

= California condor =

The California condor (*Gymnogyps californianus*) is a New World vulture , the largest North American land bird . This condor became extinct in the wild in 1987 (all remaining wild individuals were captured) , but the species has 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 . Although other fossil members are known , it is the only surviving member of the genus *Gymnogyps* . The species is listed as critically endangered by the IUCN .

The plumage is black with patches of white on the underside of the wings ; the head is largely bald , with skin color ranging from gray on young birds to yellow and bright orange on breeding adults . Its huge 3 @. @ 0 m (9 @. @ 8 ft) wingspan is the widest of any North American bird , and its weight of up to 12 kg (26 lb) nearly equals that of the trumpeter swan , the heaviest among native North American bird species . The condor is a scavenger and eats large amounts of carrion . It is one of the world 's longest @-@ living birds , with a lifespan of up to 60 years .

Condor numbers dramatically declined in the 20th century due to poaching , lead poisoning , and habitat destruction . A conservation plan was put in place by the United States government that led to the capture of all the remaining wild condors which was completed in 1987 , with a total population of 27 individuals . These surviving birds were bred at the San Diego Zoo Safari Park and the Los Angeles Zoo . Numbers rose through captive breeding and , beginning in 1991 , condors were reintroduced into the wild . The California condor is one of the world 's rarest bird species : as of October 2014 there are 425 condors living wild or in captivity . The condor is a significant bird to many Californian Native American groups and plays an important role in several of their traditional myths .

= = Taxonomy = =

The California condor was described by English naturalist George Shaw in 1797 as *Vultur californianus* . It was originally classified in the same genus as the Andean condor (*V. gryphus*) , but , due to the Andean condor 's slightly different markings , slightly longer wings , and tendency to kill small animals to eat , the California condor has now been placed in its own monotypic genus . The generic name *Gymnogyps* is derived from the Greek *gymnos* / ?????? " naked " or " bare " , and *gyps* / ??? " vulture " , while the specific name *californianus* comes from its location in California . The word condor itself is derived from the Quechua word *kuntur* .

The exact taxonomic placement of the California condor and the other six species of New World vultures remains unclear . Though similar in appearance and ecological roles to Old World vultures , the New World vultures evolved from a different ancestor in a different part of the world . Just how different the two are is currently under debate , with some earlier authorities suggesting that the New World vultures are more closely related to storks . More recent authorities maintain their overall position in the order Falconiformes along with the Old World vultures or place them in their own order , Cathartiformes . The South American Classification Committee has removed the New World vultures from Ciconiiformes and instead placed them in Incertae sedis , but notes that a move to Falconiformes or Cathartiformes is possible .

= = Evolutionary history = =

The genus *Gymnogyps* is an example of a relict distribution . During the Pleistocene epoch , this genus was widespread across the Americas . From fossils , the Floridan *Gymnogyps kofordi* from the Early Pleistocene and the Peruvian *Gymnogyps howardae* from the Late Pleistocene have been described . A condor found in Late Pleistocene deposits on Cuba was initially described as *Antillovultur varonai* , but has since been recognized as another member of *Gymnogyps* , *Gymnogyps varonai* . It may even have derived from a founder population of California condors .

Today 's California condor is the sole surviving member of *Gymnogyps* and has no accepted

subspecies . However , there is a Late Pleistocene form that is sometimes regarded as a palaeosubspecies , *Gymnogyps californianus amplus* . Current opinions are mixed regarding the classification of the form as a chronospecies or a separate species *Gymnogyps amplus* . *Gymnogyps amplus* occurred over much of the bird 's historical range ? even extending into Florida ? but was larger , having about the same weight as the Andean condor . This bird also had a wider bill . As the climate changed during the last ice age , the entire population became smaller until it had evolved into the *Gymnogyps californianus* of today , although more recent studies by Syverson query that theory .

== Description ==

The adult California condor is a uniform black with the exception of large triangular patches or bands of white on the underside of the wings . It has gray legs and feet , an ivory @-@ colored bill , a frill of black feathers surrounding the base of the neck , and brownish red eyes . 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 .

The condor 's head and neck have few feathers , and the skin of the head and neck is capable of flushing noticeably in response to emotional state , a capability that can serve as communication between individuals . The skin color varies from yellowish to a glowing reddish @-@ orange . The birds do not have true syringeal vocalizations . They can make a few hissing or grunting sounds only heard when very close .

Contrary to the usual rule among true birds of prey , the female is slightly smaller than the male . Overall length can range from 109 to 140 cm (43 to 55 in) and wingspan from 2 @.@ 49 to 3 m (8 @.@ 2 to 9 @.@ 8 ft) . Their weight can range from 7 to 14 @.@ 1 kg (15 to 31 lb) , with estimations of average weight ranging from 8 to 9 kg (18 to 20 lb) . Wingspans of up to 3 @.@ 4 m (11 ft) have been reported but no wingspan over 3 @.@ 05 m (10 @.@ 0 ft) has been verified . Most measurements are from birds raised in captivity , so determining if there are any major differences in measurements between wild and captive condors is difficult .

California condors have the largest wingspan of any North American bird . They are surpassed in both body length and weight only by the trumpeter swan and the introduced mute swan . The American white pelican and whooping crane also have longer bodies than the condor . Condors are so large that they can be mistaken for a small , distant airplane , which possibly occurs more often than they are mistaken for other species of bird .

The middle toe of the California condor 's foot is greatly elongated , and the hind one is only slightly developed . The talons of all the toes are straight and blunt , and are thus more adapted to walking than gripping . This is more similar to their supposed relatives the storks than to birds of prey and Old World vultures , which use their feet as weapons or organs of prehension .

== Historic range ==

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 , climate changes associated with the end of the last glacial period and the extinction of the Pleistocene megafauna 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 .

== Habitat ==

The condors live in rocky shrubland , coniferous forests , and oak savannas . They are often found near cliffs or large trees , which they use as nesting sites . Individual birds have a huge range and

have been known to travel up to 250 km (160 mi) in search of carrion .

There are two sanctuaries dedicated to this bird , the Sisquoc Condor Sanctuary in the San Rafael Wilderness and the Sespe Condor Sanctuary in the Los Padres National Forest . These areas were chosen because of their prime condor nesting habitat .

= = Ecology and behavior = =

When in flight , the movements of the condor are remarkably graceful . The lack of a large sternum to anchor their correspondingly large flight muscles restricts them to being primarily soarers . The birds flap their wings when taking off from the ground , but after attaining a moderate elevation they largely glide , sometimes going for miles without a single flap of their wings . They have been known to fly up to speeds of 90 km / h (56 mph) and as high as 4 @, @ 600 m (15 @, @ 100 ft) . They prefer to roost on high perches from which they can launch without any major wing @-@ flapping effort . Often , these birds are seen soaring near rock cliffs , using thermals to aid them in keeping aloft .

The California condor has a long life span , reaching up to 60 years . If it survives to adulthood , the condor has few natural threats other than humans . Because they lack a syrinx , their vocal display is limited to grunts and hisses . Condors bathe frequently and can spend hours a day preening their feathers . Condors also perform urohidrosis , or defecate on their legs , to reduce their body temperature . There is a well @-@ developed social structure within large groups of condors , with competition to determine a pecking order decided by body language , competitive play behavior , and a variety of hisses and grunts . This social hierarchy is displayed especially when the birds feed , with the dominant birds eating before the younger ones .

= = = Diet = = =

Wild condors maintain a large home range , often traveling 250 km (160 mi) a day in search of carrion . It is thought that in the early days of its existence as a species , the California condor lived off the carcasses of the " megafauna " , which are now extinct in North America . They still prefer to feast on large , terrestrial mammalian carcasses such as deer , goats , sheep , donkeys , horses , pigs , cougars , bears , or cattle . Alternatively , they may feed on the bodies of smaller mammals , such as rabbits or coyotes , aquatic mammals such as whales and California sea lions , or salmon . Bird and reptile carcasses are rarely eaten . Since they do not have a sense of smell , they spot these corpses by looking for other scavengers , like eagles and smaller vultures , the latter of which cannot rip through the tougher hides of these larger animals with the efficiency of the larger condor . They can usually intimidate other scavengers away from the carcass , with the exception of bears , which will ignore them , and golden eagles , which will fight a condor over a kill or a carcass . In the wild they are intermittent eaters , often going for between a few days to two weeks without eating , then gorging themselves on 1 ? 1 @. @ 5 kilograms (2 @. @ 2 ? 3 @. @ 3 lb) of meat at once .

= = = Reproduction = = =

Condors begin to look for a mate when they reach sexual maturity at the age of six . To attract a prospective mate , the male condor performs a display , in which the male turns his head red and puffs out his neck feathers . He then spreads his wings and slowly approaches the female . If the female lowers her head to accept the male , the condors become mates for life . The pair makes a simple nest in caves or on cliff clefts , especially ones with nearby roosting trees and open spaces for landing . A mated female lays one bluish @-@ white egg every other year . Eggs are laid as early as January to as late as April . The egg weighs about 280 grams (10 oz) and measures from 90 to 120 mm (3 @. @ 5 to 4 @. @ 7 in) in length and about 67 mm (2 @. @ 6 in) in width . If the chick or egg is lost or removed , the parents " double clutch " , or lay another egg to take the lost one 's place . Researchers and breeders take advantage of this behavior to double the reproductive rate by taking the first egg away for puppet @-@ rearing ; this induces the parents to lay a second

egg , which the condors are sometimes allowed to raise .

The eggs hatch after 53 to 60 days of incubation by both parents . Chicks are born with their eyes open and sometimes can take up to a week to leave the shell completely . The young are covered with a grayish down until they are almost as large as their parents . They are able to fly after five to six months , but continue to roost and forage with their parents until they are in their second year , at which point the parents typically turn their energies to a new nest . Ravens are the main predatory threat to condor eggs , while golden eagles and bears are potential predators of condor offspring .

= = Conservation = =

= = = Obstacles to recovery = = =

In modern times , a wide variety of causes have contributed to the condor 's decline . Its low clutch size (one young per nest) , combined with a late age of sexual maturity , make the bird vulnerable to artificial population decline . Significant past damage to the condor population has also been attributed to poaching , especially for museum specimens , lead poisoning (from eating animals containing lead shot) , DDT poisoning , electric power lines , egg collecting , and habitat destruction . During the California Gold Rush , some condors were even kept as pets . The leading cause of mortality in nestling condors is the ingestion of trash that is fed to them by their parents .

In addition to this , cattle ranchers who observed condors feeding on the dead young of their cattle assumed that the birds killed the cattle . This fallacy led to the condor 's extirpation in some parts of the western United States . This belief was so deeply ingrained that the reintroduction of condors to the Grand Canyon was challenged by some cattle ranchers , who mistakenly believed that the bird hunted calves and lambs .

Unanticipated deaths among recent condor populations occurred due to contact with golden eagles , lead poisoning , and other factors such as power line collisions . Since 1994 , captive @-@ bred California condors have been trained to avoid power lines and people . Since the implementation of this aversion conditioning program , the number of condor deaths due to power lines has greatly decreased . Lead poisoning due to fragmented lead bullets in large game waste is a particularly big problem for condors due to their extremely strong digestive juices ; lead waste is not as much of a problem for other avian scavengers such as the turkey vulture and common raven . This problem has been addressed in California by the Ridley @-@ Tree Condor Preservation Act , a bill that went into effect July 1 , 2008 that requires that hunters use non @-@ lead bullets when hunting in the condor 's range . Blood lead levels in golden eagles as well as turkey vultures has declined with the implementation of the Ridley @-@ Tree Condor Preservation Act , demonstrating that the legislation has helped reduce other species ' lead exposures aside from the California condor .

In an article titled : " Condors or lead ammunition ? We can 't have both " published by The Ecologist in January 2015 , author Dawn Starin states : " Over 60 % of the adult and juvenile deaths (that is , excluding chicks and fledglings) in the wild population have been as a result of lead poisoning . " She continues : " Because condors have been known to live past the age of 50 , do not breed until they are at least six years old , and raise only one chick every other year , their populations cannot withstand the mortality rates caused by this neurological toxin . " According to epidemiologist Terra Kelly : " Until all natural food sources are free from lead @-@ based ammunition , lead poisoning will threaten recovery of naturally sustaining populations of condors in the wild . " The article also states : " The military doesn 't use lead , and if that isn 't a huge message I don 't know what is . " However , this statement must be taken in the context that the military has limited the use of lead ammunition at installations in the condor 's range , not service wide .

= = = California Condor Recovery Plan = = =

As the condor 's population continued to decline , discussion began about starting a captive breeding program for the birds . Opponents to this plan argued that the condors had the right to

freedom , that capturing all of the condors would change the species ' habits forever , and that the cost was too great . However , the project received the approval of the United States government , and the capture of the remaining wild condors was completed on Easter Sunday 1987 , when AC @-@ 9 , the last wild condor , was captured . At that point , there were only 22 condors in existence , all in captivity .

The goal of the California Condor Recovery Plan was to establish two geographically separate populations , one in California and the other in Arizona , each with 150 birds and at least 15 breeding pairs . As the Recovery Program works toward this goal the number of release sites has grown . There are three active release sites in California , one in Arizona and one in Baja California , Mexico .

The captive breeding program , led by the San Diego Wild Animal Park and Los Angeles Zoo , and with other participating zoos around the country , including the Oklahoma City Zoo and Botanical Garden , got off to a slow start due to the condor 's mating habits . However , utilizing the bird 's ability to double clutch , biologists began removing the first egg from the nest and raising it with puppets , allowing the parents to lay another egg .

As the number of condors grew , attention began to focus on releasing some back into the wild . In 1988 , the United States Fish and Wildlife Service began a reintroduction experiment involving the release of captive Andean condors into the wild in California . Only females were released , to eliminate the possibility of accidentally introducing a South American species into the United States . The experiment was a success , and all the Andean condors were recaptured and re @-@ released in South America . California condors were released in 1991 and 1992 in California , and again in 1996 in Arizona near the Grand Canyon . Though the birth rate remains low in the wild , their numbers are increasing steadily through regular releases of captive @-@ reared adolescents .

The California condor conservation project may be one of the most expensive species conservation projects in United States history , costing over \$ 35 million , including \$ 20 million in federal and state funding , since World War II . As of 2007 the annual cost for the condor conservation program was around \$ 2 @. @ 0 million per year . However , nesting milestones have been recently reached by the reintroduced condors . In 2003 , the first nestling fledged in the wild since 1981 . In March 2006 , a pair of California condors , released by Ventana Wildlife Society , attempted to nest in a hollow tree near Big Sur , California . This was the first time in more than 100 years in which a pair of California condors had been seen nesting in Northern California . As of November 2011 there were 394 individuals living , including 205 in the wild and the rest in the San Diego Wild Animal Park , the Los Angeles Zoo , the Oregon Zoo , and the World Center for Birds of Prey in Boise , Idaho . As of October 2010 , the wild condor population in its name state of California reached 100 individuals , and 73 wild condors in Arizona . As of May 2012 , the number of living individuals has reached 405 , with 179 living in captivity . By June 2014 , using data from the National Park Service , the condor population had reached 439 : 225 in the wild and 214 in captivity . Official statistics from the October 2014 USFWS record an overall population of 425 , of which 219 are wild and 206 are captive .

As the Recovery Program achieved milestones , a fifth active release site in Sierra de San Pedro Mártir National Park , Baja California , Mexico , was added to the three release sites in California (Big Sur , Pinnacles National Park and Bitter Creek National Wildlife Refuge) and the Vermilion Cliffs release site in Arizona . In early 2007 , a California condor laid an egg in Mexico for the first time since at least the 1930s . The population of the condors has risen due to these wild and also captive nestings . In June , 2016 , three chicks that were born in Chapultepec Zoo in Mexico City , were flown to Sierra de San Pedro Mártir National Park , Baja California , Mexico . In the spring of 2009 , a second wild chick was born in the Sierra de San Pedro Mártir National Park and was named Inyaa (" Sun " in the Kiliwa language) by local environmentalists . In 2014 , Condor # 597 , also known as " Lupine " , was spotted near Pescadero , a coastal community south of San Francisco . Lupine had been routinely seen at Pinnacles National Park after having been released into the wild at Big Sur the previous year . Younger birds of the Central California are seeking to expand their territory , which could mean that a new range expansion is possible for the more than 60 condors flying free in central California . Also in 2014 the first successful breeding in Utah was reported . A pair of condors

, who were released in Arizona , nested in Zion National Park and the hatching of one chick was confirmed .

= = = Condor Watch = = =

A crowdsourcing project called Condor Watch (CW) was started on April 14 , 2014 , hosted by the web portal Zooniverse . Volunteers are asked to examine motion @-@ capture images of California condors associated with release sites managed by the United States Fish and Wildlife Service , National Park Service and Ventana Wildlife Society . The tasks on the website include identifying tagged condors and marking the distance to feeding sources such as animal carcasses . Biologists can then use this data to deduce which birds are at risk of lead poisoning .

Condor Watch enables volunteers , or citizen scientists , to participate in active research . The project has up 175 @,@ 000 images to view and assess ? far more than the team could hope to view on their own . Lead scientist Myra Finkelstein believes volunteering is fun because it allows enthusiasts to track the " biographies " of individual condors . Citizen science has long been used in ornithology , for instance in the Audubon Society 's Christmas Bird Count , which began in 1900 and the breeding bird survey which began in 1966 . McCaffrey (2005) believes this approach not only directly benefits ongoing projects , but will also help train aspiring ornithologists .

= = Relationship with humans = =

Throughout its historic range , the California condor has been a popular subject of mythology and an important symbol to Native Americans . Unusually , this bird takes on different roles in the storytelling of the different tribes .

The Wiyot tribe of California say that the condor recreated mankind after Above Old Man wiped humanity out with a flood . However , other tribes , such as California 's Mono , viewed the condor as a destroyer , not a creator . They say that Condor seized humans , cut off their heads , and drained their blood so that it would flood Ground Squirrel 's home . Condor then seized Ground Squirrel after he fled , but Ground Squirrel managed to cut off Condor 's head when Condor paused to take a drink of the blood . According to the Yokut tribe , the condor sometimes ate the moon , causing the lunar cycle , and his wings caused eclipses . The Chumash tribe of Southern California believed that the condor was once a white bird , but it turned black when it flew too close to a fire .

Condor bones have been found in Native American graves , as have condor feather headdresses . Cave paintings of condors have also been discovered . Some tribes ritually killed condors to make ceremonial clothing out of their feathers . Shamans then danced while wearing these to reach the upper and lower spiritual worlds . Whenever a shaman died , his clothes were said to be cursed , so new clothing had to be made for his successor . Some scientists , such as Noel Snyder , believe that this process of making ceremonial clothing contributed to the condor 's decline .