

Activity 4: Extra! Extra! Read All About It



Background:

Summary

Students create a newspaper and poster to educate people in their community about Whooping Cranes and threatened and endangered species.

Objectives

Students will be able to:

- Define threatened and endangered species
- Describe causes that lead to species reaching threatened or endangered status
- Understand the causes of Whooping Cranes reaching endangered status
- Explain why it is important to recognize species at risk of extinction
- Educate others about Whooping Cranes and threatened and endangered species
- Understand visual techniques used in mass media

Standards

Social Studies A.8.11

Science E.8.6

Art and Design F.8.2

Materials Needed:

- Paper, computer, and art materials necessary for creating a newspaper
- Bird Flight Diverter (in Whooping Crane trunk)

As defined by the U.S. Fish and Wildlife Service, “An **endangered species** is one that is in danger of extinction throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered in the foreseeable future.” The U.S. Fish and Wildlife Service provides species and state specific information on threatened and endangered species on their website at:

www.fws.gov/Endangered/

One or many factors can result in the decline of a species to the point that it is nearly eliminated from the Earth. Listed below are some reasons Whooping Cranes became endangered and current threats that still make them vulnerable:

1. Loss of habitat – When an organism loses its home, it can be difficult to find food, shelter, and protection. One of the leading factors that caused Whooping Cranes to decline was that their wetland habitats were modified or destroyed, and they could no longer use them.



Habitat loss, such as wetland destruction, is an important factor in the species' decline.

Photo: USFWS

2. Overexploitation – Species are excessively hunted or collected so that organisms are removed from a population at a higher rate than they are added. (For example, 100 birds are collected from a population each year, but only 75 eggs hatch per year. Of the 75 hatchlings, only 43 chicks survive because of predation and limited resources.)

3. Power line collisions – Collisions with power lines are a significant cause of Whooping Crane mortality during migration. Cranes often hit power lines after being disturbed from a roost (a place where the cranes sleep). There is an increasing number of power lines in the U.S. that are being marked with Bird Flight Diverters, like the one in the crane trunk, to reduce the risk of collision.

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4. Introduction of exotic species – Organisms can be considered native or exotic to an ecosystem. Native species are organisms that are **endemic** to an area. Exotic species are organisms that did not historically live in the area but have been introduced either accidentally or on purpose. Exotic species can reduce populations of native species when they are **invasive**; that is, they move into a native species' habitat and eventually take it over, so that the native species no longer has available habitat.

An example of an exotic, invasive species is Phragmites, a tall wetland grass. Phragmites was historically found in North America, but an aggressive strain, endemic to Europe, was introduced to North America in the 1800s. Phragmites crowds out native plant species and reduces biodiversity in wetlands.



Phragmites is an invasive grass species in North America. It forms dense colonies in wetlands. This can negatively affect Whooping Cranes because they need open water for roosting. *Photo: Peter Mulligan*

Historic numbers of Whooping Cranes cannot be defined with accuracy. When the species was at its most numerous, people were not taking population surveys of Whooping Cranes. Based on eye-witness accounts, they were never as common as Sandhill Cranes. Because of European expansion and subsequent habitat reduction, the Whooping Crane population declined rapidly in the late 1800s to early 1900s. By 1944, approximately 21 birds remained in the whole world. Six of these birds lived around a lake in Louisiana and did not migrate. Fifteen birds belonged to a population that migrated between the Aransas National Wildlife Refuge in Texas and the Wood Buffalo National Park in Canada. In 1940, severe weather scattered the birds in Louisiana, and by 1947 only one Whooping Crane remained in that population. It was relocated to Aransas National Wildlife Refuge in the hope that it would reproduce with a member of that flock, but it died shortly thereafter. With so few birds left, the Whooping Crane was on the brink of extinction.

The two most important factors that led to the decline of Whooping Cranes in the early 20th century were habitat loss and overexploitation from unregulated hunting. As European settlers traveled westward, they drained marshes and plowed prairies for agriculture, destroying much of the birds' nesting habitat. Many remaining habitats were close to human disturbance, a stress to which this shy and secretive species was unable to adjust. As the number of Whooping Cranes declined, hunters, hobbyists, and museum collectors scrambled to get hold of the rare specimens and eggs for their



Habitat loss and unregulated hunting were the two major causes of the decline of Whooping Cranes. Whooping Cranes were designated endangered in the U.S. in 1970.

Photo: International Crane Foundation

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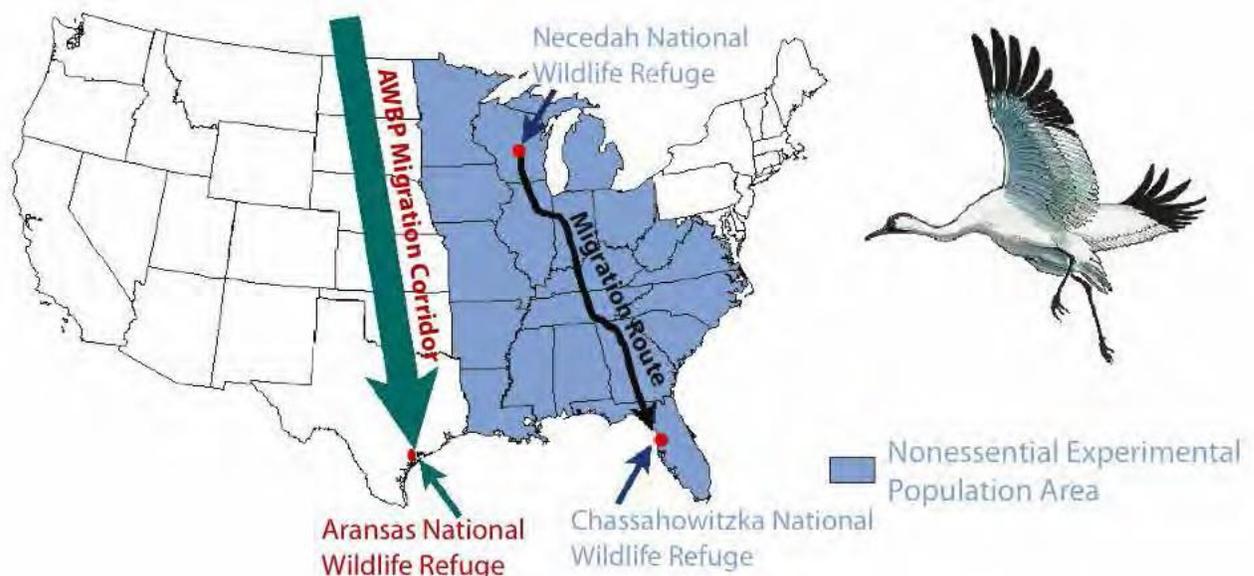
collections.

The United States Fish and Wildlife Service (USFWS) listed the Whooping Crane as threatened with extinction in 1967 and endangered in 1970. Canada designated the Whooping Crane as endangered in 1978.

The ultimate goal of current restoration efforts is to remove the Whooping Crane from the Federal List of Threatened and Endangered Species. One way to reach this goal is to have two self-sustaining populations of Whooping Cranes that can breed and raise young on their own in addition to the Aransas-Wood Buffalo flock. Currently, the Aransas-Wood Buffalo flock is the only self-sustaining population of Whooping Cranes. This is a small population of birds that spends each winter in the same vicinity on the Gulf Coast of Texas. Any catastrophic event such as a natural disaster (severe storm, hurricane, or tornado) or disease outbreak could eliminate the entire population.

In 1999, the Whooping Crane Eastern Partnership (WCEP) was formed when nine government agencies and non-profit organizations joined together with a similar goal: restoring a second migratory population of Whooping Cranes to eastern North America, and a non-migratory population in Louisiana. Restoring a second and third population in another part of the country would help safeguard the species from extinction; if something catastrophic happens to one population, the other populations may be unaffected and survive. Establishing these new populations of Whooping Cranes will bring the birds closer to delisting from the *Federal List of Threatened and Endangered Species*.

The Whooping Cranes in the Aransas-Wood Buffalo population (that migrate between Canada and Texas) are designated endangered. The Whooping Cranes in the Eastern Migratory Population and the Louisiana Population have been designated nonessential experimental populations (NEP). Whooping Cranes in a nonessential experimental population are treated as “threatened” when they are located on national park and national wildlife refuge properties, and as proposed for listing when on other properties, which provides more flexibility and discretion in managing the population. Because Whooping Cranes in the two introduced populations fall under the nonessential experimental population designation, they are not considered endangered in Louisiana or states in which the Eastern Migratory Population is found (see below).



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Procedure:

- 1) Let students examine the Bird Flight Diverter found in the Whooping Crane trunk. Ask them to consider how it reduces Whooping Crane collisions with power lines. Ask the students to give possible explanations of how the Bird Flight Diverters work.
- 2) Divide students into small groups and have students design a newsletter to educate people in their neighborhood about Whooping Cranes and the importance of recognizing threatened and endangered species.
 - The newsletter should include biological information about the Whooping Crane, an explanation of why it is important to recognize endangered species, current Whooping Crane restoration efforts, and suggestions of what people can do to help remove Whooping Cranes from the endangered species list.
 - The newsletter should include written as well as graphic materials. Here are some questions that students should address in creating their newsletter:
 - a) What specific causes resulted in the Whooping Cranes becoming an endangered species?
 - b) Why is it important to recognize threatened and endangered species? Include in your response the different types of value that a species can have. Is it worth money? Does it serve a specific function in an ecosystem? Does the species provide a specific service important to people? Is there a moral importance in conserving a species?
 - c) Why is it important to restore the population of Whooping Cranes in North America?
 - d) What are the possible effects of the permanent loss of a species from the Earth?
 - e) What are three ways that people in the community can help the Whooping Crane? Threatened and endangered species in general?

Actions taken to help Whooping Cranes don't have to be difficult or involve lots of money. It's probably easier than you think. One way people can help Whooping Cranes is by writing letters to their representatives. When people in the legislature understand that their constituents care about protecting this species, they may be encouraged to pass bills protecting wetlands.

Reporting sightings of Whooping Cranes is a way the public can become involved in the science behind monitoring the cranes. Scientists want to know where the birds are and how they are using their habitat. This can help better understand locations that are appropriate to release Whooping Cranes into the wild so they have a higher chance of survival.

Another way to help Whooping Cranes is to simply spread the word. By being able to correctly identify a Whooping Crane and point them out to friends or family is a simple action that could

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decrease accidental shootings. Sharing information about Whooping Cranes on social media is a good way to spread the word to hundreds of people quickly with little effort.

- 3) Have student groups come up with a slogan and design a poster to encourage the people in their neighborhood to save the endangered Whooping Cranes.

Extensions:

- 1) Students can research other threatened and endangered species in their state. How many endangered species are there? How many of them are birds? Mammals? Plants?
- 2) Ask each student to give a presentation on a threatened or endangered species. Students should provide life history information on the species, causes for the decline of the species, and restoration efforts currently underway.
- 3) Have students research and create a presentation on species that have been removed from the *List of Threatened and Endangered Species*, such as wolves, turkeys, trumpeter swans, and bald eagles.
- 4) Students can check out their state's Threatened and Endangered Species on the US Fish and Wildlife website at: www.fws.gov/endangered/. Which animals and plants do they recognize? Which species have they seen and which have they heard about? How and what do they know about them?