

**STATE  
THREATENED**

# Bald Eagle

*(Haliaeetus leucocephalus)*



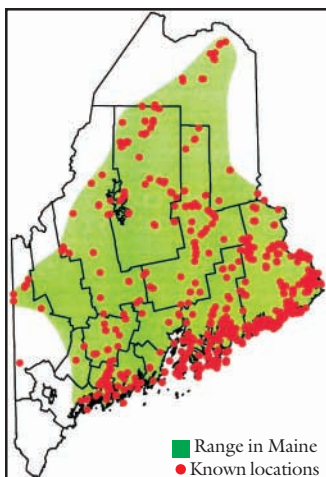
Mark McCollough

## Description

The bald eagle vies with the golden eagle as the largest bird of prey in Maine. Bald eagles have a wingspan of seven feet, body length up to 43 inches, and weight from 9-13 pounds. Females are 10-20 percent heavier than males, but otherwise the sexes are indistinguishable in appearance. The adult bald eagle's white head and tail sharply contrast with a dark brown body, plumage widely recognized on this national symbol of the United States. The bill and legs are yellow. Adult plumage is attained at 4-5 years of age. Immature birds superficially resemble golden eagles and are brown, with various amounts of white blotches on the back, belly, and wings. Immature bald eagles have blackish-brown bills and brown eyes, and their bills and eyes become increasingly yellow as the birds mature.

## Range and Habitat

Bald eagles are only found in North America. They nest along sea coasts, inland lakes and major rivers. Breeding habitat includes large trees, primarily old white pines, in close proximity (less than one mile) to water where food is abundant and human disturbance is minimal. Population centers along the Atlantic coast include Maine and the Maritime provinces, the Chesapeake Bay area, and Florida, although populations



are expanding throughout the Northeast. Eastern coastal areas of Maine have been the stronghold for state eagle recovery, but in the last two decades, populations have expanded west along the coast and north to the interior to reoccupy historic nesting habitat. Bald eagles seek quiet waterfront habitats away from human activity, but a few pairs have demonstrated increasing tolerance and nest closer to humans.

## Life History and Ecology

Bald eagles first breed at about five years of age and may establish lifelong pair bonds. The breeding season begins in February and lasts to September. Courtship involves various elaborate aerial displays, including locking talons in flight. Nests are often used for many years in succession, and sticks are added to the nest each year. Nests used for multiple years have grown to over 20 feet deep and have been estimated to weigh several tons. Some pairs may have several nests in their territory. Territory sizes vary widely depending on season, food availability, and habitat, but may be as small as 1-2 square miles in ideal conditions, such as in Cobscook Bay.

One to three eggs are laid 2-4 days apart in early March and April. The incubation period lasts about 35 days, and the female does most of the incubating. After hatching, the chicks remain confined to the nest for the next 11-13 weeks. At first they are closely brooded, but later become increasingly independent. Both parents forage for food to feed the chicks. Young eagles make their first flights (fledging) in late June-July and remain near the nest for an additional 5-10 weeks before dispersing. Most bald eagles that breed in Maine remain throughout

the winter. Juveniles may stay in Maine or wander as far south as South Carolina.

Diets of Maine eagles vary from 90 percent fish in freshwater habitats to 60 percent birds on coastal islands. Fish are their primary prey, although mammals and birds are also taken. In interior Maine, chain pickerel, brown bullheads, and white suckers comprise most of the diet. Along the coast, sculpins, alewives, eels, cormorants, eiders, and gulls are the primary prey items. Bald eagles can catch their own food, but they often steal food from other fish-eating birds. Eagles concentrate where food is seasonally abundant and accessible.

Winter habitat requirements are similar to those for breeding: large perch trees with easy flight access that offer good visibility and are near an abundant food source. More sheltered settings may be used as nocturnal roosts. In the wild, eagles probably live 15-20 years.

## Threats

Bald eagles, once abundant in Maine, were nearly extirpated because of widespread use of environmental contaminants. DDT and other contaminants caused eggshell thinning and impaired reproductive success. Problems for eagles still persist: habitat loss, human disturbance at nest sites, environmental contamination (especially mercury and PCBs), diminished water quality, and human-caused deaths and injuries are still primary conservation problems.

## Conservation and Management

In 1972, only 29 pairs of bald eagles remained in Maine when eagles were nearly extirpated from other parts of the Northeast. DDT was banned in 1972, and populations slowly rebounded thereafter. In 1978, the bald eagle was listed as a federal endangered species. Bald eagles responded favorably to reduced use of persistent chemical contaminants, protected nesting habitat, and numerous reintroduction projects. The bald eagle was reclassified to threatened on the federal list in 1995.

In Maine, recovery actions have included fostering eggs and chicks into failed nests; incorporating eagle concerns into environmental reviews; designating Essential Habitat through provisions of the Maine Endangered Species Act to protect nesting habitat; feeding wintering eagles to enhance survival of young birds; and rehabilitating injured birds. Research projects on eagle ecology, status, contaminants, survival, winter feeding, and habitat modeling were conducted by the University of Maine.

Today, annual management includes an aerial

survey of all nests and a subsequent visit to determine the number of young produced. In 2002, 290 pairs nested and produced 280 eaglets. The Maine population has been growing at a rate of about 8 percent a year. The breakdown of DDT is slow in Maine's cool climate and acidic soils, and its persistence has slowed population growth and recovery compared to other eastern populations. However, given the level of recovery achieved in Maine and throughout the United States, the bald eagle may soon be taken off state and federal lists. Management will continue to ensure that declines of the past are not repeated, and that habitat and a clean environment persist to promote population growth and expansion. Because of Essential Habitat designation, all projects or activities funded and carried out by municipalities and state agencies within ¼ mile of eagle nests are reviewed by MDIFW.

## Recommendations:

- ✓ Review Essential Habitat maps and guidelines prior to development and forest harvesting near eagle nests. Consult with a biologist from MDIFW and the U.S. Fish and Wildlife Service to assist with planning.
- ✓ Protect habitat within a ¼-mile (1,320-foot) radius of eagle nests. Maintain areas within 330 feet of nests as sanctuaries. Do not modify the physical habitat (buildings, new roads or trails, timber harvest) unless approved by a state or federal wildlife biologist.
- ✓ Avoid exterior construction, land clearing, timber harvests, and major disturbances within 330-1,320 feet of the nest during the sensitive nesting season (February 1-August 31). Establish setbacks for new construction of roads, buildings, or waterfront development comparable to conditions with which local eagles currently coexist. Maintain foraging perches, roosts, potential nest trees, and flight corridors. Partial timber harvests are compatible if they buffer existing nests and provide a lasting supply of trees suitable for nesting eagles. Employ guidelines in *Living with Eagles* (handbook available from MDIFW, 41 SHS, Augusta, ME 04333).
- ✓ Municipalities should follow Shoreland Zoning and LURC standards and strive to maintain areas adjacent to eagle nests and adjacent waterways in a low-density, rural setting. Identify these areas in comprehensive plans, and consider protecting waterways and a 250-foot upland buffer as Resource Protection Districts.
- ✓ Use voluntary agreements, conservation easements, conservation tax abatements and incentives, and acquisition to protect important habitat for threatened and endangered species.
- ✓ Report eagle nest locations to MDIFW.
- ✓ Remain a safe distance from nesting eagles when boating or hiking. The threshold for disturbance varies among individuals, but is typically 660-1320 feet, and occasionally more. If the birds vocalize or fly in response to your presence, you are too close!
- ✓ Avoid applications of pesticides around nesting areas. 