

10. Birds

Where Eagles Soar

The most abundant and diverse vertebrate animals of the Crown of the Continent are birds. There are roughly 270 species of birds here, compared to about 65 mammals, about 25 native fish, and about



12 reptiles and amphibians. The Crown of the Continent is important, both as habitat for resident birds and as a key part of migration routes for thousands upon thousands of individual birds every spring and fall. Birds here range from the mighty golden eagle, with a wingspan longer than a man is tall, to the diminutive calliope hummingbird, with eggs the size of M & M candies.

The Crown of the Continent supports such a wide variety of birds because it contains a variety of special habitat niches. White-tailed ptarmigan live in the alpine tundra; sharptail grouse and western meadow-



larks occupy grasslands; harlequin ducks and American dippers nest alongside turbulent mountain streams; northern harriers and short-

eared owls hunt the grasslands and marshes, while northern goshawks raise their young in mature forests. Birds can also adapt well to changes in habitat. Black-backed woodpeckers are attracted to the

insects that live in recently burned forests. Open-canopy species, such as western bluebirds, may colonize forests opened by logging and fire, while deep-woods birds, such as brown creepers and varied thrush, live in mature forests.

For some birds, the Crown of the Continent represents the edges of their range. It's the southernmost extension for the boreal owl and the northernmost limit of the range of Williamson's sapsucker and the white-throated swift. Other birds are more or less confined to one or the other side of the Continental Divide. Pygmy nuthatches and black-chinned hummingbirds live on the western side of the divide, while the Baltimore oriole, common grackle, and brown thrasher are found on the eastern side of the divide. The ranges of four different species of chickadees—black-capped, mountain, boreal, and chestnut-backed—overlap in the Crown of the Continent.

Some North American bird species are increasing in the Rocky Mountains and

expanding their range in the Crown of the Continent. Eastern blue jays, nearly unheard of in the Crown of the Continent until the 1980s, are increasingly common in settled areas where human habitation has changed the landscape. Native jays include the Steller's jay and the gray jay, which are still very common in the forests of the Crown of the Continent.

Migrations

Of the 270 bird species identified in Glacier National Park, about half are known to breed in the park. The rest are classified as either accidental sightings of birds that show up rarely, or as birds that migrate through the park without nesting, though they may spend a few days resting here on their journey.

Most migratory birds migrate north and south, taking advantage of the lengthening days of the northern summer and retreating from the short northern days of autumn. A golden eagle, for example, may hunt arctic hare in Alaska, or even Siberia, in summer, and fly to northern Mexico to hunt jackrabbits in winter. However, other birds migrate west and east. Harlequin ducks, for example, breed, nest, and rear young in mountain streams like Blakiston and McDonald creeks during the summer, but winter on the mild Pacific Coast of British Columbia and Oregon.

The Crown of the Continent is a key in bird migrations, both north-south and east-west. This is because the area is one of the narrowest points in the Rocky Mountains, sometimes called a geographic pinch point. Where the mountains are narrow, they form a funnel which compresses and concentrates the flow of birds. This makes for some spectacular bird watching.

The skies over the Rocky Mountains

have been described as a braided river of rising and falling air currents. Raptors (birds of prey) use those air currents to migrate. For example, thousands of golden eagles glide along this invisible river, going south each autumn and north each spring. Biologists have counted 1,000 golden eagles in one fall day at the southern end of the Livingstone Range. The eagles are joined by red-tailed hawks, rough-legged hawks, and a variety of other raptors during these migrations. Low mountain passes, such as Crowsnest and Marias, are important for gulls migrating from the Great Plains to the Pacific Ocean.

Waterfowl are also famous for their migrations. Ducks, geese, and swans tend to fly from one wetland area to another, pausing



to rest and restore energy before flying to the next staging area. One of the most spectacular staging areas in the Crown of the Continent is Freezout Lake, near Choteau. There, hundreds of thousands of snow geese pause as they migrate between California and the Arctic. During migration's peak, Freezout may have 300,000 snow geese and tens of thousands of tundra swans. Waterfowl, including tens of thousands of mallards and other ducks, use other refuges, such as Ninepipes National Wildlife Refuge in the Mission Valley and big

lakes like Flathead Lake, both as nesting habitat and as stopovers during migration. Lower and Middle Waterton lakes, Maskinonge Lake, and adjoining marshes in Waterton are important stopover spots. Since the prairies abruptly meet the mountains there, both prairie and mountain species are seen on those lakes. Large rivers of the Crown also serve as resting areas during migration.

While most birds leave the Crown for warmer climates during winter, a few hardy species come south to the Crown for their winters. These include snow buntings, rough-legged hawks, and gyrfalcon. The Crown provides habitat for a variety of birds of prey, both summer and winter. Birders afield in the Mission Valley can see five of North America's six falcon species in a single winter day. Raptors tend to congregate where prey is abundant, such as meadow voles in the Mission Valley. In other years, when voles are scarce, raptors will congregate elsewhere. Seed-eating species, such as red and white-winged crossbills, may "irrupt" in large numbers when certain tree species provide a bumper crops of cones and seeds.

Residents

Because of its cold, northerly climate, the Crown contains relatively few native year-round birds. There are a variety of grouse, including blue, ruffed, spruce, and sharptail. Owls, such as the great horned, northern pygmy, and others, also may stay year-round, as do small forest birds, such as red-breasted and pygmy nuthatches, black-capped and mountain chickadees, American dippers, common ravens, red crossbills, and others.

Some resident birds, such as the Clark's nutcracker, migrate short distances—perhaps moving from the high mountains in summer to the lower elevations in winter.

Exotics



As with plants and fish, there are several species of introduced birds in the Crown. Most are from Asia and Europe and tend to thrive near human development. These include house sparrows, European starlings, and rock

doves. Ring-necked pheasant and gray partridge are also imported exotics. These birds have become economically important on the Rocky Mountain Front, as people travel there to hunt them. Wild turkey are not native to the Crown, but were native to other parts of North America. They are now quite common in places like the foothills of the Swan Range.

The accidental and intentional introduction of some plants and other organisms have been detrimental for some bird populations. For example, the blister rust fungus is destroying much of the whitebark pine forests in the Crown of the Continent, reducing the food available for Clark's nutcrackers. Non-native plants often crowd out native plants, but don't provide appropriate food and shelter for native birds. Land management practices that fragment habitat have caused increases in birds such as the brown-headed cowbird. The cowbird has become a serious nest parasite in formerly forested areas where it did not historically occur.

Issues in Avian Conservation

Conserving birds is a challenge because they range over such enormous areas. De-

struction of forests in Mexico or Guatemala, for example, may eventually reduce the number of songbirds nesting in Canada during the summer. Swainson's hawks, which summer on the Alberta prairie, may be killed by pesticides used to control grasshoppers in Argentina, where the birds winter. Conversely, events in the Crown of the Continent can have repercussions in other nations. For example, the destruction of native grasslands in the Crown of the Continent can influence the breeding success of savannah or vesper sparrows, which also migrate between the Crown and South America.

Nationwide, conservationists are concerned about a class of birds called neo-tropical migrants, some of which have experienced serious population declines. These are birds that winter in the tropics of South and Central America and summer in northern climes, such as the Crown of the Continent. Neo-tropical migrants of the Crown of the Continent include the western tanager and Townsend's warbler.

Like other organisms, birds demand food, cover, space, and water from their habitat. Remove any one of those components, and birds will be at risk. One subtle, but significant, change in bird habitat in some places has been the loss of large, dead trees. Scores of bird species need these snags for nests and to support insects for food. People, however, see snags as useless, dead trees and fell them for firewood or because they can be hazardous for loggers. In intensively managed forests, few, if any, trees are left to grow old, die, and become snags.

The pygmy nuthatch is one species that is affected by loss of



snags. These little birds are associated with mature ponderosa pine forests. Pygmy nuthatches winter in these forests, surviving the cold by roosting in cavities in pine snags. On some cold nights, more than 100 nuthatches squeeze into one dead tree. They not only need snags, but large snags, to insulate them from the cold.

The drainage and filling of many wetland areas in the Crown in the last 100 years has also been a problem for many birds. Even small, seasonal wetlands can be important for resting and feeding waterfowl and for terrestrial birds, such as red-winged blackbirds. Several of the wetlands that originally existed on the eastern and western fringes of the Crown have been drained to support agriculture and other developments. But many significant wetlands are under protection; for example, Mission Valley's Ninepipes National Wildlife Refuge, Waterton's Maskinonge Lake, and the wetlands of the Swan Valley. In some places, like Freezout Lake, people have enhanced wetlands to support waterfowl for hunters.

Birds are also valuable indicators of pollution problems. The disappearance of certain birds can warn us of larger problems in the ecosystem. Some harmful substances, such as heavy metals, DDT, and PCBs, do not break down and will bio-accumulate in the tissue of birds. This is particularly true of birds of prey, at the top of the food chain.

Osprey, bald eagle, and peregrine falcon numbers dropped with the widespread use of the insecticide DDT in the 1950s and 1960s. They have rebounded since DDT was banned in the United States and Canada. However, international migrants

may still be at risk, as DDT remains legal in many nations.

Habitat fragmentation is another concern in bird conservation. For example, grasslands habitat for Columbia sharptail grouse has been fragmented by farms, highways, and residential development. One of the last

fragments of Columbian sharptail grouse habitat in the Crown of the Continent was the Dancing Prairie Preserve in the Tobacco Valley. As patches of prairie shrank, the grouse became increasingly vulnerable to predation by skunks and house cats and to other problems. That small flock of grouse has evidently died out, as no birds were observed in the ritual dancing ground, called a *lek*, in the spring of 2001.

Habitat fragmentation also occurs with some forest-dwelling birds, as once-extensive forests are cut into smaller pieces. Land management practices that fragment habitat may cause native birds, particularly the brown-headed cowbird, to become a serious nest parasite in forests where it did not historically occur.

The lack of natural disturbances, such as fires, seasonal floods, heavy seasonal grazing by animals like bison, and insect outbreaks, has changed the natural succession of forests and grasslands. This, in turn, changed the natural assemblage of birds in the Crown of the Continent.

The large lakes of the Crown of the



Continent provide important habitat for the common loon, which is decreasingly common south of Canada. These large, primitive waterfowl require big, clean lakes with plenty of fish. They have only one or two chicks a year and are sensitive to human disturbance during

the nesting season. Common loons are losing habitat to human development across the northlands and are also affected by water pollution. The lakes of Waterton and Glacier national parks provide a quiet, clean refuge for loons. Loons also nest in the Seeley-Swan lakes; however, there is increased concern about booming lakeshore development and boating on those and other lakes.

The alpine of the Crown is important for a variety of unusual birds, such as the white-tailed ptarmigan, the American pipit, and the gray-crowned rosy finch. If these high, fragile habitats change as the climate grows warmer, these birds may also disappear.

Though loss of habitat is the principal concern in avian conservation, hunting has historically been a problem as well. When Meriwether Lewis rode horseback along the Rocky Mountain Front in 1806, he noted nesting passenger pigeons. Lewis dined on passenger pigeons near what is now the town of Browning. These birds, which numbered in the billions, were totally extinct throughout North America only 110 years later.

Sources

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