

COMMON RAVEN - CORVUS CORAX

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Passeriformes Family: Corvidae Genus: Corvus
Species: C. corax

Habitat:

Biomes: Common Ravens occur over most of the Northern Hemisphere in nearly any habitat (eastern forests and the open Great Plains are exceptions). These include coniferous and deciduous forests, beaches, islands, chaparral, sagebrush, mountains, desert, grasslands, agricultural fields, tundra, and ice floes. They do well around human habitations including farms, rural settlements and isolated houses. In larger towns they are often replaced by American Crows, although they do occur in some cities including Los Angeles. Human presence has allowed ravens to expand into areas where they didn't previously occur, such as using artificial ponds and irrigation to survive in deserts and living on human garbage in some forests. Common Ravens are slowly moving back into the forests of the northeastern United States and Canada as those forests regenerate.

Distribution:

In US: They range throughout the Holarctic from Arctic and temperate habitats in North America and Eurasia to the deserts of North Africa, and to islands in the Pacific Ocean. In the British Isles, they are more common in Scotland, Wales, northern England and the west of Ireland. In Tibet, they have been recorded at altitudes up to 5,000 m (16,400 ft), and as high as 6,350 m (20,600 ft) on Mount Everest. The population sometimes known as the Punjab raven—described as *Corvus corax laurencei* (also spelt *lawrencii* or *laurencii*) by Allan Octavian Hume but more often considered synonymous with *subcorax*—is restricted to the Sindh district of Pakistan and adjoining regions of northwestern India.

In Other Countries: Europe, Asia, Scotland, Wales, England, Africa, Resident through most of Holarctic region from n. Europe (including Greenland and Iceland) through Siberia, south through central and w. China, south and west to n. Africa, and north through much of Europe. [CHECK DISTRIBUTION MAPS]

Holistic Description: The intriguing Common Raven has accompanied people around the Northern Hemisphere for centuries, following their wagons, sleds, sleighs, and hunting parties in hopes of a quick meal. Ravens are among the smartest of all birds, gaining a reputation for solving ever more complicated problems invented by ever more creative scientists. These big, sooty birds thrive among humans and in the back of beyond, stretching across the sky on easy, flowing wingbeats and filling the empty spaces with an echoing croak.

Species Richness: 4 SUBSPECIES

Population Dynamic: CHECK THREATS

Evolution and Systematics:

Evolution: Fossil ravens from Pleistocene found from many sites throughout much of the range of the species.

Systematics: Size varies clinally with trend from largest in north to smallest in south within North America (possibly averaging larger in wing and tail in Central America, however). Although populations said to show broad range of individual variation, further study is required based on analysis accounting for age and sex.

Number of Species: 4 SUBSPECIES

Number of Genera: 4 SUBSPECIES

Physical Characteristics:

Size and Length: Length: 22.1-27.2 in (56-69 cm) Weight: 24.3-57.3 oz (689-1625 g)

Wingspan: 45.7-46.5 in (116-118 cm)

Coloration: Common Ravens are entirely black, right down to the legs, eyes, and beak.

General Body Features: Not just large but massive, with a thick neck, shaggy throat feathers, and a Bowie knife of a beak. In flight, ravens have long, wedge-shaped tails. They're more slender than crows, with longer, narrower wings, and longer, thinner "fingers" at the wingtips.

Special Features of the Body: The common ravens that live within the Arctic are thought to have larger bills because they have to feed on prey larger than most other members of their species.

Special Features of the Head and Sensory Organs: *Corvus corax* has a large, strong, and curved bill, which helps it grasp onto prey and be able to eat many different kinds of food, they are larger in size which contributes to less predation of this species.

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: They have large pointed wings that allow for strong aerobatic flight and the ability to soar for long intervals of time.

Any Special Internal Anatomy: Viewed as one of the most intelligent creatures within the animal kingdom, the common raven has the ability to learn (through observation and problem solving), memorize, vocalize and understand complex information.⁶

Sexual Dimorphisms: Sexes similar in appearance although female smaller than male in some characteristics. Sexes distinguishable only using regression or discriminant function analyses.

Differences Between Juvenile Stage and Adult: Immatures similar to adults except remiges and rectrices become dull brownish through their first winter and heavily worn by their second calendar year compared with adults. Immatures obtain glossy black flight feathers, which fade little or not at all, by their second Prebasic molt.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: Common Ravens are so bold, playful, and clever that they're almost always doing something worth watching. They're less gregarious than crows, often seen alone or in pairs that stay together year round, although many may gather at a carcass or landfill. Large groups of ravens are probably young birds that have yet to pair up; ravens begin breeding at ages 2 to 4. On the ground ravens walk confidently, sometimes with a swagger, sometimes sidling. In flight they're more graceful and agile than crows, which often appear to be swimming across the sky compared to a raven's light wingbeats and occasional soaring. Ravens often perform aerobatics, including sudden rolls, wing-tucked dives, and playing with objects by dropping and catching them in midair. Known for their intelligence, Common Ravens can work together to solve novel problems. They sometimes follow people and possibly female cowbirds to find nests to raid. (Ravens have followed researchers as they set up artificial nests, raiding them soon after the researchers left.) Young ravens just out of the nest pick up and examine almost anything new they run across as they learn what's useful and what isn't. Ravens that find a big food supply (such as a large carcass or unguarded seabird nests) often cache some for later, the way other crows and jays store seeds. **They lie in anthills and roll around so the ants swarm on them, or they chew the ants up and rub their guts on their feathers. The scientific name for this is called "anting."**

Locomotion: Normally walks on ground, rarely hops. Liquid, even wing beats when on long-distance travel. May circle and soar with immobile wings. When sighting something on the ground, characteristically slows down by rapid "back-pedaling" of wings. In general, flight is more erratic and consists of more soaring than that of American Crow, with which it is most easily confused. Dives and rolls by tucking both wings in; dives and turns by tucking one wing in; turns loops and accelerates with short choppy wingbeats.

Communication and Perception: Common Ravens make many different kinds of calls varying from a low, gurgling croak to harsh grating sounds and shrill alarm calls. Scientists have placed their vocalizations into as many as 33 different categories based on sound and context. The most commonly heard is the classic gurgling croak, rising in pitch and seeming to come from the back of the throat. It's much deeper and more musical than a crow's simple, scratchy caw. Ravens make this call often. It's audible for more than a mile, and ravens often give it in response to other ravens they hear in the distance. Among their other calls, ravens make short, repeated, shrill calls when chasing predators or trespassers, and deep, rasping calls when their nests are disturbed. Dominant females sometimes make a rapid series of 12 or so loud knocking sounds that lasts about a second. Common Ravens can mimic other birds, and when raised in captivity can even be taught words.

Home Range: Nature and extent of territory variable; in coastal California, where nest sites are fairly abundant and food resources are plentiful, defends relatively small territories. In many other areas, domains are larger. Maintenance involves threat displays described above. Defense is usually only against individual adults and small groups. Territory holders often stay out of sight in presence of flocks, perhaps to avoid intraspecific nest predation. Interspecific aggression near nest shown toward some species, probably nest predators, e.g., American Crows, Red-tailed Hawks, Prairie Falcons, Gyrfalcons, but no evidence of true interspecific territoriality beyond immediate vicinity of nest.

Degree of Sociality: Usually either solitary or in pairs; pairs stay together year-round. Occasionally trios (of unknown relationships) may associate loosely throughout the year including at the nest. Nonbreeders are solitary, but gregarious at carcasses and other concentrated food sources, and they sleep in communal roosts where they recruit each other to food bonanzas.

Level of Aggression: Members of a territorial pair may chase conspecific intruders for several kilometers or, if the intruders remain in the area because of food, for many minutes, and social soaring may ensue. Fights can become extremely vicious, involving grabbing, pecking, and biting, and have even been known to result in death. If many intruders are present, chasing eventually ceases. Agonistic interactions at food may also involve grappling with the feet, accompanied by loud vocalizations. In birds that have developed a dominance hierarchy at a carcass, the physical interactions subside, and birds that have been together in captivity for several weeks still signal their dominance but physical interactions are much reduced.

Migration: Resident.

Predators:

Predators: Common Ravens, Owls, Martens, Great Horned Owl, Peregrine Falcon, Golden Eagle, Coyote, Gyrfalcon.

Anti-Predator Defenses: Vigorously chased Golden Eagle and Gyrfalcon until at least 3–4 km away from nest with young in Alaska. Ravens readily attack Turkey Vultures, Golden Eagles, large hawks, and American Crows near the nest. When humans approach nest with nestlings, one of the adults commonly gives rapid high-pitched kek-kek-kek -like calls, usually while flying with shallow wing beats and with head feathers fluffed out. When an intruder climbs tree or cliff to a nest, one or both of the parents may disappear, be heard only from a distance, or come in close, but they rarely dive at or attack. When they do attack, adult makes deep long rasping calls and commonly pecks branches; may snap off twigs.

Diet and Nutrition:

Adult Diet: Common Ravens will eat almost anything they can get hold of. They eat carrion; small animals from the size of mice and baby tortoises up to adult Rock Pigeons and nestling Great Blue Herons; eggs; grasshoppers, beetles, scorpions, and other arthropods; fish; wolf and sled-dog dung; grains, buds, and berries; pet food; and many types of human food including unattended picnic items and garbage.

Juvenile Diet: ^^^^

Special Adaptations for Getting Prey: Adapts well to different and changing environments, probably because of the variety of ways it finds food. Follows wolves and cougars to scavenge on leftovers. Follows harvesting machinery to catch insects and rodents. Uses a variety of methods to attack and acquire food once it is found.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Apparently monogamous, but no data from studies with marked birds, no paternity studies; 5 observations of extra-pair copulations.

Mating Season: March to April

Courtship: Additionally, male generally holds more erect posture near female. In direct display to female, also fluffs out head, bows to female while spreading wings and tail, flashes white nictitating membranes, makes gurgling or choking sounds, and snaps bill. Aerodynamic flights, including dives and rolls, could serve to attract mate, but role not known. Female displays fuzzy fluffed-out head, while making knocking calls and flaring the tail and spreading the wings.

Territoriality: HOME RANGE

Mating: Not much of a display associated with copulation. Male edges up to female performing Gurgling and Choking displays, female crouches, vibrating wings, and male mounts. Sometimes Precopulatory Display includes allopreening and jumping immediately prior to copulation, and Postcopulatory Display involves aerobatic flights and a “musical, vibrating call”

Nest Placement: Common Ravens build their nests on cliffs, in trees, and on structures such as power-line towers, telephone poles, billboards, and bridges. Cliff nests are usually under a rock overhang. Tree nests tend to be in a crotch high in the tree, but below the canopy and typically farther down in a tree than a crow’s nest would be.

Nest Description: Males bring some sticks to the nest, but most of the building is done by females. Ravens break off sticks around 3 feet long and up to an inch thick from live plants to make up the nest base, or scavenge sticks from old nests. These sticks, and sometimes bones or wire as well, are piled on the nest platform or wedged into a tree crotch, then woven together into a basket. The female then makes a cup from small branches and twigs. The cup bottom is sometimes lined with mud, sheep’s wool, fur, bark strips, grasses, and sometimes trash. The whole process takes around 9 days, resulting in an often uneven nest that can be 5 feet across and 2 feet high. The inner cup is 9-12 inches across and 5-6 inches deep. Nests are often reused, although not necessarily by the same birds, from year to year.

Egg-Laying: Clutch Size: 3-7 eggs Number of Broods: 1 brood Egg Length: 1.7-2.0 in (4.4-5.2 cm) Egg Width: 1.2-1.4 in (3.1-3.6 cm) Incubation Period: 20-25 days Nestling Period: 28-50 days Egg Description: Green, olive, or blue, often mottled with dark greenish, olive, or purplish brown.

Hatching and Incubation/Gestation: Naked except for sparse tufts of grayish down, eyes closed, clumsy, and looking like “grotesque gargoyles” according to a 1945 description.

Development: At hatching, chicks are orange to pink, unfeathered or covered very sparsely with gray down, and sightless. Nestlings have pale blue irides, which change to gray within 2 mo. Hard palate, soft palate, tongue, and mouth lining are all deep pink to red. ALTRICIAL

Parental Care: Both parents feed young; in n. Canada, male did most feeding of nestlings and mate during chicks' first 2 wk. No significant difference in apportionment of food among individual young. Male and female made equal number of feeding visits during first 15 d, then male made 32% after female stopped brooding, except on day of fledging, when male made 67%.

Lifespan: 10 – 15 years

Conservation:

Official Federal Status: Least Concern

Special Statuses in Individual States: NONE

Threats: Common Raven populations increased across the continent between 1966 and 2014, according to the North American Breeding Bird Survey. Partners in Flight estimates their global breeding population to be 20 million with 18% living in Canada, 9% in the U.S., and 3% in Mexico. They rate a 6 out of 20 on the Continental Concern Score and are not on the 2014 State of the Birds Watch List. Common Ravens tend to do well around people, profiting from the garbage, crops, irrigation, and roadkill that accompany us. Their numbers are generally stable or rising in western North America. As eastern forests were cut down in the nineteenth and twentieth centuries ravens disappeared from most of eastern North America, but they are beginning to return to the Northeast as forest cover regenerates. In many situations ravens are unwelcome: they have been shot at, poisoned, or harassed in attempts to preserve crops (and occasionally livestock such as lambs). Ravens sometimes prey on threatened species, including Least Terns, Marbled Murrelets, and desert tortoises, and wildlife biologists have spent a lot of effort and ingenuity in trying to thwart ravens to help those species, with mixed success.

Conservation Efforts: ^^^^^

Extra Facts:

1. The Common Raven is an acrobatic flier, often doing rolls and somersaults in the air. One bird was seen flying upside down for more than a half-mile. Young birds are fond of playing games with sticks, repeatedly dropping them, then diving to catch them in midair.
2. Breeding pairs of Common Ravens hold territories and try to exclude all other ravens throughout the year. In winter, young ravens finding a carcass will call other ravens to the prize. They apparently do this to overwhelm the local territory owners by force of numbers to gain access to the food.
3. Common Ravens are smart, which makes them dangerous predators. They sometimes work in pairs to raid seabird colonies, with one bird distracting an incubating adult and the other waiting to grab an egg or chick as soon as it's uncovered. They've been seen waiting in trees as ewes give birth, then attacking the newborn lambs.
4. They also use their intellect to put together cause and effect. A study in Wyoming discovered that during hunting season, the sound of a gunshot draws ravens in to investigate a presumed carcass, whereas the birds ignore sounds that are just as loud but harmless, such as an airhorn or a car door slamming.
5. People the world over sense a certain kind of personality in ravens. Edgar Allan Poe clearly found them a little creepy. The captive ravens at the Tower of London are beloved and perhaps a little feared: legend has it that if they ever leave the tower, the British Empire will crumble. Native people of the Pacific Northwest regard the raven as an incurable trickster, bringing fire to people by stealing it from the sun, and stealing salmon only to drop them in rivers all over the world.
6. Increasing raven populations threaten some vulnerable species including desert tortoises, Marbled Murrelets, and Least Terns. Ravens can cause trouble for people too. They've been implicated in causing power outages by contaminating insulators on power lines, fouling satellite dishes at the Goldstone Deep Space Site, peeling radar absorbent material off buildings at the China Lake Naval Weapons center, pecking holes in airplane wings, stealing golf balls, opening campers' tents, and raiding cars left open at parks.
7. Common Ravens can mimic the calls of other bird species. When raised in captivity, they can even imitate human words; one Common Raven raised from birth was taught to mimic the word "nevermore."
8. The oldest known wild Common Raven was at least 22 years, 7 months old. It was banded and found in Nova Scotia.

Notable Species:

1. *C. c. kamtschaticus* - Resident from ne. Siberia eastward through Aleutian Is. to Chignik, Alaska Peninsula, and northeast to Cape Newenham, Alaska.
2. *C. c. principalis* - Resident from n. Alaska across Canada to n. Greenland south to central British Columbia, central Saskatchewan, n. Wisconsin, and through Appalachian Mtns. to n. Georgia.
3. *C. c. sinuatus* - Resident in w. North America from se. British Columbia and Montana south through the Great Plains and Great Basin (east of California) and mainland Mexico to Nicaragua.
4. *C. c. clarionensis* - Resident from n. California south through Baja California and on Clarion I. in Revillagigedo Is., Mexico. Occurs east in Mojave Desert to s. Nevada and w. Arizona.