

PORTRAIT OF THE AMERICAN BALD EAGLE



**US Army Corps
of Engineers®**
Rock Island District

Objectives:

- To know the history of the bald eagle and the cause of its decline.
- To understand what has been done to improve Bald Eagle habitat.
- To know the characteristics of the American Bald Eagle.
- To understand the qualities that the Mississippi River offers the bald eagle.

Activities:

Students will each receive a copy of "Portrait of the American Bald Eagle" study guide. Eco-Test questions will be taken from the guide.

Before the Eco-Test a short presentation about the American Bald Eagle will be presented.

Study Questions:

1. What major human activities caused the decline in the bald eagle population? What happened to keep it from becoming extinct?
2. What things have the Corps of Engineers done to help the bald eagle?
3. What is eagle etiquette and why is it important?
4. Why is the Mississippi River so important to the bald eagle?

Words to Know:

- **erie (or eyrie)** - a nest built by a bird of prey in a high place such as a treetop or cliff.
- **eagle** - a large diurnal (daytime) bird of prey noted for its strength, size, keen vision and powerful flight.
- **eaglet** - a young eagle.
- **endangered species** - an animal or plant species that is in danger of extinction throughout all or a significant portion of its range.
- **extinct species** - an animal or plant species that has died out forever and will never reproduce again.
- **fledgling** - a young bird that is ready for flight.
- **habitat** - the specific natural environment (home) of an organism or group of organisms; provides water, food and shelter.
- **immature eagle** - an eagle under four years of age without adult plumage.
- **mature eagle** - an eagle four or five years of age that has adult plumage of white head and tail feathers. Mating begins.
- **migrate** - a seasonal movement from one region to another.
- **perch** - a support on which a bird sits; an eagle's daytime perch is usually within 60 yds. of the water's edge. Large cottonwood trees are used most frequently along the river.
- **plumage** - the entire feather covering on a bird.
- **roost** - a support on which a bird rests at night. Eagles generally roost together in large, mature trees surrounded by smaller trees.
- **threatened** - a species with low numbers in the population, and their numbers show signs of an unnatural decline.

THE AMERICAN BALD EAGLE

Imagine for a moment that you are standing along the Mississippi River and you look up and see an American Bald Eagle soaring overhead. As you watch the eagle you see it slow and almost stop in mid air. Then suddenly the eagle dives almost straight down into the water stopping a split second to skim the water then climbing again back into the air. As it climbs into the air you see it has a fish clinched in its talons or feet. A beautiful sight that unfortunately many Americans have never seen before, a bald eagle in flight. The Mississippi River offers qualities that make this Midwest region an area where bald eagles are common.



HISTORY OF DECLINE

The American Bald Eagle was once a very common nesting species throughout the United States. However, when the early settlers came to America, they often killed eagles because of myths that they could carry off small children or livestock. In fact, an eagle can only lift 3-5 pounds, about the size of a Mississippi River catfish.

Further decline was later due to the destruction of forest habitat, the cutting of large trees that the birds need to nest, roost and perch. Lead pellets used in shotgun shells were another problem that contributed to the decline of eagles. Birds that ate the pellets became ill with lead poisoning. The collecting of eggs by people from nests also contributed to the decline. This decline of eagles raised public concern in the 1950's.

Then in the 1960's the use of the pesticide DDT almost entirely wiped out the population. DDT was an effective pesticide or chemical used to control insects. The problem was that it did not break down into a non-poisonous substance quickly. Fish picked up the DDT that washed into the rivers and streams. When the eagles ate the fish they became infected with the DDT. The chemical caused the eggshells of the birds to become very thin and usually the eggs would break before hatching. In 1972, DDT was banned from use in the United States.

Then, in 1978 through the Endangered Species Act, the Bald Eagle was listed as Endangered in 43 of the lower states and Threatened in 5 others. Thanks to protective laws and an increased awareness and concern for the Bald Eagle it has lead to complete recovery!

In 1995, the Bald Eagle was officially reclassified from Endangered to Threatened status throughout the lower 48 states by the U.S. Fish and Wildlife Service.

On July 28, 2007 the American Bald Eagle was removed from the Endangered Species List. The eagle is still protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

IMPROVEMENTS FOR THE EAGLES

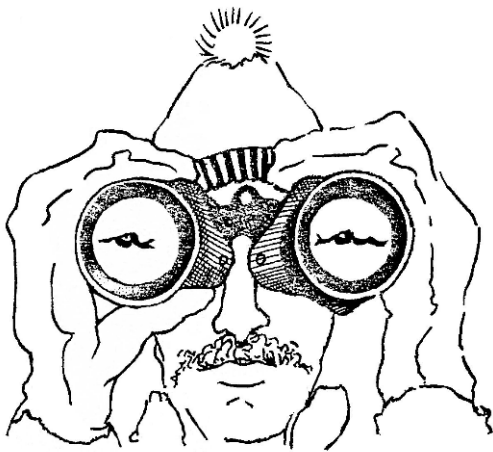
After the eagle had been placed on the endangered species list, efforts began to improve eagle habitat and increase the number



of eagles. One way this was done was to set aside land. Areas along the river that are set aside as nature preserves offer places of shelter during the winter months. The Cedar Glen Nature Preserve located in Hancock County and the Elton Fawks Bald Eagle Nature Preserve near Rock Island are both areas set aside by the Illinois Department of Conservation. But setting aside land does not always mean that the proper habitat is there, sometimes-artificial perches need to be built.

Both state and federal agencies take an active part in protecting and monitoring the progress of the eagles. The U.S. Army Corps of Engineers protect areas around the locks and dams during the winter to keep people from disturbing perching areas. They also monitor the effects that towboat navigation might have on the population. The Corps along with other agencies and organizations conduct eagle-watching events during the winter also. State biologists monitor nests and test blood from young eagles to check for poisons. The Corps with Illinois and Iowa State agencies conducts and participates in mid-winter surveys monitoring numbers. You can help with the protection of eagles and their habitat through something called eagle etiquette.

EAGLE ETIQUETTE



Eagle etiquette is the proper behavior to use when watching eagles. This means not disturbing the birds while they perch, especially during winter. If disturbed the bird uses more energy in times when it needs to save it the most. When watching eagles stay at least the distance of 3 football fields or 300 yards away in open areas, and the length of 1 football field or 100 yards in thick vegetation. Also, a person should stay on the opposite side of the river or lake when viewing. Keep away from nests and report any birds seen during the summer. Attending an eagle-watching event during the winter is a good way to learn more about the bald eagle.

EAGLE BIOLOGY

The bald eagle is not really bald but gets its name from the Old English word "balde" meaning "white," which refers to the white head of the mature or adult eagle. This bird eats primarily fish, but is also known to eat small mammals, turtles, and waterfowl. The bald eagle builds large nests called aeries that can weigh hundreds of pounds and are constructed of large sticks lined with grass. These aeries are built in tall trees near lakes and rivers.

The American Bald Eagle mates for life but will find a new mate if its partner dies. Female bald eagles are larger than males and lay 1 to 3 eggs. The young make their first flight 11 or 12 weeks after they are born. They remain defenseless and must rely on their parents for several months. The bald eagle when full grown will have a wingspan of 6.5 to 8 feet in length. The eagles do not get their white head and tail feathers until their fourth or fifth year.

The bald eagle sits 3 to 3.5 feet tall and weighs 8 to 15 pounds. Their eyes are 5 to 6 times as strong as humans. It is also believed that only half of the young birds survive until adulthood.

One reason for this is that when two eaglets hatch usually the stronger bird is the one that is fed and will survive.



Bald Eagle - Mottled Plumage/Immature (white line on underneath coverts visible in all immature plumages).

The bald eagle occurs in a variety of plumages, associated with the age of the bird. A nearly solid dark brown form is characteristic of the first-year plumage. This form is sometimes mistaken for an adult golden eagle. During its second and third years, the bird has mottled plumage (above). Then it goes into a white-bellied plumage, and, at four years of age, begins its molt into the first adult plumage, with white head and tail (below).

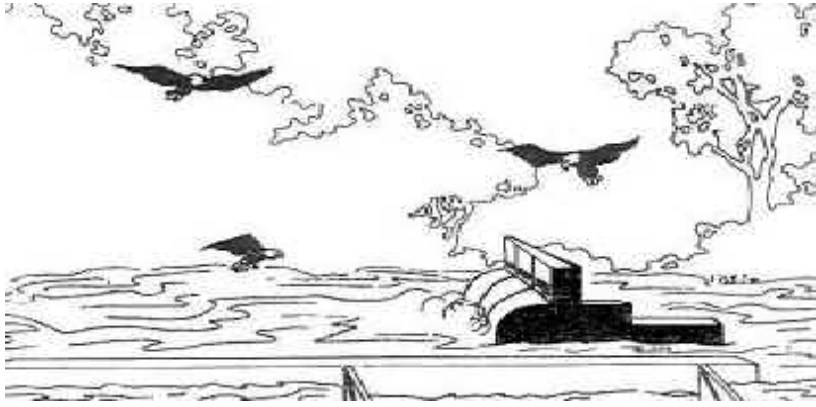


Bald Eagle - Adult (white head and tail; wing span 6-8')

MISSISSIPPI RIVER QUALITIES

Living in the area of the Mississippi River offers many unique opportunities that are not found in most areas. The Upper Mississippi River runs from Minneapolis, Minnesota to St. Louis, Missouri. This part of the river has locks and dams that the eagles gather around since turbulent water does not freeze. This is good for the eagles because many fish flow through the dam and are stunned while they pass under the gates of the dam. This provides an easy meal for the bald eagles. The Upper Mississippi River has a very high number of wintering eagles, over 2,500 birds. This is compared to the early 1960's when the entire lower 48 states averaged only 4,000 birds. During the spring and summer months most of the birds in this area probably migrate into Canada and the Great Lakes states.

Field identification is important because many times an eagle is mistaken for another bird due to false identification. The American Bald Eagle goes through a variety of plumages or feather covering. On the following page are drawings to help you identify the mature bald eagle versus the immature bald eagle.



Living near the Mississippi River sure has its advantages. Being able to see the bald eagle soar overhead is something few can do. But it has taken work to get the bald eagle this far and it will take even more. The American Bald Eagle is not only our national symbol it is also a national treasure. This is a treasure that we can all help pass on to the next generation

Did you know these fun facts?

- The bald eagle is found only in North America. It is the continent's second largest bird of prey only the California condor (an endangered species) is larger.
- Bald eagles have been known to live to be 25 to 30 years old. It is believed that they mate for life, but no one is entirely sure of this.
- When a bald eagle acquires its white head and tail feathers, it has "grown up" and is able to mate and raise young.
- Bald eagles will often steal food from each other by chasing the one who has caught a fish until that bird drops its prey. Another eagle may then catch the fish in mid-air.
- Migrating bald eagles have been tracked flying at more than 60 miles per hour.
- As many as 200 bald eagles may be found using a single roost in severe weather
- Many bald eagle roosting and feeding areas are threatened by development, despite laws that protect the habitat of this endangered species
- A bald eagle nest in *Ohio* was measured to be 8 1/2 feet wide and 12 feet deep. It weighed 4,000 pounds.
- It is a crime to possess even one feather of a bald eagle without a permit from the U.S. Fish and Wildlife Service.
- Until 1953, the state of Alaska paid rewards for dead bald eagles. Under this bounty hunting system, more than 128,000 bald eagles were killed.
- The entire skeleton of an eagle weighs only 1/2 pound. The skeleton is made of hollow bones with bracing inside the bones for strength.
- A bald eagle can strike prey with twice the force of a rifle bullet.