CALIFORNIA CONDOR - GYMNOGYPS CALIFORNIANUS

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Accipitriformes Family: Cathartidae Genus: Gymnogyps Species: G. californianus

Habitat:

Biomes: California Condors have been reintroduced to mountains of southern and central California, Arizona, Utah, and Baja California. Nesting habitats range from scrubby chaparral to forested mountain regions up to about 6,000 feet elevation. Foraging areas are in open grasslands and can be far from primary nesting sites, requiring substantial daily commutes. Condors glide and soar when foraging, so they depend on reliable air movements and terrain that enables extended soaring flight. They are so heavy that they can have trouble taking off, so they often use open, windy areas where they can run downhill or launch themselves from a cliff edge or exposed branch to get airborne. Before captive breeding programs began in the 1980s all remaining condors foraged in an area encompassing about 2,700 square miles; this range is now expanding as the wild population grows. Young condors learn the full extent of their range partly from other more experienced birds.

Distribution:

In US: The species has since been reintroduced to northern Arizona and southern Utah (including the Grand Canyon area and Zion National Park), the coastal mountains of central and southern California, and northern Baja California.

In Other Countries: NONE

Holistic Description: The spectacular but endangered California Condor is the largest bird in North America. These superb gliders travel widely to feed on carcasses of deer, pigs, cattle, sea lions, whales, and other animals. Pairs nest in caves high on cliff faces. The population fell to just 22 birds in the 1980s, but there are now some 230 free-flying birds in California, Arizona, and Baja California with another 160 in captivity. Lead poisoning remains a severe threat to their long-term prospects.

Species Richness: NO SUBSPECIES

Population Dynamic: At the time of human settlement of the Americas, the California condor was widespread across North America; condor bones from the late Pleistocene have been found at the Cutler Fossil Site in southern Florida. However, at the end of the last glacial period came the extinction of the megafauna that led to a subsequent reduction in range and population. Five hundred years ago, the California condor roamed across the American Southwest and West Coast. Faunal remains of condors have been found documented in Arizona, Nevada, New Mexico, and Texas. The Lewis and Clark Expedition of the early 19th century reported on their sighting and shooting of California condors near the mouth of the Columbia River.

Evolution and Systematics:

Evolution: Pleistocene records are known for California, Nevada, Arizona, New Mexico, Texas, Florida, and New York in the U.S. and from Nuevo León, Mexico. The New York record was from a boreal bog deposit near Buffalo and was associated with flora and fauna of the taiga, suggesting that fossil condor materials may ultimately be identified from many more locations in the e. U.S. and Canada. Multiple discoveries of condor bones have also occurred on several of the Channel Is. of California. Carbon and nitrogen isotope analysis suggest that California Condors once relied on marine mammals as a food source and might have found attractive food supplies in seabird and marine mammal colonies, much as has been known for Andean Condors on offshore islands of Peru.

Systematics: NONE

Number of Species: NO SUBSPECIES

Number of Genera: NO SUBSPECIES

Physical Characteristics:

Size and Length: Length: 46.1-52.8 in (117-134 cm) Weight: 246.9-349.2 oz (7000-9900 g)

Wingspan: 109.1 in (277 cm)

Coloration: Adults are black with striking white patches under the wings. The naked head and neck are yellowish orange. Immatures have dark heads, grayer necks, and mottled grayish instead of clear white patches under the wings. Adult coloration is reached at 6-8 years of age.

General Body Features: California Condors are the largest wild birds in North America. The wings are exceptionally long and broad, with long primary feathers giving a fingered look to the wingtips. In flight the body is noticeably bulky, the head appears small, and the tail is short and broad.

Special Features of the Body: Their wings are curved like a sail to catch warm thermals, or upward drafts of air. If the egg is removed, the pair will lay another to replace it, called "double clutching." Even their bald head exists so that food doesn't get caught in their feathers and grow infectious. The California condor has been around since the time of mammoths. Their

habitat used to stretch from California to New York, but they only survived on the west coast by eating the washed-up carcasses of whales.
Special Features of the Head and Sensory Organs: California condors have many survival adaptations that are key to their survival. They lack a sense of smell, so they developed keen eyesight to look for carrion below.
Dentition: Beak/Lamellae/Gizzard
Special Features of the Limbs and Digits: NONE
Any Special Internal Anatomy: Eating carrion also provides a danger because bacteria might infect the internal organs. However, the condors have an advanced immune system to fight this bacteria. They rub their heads on rocks and bathe frequently in still, shallow water to keep clean.
Sexual Dimorphisms: Sexes similar in size and coloration, although males (8.8 kg) average slightly heavier than females (8.1 kg). Substantial sexual size overlap makes sexing on the basis of measurements unreliable.
Differences Between Juvenile Stage and Adult: The juvenile is mostly a mottled dark brown with blackish coloration on the head. It has mottled gray instead of white on the underside of its flight feathers.
Behavior:
Diurnal, Nocturnal, or Crepuscular: Diurnal
Activity: California Condors can cover hundreds of miles in one flight as they soar for hours at a time, looking for carrion. These long-distance travelers pair off during the breeding season but are highly social at roosting, bathing, and feeding sites; individuals recognize one another. Generally, condors are not aggressive towards each other, though dominant birds will threaten opponents by standing erect, inflating air sacs in the head and neck, opening the bill and eventually lunging toward the opponent. Pairs are monogamous. They share nesting duties nearly equally, stay together throughout the year, and usually endure until one member dies. Courtship involves coordinated pair flights, mutual preening, and displays. Young are dependent on their parents for at least 6 months after fledging; consequently most condors do not nest in successive years. Condors bathe frequently; mates and chicks help groom each other's feathers and skin. They clean up after feeding by rubbing the head and neck on a nearby rock or other surface. Condors sun themselves, which helps dry feathers prior to flight and helps the bird warm up. Condors roost together on horizontal limbs of tall trees, on ledges, or in cliff potholes. Sleeping condors sometimes lie prone on their perch with their heads tucked behind their shoulder blades. Given their size, condors are not normally hunted by other animals, except humans and occasionally Golden Eagles; however, nestlings and eggs are at risk of predation from Common Ravens, Golden Eagles, and black bears. Young condors play, especially as late-stage nestlings, mock-capturing all sorts of objects and vegetation, and leaping about in seeming exuberance.
Locomotion: Walks with alternate strides of the legs; remarkably agile on the ground, capable of rapid running on occasion. Takeoffs from the ground are characteristically initiated by running and hopping. Feet have relatively short claws and are adapted primarily for walking, not gripping objects. In flight, normally flaps only when taking off or landing. However, long bouts of flapping flight are sometimes seen in individuals chasing off Golden Eagles, Common Ravens, or other condors from their nesting areas. Extended flight is by soaring; individuals either glide in uplifts along topographic features or progress by alternately circling for altitude in thermals and losing altitude in long glides.
Communication and Perception: Condors are usually silent, but can issue a variety of hisses and snorts particularly when defending nest sites. Newborn chicks hiss, wheeze, and grunt at adults. Wing movements by these giant birds can generate sounds heard over a half-mile away.
Home Range: Not known to defend feeding regions from other condors; defense of nesting areas varies. In most cases, intrusions of nonresident individuals into the immediate vicinity of active nests have not been met with agonistic behavior. However, 2 pairs in 1981–1982 vigorously defended adjacent territories centered on nests that were about 2.5 km apart, and maintained a well-defined boundary between territories. Intrusions of one pair into the territory of the adjacent pair were met with aggressive aerial chases and occasional instances of birds knocking one another off perches. All four birds were involved in these interactions, and intense aggression between these pairs may have been a reflection of both being homosexual pairs of males.
Degree of Sociality: California Condors are highly gregarious at roosts, bathing sites, and feeding sites, intermittently gregarious in foraging behavior, and mostly dispersed as pairs in breeding biology. The birds are generally tolerant of one another overall and obviously attracted to one another in many circumstances. Nevertheless, large concentrations of birds at food sources, roosts, or bathing sites are ephemeral, and birds generally soon disperse into smaller groups or individuals.
Level of Aggression: Not highly aggressive to one another; commonly mingle at close range without overt antagonism. Nevertheless, intraspecific aggression over food (far less than is normal for Golden Eagles) sometimes occurs at carcasses. Also seen occasionally between pair members around nests in nearly all recent pairs. In aggressive intrapair encounters, males usually, but not always, dominant to females, and in many instances aggression has evidently resulted from

competition over access to eggs or chicks. In other instances, causes of aggression unknown. Aggressive interactions involve chases in flight and on the ground, supplanting one another at perches, and jabbing with opened bill in flight and on the ground.
Migration: NONE
Predators:
Predators: Common Ravens, Golden Eagles, Black Bears, Coyote, Mountain Lion.
Anti-Predator Defenses: The attempt failed because the nest cave was on a cliff too precipitous for the bear to scale successfully.
Diet and Nutrition:
Adult Diet: California Condors eat carrion of land and marine mammals such as deer, cattle, pigs, rabbits, sea lions, and whales. They swallow bone chips and marine shells to meet their calcium needs. They favor small to medium-sized carcasses, probably because smaller bones are easily consumed and digested. Condors locate carcasses with their keen eyesight (not by smell) by observing other scavengers assembled at a carcass. Once they land they take over the carcass from smaller species, but they are tolerant of each other and usually feed in groups. Condors are wary of humans while feeding, which is probably why they do not use roadkill as a food source. In captivity, condors consume 5–7 percent of their body mass per day to maintain their weight, but because their crop (an enlarged part of the esophagus) can hold 3 pounds of food, they may only have to eat every 2–3 days. Young are fed by regurgitation.
Juvenile Diet: ^^^^^
Special Adaptations for Getting Prey: NONE, LOOK AT FEATURES
Reproduction:
Mode of Reproduction: Monogamous
Mating System: While the vast majority of California Condors are strictly monogamous, recent mating arrangements included trios (two males one female in Arizona, two females on male in c. California), and extra-pair copulations (eggs parented by the female of a breeding pair, but not the male). Homosexual pair behavior has also been noted in the reintroduced population.
Mating Season: Late-Fall to Early-Spring
Courtship: Courtship involves three major components, often performed in connection with nest-site visitations: coordinated pair flights in the nesting territory, mutual grooming, and courtship displays while perched. In coordinated pair flights, individuals circle and cruise through their territories, soaring closely side-by-side. Depending on an observer's position, the birds often appear to fuse optically into a single flying object larger than either bird alone. This effect may serve to advertise occupancy of the birds' territory more effectively and to a greater distance than if they flew far apart. Pair flights are one of the first signs of incipient pair formation.
Territoriality: HOME RANGE
Mating: NONE
Nesting: Condors nest mainly in natural cavities or caves in cliffs, though they sometimes also use trees, such as coast redwood and, historically, the giant sequoia. (As the wild population grows, there is the possibility they may return to the sequoia groves in the Sierra Nevada.) Condors have multiple nesting sites and may switch sites between years. Females make the final decision on which nest location to use. Condors lay their eggs directly on the dirt floor of a cliff ledge or cave, or they construct loose piles of debris from whatever is available at the nest site, such as gravel, leaves, bark, and bones. Nests have loosely defined boundaries and are usually about 3 feet across and up to 8 inches deep.
Egg-Laying: Egg Length: 3.6-4.7 in (9.2-12 cm) Egg Width: 2.4-2.7 in (6.2-6.8 cm) Incubation Period: 53-60 days Nestling Period: 163-180 days Egg Description: Pale blue-green bleaching to white or creamy.
Hatching and Incubation/Gestation: Helpless, covered in white down with eyes open. Newly hatched chicks have most of their bodies covered in white down, but have naked heads and necks, usually pale yellow-orange in color. Eyes are open at hatching. Wild chicks receive their first feedings from their parents within a few hours of hatching and are brooded almost constantly except during feedings. ALTRICIAL.
Development: NONE
Parental Care: Brooding of chicks is nearly constant for the first 2 wk after hatching, then shows a rapid decline in the next 2 wk and ceases during the day at about 1 mo of age. Consistent brooding overnight ceases at about the same time, but adults continue erratic nocturnal attendance of their nests for another 2–3 wk. The last recorded overnight attendance by an adult at a nest was on the night of the 55th day of the nestling period. Adults' regurgitative feedings of chicks are conducted within their nest caves in the early stages and each normally consists of several bouts of contact interspersed with breaks. Adults fed their chicks about once every 2 h in the first week, but by the latter stages of the nestling period, chicks received an average

of only about one feeding every 10 h and were given no feedings at all on about one-quarter to one-third of the days. Occasionally, chicks even went without food for 2 consecutive days, although this occurred only 13 times in 605 observation days during the nestling periods of the 5 most intensively studied nests of the 1980s.
Lifespan: Around 4 years.
Conservation:
Official Federal Status: Critically Endangered
Special Statuses in Individual States: NONE
Threats: California Condors are critically endangered; the species is on the 2016 State of North America's Birds' Watch List, which includes bird species that are most at risk of extinction without significant conservation actions to reverse declines and reduce threats. It rates a 20 out of 20 on the Continental Concern Score, and is a Tri-National Concern Species, and a U.S.-Canada Stewardship species. All of the more than 400 condors now alive are descended from 27 birds that were brought into captivity in 1987, in a controversial but successful captive breeding program. As of 2013, there were more than 230 individuals in the wild in California, Arizona, and Baja California. According to Partners in Flight, about 95% live in the U.S., and 5% in Mexico. The number has been rising steadily each year, as captive-bred birds are released and wild pairs fledge young from their own nests. More than 160 additional condors live in captivity at breeding programs at The Peregrine Fund, Los Angeles Zoo, and San Diego Zoo. Condors have benefited greatly from the Endangered Species Act and from aggressive efforts to breed them in captivity and re-release them into the wild, but the survival of the species is still dependent on human intervention. The major threat is lead poisoning, caused by ammunition fragments in carcasses they eat. Historically, reasons for their decline also included accidental poisoning from lead and from strychnine-laced carcasses left out for coyote control programs. Hunting by humans also had a substantial effect on condor populations. Condor recovery has been slow because of their slow reproductive rate: they produce only 1 egg every 1–2 years and do not achieve sexual maturity until age 6-8 years. Wild birds are still supplied with clean (lead-free) carcasses, but they also feed on their own, sometimes on lead-contaminated carcasses that can result in their deaths. To alleviate the lead-poisoning problem, workers catch each condor twice per year to test their blood lead levels; birds that test high are treated to remove the lead through a technique called chelation. In 2010 the Peregrine Fund reported that 72 percent of condors tested in the Vermilion Cliffs, Arizona, showed lead in the blood, and 34 condors had to be treated. The only route to self-sustaining wild populations will be by solving the lead-poisoning problem. Promising first steps have been taken, including a 2008 ban on lead ammunition used for hunting in the condor’s California range, and an innovative voluntary program in Arizona.
Conservation Efforts: ^^^^^
Extra Facts:

1. In the late Pleistocene, about 40,000 years ago, California Condors were found throughout North America. At this time, giant mammals roamed the continent, offering condors a reliable food supply. When Lewis and Clark explored the Pacific Northwest in 1805 they found condors there. Until the 1930s, they occurred in the mountains of Baja California.
2. One reason California Condor recovery has been slow is their extremely slow reproduction rate. Female condors lay only one egg per nesting attempt, and they don’t always nest every year. The young depend on their parents for more than 12 months, and take 6-8 years to reach maturity.
3. Condors soar slowly and stably. They average about 30 mph in flight and can get up to over 40 mph. They take about 16 seconds to complete a circle in soaring flight. By comparison, Bald Eagles and Golden Eagles normally circle in 12–14 seconds, and Red-tailed Hawks circle in about 8–10 seconds.
4. At carcasses, California Condors dominate other scavengers. The exception is when a Golden Eagle is present. Although the condor weighs about twice as much as an eagle, the superior talons of the eagle command respect.
5. Condors can survive 1–2 weeks without eating. When they find a carcass they eat their fill, storing up to 3 pounds of meat in their crop (a part of the esophagus) before they leave.
6. California Condors once foraged on offshore islands, visiting mammal and seabird colonies to eat carrion, eggs and possibly live prey such as nestlings.
7. In cold weather, condors raise their neck feathers to keep warm. In hot weather, condors (and other vultures) urinate onto a leg. As the waste evaporates, it cools off blood circulating in the leg, lowering the whole body temperature. Condors bathe frequently and this helps avoid buildup of wastes on the legs.
8. Adult condors sometimes temporarily restrain an overenthusiastic nestling by placing a foot on its neck and clamping it to the floor. This forceful approach is also a common way for an adult to remove a nestling’s bill from its throat at the end of a feeding.

9. Young may take months to perfect flight and landings. “Crash” landings have been observed in young four months after their first flight.
10. California Condors can probably live to be 60 or more years old—although none of the condors now alive are older than 40 yet.
11. What’s in a name? The name “condor” comes from cuntur, which originated from the Inca name for the Andean Condor. Their scientific name, Gymnogyps californianus, comes from the Greek words gymnos, meaning naked, and refers to the head, and gyps meaning vulture; californianus is Latin and refers to the birds’ range.

Notable Species: NONE