Soar with New Jersey's Eagles

by Colleen O'Dea

To many bird watchers, the American bald eagle is neither the most beautiful nor the rarest of birds. Yet nothing can compare to watching an eagle in flight — its dark body cutting across a clear sky, its wings stretching wide in a near straight line and, of course, its striking white head.

"People really seem in awe of what they are experiencing; they really feel they are in the presence of something special," says Joan Walsh, a New Jersey Audubon Society biologist.

Bill O'Hearn of the New Jersey chapter of the Sierra Club agrees: "The bald eagle is still so rare, it's a precious thing to see. You feel really fortunate."

While it is still rare to spot the country's symbol in New Jersey and most places throughout the United States, sightings are becoming more common. With the help of zoologists and environmentalists, the eagle has soared back from the brink of extinction — so much so that federal officials want to remove it from the federal endangered species list. And New Jersey has worked as hard as any state for more than a decade to protect its eagles and re-populate the state with birds from Canada.

Those efforts have finally begun paying off. In the early 1970s, there was only one pair of nesting eagles left in the state at Bear Swamp in Cumberland County, the legacy of the insecticide DDT (dichloro-diphenyl-trichloroethane) and other toxic chemicals. The chemicals severely hampered the eagle's ability to produce an eggshell strong enough to ensure hatching.

By 1994, there were nine pairs of eagles nesting in the Garden State — just one of many recent state eagle records that was shattered last year, says Kathleen E. Clark, a principal zoologist with the Endangered and Nongame Species Program (ENSP) of the New Jersey Department of Environmental Protection's Division of Fish, Game and Wildlife. And for the first time in decades, two nests — one at Wading River in Atlantic County and the other at Round Valley Recreation Area in Hunterdon County — were spotted outside South

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During the early 1980s, bald eagle eggs were incubated by bantam hens at the Patuxent Wildlife Research Center in Maryland (top) and were returned to New Jersey nests shortly after hatching.

This two-week-old bald eagle at Patuxent (bottom) is fed raw chicken fortified with vitamins, minerals and enzymes.

Jersey's Delaware Bay region. The latter is the first eagle's nest identified in North Jersey in at least 40 years, says Don Freiday, a Hunterdon County park naturalist.

"They eat fish at Spruce Run and Round Valley reservoirs," says Freiday. "Some of the fish caught (by anglers) are too small to keep and are released. . . . Fishermen have seen the eagles diving between boats, apparently getting those fish."

The Hunterdon eagles fledged two young, meaning the eaglets were cared for until they were able to fly on their own. Those two fledglings, which generally are preyed upon by turkey vultures, hawks and other predators, were among 12 produced from New Jersey's nests in 1994, double the number from 1993. These growing numbers of young eagles may return to the same areas in four to five years to build their own nests.

Even the annual number of eagles which spend the winter in New Jersey seems to be increasing. Bird watchers counted 92 eagles wintering here in 1994, 14 more than were counted the previous winter. Clark says 22 eagles were counted on just one roost in Cumberland County. And participants in the Cape May Bird Observatory's fall hawk watch spotted more than 100 migrating birds compared with a previous high of around 80, says Walsh.

"The eagle numbers are way up," Walsh says. "That's good news for eagles all over the place, since some of these guys are from New York State or Massachusetts."

Many eagles leave the northern states in winter in anticipation of their hunting grounds freezing. They migrate south in search of open water in which to hunt for fish, fowl or even muskrats. Walsh says eagles generally settle where there's a safe place to perch, often in dead trees far from civilization and away from other territorial birds.

A National Resurgence

The resurgence of the eagle in New Jersey has paralleled a national rebound, which has led the U.S. Fish and Wildlife Service to propose changing the bird's status from endangered to threatened. Endangered means that the species is in peril of becoming extinct; threatened means that a species may become endangered if steps are not taken to protect it. A final decision on the bird's status is not expected until July, when a one-year public comment period expires. However, the eagle remains on New Jersey's endangered species list.

Georgia Parham, a Fish and Wildlife spokeswoman, says the eagle population in the 48 contiguous states — Alaska has always had a thriving population — has shown a "dramatic increase" from just 417 nesting pairs in 1963, the first year they were counted, to more than 4,000 in 1993. And the most recent count does not include "probably several thousand" juvenile birds who have not yet begun to nest.

While the near total ban on DDT use in the United States in 1972 started the bird on the road to recovery, Parham says many states, like New Jersey, undertook aggressive measures to protect their remaining eagles and to bring in new ones. Federal funds at one time helped state efforts, but now New Jersey's program is funded solely through an income tax checkoff, donations and proceeds from a wildlife conservation license plate. In fact, the ENSP has proposed featuring the bald eagle on its 1995 plate.

The state's efforts began small when, in 1982, biologists with the ENSP decided to help the Bear Swamp eagles successfully hatch young. For six years, biologists had seen the female lay eggs but not be able to incubate them because DDT contamination had made the shells too thin. So the biologists entered the nest and replaced the eggs

with plaster replicas. The eggs were then brought to the U.S. Fish and Wildlife Service's Patuxent Wildlife Research Center in Maryland, where they were hatched.

"We brought the chicks back when they were 13 to 15 days old, took the (fake) eggs out and put the chicks in," says Clark. "In that way, the eagle pair was able to fledge young."

That effort continued successfully until 1988, when the female died and was replaced with a new one which was able to produce and incubate her own eggs successfully.

Meanwhile, beginning in 1983, the state's ENSP conducted what is called a "hacking" program. Young eagles were brought from Manitoba, Canada, to the Dividing Creek area of Cumberland County and released in hopes that some would establish territories and build nests. Clark says 60 birds were hacked between 1983 and 1990, and three more eagles were released in Cape May County in the last two years.

"We wanted to give a jump start to the population," Clark says. "Since young take five years to mature and nest, it would have been a long wait, with just having our single nest produce one or two young every year. I suspect some of our hacked birds are nesting here."

The eagle has soared back from the brink of extinction

Spotting an Eagle

Eagles are exciting to view, although sometimes the inexperienced bird watcher may see an eagle and not even know it.

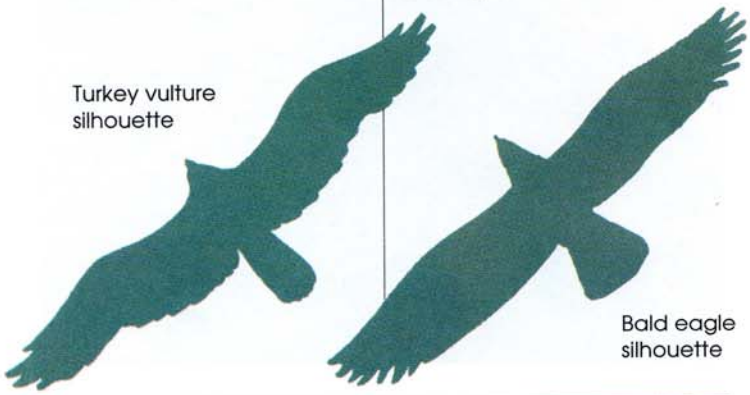
It's virtually impossible to mistake an adult eagle with its bright white head and tail feathers and dark body with a wingspan of six feet or more. The male and the female are identical, except the female is slightly larger. But until the eagle matures, which occurs at four or five years old, it's not quite so identifiable and is sometimes mistaken for a turkey vulture.

Eagle chicks hatch around May, and the birds are chocolate brown for their first year. A two-year-old eagle is still mostly brown, but has white on his belly and under his wings, which is visible during flight. Around age four, the head changes from all brown to a mixture of brown and white before it turns pure white.

There are several differences between a young eagle and a turkey vulture. The eagle has a longer head and neck, but a shorter tail than the vulture. The bottom edge of an eagle's outstretched wings appear to form almost a straight line, while the vulture's wings are scalloped. The vulture's underwing is gray, rather than the white of the eagle's. And in flight, the vulture's wings form a "U" or "V" shape, while the eagle's appear virtually flat.

"Eagles in flight really have a flat profile," says Clark. "That's one of the best ways to tell them. They don't rock back and forth."

State officials encourage responsible eagle watching and ask people who spot eagles, particularly those who may see nesting birds beginning around February of each year, to contact the Endangered and Nongame Species Program at (609) 628-2436.



Turkey vulture silhouette

Bald eagle silhouette

The head of a young bald eagle is chocolate brown (below) until it begins to turn white at about four years of age.

A New Threat on the Horizon

But while the state's eagle population continues to grow, not every bird is thriving. Clark says residual amounts of DDT and DDE (a DDT derivative) and more recent contamination by PCBs (polychlorinated biphenyls) leaching into the Delaware Bay from nearby federal Superfund sites may be preventing two eagle pairs in the Gloucester County area from producing healthy eaglets. Although PCBs have been banned, a great deal of the toxin remains in the environment.

"Toxic levels of PCBs can cause the embryo to die in the egg or the young eaglet to die," says Clark. "One egg sample we collected in 1993 had high levels of PCBs. . . . We are very concerned about the long-term effects of this, and the Endangered Species Program continues to monitor contaminants in young eagles and the productivity of nesting pairs."

People pose another major problem for eagles. The birds generally nest in remote locations and can't tolerate human disturbance — some eagles will abandon a nest if they see humans get too close. State officials and naturalists generally won't disclose the exact locations of eagle nests because they don't want people to upset the birds.

"If you ever come upon a nest, you should immediately back-track and get out of there," says Walsh. "Some are extremely sensitive."

An eagle's nest, called an aerie, is unmistakable. Freiday says a nest is about six feet across and several feet deep, usually built high in a large tree with an open air approach. It is usually located close to water.

Clark says farmers and other land owners have helped to preserve eagles' nests on their land by allowing state biologists to observe the birds and by preventing others from getting too close. Only once or twice in the last few decades has the state had to step in to save a nest.

In the most recent case during the mid-'80s, the state condemned the land around Bear Swamp — site of last remaining nest at the time — to prevent a sand-mining operation from destroying the critical habitat for eagles, Clark says.

A Bright Future?

Designated as the emblem of the United States by Congress in 1982, the eagle was first protected in 1940 by the federal Bald Eagle Act. Greater protection came in 1970 with the passage of the Endangered Species Act, which made it illegal to harm, injure or kill any animal, plant, insect or bird designated as endangered.

But while the eagle may appear to be on the road back to recovery, Clark says officials must keep an eye on toxic chemicals, trying to identify the source of pollution and cleaning it up whenever possible. It would be even better to prevent the release of toxins into the environment in the first place.

"It's something we're very concerned about," she says. "What we might see, as we saw in the '60s, is birds maintaining their nests and their nest attempts fail."

But despite the potential dangers, Walsh is optimistic about the future of the eagle in New Jersey.

"There probably will be more pairs that pop up," she says. "The eagles are not done populating the state of New Jersey. In 20 years, we may have a whole slew of them."

The ENSP is supported through a state income tax checkoff for wildlife (line 46B on the 1994 form), the proceeds from an endangered species wildlife plate and donations. To order the wildlife conservation plate, which costs $50, call 1-800-W-PLATES. For more information on how you can support ENSP programs, including the American bald eagle project, call (908) 735-8975 in northern New Jersey and (609) 628-2436 in southern New Jersey.

Colleen O'Dea is a freelance writer who lives in High Bridge.

ENDANGERED AND NONGAME SPECIES PROGRAM

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An eagle's nest (above), called an aerie, is built in a large tree and is generally six feet deep and six feet across.

The Eagle Has Landed

There are several places in New Jersey to catch a glimpse of the magnificent symbol of the United States. It is best to start your eagle watch in the mid-to late-morning when the birds are out fishing in one of the large bodies of water in the state.

In North Jersey, wintering eagles can be seen up and down the Delaware River. Some also have been spotted at several reservoirs in the state including the Wanaque and the Monksville in Passaic County as well as Yard's Creek in Warren County. The Hunterdon eagles can be seen year-round at Spruce Run or Round Valley reservoirs. Hunterdon County naturalist Don Freiday suggests scanning the shorelines with binoculars early in the morning while the birds are perched. Later in the morning, they may been seen diving for fish and waterfowl.

Joan Walsh of the Audubon Society says that during the eagle migration, warm days with a north or northwest wind are best. In cloudy weather, the eagles fly lower and may be easier to spot. If it's sunny, "they're going to get way up there," she says. Although eagles may be spotted beginning in mid-August, October through early November is the peak migrating time.

Most of the best eagle watching opportunities are in South Jersey on the Delaware Bay or inland waterways such as the Maurice and Cohansey rivers. Wintering eagles can often be seen in the wetlands off Maple Avenue in Dividing Creek.

While it's unlikely eagles will take up residence in highly populated counties like Hudson and Essex, biologists do believe undeveloped areas in North Jersey, particularly in the Highlands region, will host eagles in the not too distant future.

For people who really want to see a nest, one South Jersey site is visible, yet protected. At Stow Creek, near Canton, a nest is surrounded by wetlands and a farm so it's not accessible, yet it can be seen from a distance.

"You can park alongside the road and see this very photogenic bald eagle's nest," says Kathleen Clark of the Endangered and Nongame Species Program. "We will be developing a viewing area there so people can learn about eagles."