

## AMERICAN CROW - CORVUS BRACHYRHYNCHOS

American crows are common, widespread, and susceptible to the West Nile virus, making them useful as a bioindicator to track the virus's spread. Direct transmission of the virus from American crows to humans is unheard of and unlikely. Crows are extremely smart and even have the capability of counting and individually recognizing human faces.

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

### **Habitat:**

**Biomes:** American Crows are highly adaptable and will live in any open place that offers a few trees to perch in and a reliable source of food. Regularly uses both natural and human created habitats, including farmland, pasture, landfills, city parks, golf courses, cemeteries, yards, vacant lots, highway turnarounds, feedlots, and the shores of rivers, streams, and marshes. Crows tend to avoid unbroken expanses of forest, but do show up at forest campgrounds and travel into forests along roads and rivers. Avoids deserts.

### **Distribution:**

**In US:** The range of the American crow now extends from the Pacific Ocean to the Atlantic Ocean in Canada, on the French islands of Saint-Pierre and Miquelon, south through the United States, and into northern Mexico.

**In Other Countries:** NONE

**Holistic Description:** American Crows are familiar over much of the continent: large, intelligent, all-black birds with hoarse, cawing voices. They are common sights in treetops, fields, and roadsides, and in habitats ranging from open woods and empty beaches to town centers. They usually feed on the ground and eat almost anything – typically earthworms, insects and other small animals, seeds, and fruit but also garbage, carrion, and chicks they rob from nests. Their flight style is unique, a patient, methodical flapping that is rarely broken up with glides.

**Species Richness:** 4 SUBSPECIES

**Population Dynamic:** American crows are protected internationally by the Migratory Bird Treaty Act of 1918. Despite attempts by humans in some areas to drive away or eliminate these birds, they remain widespread and very common. The number of individual American crows is estimated by BirdLife International to be around 31,000,000. The large population, as well as its vast range, are the reasons why the American crow is considered to be of least concern, meaning that the species is not threatened.

### **Evolution and Systematics:**

**Evolution:** Fossils of Corvus brachyrhynchus have been found in numerous late Pleistocene (<0.5 million years before present) and prehistory sites from across North America north of Mexico.

**Systematics:** Individuals in w. North America (C. b. hesperis) overall smaller than those to the east; populations in extreme s. Florida (C. b. pascuus) have relatively large bills and, especially, feet; appear to differ behaviorally from birds to the north, apparently never flocking, inhabiting rural (“back country”) areas, and possessing a greater vocal repertoire, including yodeling.

**Number of Species:** 4 SUBSPECIES

**Number of Genera:** 4 SUBSPECIES

### **Physical Characteristics:**

**Size and Length:** Length: 15.8-20.9 in (40-53 cm) Weight: 11.2-21.9 oz (316-620 g)

**Wingspan:** 33.5-39.4 in (85-100 cm)

**Coloration:** American Crows are all black, even the legs and bill. When crows molt, the old feathers can appear brownish or scaly compared to the glossy new feathers.

**General Body Features:** A large, long-legged, thick-necked bird with a heavy, straight bill. In flight, the wings are fairly broad and rounded with the wingtip feathers spread like fingers. The short tail is rounded or squared off at the end.

**Special Features of the Body:** They have been observed alerting coyotes, wolves and other such predators to carcasses that they themselves were incapable of tearing open. Once opened, they themselves have access to the soft tissue inside and can share the meal.

**Special Features of the Head and Sensory Organs:** Straight beaks of intermediate length are particularly versatile and are often found on omnivorous birds like crows, ravens, jays, nutcrackers, and magpies.

**Dentition:** BEAK/LAMELLAE/GIZZARD

*Special Features of the Limbs and Digits:* Hide and store food from one season to the next. Use past experiences to predict the behavior of those in their species. Mob Mentality: Crows are often seen gathering in "mobs" to harass intruders or potential predators, such as cats and birds of prey. Establish the flock's pecking order by "sparring" in mid-air. Crows are said to change their entire migration pattern to avoid places where a crow had been killed in the past. NOT REALLY LIMBS AND DIGITS.

*Any Special Internal Anatomy:* Crows have been recorded to use their wit to steal prey from much larger predators, including Bald Eagles and other large bird of prey, as well as from wolves and even bears. Larger Ravens have been observed picking up and carrying off bags of trash, so that they could eliminate competition, and explore the inside at a location and a time of their choosing.

*Sexual Dimorphisms:* Sexes alike except male slightly larger than female.

*Differences Between Juvenile Stage and Adult:* Immatures (3–15 mo old) like adults but plumage less glossy and feathers of back, wings (particularly remiges), and tail gradually fading to brownish, contrasting with remaining blackish plumage. In the hand, outer rectrices also average narrower and more pointed in immature than adults. Juveniles (1–3 mo after fledging; before Prebasic I molt) grayish black with little gloss; looser, fluffier feathers than older birds; and blue to gray iris.

### **Behavior:**

*Diurnal, Nocturnal, or Crepuscular:* Diurnal

*Activity:* American Crows are highly social birds, more often seen in groups than alone. In addition to roosting and foraging in numbers, crows often stay together in year-round family groups that consist of the breeding pair and offspring from the past two years. The whole family cooperates to raise young. Winter roosts of American Crows sometimes number in the hundreds of thousands. Often admired for their intelligence, American Crows can work together, devise solutions to problems, and recognize unusual sources of food. Some people regard this resourcefulness and sociality as an annoyance when it leads to large flocks around dumpsters, landfills, and roosting sites; others are fascinated by it. American Crows work together to harass or drive off predators, a behavior known as mobbing.

*Locomotion:* Strides with pronounced waddle, toes pointing slightly inward. Hops in corvid fashion when in a hurry, such as when chasing prey—one foot hitting the ground earlier and slightly ahead of the other. Flies with regular wing beat. Flight speed 40–51 km/h, 48 km/h. Heart rate during flight 10 beats/s.

*Communication and Perception:* The American Crow is not known for the beauty of its song, a series of loud caws. You may also hear crows making a "subsong": a mixture of hoarse or grating coos, caws, rattles, and clicks. These are arranged in sequences that can be many minutes long, given quietly and with a rambling, improvised quality.

*Home Range:* Territory size varies widely among studies cited below, from 0.72 ha/pair. Territorial encounters in Florida most common early in the morning, from prior to nest-building until copulatory behavior ceased in early part of incubation, a period in which the breeding male took the lead; after this the male's aggressiveness declined, while the female's increased. Encounters occurred on the ground, in trees, in aerial melees and pursuit flights, circular flights that marked territorial boundaries, and treetop-sitting. Attacks on neighbors often followed after the crows in a group first bunched together.

*Degree of Sociality:* Family (parents, offspring, and immigrants from nearby families) is social unit throughout the year in Oklahoma; this may be obscured in regions where birds in large roosts feed in large flocks on abundant food. In populations with helpers, social unit is the cooperatively breeding group. To what extent the family remains together in migratory crows, and for how long, is unknown.

*Level of Aggression:* Avoids most physical contact through sound and body language. Conflicts between neighboring groups uncommon, and aggression minimal, except in late winter and spring, when vocalizations and patrol flights occur. In combat, mostly over food and territorial trespass, 2 opponents jump-fly at each other, belly to belly, pecking and clawing, or they stand near each other and 1 tries to grasp the other by extending a foot; both birds may lie on their sides trying to grab each other's feet, or 1 bird stands on belly of other.

*Migration:* Short-distance migrant or resident. Most of the crows that breed in Canada winter in the United States, and no crows regularly winter in Mexico.

### **Predators:**

*Predators:* Great Horned Owl, Raccoons, Red-shouldered Hawk, Cooper's Hawk, Domestic Cat, Golden Eagle, Bald Eagle, Northern Goshawk, Great Horned Owl, Red-tailed Hawk, Merlin, Barred Owl.

*Anti-Predator Defenses:* Mobs perched and flying predators. Mobbing calls attract neighboring crows to the site; the collective noise is impressive. Kilham counted 136 crows mobbing one Great Horned Owl. When mobbing in flight, stays above the predator and dives at it, giving the Dive-Attack Call at the bottom of the dive, before pulling up sharply. Stays in flight above Northern Goshawks and does not dive on them.

### **Diet and Nutrition:**

**Adult Diet:** American Crows eat a vast array of foods, including grains, seeds, nuts, fruits, berries, and many kinds of small animals such as earthworms and mice. They eat many insects, including some crop pests, and also eat aquatic animals such as fish, young turtles, crayfish, mussels, and clams. A frequent nest predator, the American Crow eats the eggs and nestlings of many species including sparrows, robins, jays, terns, loons, and eiders. Also eats carrion and garbage.

**Juvenile Diet:** ^^^^^^

**Special Adaptations for Getting Prey:** Opportunistic. Forages alone, in pairs, in families, or in small to large flocks. Obtains most food on the ground by walking, sometimes hopping when sees prey at a distance. Collects food on surface of the ground or vegetation; probes with bill into turf; flicks aside debris, and grabs or tilts larger objects, such as dry cow pies, sideways or forward with bill, to let them fall over and expose hidden food. Digs with bill in soil, sand, or garbage to expose food. Digs pits about 2 cm deep when foraging for clams.

### **Reproduction:**

**Mode of Reproduction:** Monogamous

**Mating System:** Monogamous

**Mating Season:** March to July

**Courtship:** Courtship display, if it exists, is rare, judging by the paucity of reports on the subject. Allopreening, often actively solicited by either mate, occurs regularly, but largely ceases during incubation. Billing, seen infrequently, involves a mated pair gently fencing with their bill tips, and bill-grasping.

**Territoriality:** HOME RANGE

**Mating:** Males sometimes pick up objects as part of copulatory behavior. During copulation, male settles on female, waving his outstretched wings; female stands and vibrates her tail up and down while the male works his tail under hers. Loud, hoarse calls by female, audible 250 m away, heard during 13 of 30 copulations seen. Copulations occur on the ground, in trees, and on nests; last from 4 to 12 s. Reverse mounting occurs.

**Nest Placement:** Crows typically hide their nests in a crotch near the trunk of a tree or on a horizontal branch, generally towards the top third or quarter of the tree. They prefer to nest in evergreens, but will nest in deciduous trees when evergreens are less available.

**Nest Description:** Both members of a breeding pair help build the nest. Young birds from the previous year sometimes help as well. The nest is made largely of medium-sized twigs with an inner cup lined with pine needles, weeds, soft bark, or animal hair. Nest size is quite variable, typically 6-19 inches across, with an inner cup about 6-14 inches across and 4-15 inches deep.

**Egg-Laying:** Clutch Size: 3-9 eggs Number of Broods: 1-2 broods Egg Length: 1.4-1.9 in (3.6-4.7 cm) Egg Width: 1.0-1.2 in (2.6-3.1 cm) Incubation Period: 16-18 days Nestling Period: 20-40 days Egg Description: Pale bluish-green to olive green with blotches of brown and gray toward the large end.

**Hatching and Incubation/Gestation:** Naked except for sparse tufts of grayish down, eyes closed, clumsy.

**Development:** Altricial (blind, helpless), sparsely covered in down, and nidicolous (remain in nest until they can fly). Mass of average nestling at hatching in Saskatchewan 15.6 g.

**Parental Care:** At first, male and helpers bring all food while female broods young. Female may take some of the food and eat it or feed the nestlings. As nestlings age, female spends less time brooding and participates more in feeding young. Having helpers did not result in better survival to the next breeding season for breeding male and female crows. Food carried in ante lingual pouch. Adults appear to pass much saliva to the nestlings along with the food, and they sometimes dunk food in water on way to nest.

**Lifespan:** Around 10 to 15 years.

### **Conservation:**

**Official Federal Status:** Least Concern

**Special Statuses in Individual States:** NONE

**Threats:** American Crows are numerous and their populations were stable between 1966 and 2014, according to the North American Breeding Bird Survey. Partners in Flight estimates a global breeding population at 27 million, with 88% spending part of the year in the U.S., and 37% in Canada. They rate a 6 out of 20 on the Continental Concern Score and are not on the 2014 State of the Birds Watch List. The American Crow is extremely susceptible to West Nile virus, which was introduced into North America in 1999. Virtually all crows that contract West Nile die within one week, and few seem able to survive. No other North American bird has died at the same rate from the disease, and the loss of crows in some areas has been severe.

**Conservation Efforts:** ^^^^^^

### **Extra Facts:**

1. American Crows congregate in large numbers in winter to sleep in communal roosts. These roosts can be of a few hundred up to two million crows. Some roosts have been forming in the same general area for well over 100 years. In the last few decades some of these roosts have moved into urban areas where the noise and mess cause conflicts with people.
2. Young American Crows do not breed until they are at least two years old, and most do not breed until they are four or more. In most populations the young help their parents raise young for a few years. Families may include up to 15 individuals and contain young from five different years.
3. In some areas, the American Crow has a double life. It maintains a territory year round in which the entire extended family lives and forages together. But during much of the year, individual crows leave the home territory to join large flocks at dumps and agricultural fields, and to sleep in large roosts in winter. Family members go together to the flocks, but do not stay together in the crowd. A crow may spend part of the day at home with its family in town and the rest with a flock feeding on waste grain out in the country.
4. Despite its tendency to eat roadkill, the American Crow is not specialized to be a scavenger, and carrion is only a very small part of its diet. Though their bills are large, crows can't break through the skin of even a gray squirrel. They must wait for something else to open a carcass or for the carcass to decompose and become tender enough to eat.
5. Crows are crafty foragers that sometimes follow adult birds to find where their nests are hidden. They sometimes steal food from other animals. A group of crows was seen distracting a river otter to steal its fish, and another group followed Common Mergansers to catch minnows the ducks were chasing into the shallows. They also sometimes follow songbirds as they arrive from a long migration flight and capture the exhausted birds. Crows also catch fish, eat from outdoor dog dishes, and take fruit from trees.
6. Crows sometimes make and use tools. Examples include a captive crow using a cup to carry water over to a bowl of dry mash; shaping a piece of wood and then sticking it into a hole in a fence post in search of food; and breaking off pieces of pine cone to drop on tree climbers near a nest.
7. The oldest recorded wild American Crow was at least 16 years 4 months old when it was recaptured and rereleased during a banding operation in New York. A captive crow in New York lived to be 59 years old.
8. 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."

**Notable Species:**

1. C. b. Brachyrhynchos - E. North America (northern populations migratory) from sw. Northwest Territories east to Newfoundland south to e. Texas and s. New Jersey.
2. C. b. Paulus - Resident e. and se. U.S. from Delaware and Maryland south through s. and e. West Virginia, se. Kentucky, and e. Tennessee and southwestward to se. Texas including Louisiana, se. Arkansas, and Mississippi.
3. C. b. Pascuus - Resident in Florida Peninsula. Has proportionately large feet and relatively long tarsus and bill. Characteristics best developed in southern portion of peninsula.
4. C. b. Hesperis - Resident (northern populations migratory) from n. British Columbia, central Alberta, central Saskatchewan south to nw. Baja California, central Arizona, and n.-central New Mexico.