammals that lived during the Ice Age and are still found in Illinois.

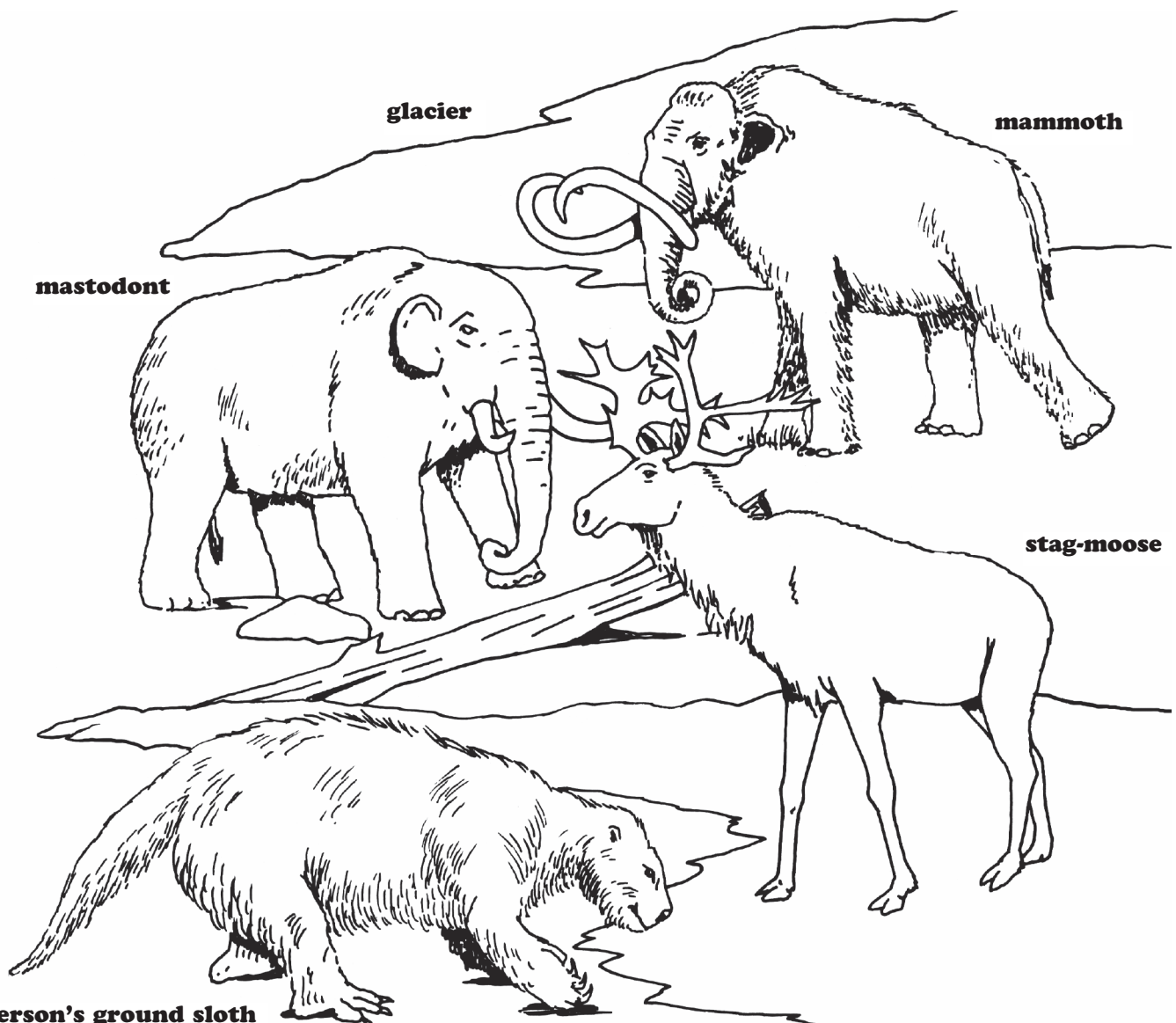


Illustration courtesy of the Illinois State Museum.

Glaciers

What is a glacier?

A glacier is a large mass of moving ice. It forms when snow piles up so much that its own weight turns it into ice. The ice begins to move if enough weight is put on it. As the ice moves, it picks up and grinds rocks. When a glacier melts, the rocks and dirt it was carrying are left behind. The glaciers

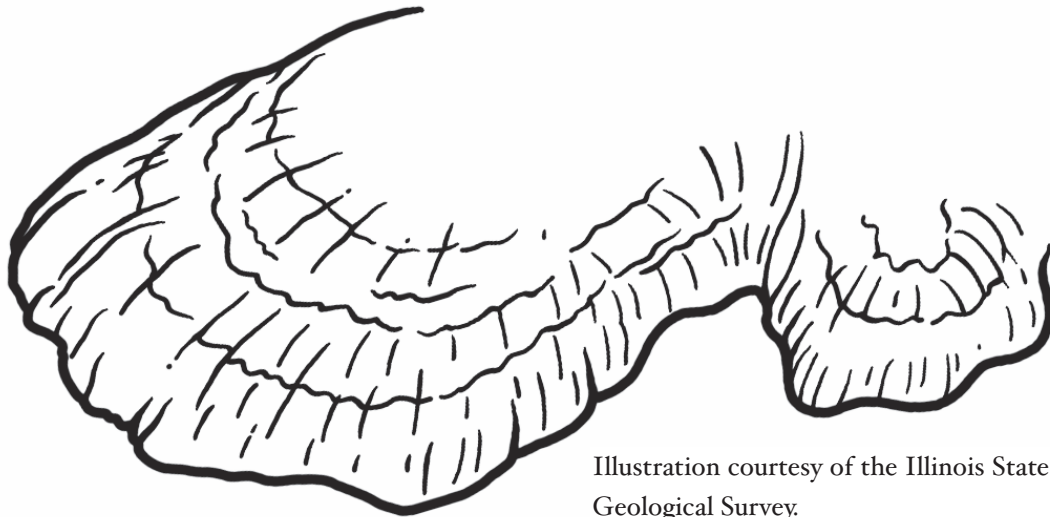


Illustration courtesy of the Illinois State Geological Survey.

that crossed into Illinois started in Canada. They moved very slowly, but they made big changes in the land. Glaciers in Illinois were from 2,000 to 200 feet thick.

Glaciers and Animals

Glaciers moved across Illinois and melted several times. The animals in Illinois changed as the temperatures changed. In warm periods, jaguar, peccary and armadillo lived here. In cold times, mammoth, mastodont and stag-moose moved in. Other mammals were able to live in Illinois all the time.

Living or Extinct?

Each of the animals listed below lived in Illinois when the glaciers were here. Put an “E” in the blank if this type of animal is extinct (no longer lives on earth). Put an “L” in the blank if this type of animal is still living in Illinois.

1. _____ stag-moose

4. _____ mammoth

2. _____ raccoon

5. _____ Jefferson's ground sloth

3. _____ white-tailed deer

6. _____ gray squirrel

Extinct Ice Age Mammals

Jefferson's ground sloth

Megalonyx jeffersonii

The Jefferson's ground sloth was a relative of the anteaters, armadillos and tree sloths that live today. It was as big as a bison. It had big claws on the toes. It could stand on its hind legs to reach the leaves and twigs that it ate. Fossils from this animal have been found in northern Illinois.



giant beaver

Castoroides ohioensis

The giant beaver was about the same size as a black bear. It looked much like today's beaver, though. The giant beaver ate soft plants that were easy to chew. It lived in large ponds and lakes fed by melting glaciers.

This animal did not build dams.

Fossils of the giant beaver have been found in central and northern Illinois.



Illustration adapted with permission from the work of William Stone, Illinois State Museum.

flat-headed peccary

Platygonus compressus

The peccary was a lot like the pig of today. The peccary was smaller, though. These animals lived in large groups and ate about anything. Fossils of the peccary have been found in most of Illinois. It probably was most common in Illinois in the warm periods between glaciers.

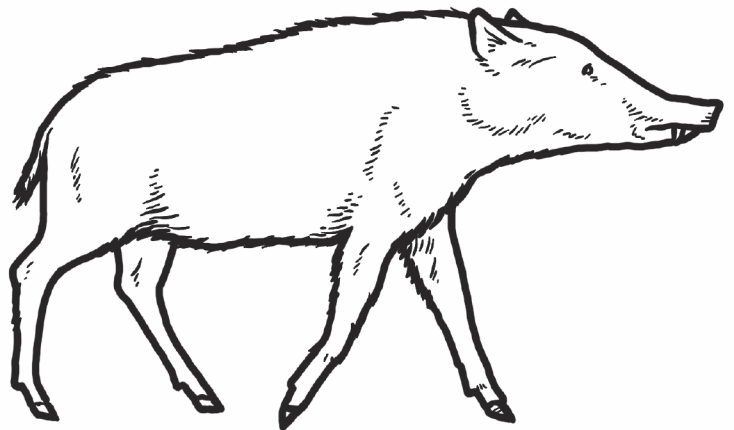


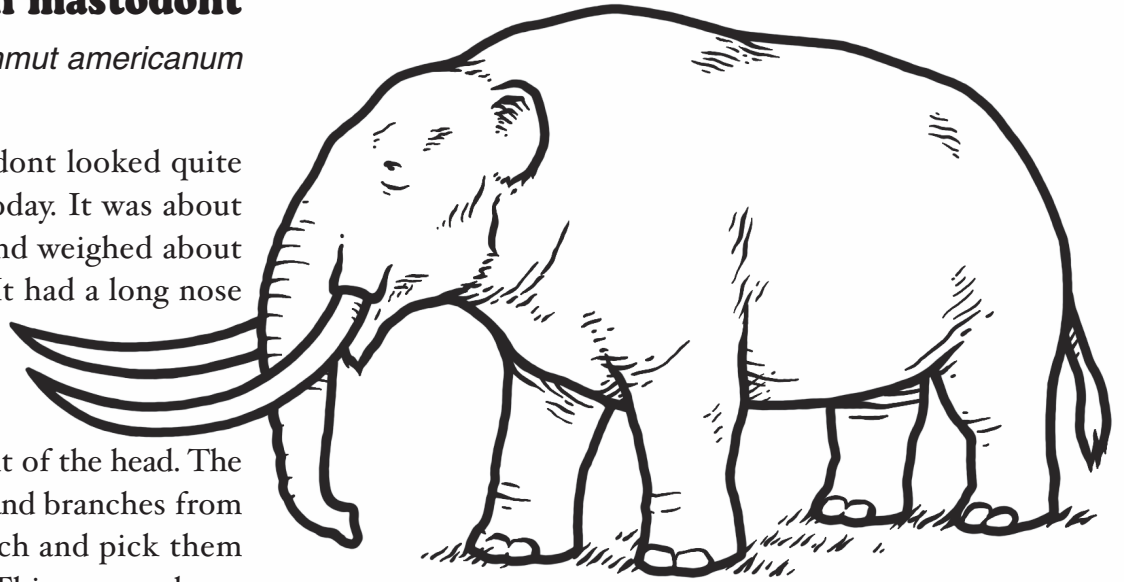
Illustration adapted from artwork courtesy of the Illinois State Museum.

Extinct Ice Age Mammals

American mastodont

Mammut americanum

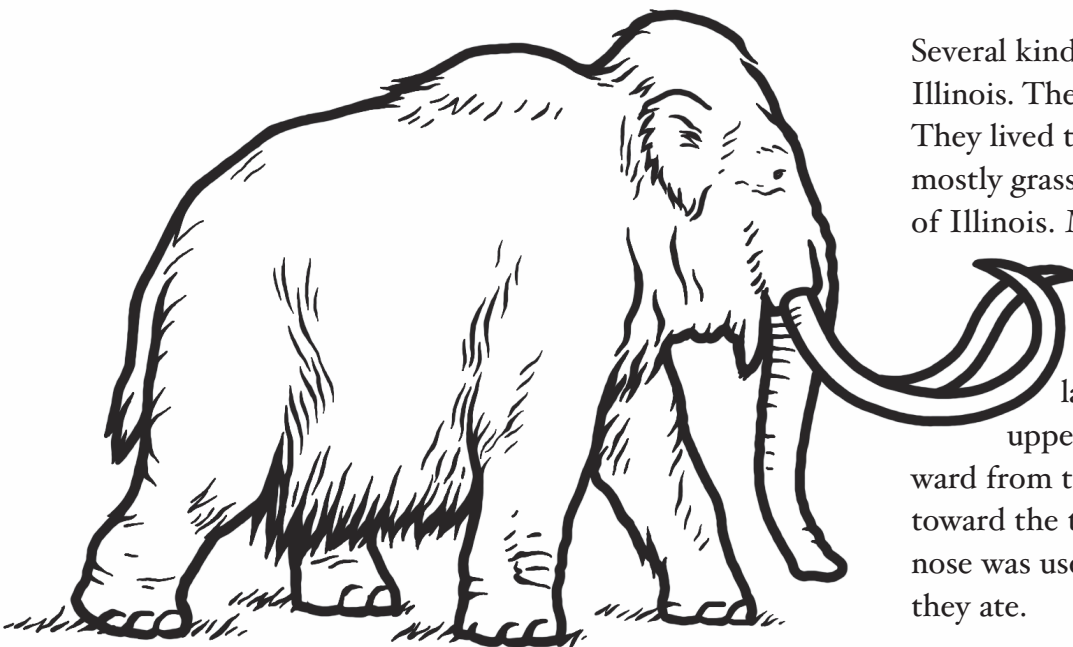
The American mastodont looked quite like the elephant of today. It was about seven to 10 feet tall and weighed about four to seven tons. It had a long nose and big legs. Large tusks grew from the upper jaw and went out straight in front of the head. The mastodont ate leaves and branches from trees. It was able to reach and pick them with its long nose. This mammal was found in all of Illinois during the Ice Age.



mammoths

Mammuthus sp.

Several kinds of mammoths lived in Illinois. They had different types of teeth. They lived the same type of life, eating mostly grasses, and were found in all parts of Illinois. Mammoths were as big as the elephants that live today (10 to 12 feet tall and weighed up to six tons). They had very large tusks that grew from the upper jaw. The tusks curved outward from the jaw then back together toward the tip. They had a long nose. The nose was used to pick the grasses that they ate.

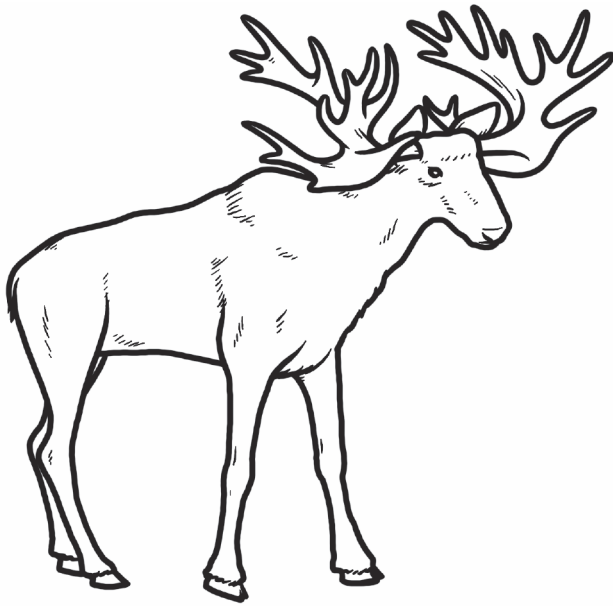
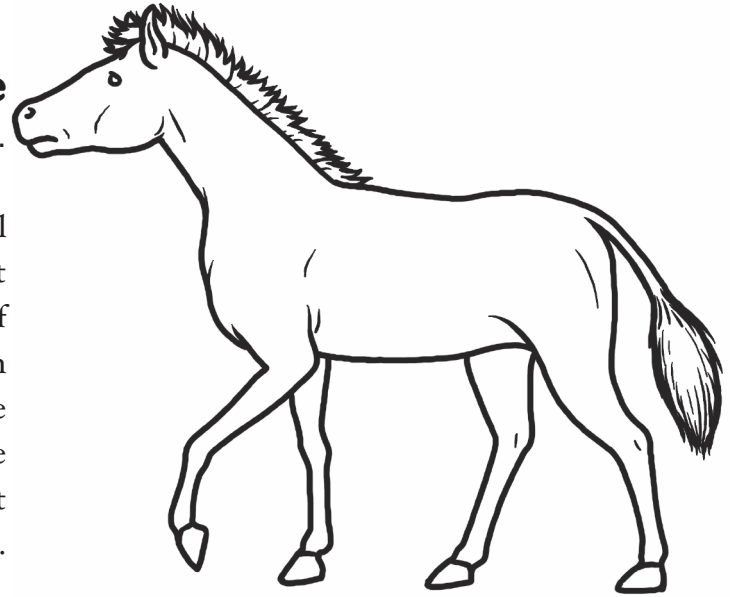


Extinct Ice Age Mammals

horse

Equus sp.

Fossils of the horse were found in what is now central Illinois. These horses were very much like horses that live in Mongolia today. They ranged in size from that of a pony to that of a modern saddle horse. They lived in open, grassy areas. They ate plants and could move long distances on their powerful legs. Horses became extinct in North America about 13,000 years ago but were brought back by Spanish explorers in the 1500s.



stag-moose

Cervalces scotti

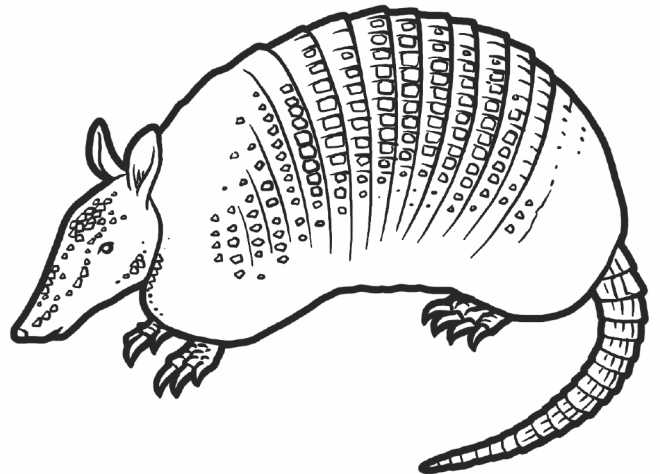
The antlers of this animal were most like those of today's moose. Its head was like that of today's elk. It had long legs. The legs helped it to wade in wetlands to find plants to eat. Fossils of the stag-moose have been found in central and northern Illinois.

Illustration adapted from artwork courtesy of the Illinois State Museum.

beautiful armadillo

Dasypus bellus

This animal looked like modern armadillos but was much bigger than them. It ate insects. Its fossils have been found in southern Illinois. It probably was only in the state in the warm periods between glaciers.

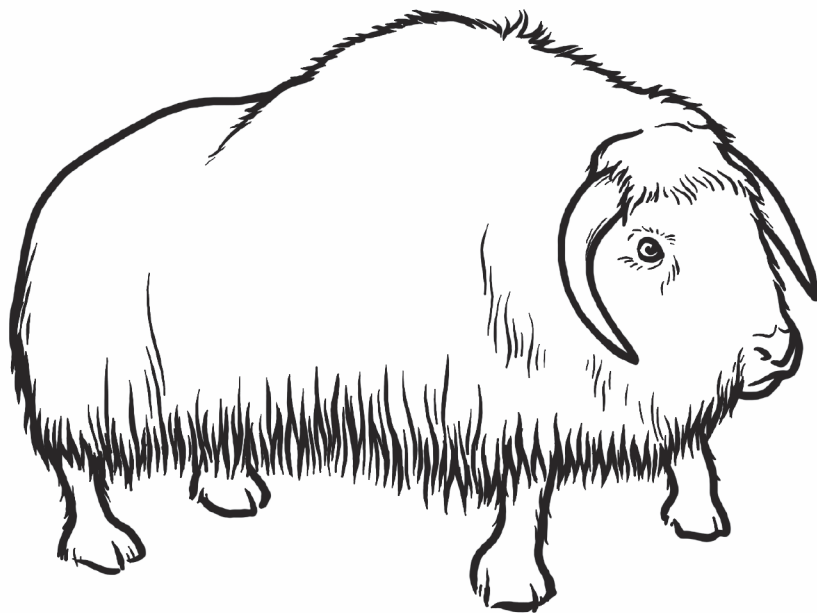


Extinct Ice Age Mammals

Harlan's muskox

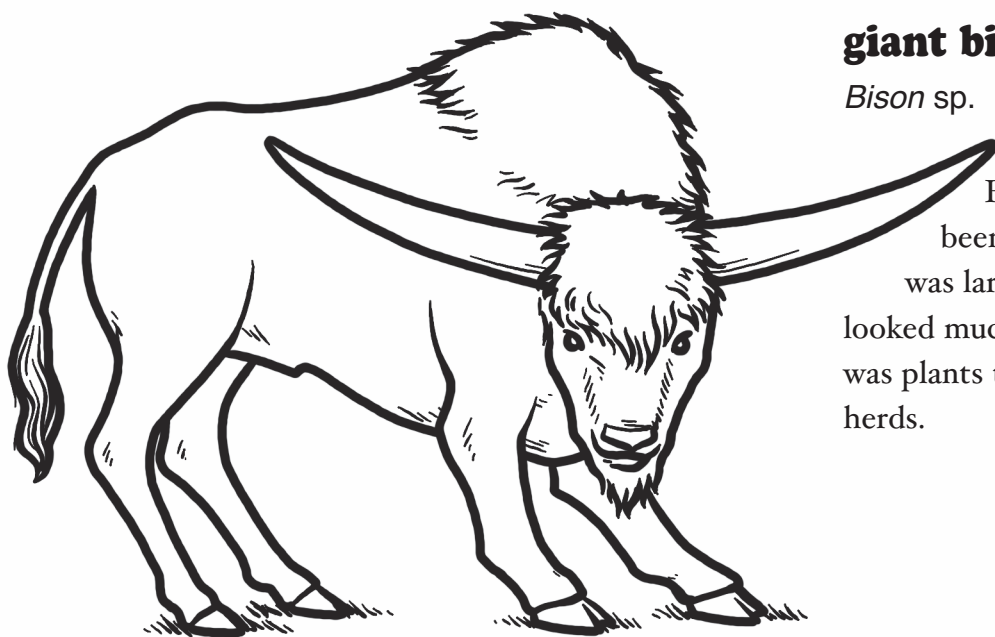
Bootherium bombifrons

Harlan's muskox had a covering of long, shaggy hair. It was the size of a cow. Its horns came out from behind the eyes and curved out, down and forward. Males had larger horns than females. This animal was found in all of Illinois. It ate grasses, sedges, willows and other plants found in its woodland habitat.



giant bison

Bison sp.

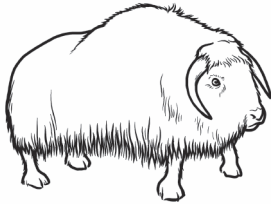


Fossils of the giant bison have been found in southern Illinois. It was larger than the bison of today. It looked much like today's bison. Its food was plants that it ate as it roamed in small herds.

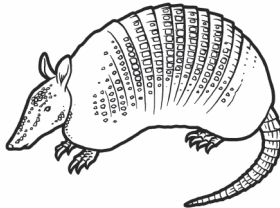
Yesterday and Today

Match the species from the Ice Age with the species from today that it is most like. Then write the name of the “Species of Today” on the blank by the drawing.

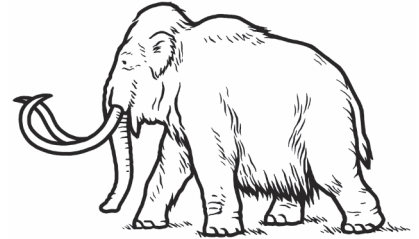
Ice Age Species



1. _____ Harlan's muskox



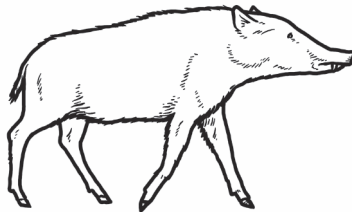
2. _____ beautiful armadillo



3. _____ mammoth



4. _____ Jefferson's ground sloth

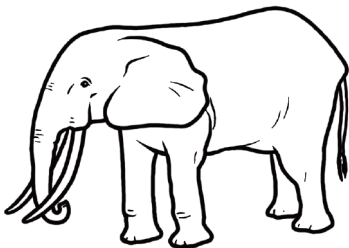


5. _____ flat-headed peccary



6. _____ giant beaver

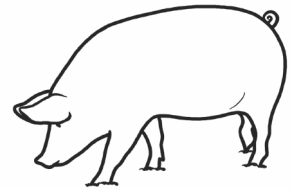
Species of Today



A. _____



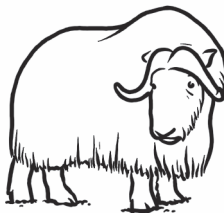
B. _____



C. _____



D. _____



E. _____



F. _____

Names for “Species of Today”

armadillo

beaver

elephant

muskox

pig

three-toed sloth

Me and My Adaptation

An adaptation is something that helps an animal or plant to survive. For example, the beautiful armadillo had hard plates on its body that helped to protect it. Tell how each of the following adaptations helped its mammal to survive.

long nose (mammoth)

long legs (stag-moose)

heavy fur covering (Harlan's muskox)

sharp front teeth (giant beaver)

big claw on each toe (Jefferson's ground sloth)

Changing Times

When an animal's environment changes, the animal must adapt to the changes, move or die. Sometimes changes happen very fast. Sometimes changes take thousands of years. In each of the lists below, all of the answers are correct except one. Circle the **incorrect** answer in each group.

moved into Illinois between glaciers when the weather was warm

beautiful armadillo giant beaver flat-headed peccary

stayed in Illinois when glaciers were here and when they weren't

jaguar raccoon eastern cottontail

left Illinois when the glaciers left

snowshoe hare arctic shrew deer mouse

became extinct

mammoth stag-moose white-tailed deer

lived in Illinois in ancient times and today

American mastodont eastern cottontail gray squirrel

lived in Illinois until the 1800s

wapiti black bear flat-headed peccary

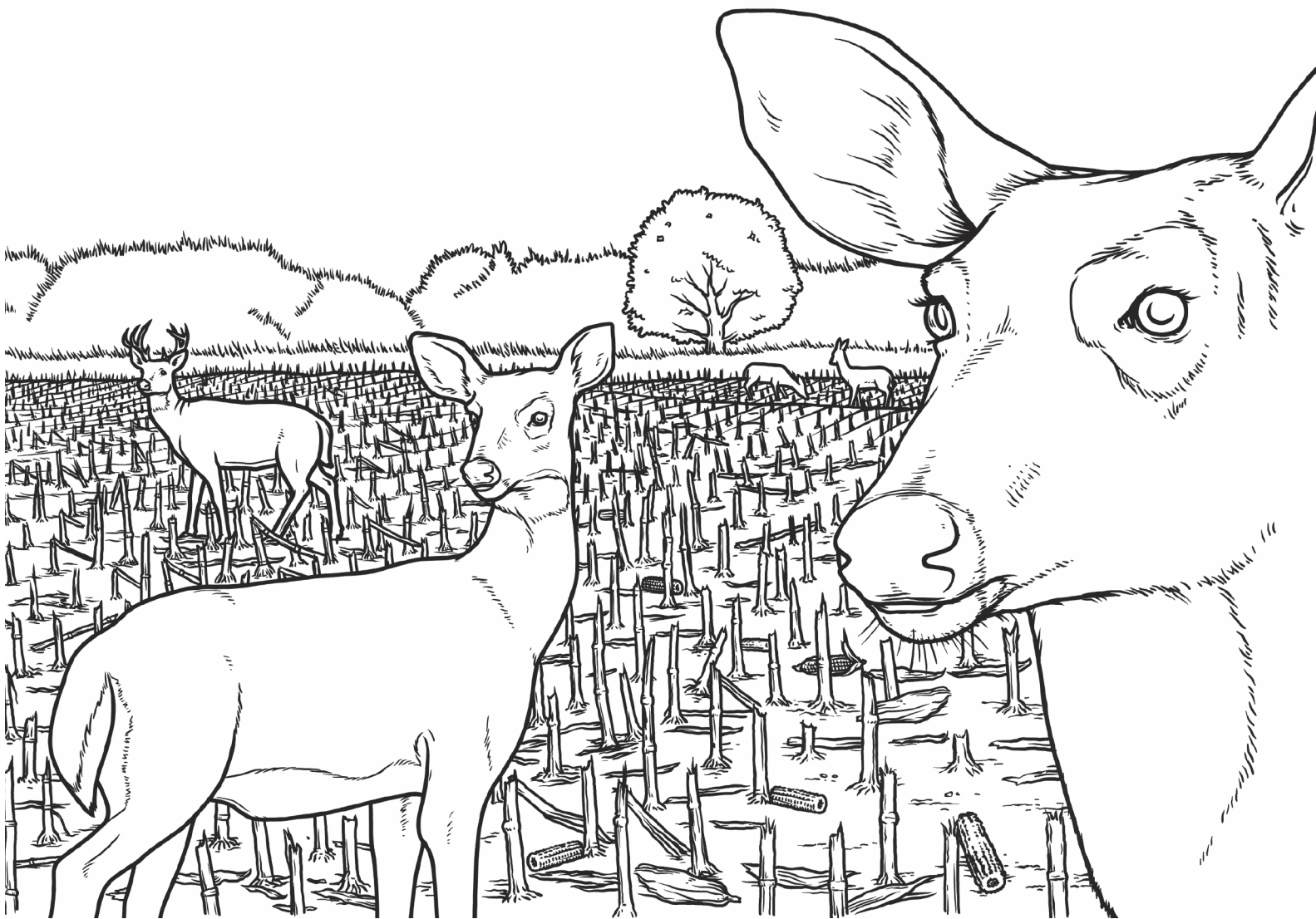
Changes in the Recent Past

The world is always changing. As you have learned in this activity book, sometimes living things can adjust to the changes. Sometimes they cannot.

Since humans came to Illinois, several mammal species no longer live here. Humans have made many changes in Illinois. Their uncontrolled hunting and trapping led to the removal of a few mammal species. Changing the land from natural prairie, woodland and wetlands to farming also was bad for some mammals. The practice of fencing land changed the way that some mammals lived.

Other mammals have been helped by human actions. There are more white-tailed deer and beaver in the state than ever before. Developing pastures, building lakes and not mowing along roads have helped the red fox, coyote, badger, eastern cottontail and other species. Setting aside land as natural areas helps mammals and many other species.

On the next few pages, you'll learn about more mammals that once lived in Illinois.

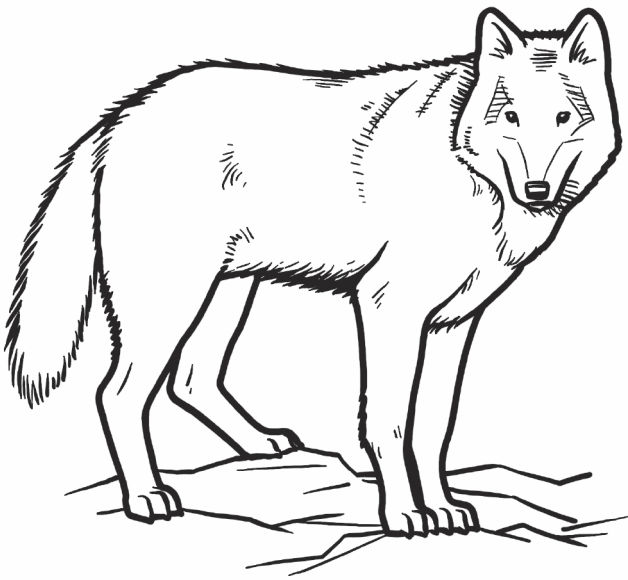
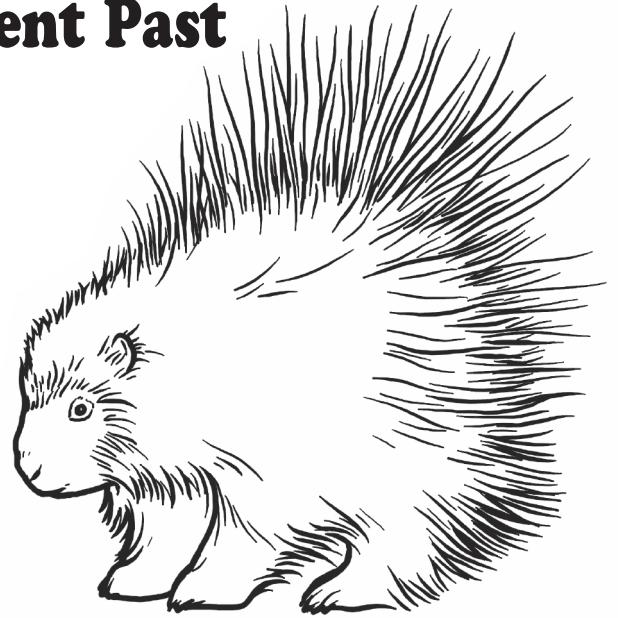


Mammals from Illinois' Recent Past

porcupine

Erethizon dorsatum

Porcupines last lived in the wilds of Illinois in the early 1800s. They once were found in the northern part of the state. As large forests were cut down, the porcupine lost its habitat.



gray wolf

Canis lupus

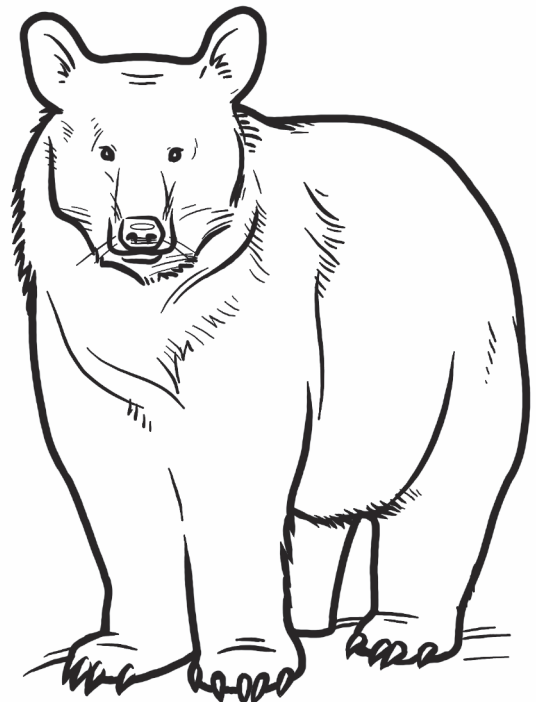
Wolves were gone from Illinois by the 1860s. At one time they were found in all of Illinois. They have recently been added to the Illinois endangered and threatened list. A gray wolf sometimes comes into Illinois from other states.

black bear

Ursus americanus

The last wild black bears in Illinois were killed in the 1860s. Loss of habitat and no hunting laws led to the removal of these animals from the state.

Any black bears seen today have been turned loose, escaped or have wandered into the state.



Mammals from Illinois' Recent Past.

marten

Martes americana

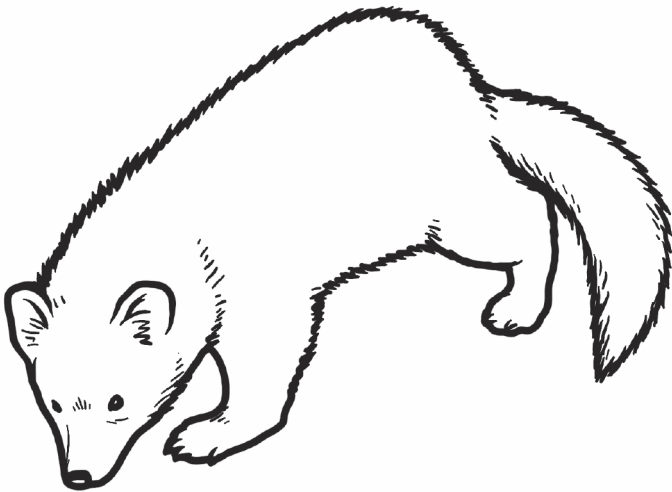
The marten may have lived in northern Illinois. It was gone from the state by the mid-1800s. It needs a large forested habitat. There probably were never very many martens in Illinois.



fisher

Martes pennanti

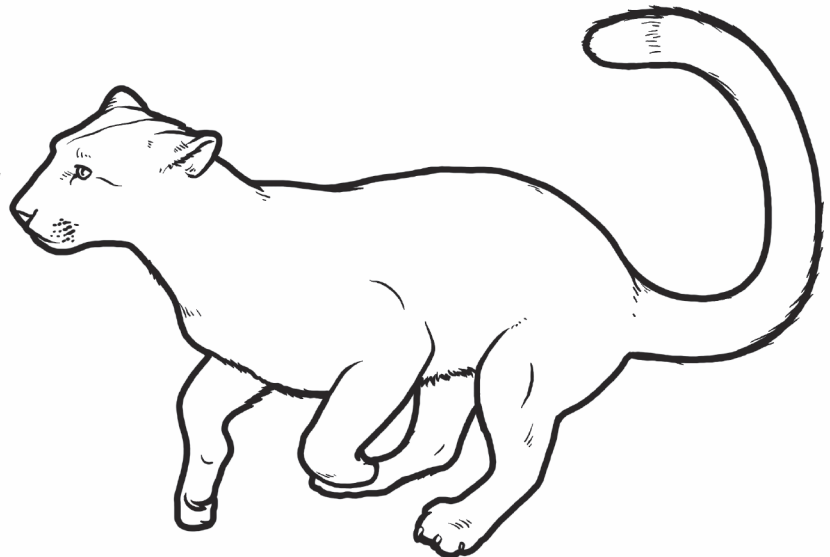
The fisher was once a resident of the state. It lived in large wooded areas. It ate porcupines, squirrels and voles. When the forests were cleared in Illinois, the fisher moved out.



mountain lion

Felis concolor

Mountain lions were gone from Illinois by the late 1800s. Any mountain lions seen in the state today have been turned loose, escaped or have wandered in from other states.

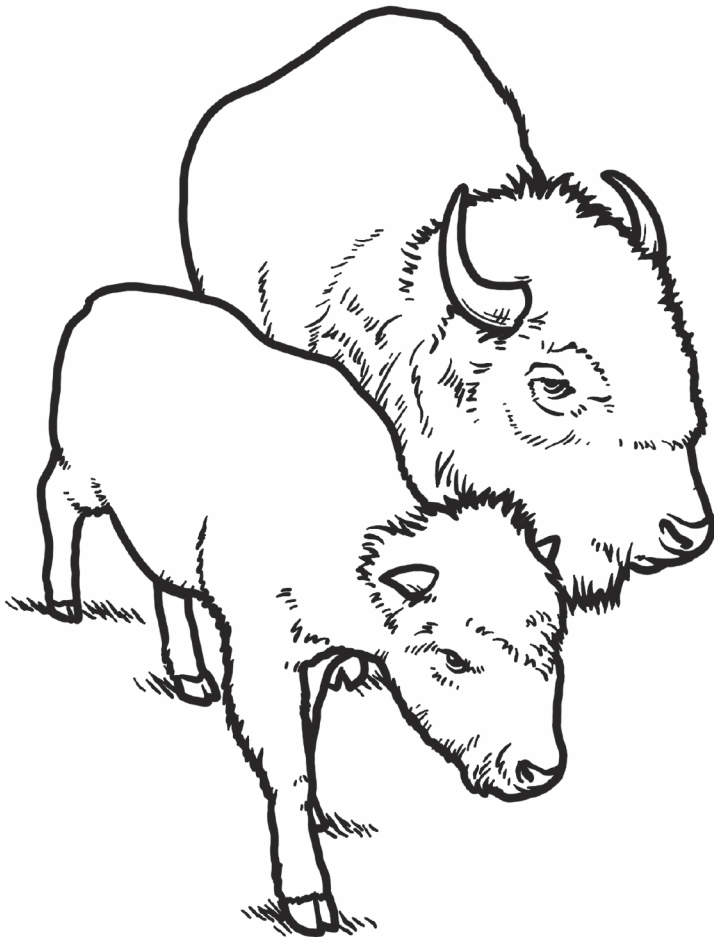
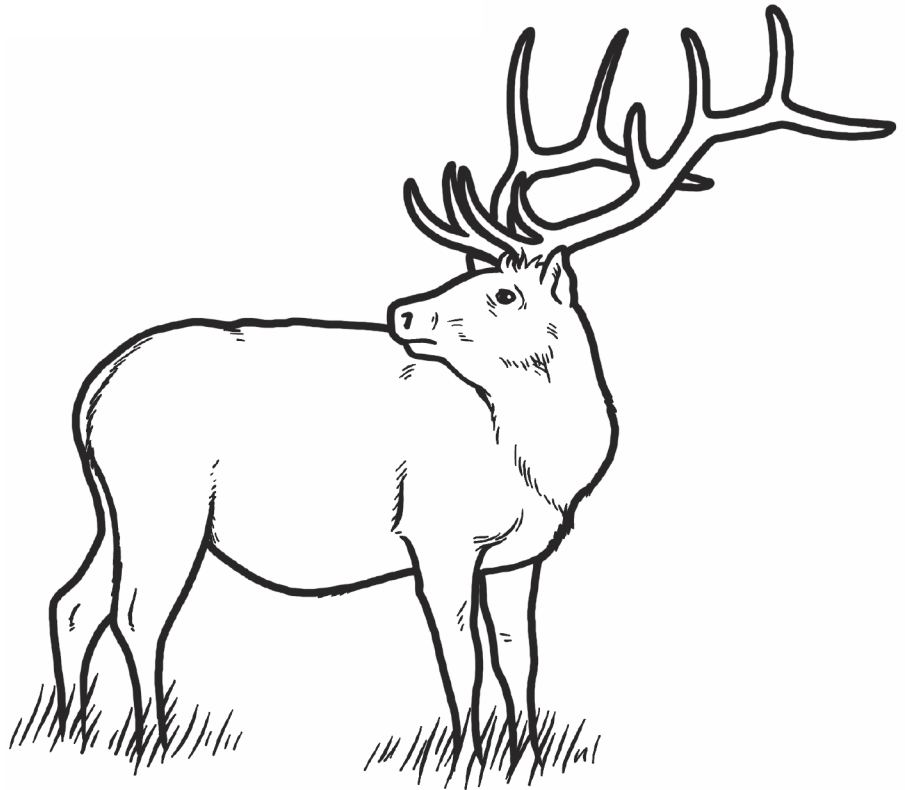


Mammals from Illinois' Recent Past

wapiti

Cervus elaphus

Wapiti, or elk, could once be found in all of Illinois. Harsh winters in the late 1700s killed many wapiti. The rest of the wapiti were removed from the state mainly by hunters. Hunters in the early 1800s had no laws to tell them how many animals they could kill. Some hunters killed as many wapiti as they could. By the 1850s there were no more wild wapiti in Illinois.

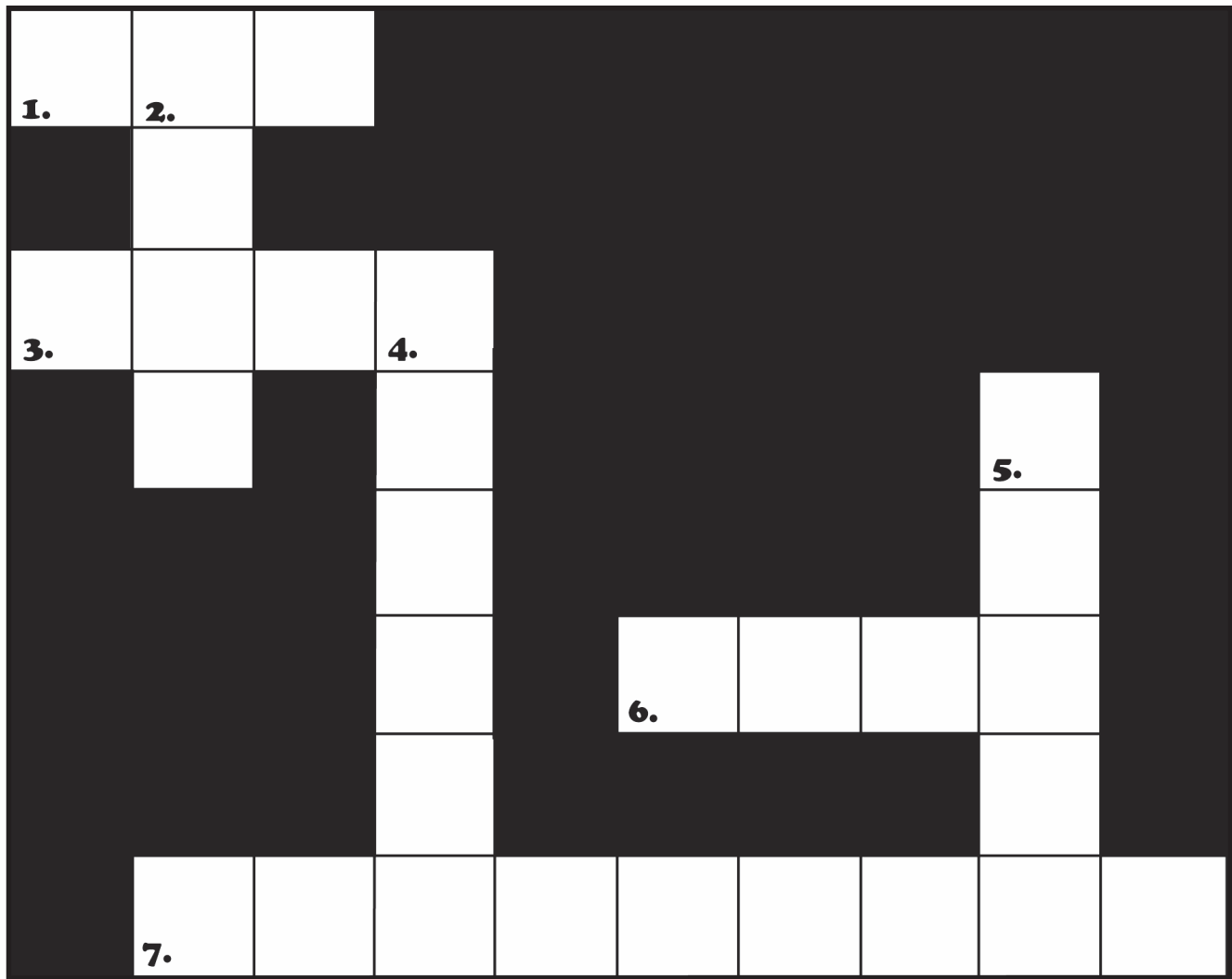


bison

Bos bison

Bison were gone from Illinois by the 1830s. They had been found in all of the state just a few years earlier. Very bad winters in the late 1700s killed many bison. Hunters were the main reason that bison were eliminated from Illinois. There were no laws to tell hunters how many bison they could kill, and some people shot as many as they could. It did not take many years to kill them all.

Puzzler



Across

1. Also called “wapiti,” this animal was gone from Illinois by the 1850s.
3. The gray _____ sometimes wanders into Illinois from other states.
6. Because there were no hunting _____ in the 1800s, some people killed as many animals as they could.
7. The _____ left Illinois in the early 1800s as forests were cut down.

Down

2. The mountain _____ last lived in the wilds of Illinois in the late 1800s.
4. This animal eats porcupines.
5. _____ were gone from Illinois by the 1830s.

Searching for Answers

Find the following words in the puzzle. Circle each word as you find it.

black bear

change

deer

elk

habitat

humans

mammal

laws

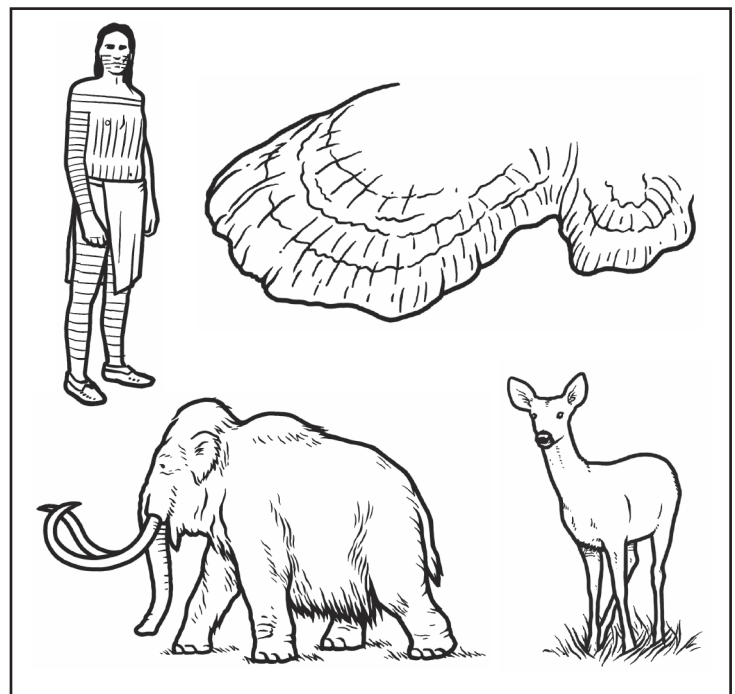
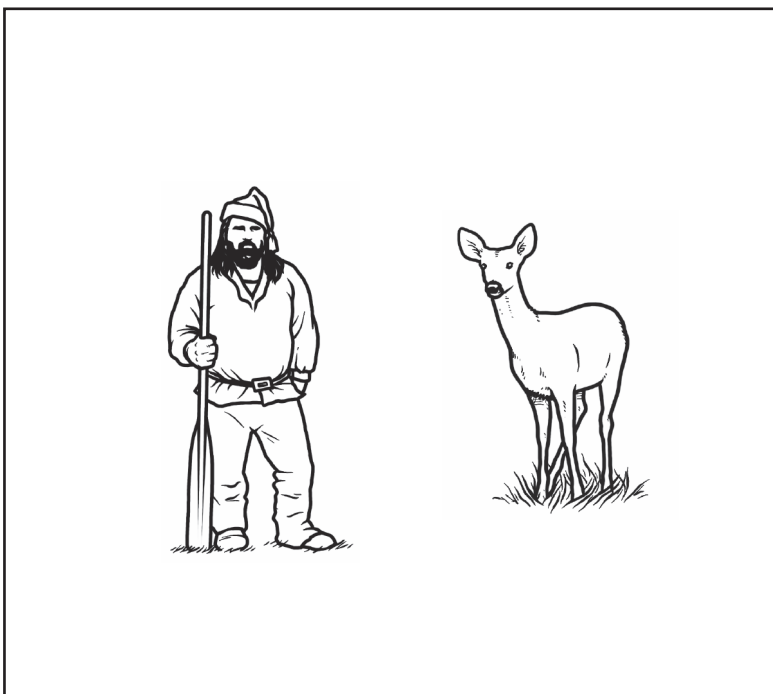
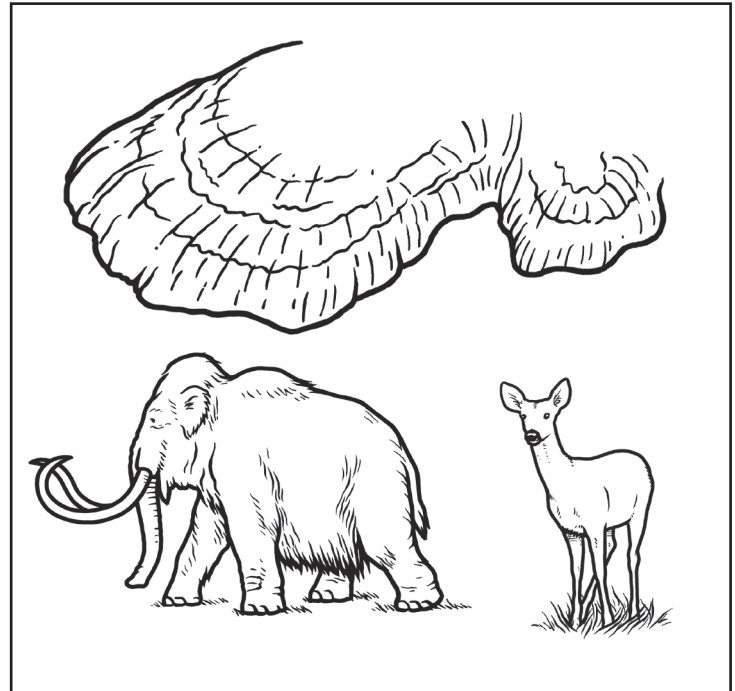
past

wild

H	A	B	I	T	A	T	W	L
U	E	L	K	W	I	L	D	R
N	R	A	K	D	T	C	E	G
T	N	C	H	A	N	G	E	F
L	M	K	U	P	Q	W	R	R
N	R	B	M	A	M	M	A	L
G	T	E	A	S	P	S	D	A
F	G	A	N	T	H	L	Z	W
X	C	R	S	B	N	M	C	S

A Place in Time

The events in the pictures below happened in Illinois' past. Put them in order from oldest to most recent. Start with number 1 by the oldest event and work your way to the most recent.



What's for Dinner?

Some mammals hunt and eat other animals. Plants are used for food by other mammals. Still other mammals eat both plants and animals.

Place an "A" next to the name of the mammals that eat animals.

Place a "P" next to the name of the mammals that eat plants.

Place a "B" next to the name of the mammals that eat both plants and animals.

_____ **mammoth**

_____ **flat-headed peccary**

_____ **giant beaver**

_____ **fisher**

_____ **horse**

_____ **American mastodont**

_____ **stag-moose**

_____ **beautiful armadillo**

Past, Present, Future

You have learned about mammals that lived in Illinois in the past. You know some things about mammals that live today. What do you think mammals will be like in the future?

In the space below, draw a mammal that you think will live in Illinois 1,000 years from now. Give it a name. Draw the place that it will live in, too.

Your Turn

What else would you like to learn about the mammals in this book? Write two questions below that you would like to answer.

1. _____

2. _____

Now see if you can find the answers. Your teacher can help you get started. Write the answers on the lines below.

1. _____

2. _____

Answers

page 5 - Living or Extinct

1 - E; 2 - L; 3 - L; 4 - E; 5 - E; 6 - L

page 10 - Yesterday and Today

1 - E A - elephant

2 - F B - three-toed sloth

3 - A C - pig

4 - B D - beaver

5 - C E - muskox

6 - D F - armadillo

page 11 - Me and My Adaptation

long nose - used to gather food

long legs - used to wade into wetlands to find plants to eat

heavy fur covering - protection (from cold, rain,

snow, insects and other items)

sharp front teeth - used for cutting plants

big claw on each toe - used to grasp food; also may

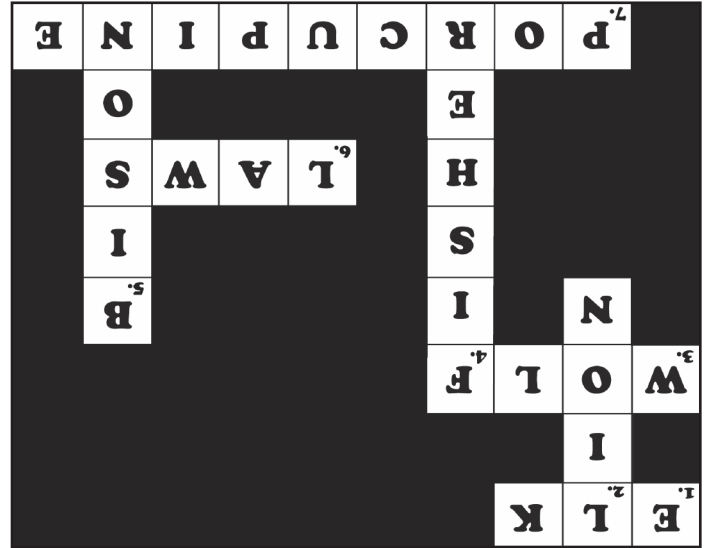
have helped it to stand on two legs

page 12 - Changing Times

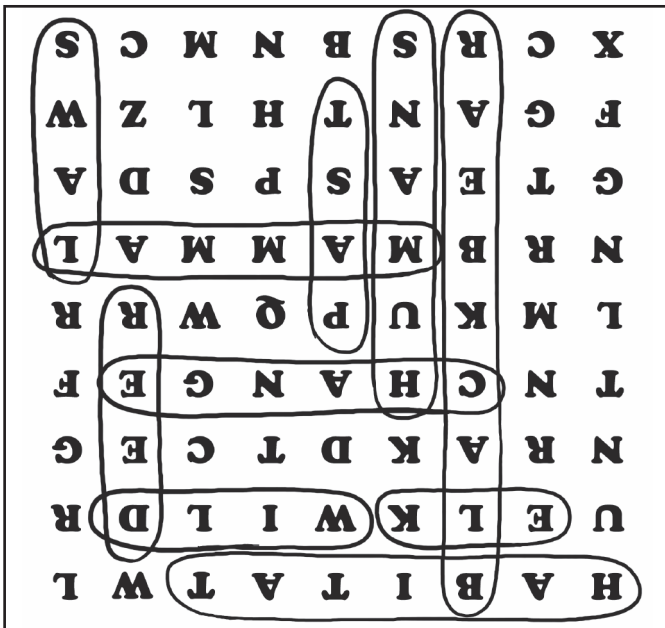
giant beaver; jaguar; deer mouse; white-tailed deer;

American mastodont; flat-headed peccary

page 17 - Puzzler



page 18 - Searching for Answers



page 19 - A Place in Time

3, 1, 4, 2

page 20 - What's for Dinner?

mammoth - P

flat-headed peccary - B

giant beaver - P

fisher - A

horse - P

American mastodont - P

stag-moose - P

beautiful armadillo - A

page 21 - Past, Present, Future

Answers will vary.

page 22 - Your Turn

Answers will vary.

Illinois Department of Natural Resources

Division of Education

One Natural Resources Way

Springfield, IL 62702-1271

217-524-4126

<https://www2.illinois.gov/dnr/education/Pages/default.aspx>

dnr.teachkids@illinois.gov