

PHILADELPHIA ZOO

3400 West Girard Avenue ■ Philadelphia, PA 19104-1196 ■ 215-243-1100 ■ philadelphiazoo.org

Endangered Species (3rd-5th)

Essential Question

What is extinction and how can we prevent it?

Objectives

1. Student will learn the difference between endangered and extinct
2. Students will learn some reasons that animals become endangered
3. Learn some things humans can do to help

Vocabulary

Endangered: a species threatened with extinction

Extinct: a species no longer in existence

Recommendations

Read:

["Can We Save Them?"](#) – David Dobson

["Condor's Egg"](#) – Jonathan London

["Animals on the Edge"](#) – Sandra Pobst

Research:

-Different animals from regions outside North America that have gone extinct and why

-Animals that have come back from the brink of extinction (some examples include American bison, bald eagles, and Rodrigues fruit bats)

Discuss:

How do we impact the world around us? Name some big ways and some small ways.

Why is it important for animals to stay alive?

Classroom Activity

Individually: Have students read the short fact sheets about 5 extinct species: Passenger pigeon, Caribbean monk seal, Eastern elk, Carolina parakeet, and Blue walleye. Each student should choose the one they are most interested in and learn more about that species by completing the included worksheet.

In Groups: Students who chose the same animal should work in groups to compare and contrast their answers to the worksheet questions. They should work together to answer the questions on the back of the worksheet.

Standards

PA Academic: 3.1 A2, 3.2 B6, 3.4 A2, 3.4 B2, 3.4 B4, 3.4 C1, 3.4 C3, 3.4 E2, 3.4 E3, 4.1 A, 4.1 C, 4.1 D, 4.1 E, 4.3 A, 4.3 B, 4.5 A, 4.5 B, 4.5 C, 4.5 D

Next Generation Science: 3-LS2-1, 3-LS4-3, 3-LS4-4, 3-LS4-2, 3-LS4-2, 5-LS2-1, 5-ESS3-1

New Jersey Core Curriculum: 5.1, 5.3 C, 5.3E

Common Core: CCSS.ELA-LITERACY.RI.3, CCSS.ELA-LITERACY.RI.4, CCSS.ELA-LITERACY.W.2, CCSS.ELA-LITERACY.SL.3

Passenger Pigeon

Last seen: 1914

Declared extinct: 1914

Former range: Most of North American, east of the Rocky Mountains



Passenger pigeons used to be the most abundant birds in North America, and probably the whole planet. That means there were more passenger pigeons than any other bird you can think of! In fact, during their highest population period, passenger pigeons made up **one quarter (25%) of all birds**. They lived all over the United States, especially in forests with beech and oak trees. Passenger pigeons lived in huge groups made up of millions of birds. They were **nomadic**, which means they traveled all the time instead of living in just one place.

Passenger pigeons began to decline in the early 1800s. Until 1870, the pigeon population was slowly declining, but was still very high in numbers. Between 1870 and 1890, **passenger pigeons declined very quickly**. The forests where they used to live were cut down in order to make room for more people to build houses and towns. They were also hunted for their feathers and their meat. Because there were so many of them, **most people were not worried about them ever going extinct**.

A passenger pigeon lived in the Cincinnati Zoo in Ohio in the early 1900s. Her name was **Martha**. The Cincinnati Zoo was trying to save the pigeons by keeping some safe. The pigeons did not breed enough, which means they did not have enough babies to survive. Martha died on September 1, 1914, and was the last member of her species.

Carolina Parakeet

Last seen: 1918

Declared extinct: 1918

Former range: From New York to the Gulf of Mexico



Carolina parakeets were the **only type of parrot that ever lived in North America**. They were small parrots that were only about 1 foot long from their beak to the end of their tail. They could live for a long time – one pair of Carolina parakeets **lived to be over 35 years old!** There were probably a few million parakeets when they were abundant in the United States. They lived in flocks of 200-300 birds. Most of them lived in forests along rivers and swamps, and they were often found along the Mississippi River.

Carolina parakeets were often written about by the first explorers in North America. Many of these explorers had never seen a parrot before! However, they were mentioned less and less as time went by, and by **1860 they were almost never seen outside of Florida**. The forests where they lived were being cut down to make room for people to build houses and towns. **Many people captured them** for their feathers, and because the parakeets would eat their crops. They also may have encountered a new disease, and because their population was so small, the species could not fight it. They also had to compete with an **introduced species of honeybee**, who used a lot of the same habitats that the parakeets did.

The Cincinnati Zoo tried to keep Carolina parakeets from going extinct by keeping them safe. The last Carolina parakeet, named **Incas**, died on February 21, 1928.

Eastern Elk

Last seen: 1877

Declared extinct: 1880

Former range: Canada and northeastern United States



Eastern elk used to be found all over the eastern United States and Canada. They were **very big** – they could be up to 6 feet tall at their shoulders and weighed up to 1000 pounds. Their antlers could also grow to be 6 feet long! They were the **most widespread elk in the Western Hemisphere**. They had light brown hair all over their bodies, including a shaggy neck mane that was longer and darker than the rest of their hair. They lived in dense forests with lots of large trees. Male elk would announce their location by making a noise called a 'bugle.'

Eastern elk could be found in herds throughout most of the forests in the eastern United States. As more humans moved across the country and into new areas, **their habitat was destroyed** to make room for houses and towns. The elk were also **hunted for their meat and their antlers**. By 1850, the elk could be found in the Allegheny Mountains but could no longer be found in the rest of their range.

On September 1, 1877, an eastern elk was shot in Pennsylvania. People searched for them for a few years and could not find any more. That had been the very last eastern elk. They were officially declared **extinct in 1880** by the US Fish and Wildlife Service.

Caribbean Monk Seal

Last seen: 1952

Declared extinct: 2008

Former range: Caribbean Sea, Gulf of Mexico, and western Atlantic Ocean



Caribbean monk seals used to live in tropical waters off the coast of the southeastern United States. They were **very large** – they could be up to 8 feet long and weigh up to 600 pounds! They were very curious, and when they were on land they would not run away from humans. They lived in large groups of **20-100 seals**. While they could not move very quickly on land, they were excellent swimmers, like all other seals. Early explorers used to call them **sea wolves**. Christopher Columbus was the first person to write about Caribbean monk seals!

Caribbean monk seals used to be found in very large groups on beaches throughout the Caribbean Sea and nearby waters. Hundreds of seals would rest on the beach at one time. The seals were **very valuable to humans** because they had lots of meat that could be eaten and lots of fat that could be used for fuel. Many seals were killed, and by **1850** they were becoming difficult to find. Humans were also taking lots of fish out of the water. The seals needed those fish to eat, and they were having trouble finding enough food to eat. This made it very hard for the remaining seals to survive.

In 1952, a Caribbean monk seal was seen in the waters near Jamaica. Many people have searched for the seals since, but no one has found any. They were officially declared extinct in 2008. They have two very close relatives – the Hawaiian monk seal and the Mediterranean monk seal. Both of these seals are critically endangered.

Silver Trout

Last seen: around 1930

Declared extinct: 1939

Former range: Large lakes in New Hampshire



Silver Trout used to live in large lakes in New Hampshire, particularly Monadnock Lake and Christine Lake. They grew to be about 1 foot long. Silver trout were **not actually silver** – they were olive green! Silver trout usually spent their time in deep waters. In the fall months, they would gather in very large groups near the surface and were very easy to find. They had **no natural predators** and were able to thrive in the lakes.

Around 1890, the lakes where the trout lived began to grow into popular tourist destinations. Lots of people would spend their summers on the lakes, and they would spend much of their time fishing. The silver trout was not an easy fish to catch in the summer, so **other fish were introduced** to the lakes so that people would have fish they could catch. These fish, which included yellow perch and another type of trout, competed with the silver trout. There was not enough food or space for all the fish to survive, and the silver trout struggled to compete with the larger fish.

In 1939, many people looked for the trout in both lakes where it used to live, but no one could find any. They have not been seen since, and were officially declared extinct.

Name: _____

Choose one of the 5 extinct animals that you are interested in. Use the information you have to answer the following questions.

Which animal did you choose? _____

How long has this animals been officially extinct? Show your work.

How long has it been since this animal was last seen? Show your work.

There are 5 big causes of extinction. Circle the ones that you think had an impact on this animal. If you are not sure what one of them means, use context clues to help you make a guess.

Habitat loss

Introduced species

Pollution

Population decline

Overuse by humans

Explain your thinking for the previous question. Why did you choose those causes?

For these questions, work together with a group of students who chose the same animal that you did.

Think about the reasons why this animal went extinct. Do you think we could have prevented this from happening? Why or why not?

What could people have done differently that may have helped this animal survive?

Do you think that what happened to this animal could happen to an animal that is still alive today? Why or why not?