#### Fierce, Majestic, Powerful and in Peril

Bald eagles evoke images that are matched by few other animals. At the apex of flight, serenely perched on a tree or boldly diving toward prey, they are at once fierce, majestic, powerful and independent. Their choice as our nation's emblem is obvious.

Bald eagles are found along four major flyways: (1) the Pacific Flyway from Alaska to California; (2) the Rocky Mountain Flyway from Canada to Arizona and New Mexico; (3) the Mississippi Flyway from the Great Lakes Region to the Gulf Coast; and (4) the Atlantic Flyway from Newfoundland to Florida They once flourished in this country, but their population has drastically declined in the last century.

Humans are the biggest threat to bald eagles. Much of the bald eagles' habitat was lost, many of the birds were shot, and they were exposed to widespread contaminants. Between 1917 and 1952, for example, a bounty was placed on bald eagles in Alaska. Fishermen believed the birds competed with them for salmon. Although this belief was unfounded, more than 100,000 birds were killed during the 35 years the bounty was in effect.

In 1940, Congress passed the Bald Eagle Protection Act that prohibited the killing, possessing, and transporting of bald eagles without permits, except in Alaska. The law was later amended to include Alaska and golden eagles. Still, populations continued to fall.

Fish, the preferred prey of bald eagles, were killed by water pollution. Persistent pesticides such as DDT, which disrupts a bald eagle's reproduction system, lingered in the environment. By 1974, only 791 breeding pairs were counted in the 48 contiguous states. Idaho had only 11 pairs in 1979.

In 1978, the bald eagle was designated as an endangered species in 43 states and a threatened species in five states under authority of the Endangered Species Act. In 1995, the bald eagle was reclassified as a threatened species throughout the lower 48 states (not so in Alaska and Hawaii). In 2007, the bald eagle was removed from protection of the Endangered Species Act because its national population increased to 9,789 breeding pairs in the lower 48 states. In Idaho, the number of bald eagle nests had grown to 216 in 2006.

#### Winter Refuge

Bald eagles pair for life. They remain aloof from other pairs in their northern nesting areas, raising their young and feeding on fish. Prey disappears as Canadian winters bring deep snows and sub-zero temperatures to eagle habitat. Each fall, the birds leave their nesting areas and migrate south to milder climates where they spend the winter. As they migrate, bald eagles become more social, often congregating at winter grounds.

Wolf Lodge Bay along Coeur d'Alene Lake in northern Idaho is one of many wintering grounds along the eagles' annual migration route. Steep mountains covered with western larch, Douglas-fir, ponderosa pine and grand fir rise from the lakeshore.

Northern Idaho's average winter temperature of 22°F and average annual snowfall of 60 inches is mild compared to the frozen country that lies to the north. Wolf Lodge Bay's rocky shores, submerged gravel beds and unique water ecology lures many eagles.

It provides ideal habitat for kokanee salmon - a primary winter food source for bald eagles. Wolf Lodge Bay harbors an abundant supply of these small, landlocked salmon. The blend of rugged topography, dense tree growth, mild climate and ample food draws eagles to Wolf Lodge Bay each winter.

Wolf Lodge Bay is seven miles southeast of Coeur d'Alene, Idaho, and is bordered by Interstate 90 to the north and Idaho Route 97 to the east and south. This makes the area surprisingly close and easily accessible to 500,000 people in Kootenai County, Idaho and Spokane County, Washington.

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#### **Seasonal Movements of Bald Eagles**

During November, the land-locked kokanee salmon in Coeur d'Alene Lake begin to spawn along the shallow waters of the lake. After the fish spawn, they die and float to the surface of the water, creating an abundant food source for the migrating eagles, particularly in Wolf Lodge Bay. The eagles, lured by the spawning fish, are sustained by this plentiful supply of spawned-out kokanee.

Bald eagles begin arriving in the Coeur d'Alene area in late November with numbers increasing through mid- to late-December. The number of eagles fluctuates based on the number of dead and dying kokanee. By the first week in January the number of spawning salmon declines and most of the eagles have dispersed. Only a few eagles remain in the area through portions of January and February as most have departed for more southerly destinations along their migration route before returning to their traditional nesting sites. Eagles do not nest at Wolf Lodge Bay but there are nesting sites in other parts of northern Idaho. The number of eagles observed from year to year varies from 10 to 156, with an average of 54.

# **Daily Activities of Bald Eagles**

Bird watching at Wolf Lodge Bay has become increasingly popular over recent years and for good reasons. It's a place where you can see our national bird in its natural environment, close enough to observe it soaring, hunting or perched on a tree. Eagles circle above the water or peer down from the rugged limb of a larch snag. Studies of their daily activities reveal the complexity and magnificence of bald eagles' behavior and their role in the delicate balance of nature.

# **Perching and Soaring**

As mid-morning approaches, eagles begin to limit their feeding activity and settle on perches. They seem to prefer certain trees and even favorite limbs. The preferred perches are usually the taller trees with open branches close to the water. If weather conditions are inclement, the eagles are likely to spend the rest of the day perched on branches of their favorite conifers.

On windy days, eagles take advantage of turbulent air currents and soar high above the water. As wind speed increases, so do the soaring activities. During these times, eagles spend less time feeding and perching and more time flying. Eagles have been observed gliding in graceful, almost motionless flight for several hours at a time.

#### **Feeding**

Kokanee salmon were introduced into Coeur d'Alene Lake in 1937, and bald eagles started inhabiting the area soon afterwards. These salmon mature in about three years and reach a length of about 11 inches. Their three-year life cycle ends in November as females lay eggs and males fertilize the eggs. After spawning, the fish die and float to the surface of the water, creating the abundant food source for the eagles.

Although most of the eagles' fishing takes place during the early morning, some feeding may occur throughout the daylight hours. Dawn finds the eagles arriving at the fishing area from their communal night roost. As they arrive, they position themselves on perches in trees near the water's edge. From these vantage points, they scan the water in search of dead or dying salmon.

Upon sighting their prey, the eagles glide from the perches, circle above the floating salmon, and in a descending spiral motion snatch the fish from the water. With the salmon firmly grasped in their talons, they return to nearby perches to feed.

Eagles that arrive in the fall before the salmon have begun to spawn or those that remain in the area past January when the salmon supply has diminished must find another source of food. Ducks become their main prey. The impact on the waterfowl population is small though. Waterfowl killed are usually sick or injured ducks.

Pellets of indigestible duck feathers can often be found under the perch trees of eagles. Ground beneath the perch trees where eagles feed is often littered with remains of partially eaten salmon. This seemingly wasted fish is actually an important food source for crows and ravens.

# **Eagle Habitat Protection**

Of utmost importance to the eagle's future use of Wolf Lodge Bay is the continued, unaltered spawning of kokanee salmon along the shores of the bay. Without abundant spawned-out kokanee, the large concentration of eagles would not exist here. Also important is protection of the daytime perching areas.

The eagle habitat at Wolf Lodge Bay includes Bureau of Land Management (BLM), private, state and National Forest lands. Several years ago, the BLM developed a cooperative bald eagle habitat protection plan to ensure preservation of this winter sanctuary. The plan calls for maintenance of habitat and an ongoing monitoring effort focusing on the 332-acre BLM Bald Eagle Management Area along Wolf Lodge Bay and Beauty Bay.

As part of this effort, BLM biologists annually monitor the eagle population. Observations indicate two significant changes: during recent years the number of visitors viewing the birds has risen dramatically, and eagles are shifting from their daytime perch sites on Mineral Ridge to more remote perches on Wolf Point. The eagles are apparently abandoning their traditional perch sites as a result of disturbance by visitors to the area.

No one really knows just how much disturbance would permanently drive the eagles away. Studies at Wolf Lodge Bay show that the eagles have some tolerance to humans, but the extent is unknown. Visitors need to limit their activities, such as walking along the road or approaching the eagles as they perch. Otherwise, they could cause these wild birds to fly away from the immediate area, and spoil the opportunity for other people to watch them. To avoid disturbing the eagles and for your own safety, please view the eagles from the BLM boat ramp or Mineral Ridge Trail head.