



Structured Inquiry Search

Home ► Kingdom Animalia ► Phylum Chordata ► Subphylum Vertebrata ►
 Class Aves ► Order Falconiformes ► Family Accipitridae ► Subfamily Accipitrinae ►
 Species ***Haliaeetus leucocephalus***

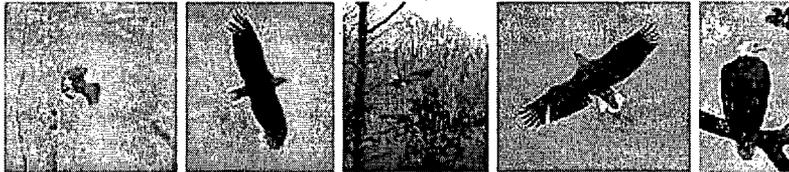
Haliaeetus leucocephalus

bald eagle

Information

Pictures

Classification



2008/01/20 04:31:06.826 US/Eastern

By Marie S. Harris

Geographic Range

Kingdom: Animalia
 Phylum: Chordata
 Subphylum: Vertebrata
 Class: Aves
 Order: Falconiformes
 Family: Accipitridae
 Subfamily: Accipitrinae
 Genus: *Haliaeetus*
 Species: ***Haliaeetus leucocephalus***

The bald eagle is native to North America and originally bred from central Alaska and northern Canada south to Baja California, central Arizona, and the Gulf of Mexico. It now has been extirpated in many southern areas of this range.

Biogeographic Regions:

nearctic ☞ (native ☞).

Habitat

Bald eagles are able to live anywhere on the North American continent where there are adequate nest trees, roosts and feeding grounds. Open water such as a lake or an ocean, however, is a necessity.

Terrestrial Biomes:

desert or dune ☞; savanna or grassland ☞; chaparral ☞; forest ☞; mountains ☞.

Physical Description

Mass

3175 g (average) [Ref]
(111.76 oz)

The plumage of an adult bald eagle is brown with a white head and tail. Immature eagles are irregularly mottled with white until the fourth year. Their legs are feathered half way down the tarsus, and the beak, feet, and eyes are bright yellow. Bald eagles have massive tarsi, short and powerful grasping toes, and long talons. The talon of the hind toe highly developed in both species, and it is used to pierce vital areas while the prey is held immobile by the front toes. The wing span of an eagle can reach seven and a half feet .

Some key physical features:

endothermic \mathcal{Q} ; bilateral symmetry \mathcal{Q} .

Reproduction

Time to hatching

35 days (average) [Ref]

Age at sexual or reproductive maturity (female)

1460 days (average)
[Ref]

Age at sexual or reproductive maturity (male)

1460 days (average)
[Ref]

When the female is ready to copulate, she makes a head down, bowing gesture, and the male closes his talons and mounts her. The male's tail goes down and hers goes up. The process is completed when their cloacae meet. Bald Eagles sometimes even copulate out of season. This behavior may account for the strong loyalty between mates. There is not any sound evidence, however, that supports the idea that eagles mate for life.

A mated pair adds on to their nest each breeding year. The nests are primarily built of sticks and can eventually weigh up to two tons. Bald Eagle nests are among some of the largest nests in the world. Females lay a clutch of one to three eggs, but usually two. Incubation lasts from five to six weeks. One problem that greatly hampers the recovery of the species is sibling competition. A female lays her eggs a few days apart, and incubation begins with the first egg. One to two days is the normal age difference between eaglets. Older hatchlings are able to dominate the younger ones for food because of their size. In a three-egg brood, the third chick has little chance of survival. Nest duties among the pair are shared equally; both the male and the female will hunt and offer food to the eaglets.

Key reproductive features:

iteroparous \mathcal{Q} ; gonochoric/gonochoristic/dioecious (sexes separate); sexual \mathcal{Q} ; oviparous \mathcal{Q} .

Behavior

Bald eagles are only partially migratory; if they possess access to open water, they will

remain at that nesting sight year round. Those that do not have access to water leave the frozen countryside in the winter and migrate to south or to the coast. Eagles choose their migratory routes to take advantage of thermals, updrafts, and food sources, and usually migrate during the day between 8:00 A.M and 6:00 P.M.

There are three methods of flight used during migration: Eagles ascend in in a thermal and then glide down, circle steadily down a stream of thermals, or use rising air generated by the wind as it sweeps down against a cliff or other raised feature of the terrain.

Key behaviors:

flies; motile \mathcal{Q} .

Food Habits

Bald eagles are primarily fish-eaters that prefer salmon, but will also take avian prey. Waterfowl are an important secondary food source, and eagles also eat small mammals such as rabbits, seabirds, and carrion. When hunting, the Bald Eagle either seeks its prey from a perch or from high in the sky, then swoops down and snatches up the prey in its talons. Another method used by bald eagles to gain food is theft; Bald Eagles are often seen stealing prey from other birds.

Economic Importance for Humans: Negative

There is no substantiated evidence that the Bald Eagle has any negative impact. In the past, however, the Bald Eagle has been unjustly accused of hurting both the fish industry and the fur industry. As a result, the government in Alaska once paid two dollars for every dead eagle brought in. Soon after this went into affect, it became apparent that slaughtering eagles didn't help the fish or fur industry. Another apparently false accusation is that they kill a large number of lambs on open ranges.

Economic Importance for Humans: Positive

Eagles help ranchers by controlling the number of rabbits and rodents -- animals that compete with livestock for grass. Their feathers are used in the ceremonies of some groups of native North Americans.

Conservation Status

IUCN Red List: [link]:

Least Concern.

US Migratory Bird

Act: [link]:

Protected.

US Federal List:

[link]:

Threatened \mathcal{Q} .

CITES: [link]:

Appendix II.

State of Michigan

List: [link]:

Threatened.

Over the years, the Bald Eagle population has suffered from excessive hunting and pollution. In the early part of the century, hunting eagles was a popular sport. Eagles were shot not only for their feathers, but also because they posed a "threat" to livestock (e.g. sheep) and hampered the fishing industry. In recent years, however, pollution has greatly contributed to the demise of the species. As a result of both land and water pollution, a significant amount of the Bald Eagle food supply has been killed. In particular, the use of pesticides such as DDT had been the greatest threat to the species. Pesticides are often found in fish, the major food supply for eagles. DDT in a female's body disturb the shell-making process, causing her to produce very weak shells or no shells at all. Eagles once numbered around 50,000 in the contiguous United States, but by the time the U.S had restricted the use of DDT in 1972, only about 800 breeding pairs remained. Under the Endangered Species Act of 1973, however, the eagles have made a steady recovery. Breeding pairs now number close to 3000, and there has been an increase in the number of hatchlings per nest. Only in Canada and Alaska, however, are eagles found in abundance.

A tremendous effort had been made to protect and restore the bald eagle population. Some states now support effective nest-monitoring and programs to release young birds into the wild. Federal protection has involved monitoring populations, improving protection, setting up captive breeding programs, relocating wild birds, and establishing a wide-ranging public information program.

Bald eagles are currently listed as threatened by the U.S. Fish and Wildlife Service and by the Michigan Department of Natural Resources. They are protected by the U.S. Migratory Bird Act.

Other Comments

Much to Benjamin Franklin's dismay, the Bald eagle was adopted as the national emblem in 1782. He said that the Bald Eagle was a bird of bad moral character (stealing food) and recommended the turkey instead. None the less, the bird serves as a symbol of wilderness and freedom.

Bald Eagles are also considered to be highly adaptable birds. In one case, for example, a pair actually nested on a giant cactus.

Contributors

Marie S. Harris (author), University of Michigan.

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Sponsored in part by the Interagency Education Research Initiative, the Homeland Foundation and the University of Michigan Museum of Zoology. *The ADW Team gratefully acknowledges their support.*

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