



The “Fall and Rise” of Bald Eagles in Ohio

A Story of the Bald Eagle Recovery
by Brad Perkins with assistance
from Laura Kerns - ODNR

Unless otherwise indicated, all photos
were taken by Brad Perkins in Ohio.



**Adult Bald Eagle watching
river in Coshocton County**



**Adult Bald Eagle looking
a little bedraggled from
getting wet**




**Adult Bald Eagle showing a little
annoyance in Knox County**



**Adult Bald Eagle in
protective stance at Magee
Marsh**



**Adult Bald Eagle on sand
pile at sand & gravel pit in
Knox County**

An adult bald eagle is perched on a nest made of dry sticks and twigs. The eagle has a white head and neck, a yellow beak, and dark brown feathers on its body. It is looking to the right. The background consists of tree trunks with peeling bark and bare branches.

**Adult Bald Eagle hunting
along Wills Creek in
Coshocton County**

An adult bald eagle is perched on a thick, white-barked tree branch. The eagle has a white head and neck, a yellow beak, and dark brown feathers on its body. It is looking to the left. The background consists of bare, dark branches and a blurred forest scene.

**Adult Bald Eagle hunting
along Wills Creek in
Coshocton County**



**Young Bald Eagle pair
feeding on deer carcass in
Muskingum County**

A photograph of an adult bald eagle perched on a large, intricate nest made of dry sticks and twigs. The nest is situated high in a tree, surrounded by bare branches and a few small, reddish-brown buds. The eagle has a white head and neck, a yellow beak, and dark brown body feathers. The background shows more tree trunks and a clear sky.

**Adult Bald Eagle on nest
in Tuscarawas County**



**Close-up of Adult Bald
Eagle on nest in
Tuscarawas County**

Ohio Bald Eagle Facts

Color: Adult dark brown, white head and tail.
Immature, mottled brown.

Weight: 10 to 12 lbs. **Height:** 32 inches

Wingspan: 6 ½ to 7 feet.

Food: Mostly fish, also: waterfowl, small mammals, carrion.

Mating: Monogamous, breed late Feb. to Mar.

Clutch Size: Usually 2, sometimes 1 or 3.

Incubation Period: 35 days.

Young: Leave the nest after 10 to 13 weeks. Will resemble adults in 3 to 5 years.

Life Expectancy: 15 to 20 years.

Mortality Rates: Highest in 1st year. 50% to 80 %.

Nest: Used year after year. One nest in Vermilion, Ohio reached a size of 12 feet high and 8 feet wide and weighed 2 tons.

Residency: Adults usually remain in Ohio year round. Some immature birds will migrate south in the fall and north in the spring.





Female Bald Eagles are approximately 20% larger than their male counterparts

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A photograph of an immature bald eagle perched on a thick, dark tree branch. The eagle has dark brown, mottled feathers and a light-colored head with a dark stripe through its eye. It is holding a large, bright orange-red fish, likely a carp, in its beak. The background is filled with green foliage and tree branches, creating a natural, wooded setting. The lighting is bright, suggesting daylight.

**Immature Bald Eagle on
feeding on carp caught in
Lake Erie at the Ottawa
National Wildlife Refuge**

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Picture of Great Vermillion Nest from the 1920's. The nest structure was recovered and weighed when the nest tree collapsed. It weighed 2 tons.

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**Who is An Eagle Watch
Volunteer ??**

And What Do They Do??

A photograph showing a person in a tan jacket and pants sitting on a log in a grassy field. They are using binoculars mounted on a tripod. Another tripod with a camera is also visible. The background features a large tree, a plowed field, and distant hills under a clear sky.

Volunteers monitored all activity at nests in Ohio so that biologists knew exactly what was taking place at each nest in Ohio.

Volunteer monitoring a nest in Coshocton County from a distance of about 500 yards.




Nest activity could not be seen accurately with the naked eye.



A spotting scope was required to monitor nest activity. Here an adult eagle is incubating eggs.



In this picture, the adult eagle is sitting higher in the nest, indicating that eaglets have hatched and are being protected under the adult eagle's body. Notice the food to the right of the adult eagle.

A bald eagle is shown in profile, sitting on a nest constructed from a messy pile of dry sticks and twigs. The eagle has a white head and neck, a yellow beak, and dark brown feathers on its body. It is actively pulling dry grass or twigs into its beak, packing them around its head and neck. The nest is situated next to a tree trunk with light-colored bark. The background is a soft-focus view of more trees and a grey sky.

This adult eagle is packing insulation around itself to protect the eaglets underneath it.

Duties at the nest and in food gathering are shared by both adults.



**Notice the very young eaglet
in the left side of the nest.**

Close-up of very young eaglet





**Adult male Bald Eagle
bringing food to a nest in
Tuscarawas County with
female on nest with 2 very
young eaglets.**



Notice fish in left talon.

**Female eagle feeding
fish to eaglets.**




Eaglets grow quite rapidly.





Continued growth of eaglets.

A dark brown eaglet is perched on a nest constructed from a dense pile of dry sticks and pine needles. The nest is situated in a wooded area, with green foliage visible in the background and foreground. The eaglet has a dark head, a sharp beak, and its body is covered in dark feathers. It is looking towards the left of the frame.

Eaglets are at the age now where they can begin stretching and strengthening their wings for first flight. It takes 10-13 weeks from hatching before they are ready for flight.

Eagle Nest Designation Wills Creek Nest
 Date May 11, 2002 Observer(s) Brad Perkins
 Weather: Temp: 55°-60° % Cloud Cover 5%
 Wind: Velocity 10 MPH Direction SE Precipitation —
 Equipment (optional): 20-60 Power Scope, 10-Power Binoculars
 Start Time: 9:10 End Time: 10:25

Time Each Observation	# Birds Present & Plumages	Birds on Nest	Comments
9:10	2-Adults, 2-Eaglets	4	Both adult eagles are on the nest feeding the two eaglets.
9:23	2-Adults, 2-Eaglets	3	One of the adult eagles leaves the nest and disappears into the trees.
9:25	1-Adult, 2-Eaglets	3	The eaglets settle down in the nest.
9:30	1-Adult, 2-Eaglets	3	The adult eagle on the nest flies off the nest, circles the area once, then lands on a perch above nest.
9:32	1-Adult, 2-Eaglets	3	The adult eagle reverses the above process, landing on the nest and standing guard over the eaglets.
10:07	1-Adult, 2-Eaglets	3	One of the eaglets becomes active in the nest.
10:10	1-Adult, 2-Eaglets	3	The eaglet settles down again in the nest.
10:25	1-Adult, 2-Eaglets	3	I leave the observation area.

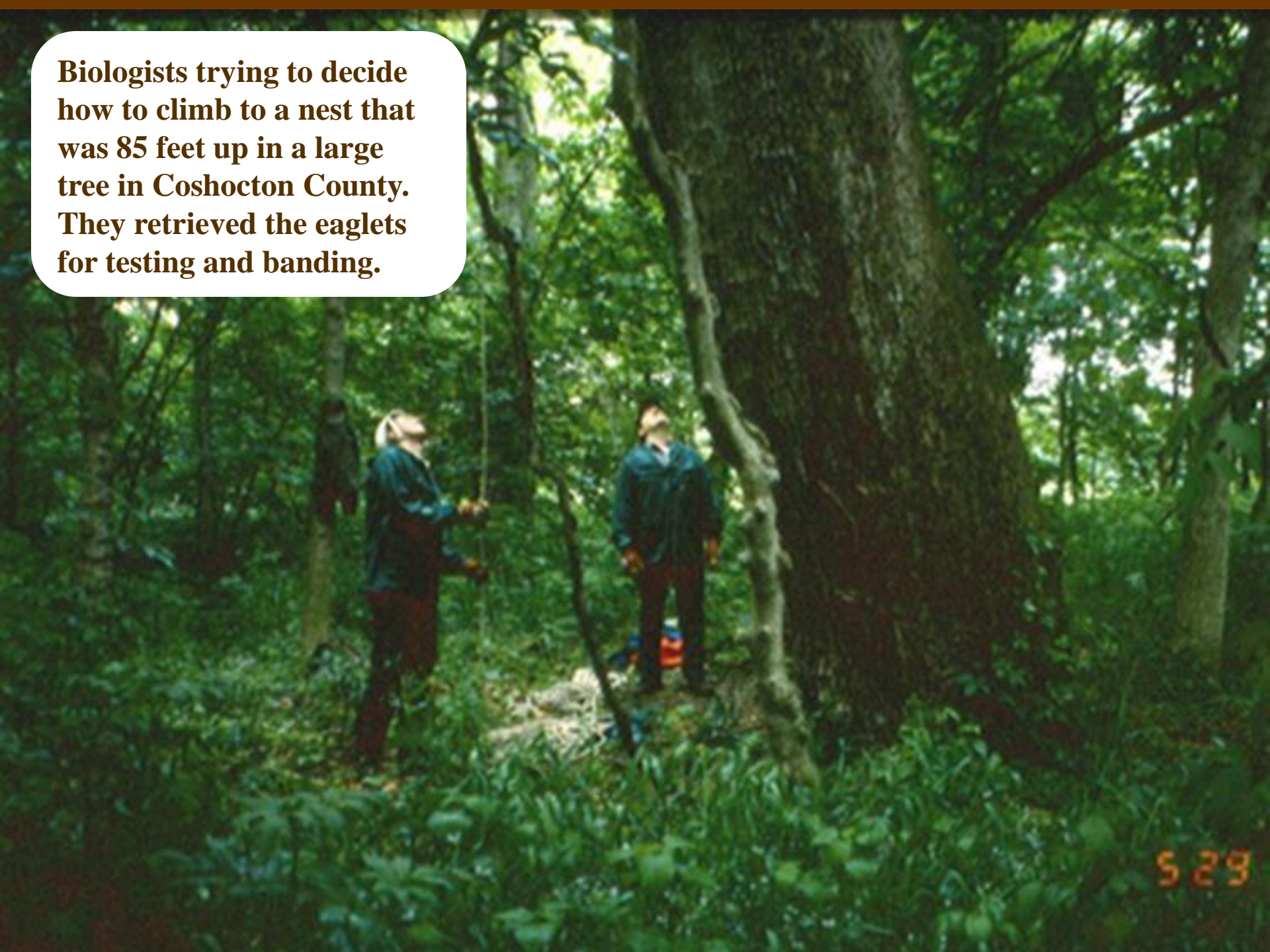
Remarks to be included in comment section: Types of activity: (1) courtship or breeding (2) nest building, (3) feeding [self], (4) incubation, (5) brooding, (6) feeding [young]; other activity around nest [natural & human]; indicate if a band is observed on either adult; distinguish between birds if possible.
 Notify Division of Wildlife at above address immediately of any unusual circumstances.


In the 1990's and early 2000's, volunteer nest monitors recorded lots of detailed information and turned these records into biologists at the Crane Creek Wildlife Research Station in northern Ohio.

Later, the monitoring data was entered electronically.


Eventually, the Bald Eagle recovery in Ohio reached a point where detailed nest monitoring was no longer needed and the volunteer nest program was disbanded.

Biologists trying to decide how to climb to a nest that was 85 feet up in a large tree in Coshocton County. They retrieved the eaglets for testing and banding.



A photograph showing two wildlife biologists in dark jackets and caps working on a small yellow bird (eaglet) on a yellow surface. One biologist is using a digital caliper to measure the bird's talon. The other biologist is holding the bird. A red toolbox with the number '52997' is visible in the foreground. In the background, another person is taking a photo. The scene is outdoors, possibly on a boat or near a body of water.

Wildlife biologists taking measurements of eaglet's talons. They also took blood samples, checked for parasites, and banded its ankles with state and federal ID bands.



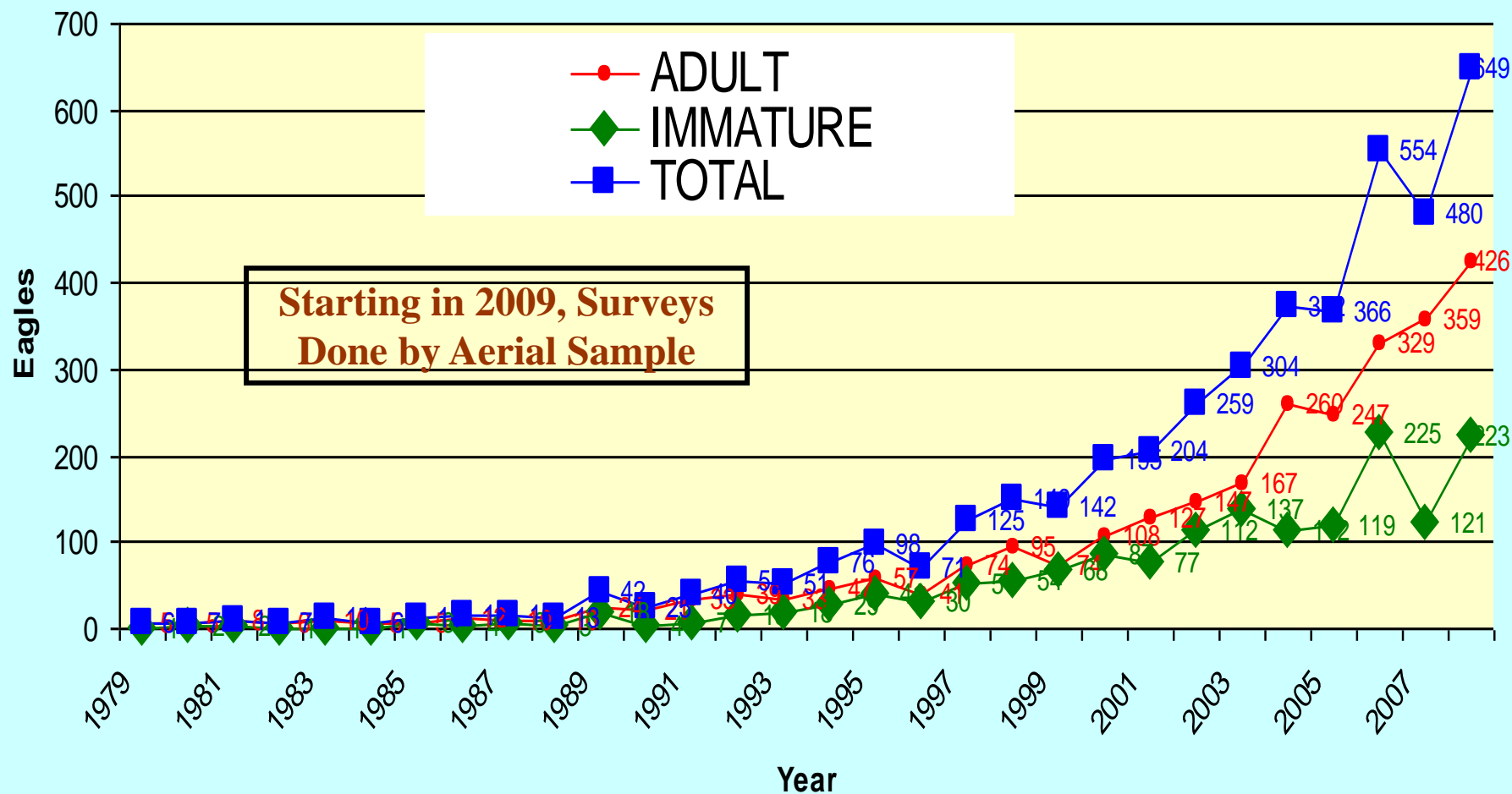
If the eaglets were calm, you could get a photo-op with them before they were put back in the nest. Most eagle bandings were discontinued in the mid 2000's.

Reasons for Eagle's Decline

- Pesticides like DDT (banned in 1972) & Dieldrin
- Loss of Habitat
- Water Pollution
- Hunting Pressures

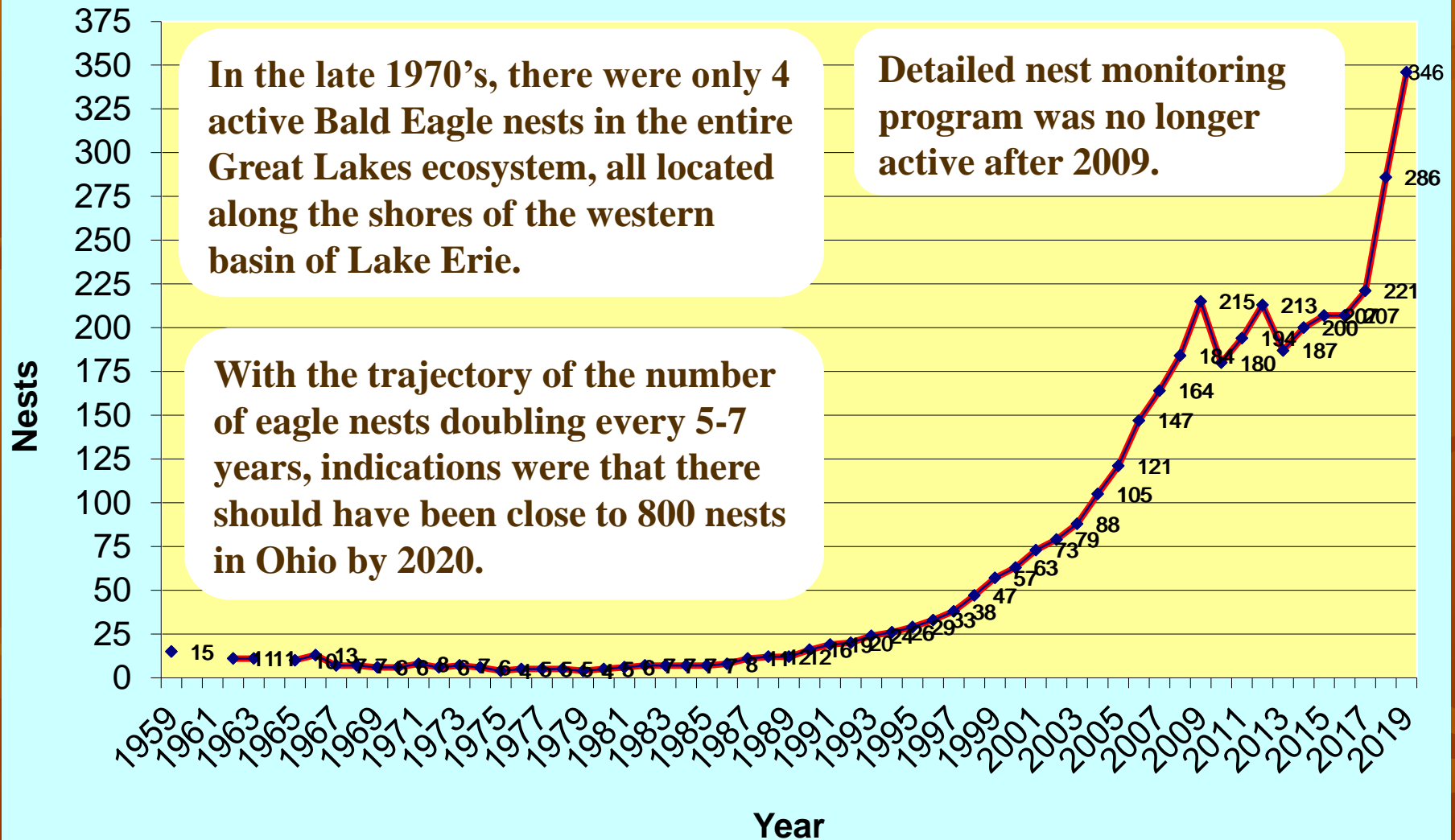
Midwinter Eagle Surveys

Counts Performed by Volunteers and Division of Wildlife Employees



Data Provided by Ohio Division of Wildlife

Eagle Nests in Ohio



Data Provided by Ohio Division of Wildlife

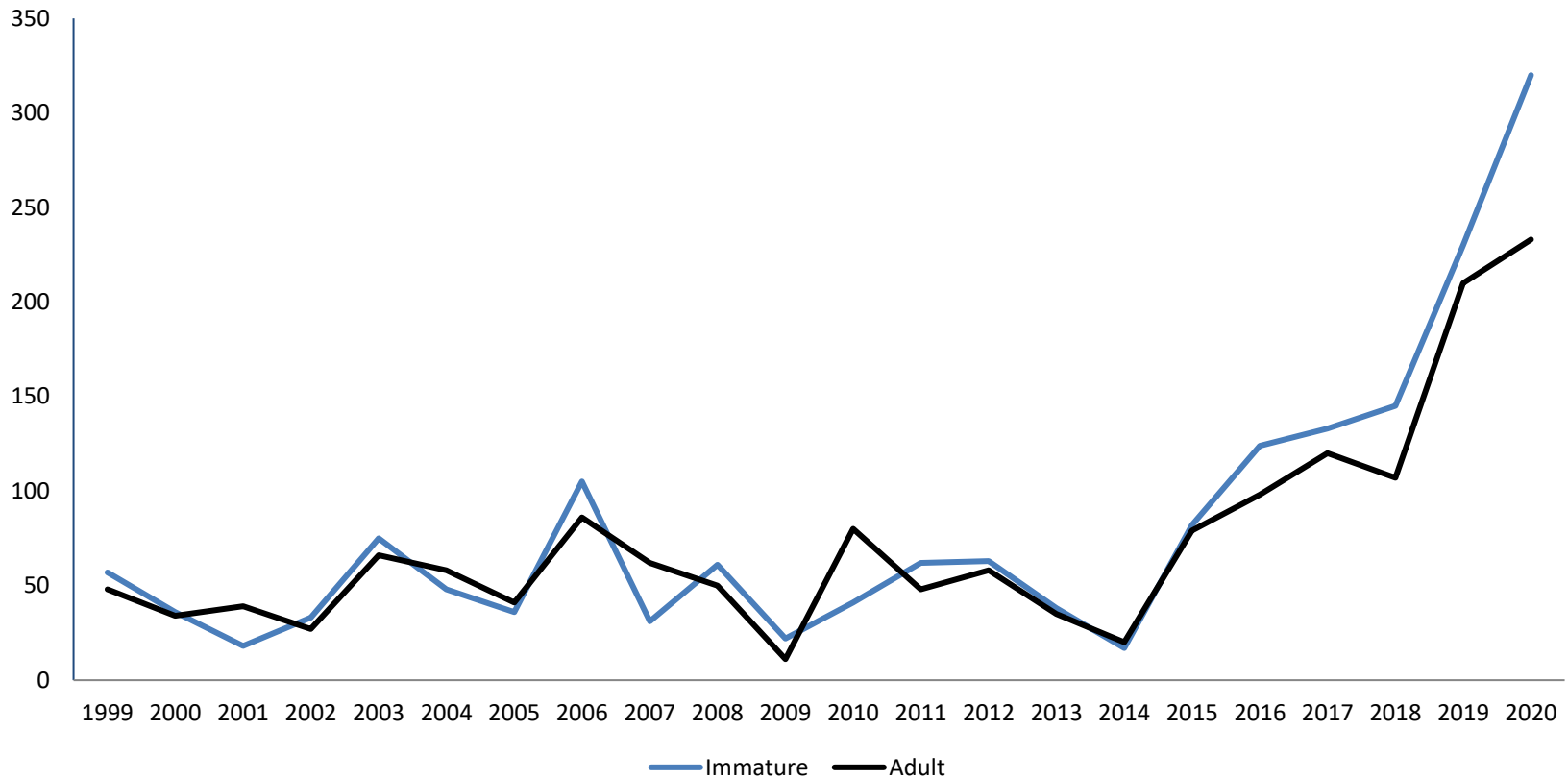
Annual ODNR Eagle Surveys

- **Annual Midwinter Count/National Survey**
- **Aerial nest survey –**
 - 5 10-sq mi blocks
 - 2 blocks done annually
 - 3 blocks done every 3 years on a rotating basis




Ohio Midwinter Bald Eagle Status

Midwinter Bald Eagle Numbers
1999-2020

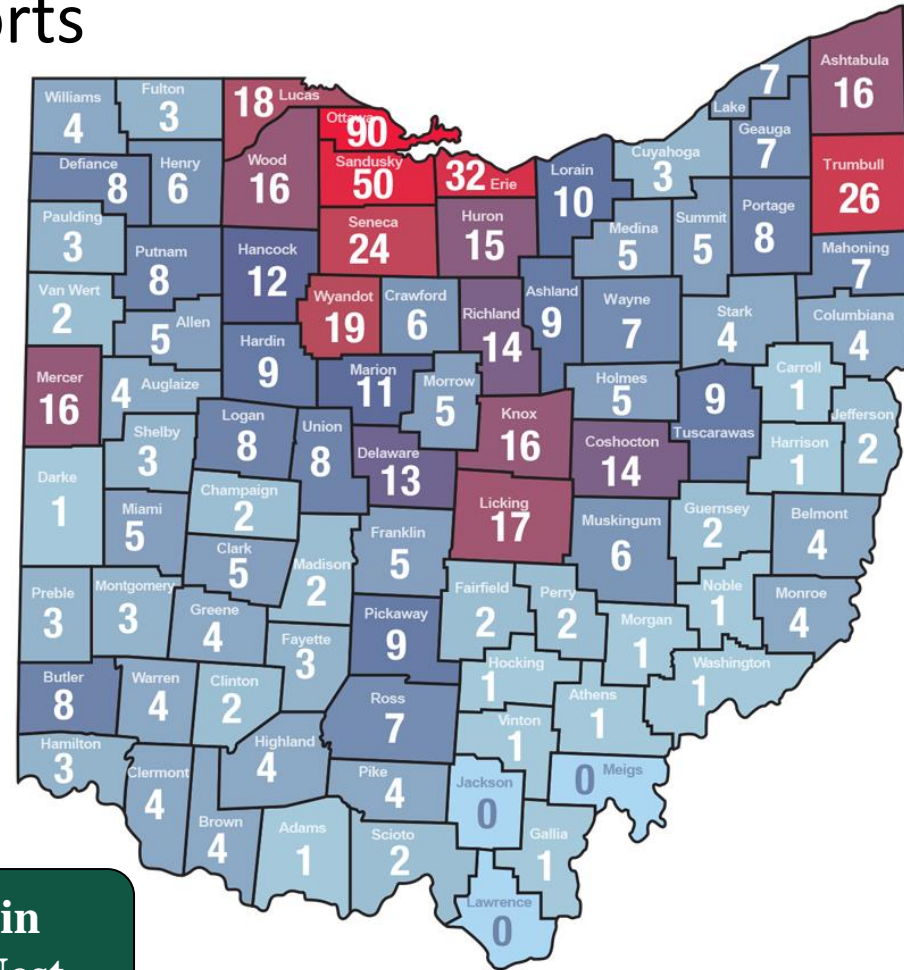


Bald Eagle Nest Census

- Spring 2020 – 1st nest census since 2012
 - ~2500 Citizen Science Reports
 - 700 + eagle nests located
- 
- A map of Illinois counties is shown, with four counties highlighted in red and labeled with their respective eagle nest counts: Williams (4), Fulton (3), Lucas (18), and Otsego (90). The map is located in the bottom right corner of the slide.



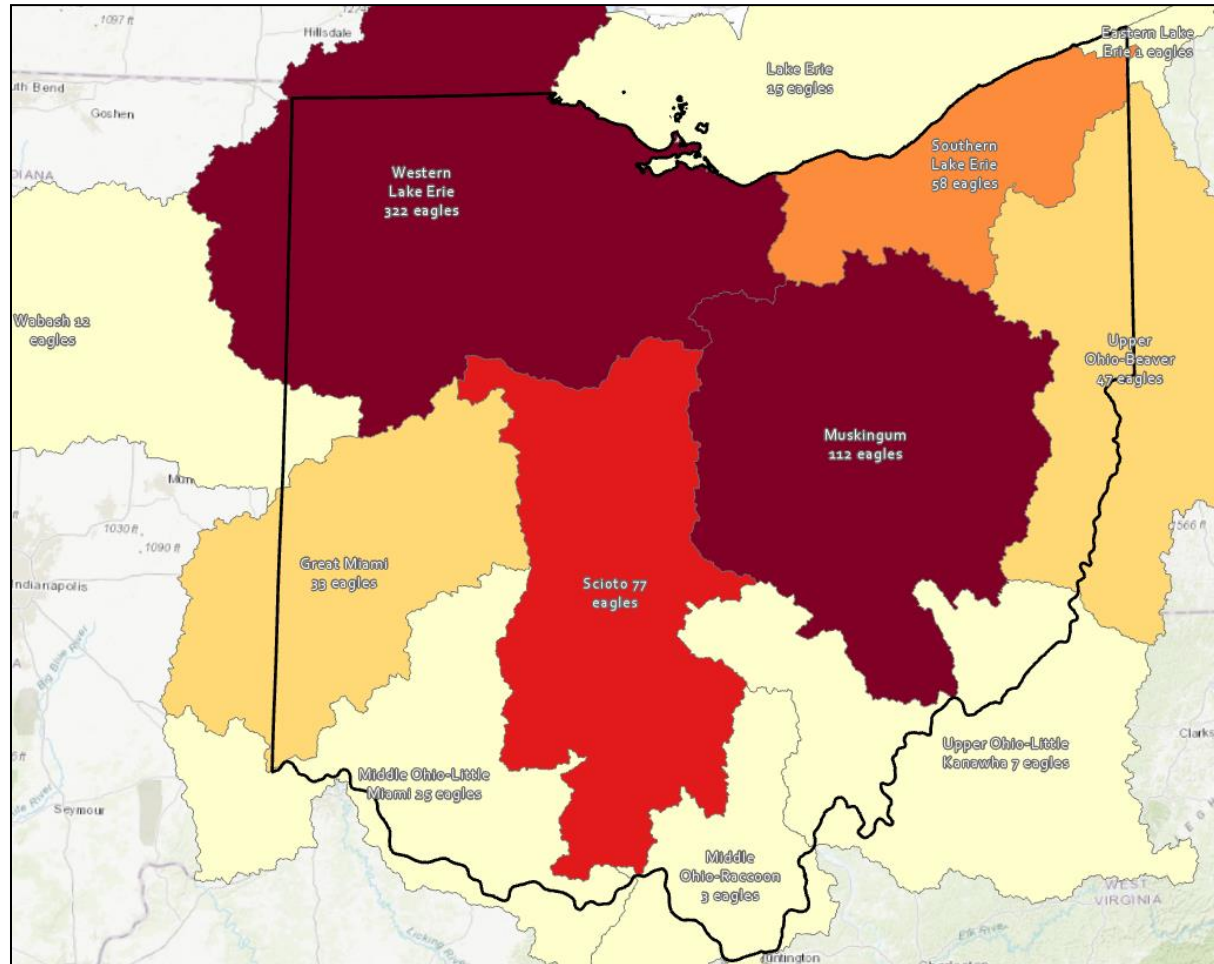
As of 2020, there are only 3 counties in Ohio without a verified Bald Eagle Nest.



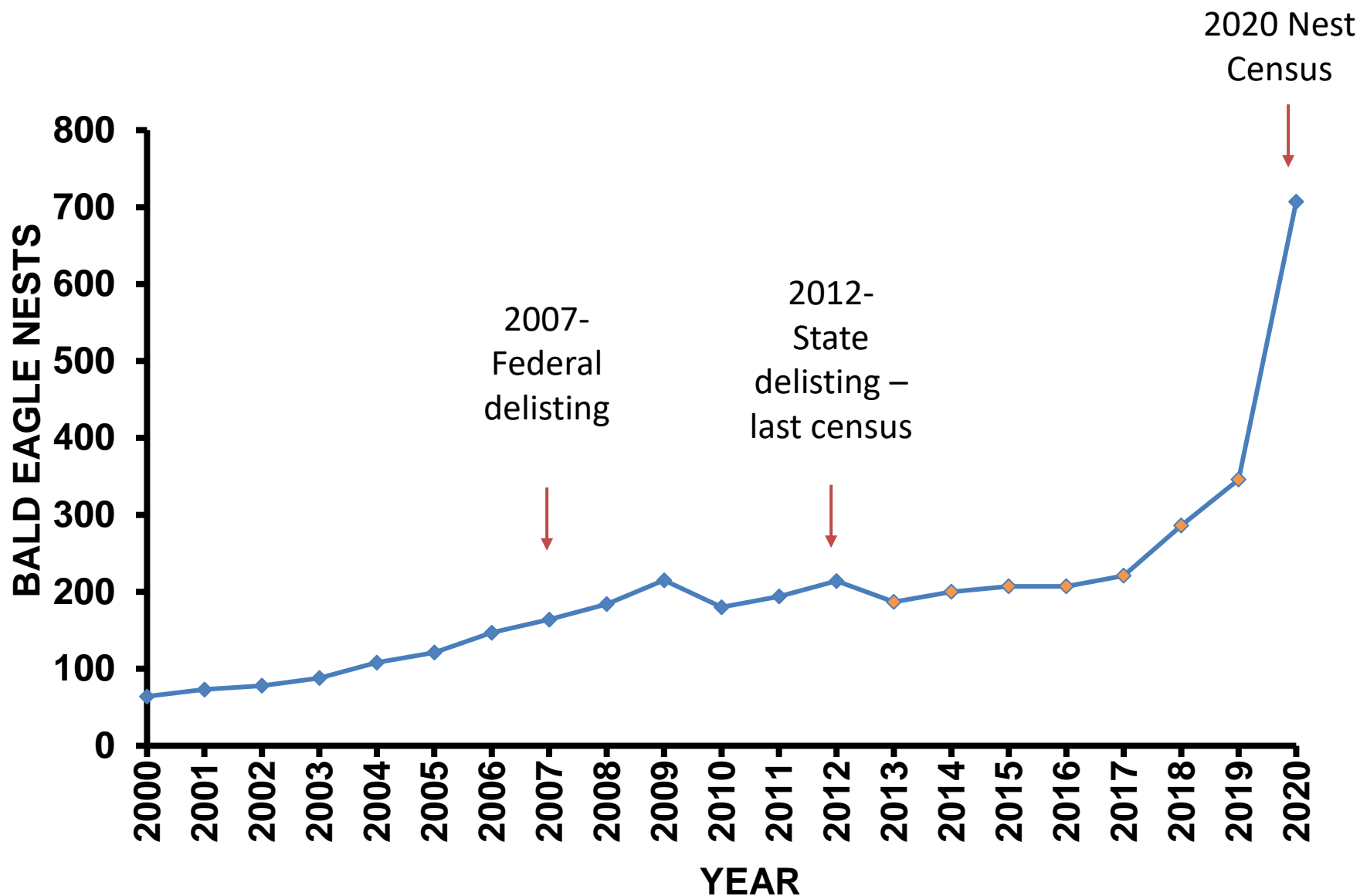
Bald Eagle Nest Census: Fun Facts

Lake Erie Watershed – 396 nests
Ohio River Watershed – 316 nests

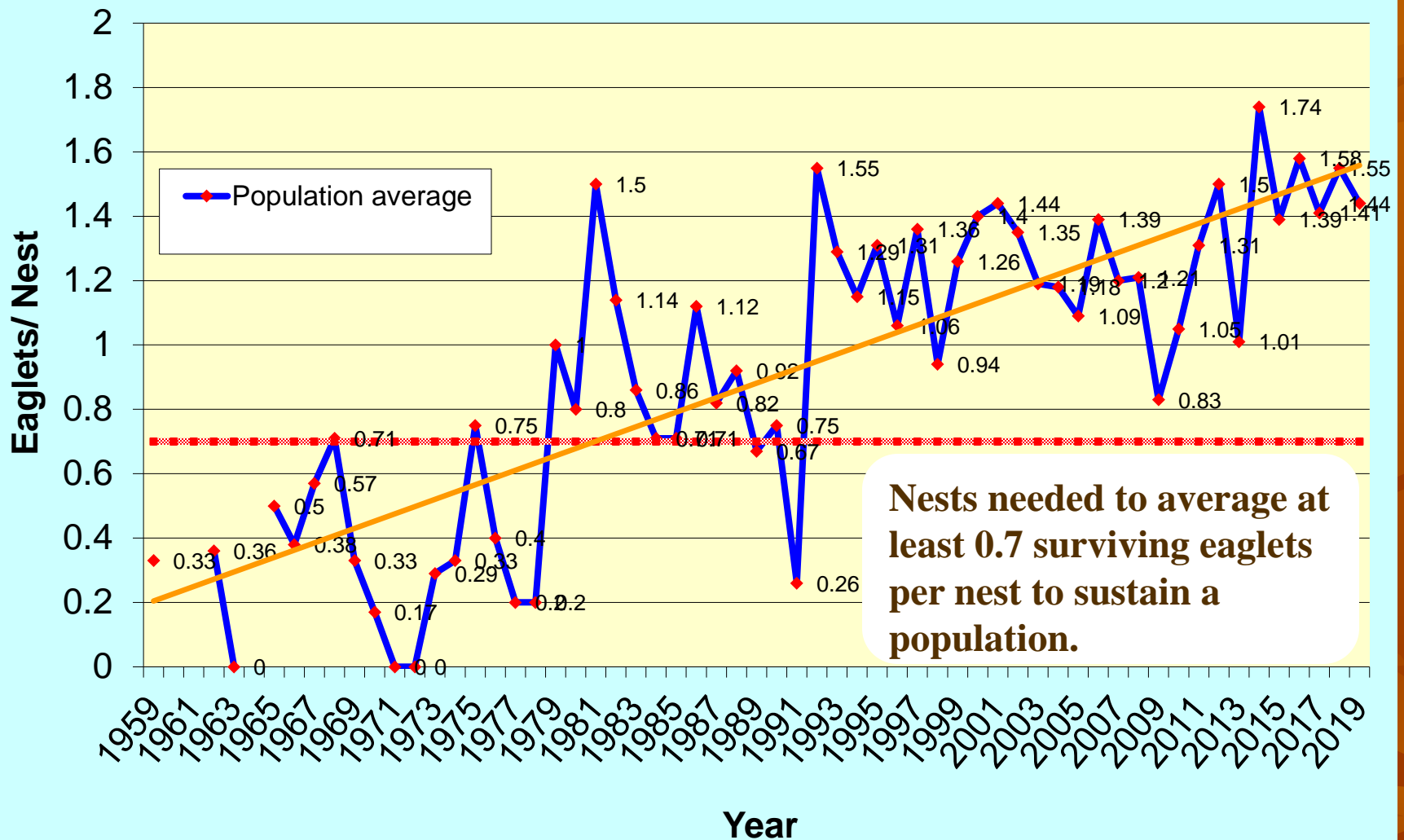
- 621 nests north of I-70
- 565 nests on private land (red dots)
- 147 on public land (light blue dots)
- 43 on Division of Wildlife properties



Bald Eagle Breeding in Ohio 2000-2019



Eaglets per Nest for Ohio Nests



Data Provided by Ohio Division of Wildlife

Counties With Nests



13 counties in Ohio
had recorded eagle
nests in 1996.

1996

Counties With Nests



Counties With Nests



**34 counties in Ohio
had recorded eagle
nests in 2005.**

2005

Counties With Nests

57 counties in Ohio had recorded eagle nests in 2009.



2009

Protection for Ohio's Eagles

- Eagle Protection Act
- Migratory Bird Treaty Act
- Endangered Species Act
(Federally Delisted in 2007)
(State Delisted in 2012)


Today's Concerns

- Water Pollution
- Loss of Habitat
- West Nile Virus
- Lead Poisoning
- Collisions



THIS WEST NILE THING
MIGHT BE WORSE
THAN WE THOUGHT.



A bald eagle with a white head and yellow beak stands over a dead deer carcass in a field of dry grass. The eagle is looking towards the left. The deer is lying on its side, with its head and front legs visible. The background is a dense field of dry, yellowish-brown grass and twigs.

Eagles feeding on hunter shot dead deer carcasses can lead to them ingesting slug fragments and getting lead poisoning.


The background of the slide features a pattern of stylized autumn leaves in various shades of orange and brown, creating a textured, seasonal feel.

Rescue Attempt At Mohawk Dam Area

(a landowner reported a sick eagle in the area)



This eagle was very sick. It allowed us to get far too close and it couldn't fly properly.

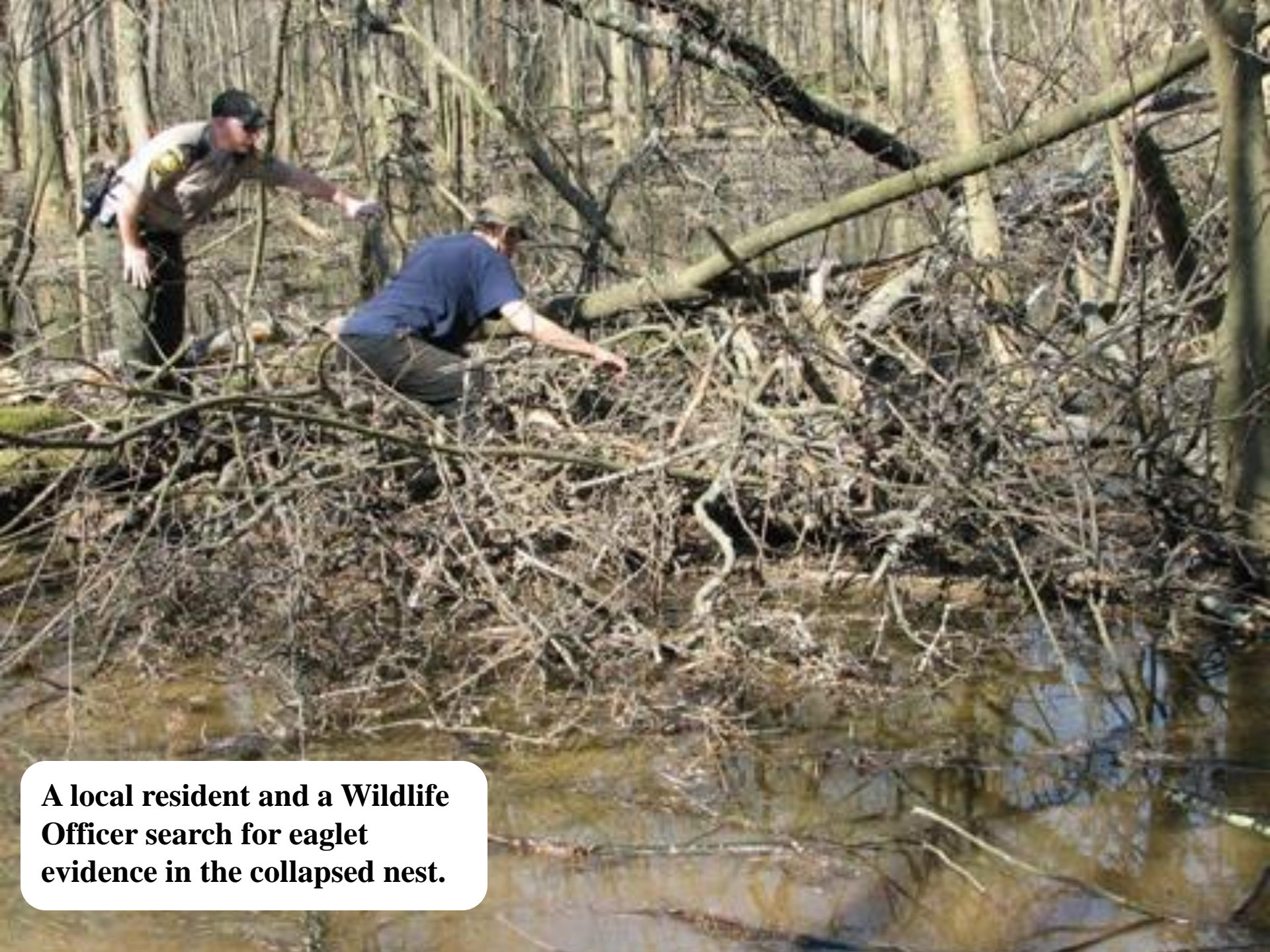


The eagle was captured and taken to the Ohio Bird Sanctuary by a Division of Wildlife employee, where it died a few days later. It was determined to have 3 times the lethal amount of lead in its blood stream.



Disaster at Killbuck South Nest

(a nest tree collapsed in the Killbuck Swamp)



A local resident and a Wildlife Officer search for eaglet evidence in the collapsed nest.



Unfortunately, 2 drowned eaglets were recovered and sent to the Bald Eagle Repository in Madison Wisconsin, the official resting place of dead Bald Eagles, due to the official designation of Bald Eagles as our national symbol.

Nest Down At Plainfield


Can The Eaglets Be Saved?

(is the third time a charm on rescue attempts?)

A photograph of a bald eagle with a white head and yellow beak, perched on a nest constructed from a dense pile of dry sticks and branches. The nest is situated within a thicket of bare, brown tree branches. The eagle is facing slightly to the left. The background is filled with more bare branches, creating a complex, web-like pattern.

**This nest in Coshocton County
collapsed on a hot July day,
with 2 large eaglets in it.**


Division of Wildlife employees were busy that day, so my wife and I were asked to investigate the nest collapse and report back.



We turned the entire nest over, stick-by-stick, and found nothing. We then began carefully searching the surrounding area.



My wife found the first eaglet perched on a bare root ball. Apparently, it spread its wings and floated down when the nest collapsed.

A photograph of two eagles in a nest. One eagle is perched on a branch, looking towards the right. The other eagle is in the foreground, with its wings spread wide, showing dark feathers with white mottling. The nest is surrounded by dense green foliage, including large oak leaves in the foreground. A body of water is visible in the background.

**We found the second eaglet
a short distance away. It
jumped off its perch and
swam over to join its sibling
on the root ball.**

Both eaglets appeared to be unharmed, but they were still in danger as the water was rising behind Wills Creek Dam due to heavy rains, and these eaglets couldn't fly to get to higher perches.





The next morning, I escorted 2 Division of Wildlife employees back into the swamp with canoes and materials to try to build an elevated platform for the eaglets.

The first job was to capture the eaglets and get them into some shade. This is a great indication of their size, as this eaglet is still too young to fly.





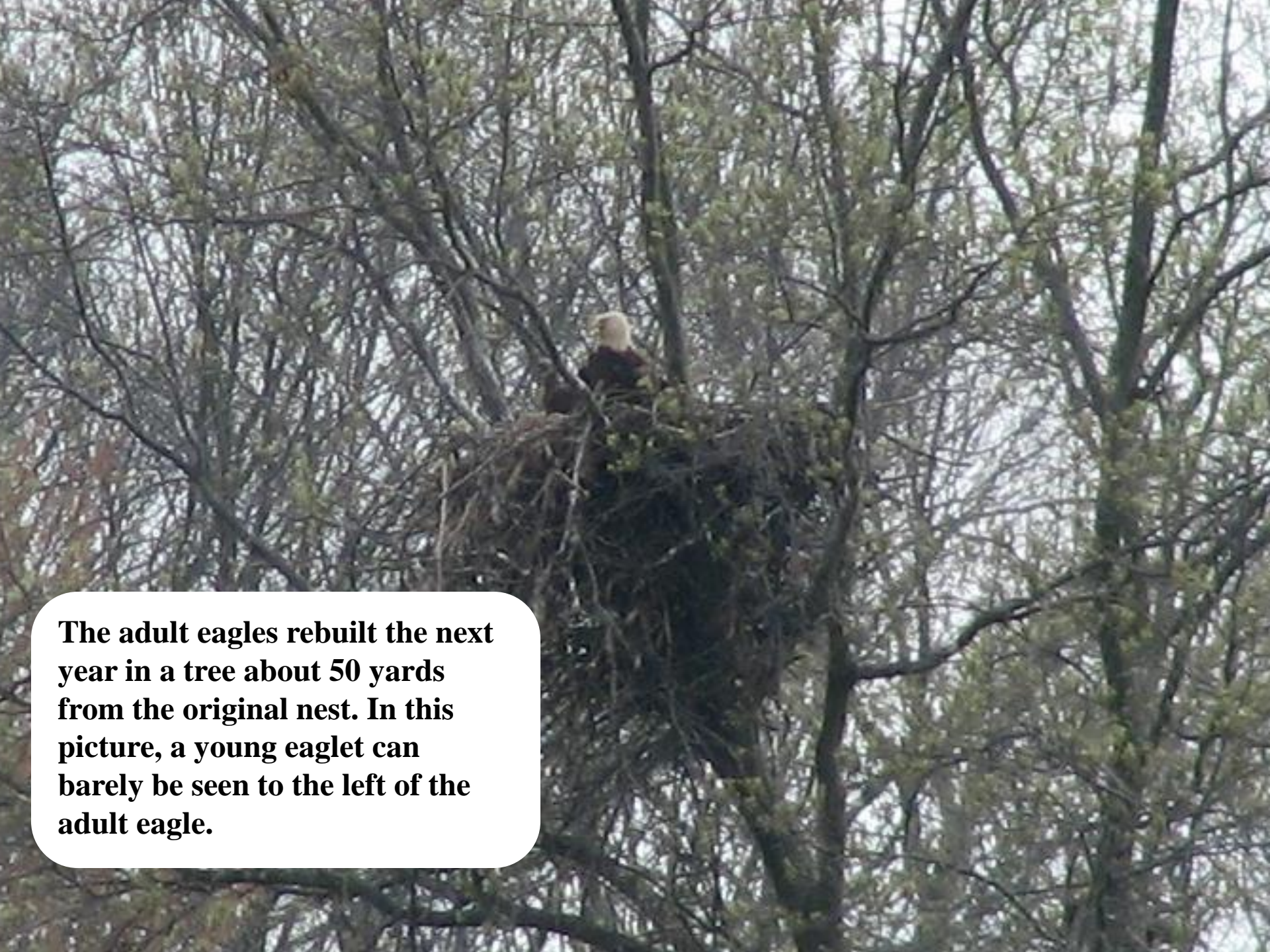
The next step was to build a platform and attach some sticks for them to grip with their talons.



The platform was then attached to a Sycamore tree at a height of about 15 feet.



We then released the eaglets onto the platform. The parents (which had been flying around watching our activity) returned later to the platform with food for the eaglets, and the eaglets were flying by the end of the week. SUCCESS!

A photograph of a bald eagle sitting on a nest made of sticks and branches, perched high in a tree. The eagle's white head and neck are prominent against the dark branches. To the left of the eagle, a young eaglet is visible, though it is much smaller and blends into the darker foliage. The background consists of a dense network of tree branches and some green leaves, suggesting a spring or early summer setting.

The adult eagles rebuilt the next year in a tree about 50 yards from the original nest. In this picture, a young eaglet can barely be seen to the left of the adult eagle.



Eagle Identification Tips

Example of immature Bald Eagle.

It takes a Bald Eagle 4 to 5 years to develop a full set of white head and tail feathers. Immature Bald Eagles range from almost solid brown, to a variety of brown, white, and blond mottling.

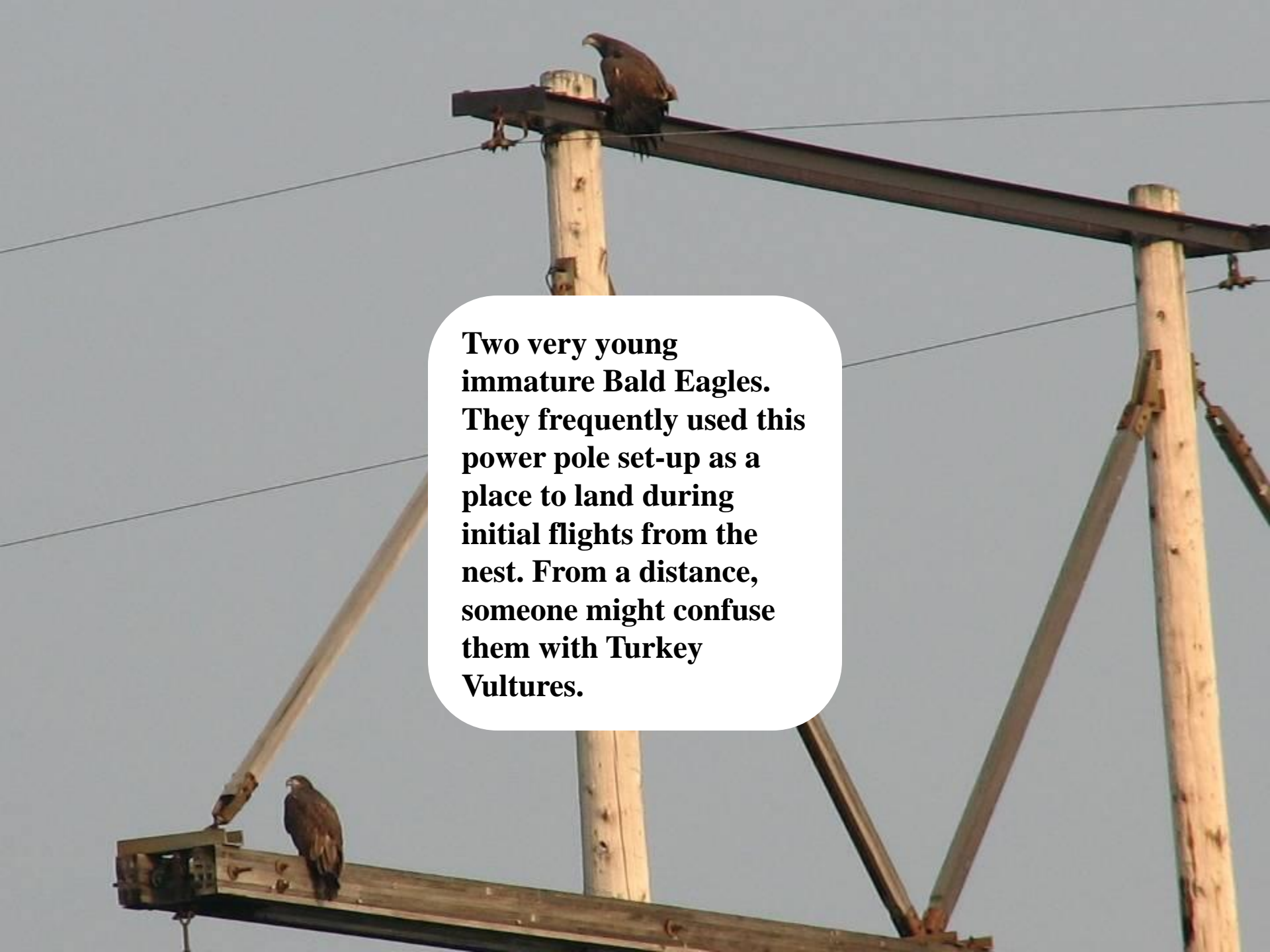


**Comparison of adult and
immature Bald Eagles.**





**Comparison of adult and
immature Bald Eagles.**

A photograph of a wooden power pole with two young Bald Eagles perched on it. One eagle is at the top of the pole, and the other is lower down on a crossarm. The background is a clear, light blue sky. A white text box with rounded corners is overlaid on the center of the image.

**Two very young
immature Bald Eagles.
They frequently used this
power pole set-up as a
place to land during
initial flights from the
nest. From a distance,
someone might confuse
them with Turkey
Vultures.**

Example of immature Bald Eagle.





Example of immature Bald Eagle.

**Example of immature Bald Eagle,
feeding on a dead groundhog.**



Example of immature Bald Eagle with a high level of off-white colored chest feathers. Notice the large beak and large, yellowing talons.



Example of immature Bald Eagle.




Example of immature Bald Eagle.





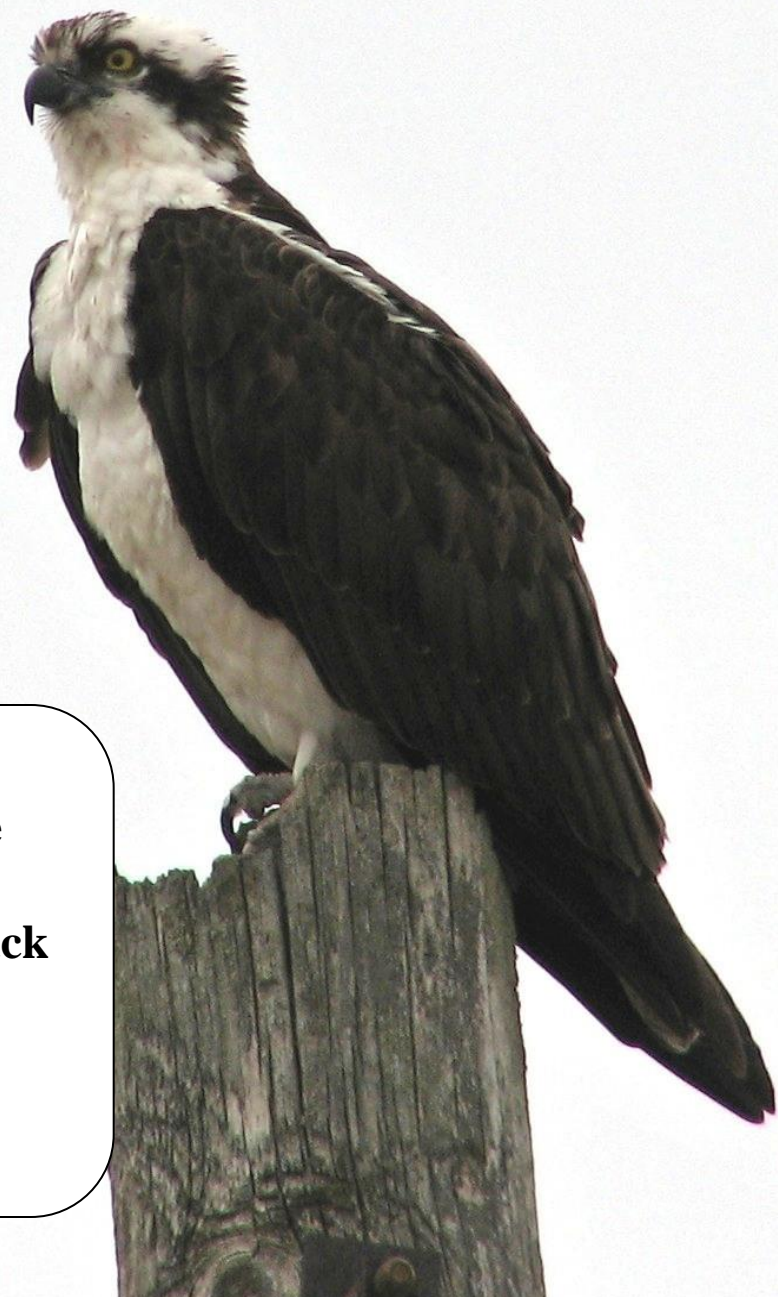
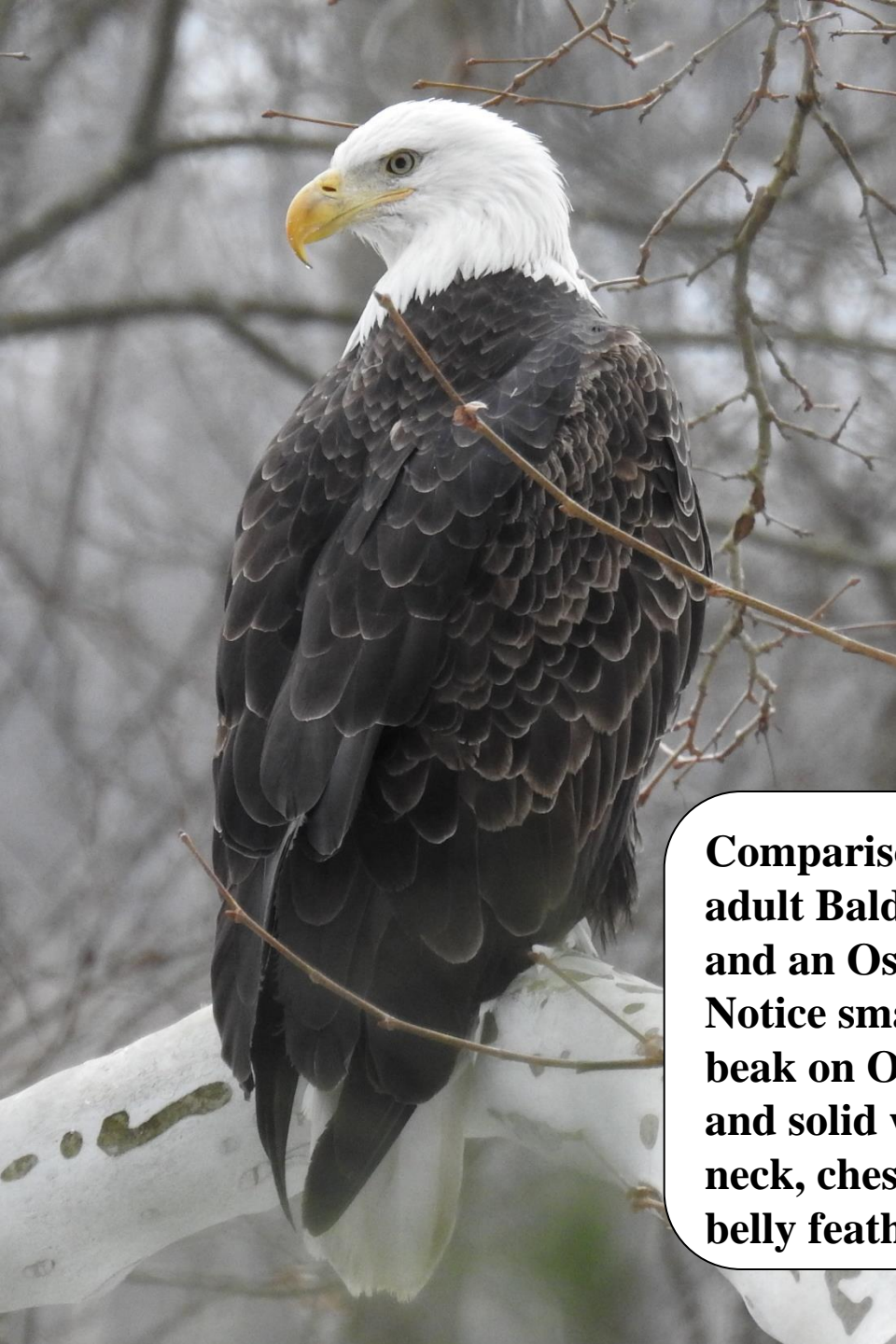
Example of immature Bald Eagle, with an almost blond appearance on the back and top-side wing feathers.

A photograph of an immature Bald Eagle perched on a bare tree branch. The bird has a yellow beak and is developing a white head and tail, with brown feathers on its body. The background is a dense network of bare branches.

Example of immature Bald Eagle. This bird is probably 3 years old. Its beak is nearly all yellow, and it has started developing the white head and tail feathers characteristic of an adult Bald Eagle.

**Three immature Bald Eagles
sparring over dinner.**





**Comparison of
adult Bald Eagle
and an Osprey.
Notice small, black
beak on Osprey
and solid white
neck, chest, and
belly feathers.**

This immature Bald Eagle has a line of dark feathers through the eye-line, much like an Osprey, but notice the size and color of the beak.





A Turkey Vulture has dark wings like a Bald Eagle, but the head is a dead giveaway.

A Black Vulture also looks very different from a Bald Eagle.



**Example of Turkey Vulture
with wings spread. Small head
is still very distinguishable.**

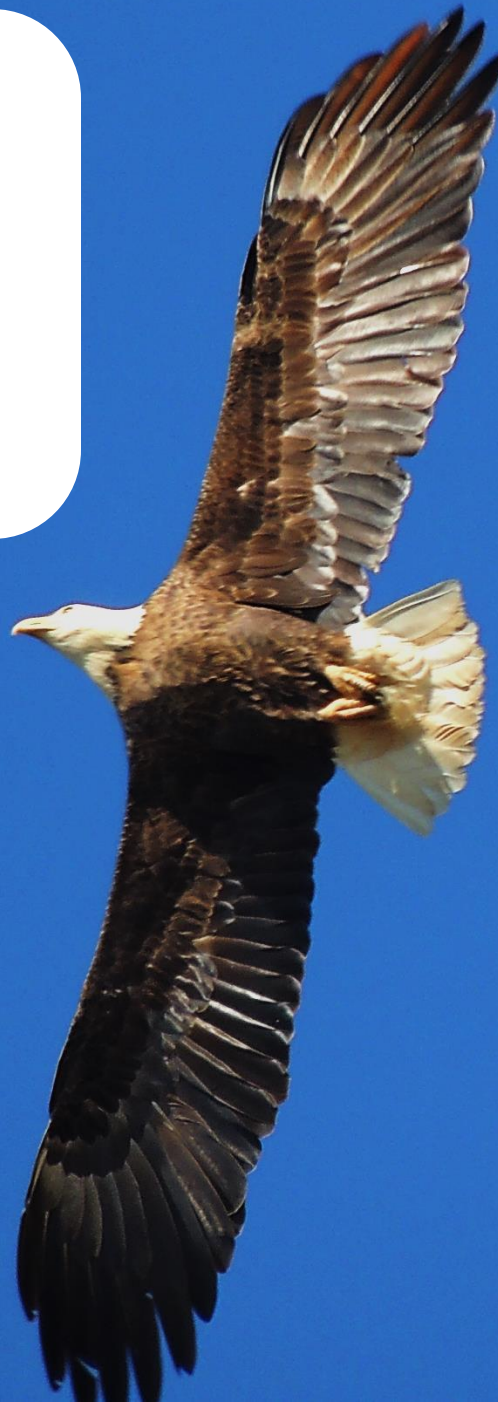


**Example of Black Vulture
with wings spread. Notice
white feathers on wing tips.
This is an identifying mark
when in flight.**



How do you distinguish a Bald Eagle from a Turkey Vulture when flying at a distance?

Bald Eagles soar with their wings straight out like a wooden plank.



Turkey Vultures soar with their wings up-tipped in a shallow “V”.



I don't have a quality picture of a Black Vulture in flight, but its wings are a little more flattened than the Turkey Vulture and tipped forward. It also has the white wing tips visible from below.

**Another example of a
Bald Eagle in flight.**



**Another example of a
Turkey Vulture in flight.**



**Another example of a
Bald Eagle in flight.**



**Example of an
immature Bald Eagle
in flight, as seen from
below.**



**Another example of a
Turkey Vulture in flight.**

**Another flight
characteristic to look
for is that Bald Eagles
and Turkey Vultures
flap slowly. Black
Vultures and most
hawks flap quickly
then glide.**



**Turkey Vultures are also
constantly making minor
flight corrections when
soaring, whereas Bald
Eagles soar very smoothly.**



Example of an Osprey in flight. Notice white underside, black wrist patches, and bend in wings at wrist.

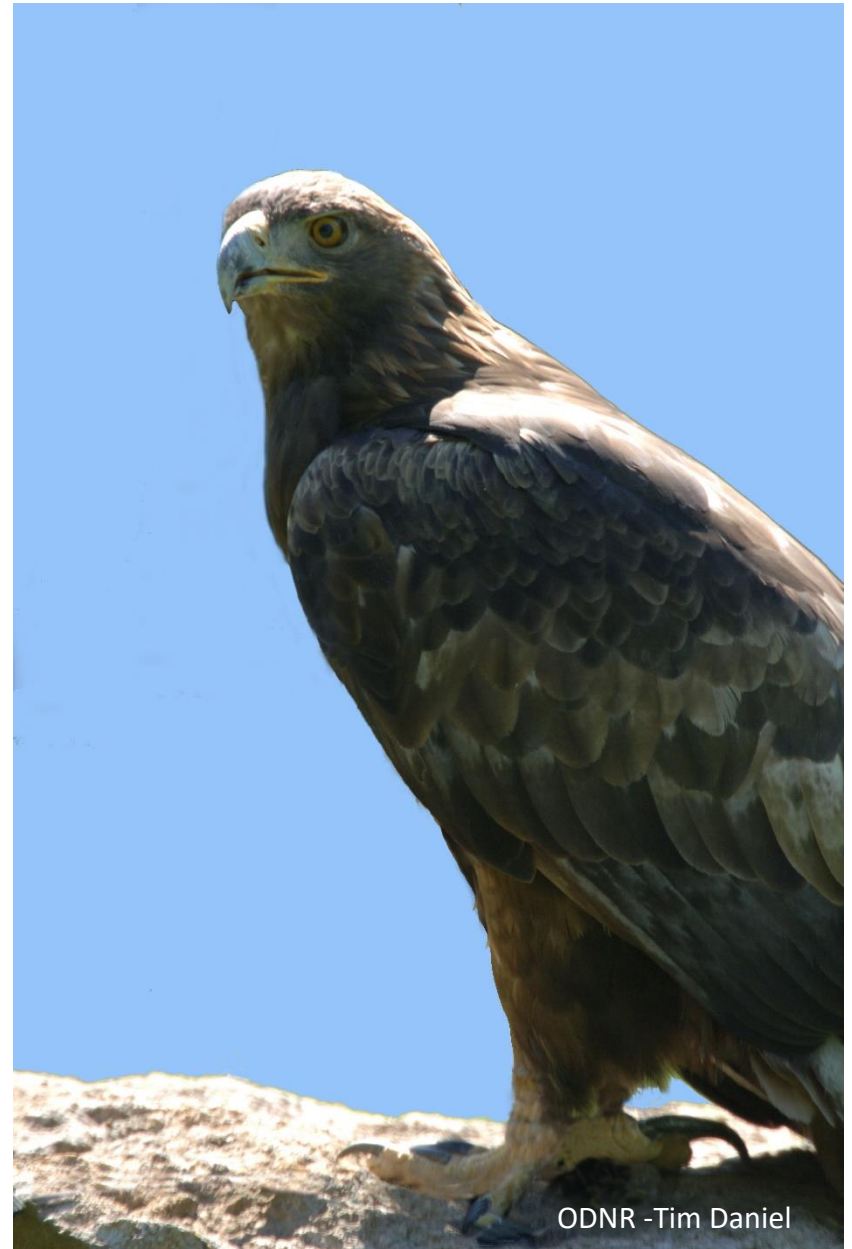
Golden Eagle

Golden Eagle picture from Montana. There are a few in Ohio during winter.



Golden Eagles are dark brown with gold-colored head feathers at all ages.

Brad Perkins



ODNR -Tim Daniel



**This eagle was yawning,
telling me it's time to end
this presentation. I hope it
was informative.**

A Bald Eagle is perched on a light-colored tree branch. The eagle has a white head and neck, a yellow beak, and dark brown feathers on its body. The background shows bare tree branches and a hint of snow, suggesting a winter setting.

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