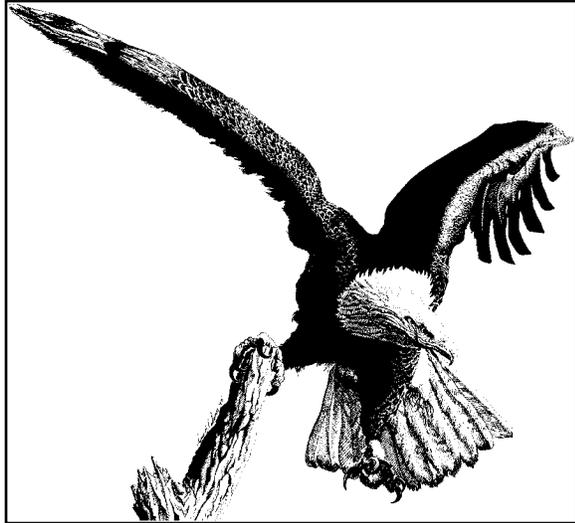


Ohio Division of Wildlife
Life History Notes

Bald Eagle

Scientific Name: *Haliaeetus leucocephalus*



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Introduction

Selecting a national symbol is no easy task. Something that embodies the best characteristics or qualities to which to aspire should be chosen. The bald eagle displays many outstanding characteristics—exceptional vision, a striking appearance, and a commanding presence. You can't help but think that those who decided upon the eagle as the country's symbol had to have seen it soaring over open water and were impressed with its grace, strength, and the personification of freedom.

Sadly, by the later half of the 20th century, the bald eagle was classified as an endangered species. This, however, is a case with positive results. Through the diligent efforts of wildlife biologists and a concerned public the bald eagle population is coming back and is no longer on the federal endangered list. Its federal status is now "species of concern" the symbol of the nation has also; become the symbol of recovery for all endangered wildlife.

Description

The bald eagle can be found in small concentrations throughout the U.S., particularly near sizeable bodies of water, natural and man-made. Some of the largest populations in North America are in Alaska, the Pacific Northwest, Canada, the Upper Great Lakes region, and Florida. In Ohio, the bald eagle's stronghold is the marsh region of western Lake Erie. In recent years, the bald eagle has expanded through-

out Ohio with nesting pairs in most major river systems and in 2005 a pair nested near the Ohio River in Brown County. Nonbreeding birds can be found anywhere in the state at anytime of the year.

The adult bald eagle is one of the most easily recognized species of wildlife. It has snow white feathers covering its head down to the neck area. The tail feathers of the mature bald eagle are also white. The body color is very dark brown, almost black. Yellow eyes, beak, and feet accent the bird's appearance. The white of the head and tail distinguish the fully mature eagle from immature birds of the species. Young eagles do not have this appearance until they reach the age of five or six years. Until that time, they are decidedly duller in appearance and, to the inexperienced observer, probably would not be recognized as a bald eagle. Immature eagles are almost uniformly dark brown from head to tail feather. Their undersides are mottled white with buff and cream blotches.

The sexes are alike in appearance. The voice of the bald eagle has been described as a high-pitched, squeaky cackle or chatter.

The eagle is one of the largest birds in the raptor (bird of prey) or Accipitridae family. It is generally 34 to 43 inches long, weighs 10 to 12 pounds (females are the heavier of the sexes) and has a wingspan of six to seven and a half feet.

Habitat and Habits

The bald eagle, as with any species of wild-life, requires food, water, shelter, and space. For the bald eagle, the ideal site is one where water with ample food (fish) is located within two miles of the nest. The eagle shows a preference for a somewhat secluded homesite. This is particularly critical when the nest is being established and young raised. Eagles are highly territorial and too much interference from other eagles can result in problems at the nest site.

The bald eagle is skilled in taking fish over water, dipping to the surface and coming up with a fish clutched in its talons. However, the bird has other methods of obtaining food. In Alaska, it has been observed standing in streams, using its talons or beak to capture migrating salmon. The eagle will readily feed on mammals, including groundhogs, rabbits, squirrels, or other birds such as ducks, gulls, hawks, and owls. It will also scavenge for carrion, especially in the winter when other sources of food are limited.

Reproduction and Care of Young

It is generally believed that the bald eagle stays mated to one partner for life. However, current research is yielding evidence that this might not be completely true. Nonetheless, bald eagle pairs go through a series of behaviors in preparing to mate that bond them to one another. Pair bonding activity for both new and established pairs begins in the fall. Courtship behavior and nest building can occur anytime between October and early December. As winter begins and daylight hours are reduced, the bonding activities wind down. Courtship rituals resume in late January as the days begin to lengthen again. Although many steps and activities are involved in the mating behavior of the bald eagle, the most noticeable and spectacular part of this process is the aerial display between the mates. Beginning in early February, the male bald eagle will put on an aerial display of ritualized movements showing his mate his readiness. If receptive, the female will join him in flight. This activity is then followed by more ritual movements and gestures before actual mating occurs. As outstanding as this display is, scientists credit the activity that occurs during nest building as the most important element in cementing the pair bond.

Established pairs generally return to an existing nest and add six or more inches of material including branches and grasses. Corn stalks and cattails are also added to the nest structure prior to egg laying, during incubation, and through the early brooding period to provide an insulating lining to the nest structure. The nest is maintained throughout the breeding season.

New pairs will basically start from scratch and this can be quite a task as the average nest ranges in size from three to five feet across and three to six feet in depth. Still, a young pair can build their nest in as little as three weeks.

Ohio has the distinction of being the home of the largest bald eagle nest on record. Referred to as the "Great Nest," it was located in Vermilion and was measured at 12 feet in height, 8 1/2 feet across and it weighed two tons! The nest was 80 feet up in the tree, which is within the normal placement range of 50 to 100 feet above ground. This nest was used continuously by different pairs of eagles for over 35 years. It was destroyed during a storm in 1925.

The female lays one to three eggs, approximately 36 hours apart, in mid-February to late March. Both she and her mate spend time on the nest incubating. This process usually lasts 35 days, with the young hatching in late March through early May. The eaglets will stay in the nest 10 to 12 weeks and both parents share the feeding responsibilities. The eaglet(s) begin limb hopping as they strengthen their wings. The fledging process continues for four to eight weeks; all the while the eaglets slowly broaden their range from the nest, but continue to depend on their parents for food. The young birds generally become independent at 17 to 20 weeks of age and will disperse from Ohio in November or December.

Management Plans

Bald eagle numbers declined through the first half of the 20th century as habitat was lost. After World War II, the pesticide DDT was commonly used on American farms and by way of runoff, found its way into rivers, streams, and lakes. As a result, the staple of the bald eagle's diet—fish—became contaminated. The toxicity of the chemical eventually built up in the birds' system and either left them sterile or so seriously weakened the shells of their eggs, that they would break under the weight of the incubating adults. The effect of the contamination was a critical decline in the number of healthy, adult nesting pairs because too few young were being produced to replace or expand the population.

Eventually, the link between the use of DDT and the contamination of numerous wildlife species was established, and the pesticide was subsequently banned. That was in 1972. Unfortunately, legislating DDT, dieldrin, and other chemicals out of use didn't magically bring the bald eagle back from the brink of extinction in the state or nation. Chemical contamination, loss of habitat and other adverse conditions were having a long-term impact on the birds. In 1979, seven years after the ban on the use of these chemicals, eagle numbers continued to decline; in 1959 there had been 15 pairs, now

Ohio was down to just four pairs. If this trend was to be reversed, man would have to step in and actively manage for an increase in the population.

In 1979, the Ohio Division of Wildlife began a bald eagle restoration project. An important aspect of this project was adding more young eagles to the resident population and eventually, breeding population. Eaglets were obtained from zoos and the U.S. Fish and Wildlife Service (USFWS) and placed in the nests of eagles whose eggs failed to hatch. The eagles became "foster parents" to these eaglets.

Additional actions were taken to help restore Ohio's eagle population. Education of the public about the importance of the eagle and other raptors was and continues to be essential. Rehabilitation of injured birds contributed to the eagle's recovery. Each individual bird was considered critical to the population and the future. Every attempt was made to help a bird recover and return to the wild. Man-made nests, constructed to resemble an eagle-built nest, were developed in areas where existing nests were in poor condition.

In 1989, the bald eagle restoration project added a new dimension with the creation of a four-year research project to determine the movement and habitat requirements of young bald eagles. While still in the nest, each eaglet produced in the Lake Erie marshes was fitted with a backpack-style harness holding a radio transmitter and an identification tag was attached to each bird's wings. The radio signals were monitored by biologists working out of the Division of Wildlife's wetland research station. The results of this research have added to the existing knowledge concerning habitat requirements of Ohio's eagles. This phase of the project, as well as the restoration efforts themselves, was funded through the "Do Something Wild!" income tax checkoff program.

Restoration was just one phase of the preservation of the bald eagle in Ohio. Two problems still threaten the existence of the bald eagle in Ohio: 1. the loss of wetlands and swamp forests, among the preferred nesting and staging areas for the eagle; and 2. contaminant concerns. Elevated levels continue to affect Lake Erie bald eagle populations.

Ohio has experienced a great deal of success in its efforts to strengthen the state's bald eagle population. In 2004, a major milestone was reached with 100 nesting pairs statewide.

Viewing Opportunities

Much has been accomplished in the effort to save and restore the bald eagle in Ohio and the nation. Seeing a bald eagle in the wild is an opportunity that should not be missed. The best time to see the bald eagle is in the late winter or early spring, before the trees leaf out. Eagles are also more active at this time as they are pairing off and establishing territories and nests. However, this is also a critical period in the reproductive cycle of the bird and it should not be disturbed. Therefore, if you plan to make a viewing trip at this time, attempt to be as unobtrusive as possible. Binoculars or a spotting scope are recommended, as they will allow you to get a good view of the bird while keeping your distance. The Ottawa National Wildlife Refuge and Pickerel Creek Wildlife Area are becoming spectacular staging areas for non-breeding eagles from late August to October, when a lucky observer may see 10 to 20 eagles at one time from the trail system.

Eagles may also be viewed from roads surrounding the Mosquito Creek, Killdeer Plains, and Magee Marsh wildlife areas. Keep in mind though, that no spot is guaranteed for eagle viewing. These birds are highly mobile and may set up "housekeeping" in another location.

Do Something Wild!

As mentioned earlier, research and restoration efforts for the bald eagle were funded in part by money from the Do Something Wild! income tax checkoff fund. The Division of Wildlife also uses money from this fund to acquire wetlands—a habitat critical to the bald eagle. Through the generosity of Ohio citizens, who either donated through the checkoff, purchased wildlife conservation plates, or made their direct contribution to the Endangered Species Special Account, the Division is able to sponsor a variety of special projects to benefit endangered species and wildlife diversity in the state.

Tax time is not the only time you can help. Contributions to our Endangered Species and Wildlife Diversity Program are accepted throughout the year. To make a donation, please send a check to: Endangered Species Special Account, Ohio Division of Wildlife, 2045 Morse Road, Bldg. G, Columbus, Ohio 43229-6693. All contributions, whether made on your tax return or directly, are tax deductible.

At a Glance

Mating: Monogamous, pairs for life

Peak Breeding Activity: Early February through March

Incubation Period: 35 days on average, February through April

Clutch Size: Usually two eggs; with a range of one to three

Young are Hatched: Peak hatching occurs in mid-April

Young: Altricial (helpless and dependent on the parents). They leave the nest at about 10-13 weeks

Number of Broods per Year: 1; however, if a nest is destroyed, some pairs will "recycle" and initiate a second nest within the same year.

Adult Weight: Males - 10 pounds; Females - 12 pounds

Adult Length: 34-43 inches, including the tail

Adult Wingspan: Between 6 1/2 and 7 feet

Life Expectancy: 15-20 years in the wild

Migration Patterns: Adults are generally year-round residents; immature birds sometimes migrate during spring and fall.

Feeding Periods: Anytime during daylight hours

Typical Foods: Mostly fish, will also feed upon waterfowl, small mammals, and carrion

Native to Ohio: Yes

Active or Potential Conflict Species: No

The bald eagle is on Ohio's threatened species list and is listed as species of concern throughout most of its range by the federal government.

