The American Bald Eagle
Facts at Your Fingertips

These informational pages have been compiled by the staff of the American Bald Eagle Foundation and are provided as an educational service of our organization. So go ahead, impress your friends with eagle facts and spread the word about these amazing birds! If you would like additional information about Bald Eagles, or if you are interested in becoming a member, please contact us:

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Bald Eagle Range and Taxonomy

The Bald Eagle ranges throughout North America, from southern California, Texas and Florida, to Alaska, the Yukon and the Northwest Territories.

Each year Christmas Bird Counts are held throughout the United States and recent counts have found wintering Bald Eagles in every state except Hawaii. Bald Eagles breed throughout the U.S. but are concentrated in Alaska, the Pacific Northwest, the Great Lakes States, Florida and the eastern seaboard from Maine to Virginia.

The American Bald Eagle is known scientifically as *Haliaeetus leucocephalus* and is the only North American resident among the 8 species of "sea eagles" in the genus *Haliaeetus*. Other sea eagles include the following:

Sea Eagle	Range
Steller's Sea Eagle	Far eastern Russia, Kamchatka Peninsula, Korea, Japan
White-tailed Sea Eagle	Northern and Eastern Europe, across the former USSR
Pallas' Sea Eagle	China, India, Himalayan region
Sanford's Sea Eagle	Solomon Islands in the Pacific
White-bellied Sea Eagle	Australia, Southeast Asia, India
African Fish Eagle	Africa south of the Sahara Desert
Madagascar Fish Eagle	Madagascar

Why is the Bald Eagle called "bald"? In old English the word "bald" once meant "white", therefore, North America's white-headed sea eagle was named the "Bald Eagle" by early settlers of North America.

There is a gradual increase in the size and weight of Bald Eagles from the southern portion of their range to the northern portion. Due to these size differences, two subspecies of Bald Eagles are recognized; a southern subspecies and a northern subspecies. Bald Eagles found in southern California, Arizona, Oklaoma, Texas, Louisiana, and the southern Atlantic states are considered to be part of the southern subspecies. Eagles found breeding in all other parts of their range are part of the northern subspecies.

It is estimated that there are 10,000 - 12,000 breeding pairs of Bald Eagles in Southeast Alaska. The total number of Bald Eagles found in Alaska is estimated to be about 40,000 - 50,000 and the total number of Bald Eagles in the world is probably around 80,000 to 100,000.

Physical Characteristics of Bald Eagles

Average weight for adult male (northern subspecies) = 9½ lbs
Average weight for adult female (northern subspecies)=11½ lbs

Average wingspan for adult male - 6 feet 8 inches
Average wingspan for adult female - 7 feet 3 inches

Female Bald Eagles are larger than males. This is known as "reverse sexual dimorphism" and is a common trait of raptors, but is rare among other types of birds.

Juvenile Bald Eagles have slightly longer flight feathers than adult Bald Eagles, so they will appear larger, though their weight is actually slightly less. Longer flight feathers allow the juveniles to be more efficient at soaring long distances.

Vision is the Bald Eagle's most important and powerful sense. Bald Eagle eyes are large and occupy most of the space in their head. They have up to eight times better resolution than humans and may be able to see prey up to 2 miles away, depending on its size.

Bald Eagles rely on their feet and talons to capture, grasp and kill their prey. The feet are very large even for a bird of its size. When spread on a flat surface the Bald Eagle's foot is about 6 inches long.

Bald Eagles progress through a series of mottled brown plumage stages during the first 4 years of their life, before obtaining their white head and tail when they are 5 years old.

The oldest recorded wild Bald Eagle was 28 years old. This eagle was banded along the Chilkat River in 1965 and recovered in 1993 within 12 ½ miles of where it was banded. When the Bald Eagle was banded in 1965, no records were kept to indicate its age at that time. Therefore, 28 is a minimum age for this eagle (assuming that it was banded during the first year of its life) and its actual age was probably higher.

Breeding and Nesting Behavior of Bald Eagles

It is generally assumed that Bald Eagles form long-lasting partnerships with their mates. Some Bald Eagles may mate for life, but it is probable that others may "divorce" their mates in favor of a new mate, especially if they have been unsuccessful in breeding. If one mate is killed the remaining mate will take a new partner.

Bald Eagles secure their pair bonds by participating in vocal and aerial courtship displays, including pursuing each other while performing rapid dives and turns. The most spectacular display is the "cartwheel" where eagles will grasp talons in mid-air, plummet to within a few feet of the ground in a series of spiraling cartwheels, and then release talons and fly off.

A common myth is that copulation takes place during the cartwheel display. Actually, copulation occurs on the nest or on a nearby tree branch.

In order to conserve energy during the winter, Bald Eagles often spend 98% of their day perching

Foraging Techniques of Bald Eagles

Fish are the primary food source for Bald Eagles, followed by birds and mammals. Birds that are commonly eaten include gulls, ducks, Canada geese, and sea birds. Mammals commonly eaten include foxes, squirrels, prairie dogs, raccoons, jackrabbits, sea otter pups, winter killed deer, elk and moose and washed-up seal, sea lion, porpoise and whale carcasses.

Bald Eagles acquire their prey in three ways. In order of preference, they are stealing from others, scavenging on carrion, and hunting and killing. Eagles often steal prey from one another, but will also steal from ospreys, gulls, loons, mergansers, hawks and sea otters. Even in winter foraging areas, such as the Chilkat Valley, where an abundance of salmon carcasses are available, Bald Eagles will often prefer to rob the prey of other eagles.

When hunting for live fish, a Bald Eagle will skim the top of the water and snatch the fish in its talons. Bald Eagles, however, can not fly with more then 4 - 6 pounds of food. If a Bald Eagle catches a fish that is to large for it to fly away with, it may attempt to swim to shore while dragging the prey. In Alaska, where Bald Eagles often feed on salmon heavier than 6 pounds, they will stand along streams and pounce on their prey when it is in shallow water. The Bald Eagle will then drag the salmon up on to the shore where it is eaten.

Energy and Food Requirements of Bald Eagles

A Bald Eagle requires an average of ½ to 1 pound of food per day, but eagles do not need to feed every day. If food is abundant they can gorge and store up to 2 pounds of food in their crops, which is digested later. This adaptation allows them to survive through periods when prey is less abundant.

If eagles are feeding chiefly on salmon they will need to eat the equivalent of about 1 salmon a week to meet their energy requirements.

Bald Eagles, like other raptors, regurgitate pellets after feeding. Pellets contain indigestible portions of the food including fur, feathers and bone. Fish bones are very digestible and are rarely found in eagle pellets.

Reproduction and Survival of Bald Eagles

An “active” nest is one that eagles have laid eggs in. In Alaska (except the Chilkat Valley), 40 - 70 % of active nests will eventually hatch young (or be successful). For the last 20 years in the Chilkat Valley, the average reproductive success has been about 30%.

Less than 10% of hatched eaglets will survive until maturity. 70-90% of eaglets probably die in their first year of life. Most juvenile Bald Eagles die because of starvation.

Adult Bald Eagles die from a variety of causes including shooting, impact injuries (usually caused by cars), poisoning, electrocution, trapping, drowning, starvation, disease, and injuries caused by another eagle.

Average spacing of active nests in Southeast Alaska, is about 1 active nest for every mile of shoreline or coastline. This is the densest concentration of Bald Eagle nests in the world.

Bald Eagles will repair old nests within their territories by adding new sticks to them each year. If built in a sturdy tree, some nests can last from 20 - 50 years and become quite large. The largest nest ever found was in Florida. It was 9.5 feet across, 20 feet deep and weighed more than 2 tons. Nests are typically about 5 feet wide and 3 feet deep. A Bald Eagle can build a new nest in 4 days.

99% of nests in Southeast Alaska are within 200 meters of water. Most of these nests are found in Sitka spruce and western hemlock trees, except along major rivers such as the Chilkat, where 95% of the nests are found in black cottonwood trees. In other parts of their range, Bald Eagles nest in a wide variety of deciduous and coniferous trees, and in the treeless Aleutian islands Bald Eagles nest on rock pinnacles or on the ground.

Bald Eagles lay 1-3 eggs. Eggs are 2-3 inches long, and are rather small in comparison to the Bald Eagle's body weight.

After Bald Eagle eggs are laid, they need to be incubated almost 24 hours a day to protect them from excessive heat and cold. Both the male and the female take turns incubating. Eggs hatch 35 days after they are laid. Eaglets remain in the nest for 70 to 90 days until fledging.

During the three months that eaglets remain in the nest they will increase in weight from about 3 ounces to 10 pounds.

Bald Eagle eggs are laid, and hatch, one to two days apart Two eggs usually hatch in each Bald Eagle nest, but, often due to siblicide, only one eaglet will survive. Siblicide occurs when the older sibling causes the death of the younger sibling, either through direct physical attack or by denying the younger sibling access to food. After three weeks of growth both eaglets will be about the same size and fighting between siblings decreases dramatically.

Winter Ecology and Migration of Bald Eagles

Some populations of Bald Eagles migrate while others will stay in their territories all year. Food supply determines if a Bald Eagle population will be migratory. Bald Eagles found in interior Alaska, Canada and the northern contiguous U.S. states are migratory because the lakes and rivers where they get their food freeze each year. Most Bald Eagles found in more temperate coastal regions, including Southeast Alaska, the Pacific Northwest and the southern U.S. are non-migratory.

Eagles may migrate long distances. A satellite telemetry study conducted by the Washington Department of Fish and Wildlife has shown that Bald Eagles wintering along the Skagit River in Washington may breed in northern Yukon, Northwest Territories or interior Alaska. The longest migration observed was 1200 miles from a wintering area in northern California to a breeding area in the Northwest Territories.

In Winter, Bald Eagles often congregate in food rich areas including the Chilkat Valley, Alaska; the Skagit and Nooksak rivers, Washington; and the Mississippi River Valley. The largest congregation of Bald Eagles in the world occurs in the Chilkat Valley, where between 2000 and 3500 eagles gather in November to feed on late runs of chum and coho salmon.

Interactions with Humans

In the early part of 1900's, people mistakenly thought that bald eagles were competing with humans for salmon, so a bounty was imposed on eagles from 1917 to 1952. During this time people were paid between $0.50 and $2 for every pair of bald eagle talons that they turned in to the Alaska territorial government. Records show that the government paid for 128,000 pairs of Bald Eagle talons turned in during these bounty years.

A precipitous decline in Bald Eagle reproduction and Bald Eagle populations was seen in the Lower 48 states shortly after World War II, when large amounts of pesticides (particularly DDT) began to be used on American croplands. One study in Florida showed that in only 10 years nest success declined by 75%; from a high in 1942 of 89% to 14% in 1952. Although DDT was banned in 1972, declines in nest success continued through the 1970's. Since the 1980's Bald Eagle populations have been making a tremendous comeback.

In 1994 the Bald Eagle in the Lower 48 states was downlisted on the Endangered Species list from endangered to threatened. In 1999, the Bald Eagle was proposed for complete removal from the Endangered Species list. This removal proposal will probably be approved in the year 2000. Bald Eagles were never listed as an Endangered species in Alaska.

Bald Eagles in Chilkat Valley, Alaska

Approximately 30 to 50 nests are usually active (eagles have laid eggs in them) each year in the Chilkat and Chilkoot Valley's and along the marine shores near Haines. Listed below are the numbers of Bald Eagles usually found in the Chilkat Valley at various times of the year:

- Late winter early spring (Feb-May): 50 - 150 (more can be seen during the Hooligan run in early May)
- June-August (during sockeye run): 200 - 300
- Fall and Winter: starting in August the number of eagles in the Chilkat Valley gradually increases to peak numbers in November and December of 2000 - 3500 eagles. Up to 4000 Bald Eagles were seen here in the 1980's but during the last 10 years the average has been between 2000 - 3500 eagles. There has been a 30 - 50% decline in the fall chum salmon run in the Chilkat Valley since the mid-1980's, possibly causing a decline in number of eagles now seen during the congregation.

In 1999, the December 10th ground count of Bald Eagles was 2,548. Historically this count has been shown to account for about 75% of the total eagles present, therefore, the actual number of Bald Eagles was probably about 3,400. For comparison, in 1984, the ground count was 3,980; therefore, the actual number of eagles may have been as high as 5,300

The average percentage of active nests that have successfully fledged young over the last 20 years in the Chilkat Valley is 30%.

In 1999, 136 Bald Eagle nests were located and mapped in the Chilkat Valley region.