

# Andean Condor

*Vultur gryphus*

**Class:** Aves      **Order:** Falconiformes      **Suborder:** n/a      **Family:** Cathartidae (new world vultures)

**Other names:** none

**Other subspecies:** none

**Other Relatives:** only vulture or condor in their genus. Related to other new world vultures.

## Zoo Condors 1.1.0

Miss Gryphus 0.1– female

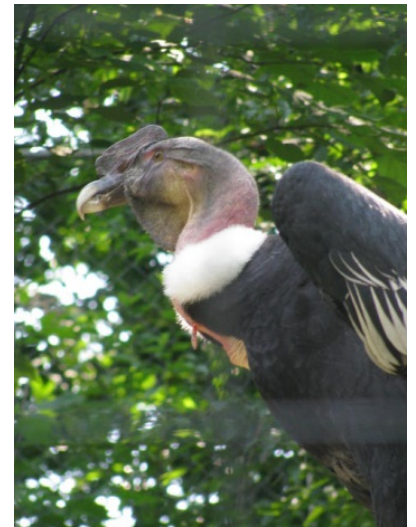
DOH: 5/1/1979, AQ: 12/19/2010

Gryphus was hatched at the Bronx Zoo, and currently weighs around 22.7lbs

Chavin 1.0– male

DOH: 6/10/1986, AQ: 10/18/2010

Chavin was hatched at the LA County Zoo, and later lived at the Sedgewick County Zoo before coming to Brandywine in 2010, and currently weighs around 25.79lbs



## Status

Near threatened [1] Population estimates fall around 6,700-10,000 individuals [2].

## Geographic Region

*Vultur gryphus* are found throughout the Andes, in Venezuela, Colombia, Ecuador, Peru, Bolivia, Peru, Argentina and Chile [3]. Wild populations are thought to have been extirpated from Venezuela, but are still very rarely seen there [3].



## Habitat

Open grassland and alpine regions up to 5,000 m [2]

## Characteristics

**Size:** *Weight:* 17 – 24 lbs. (female); 24 – 33 lbs. (male) [4]

*Length:* 38 – 50 inches [3]

**Longevity:** **Wild** 50 years [4] [3]      **Captivity** 75+ years [4] [3]

## Physical Description

- The body is feathered in black with large white patches on the underside of the wings and white, downy feathers surround the neck.
- When extended, the wing tips have gaps between the primaries which is an adaptation for soaring [3].
- Andean Condors have the largest wingspan of all land birds at 8'10" to 10 feet. [3]
- The beak is hooked at the end and functions in tearing rotting meat off a corpse [3].
- Condors have keen eyesight (can see in color), though scavenging birds' eyesight is not as acute as other birds of prey.
- The feet of Andean condors are much less powerful with shorter blunted talons compared to those of other birds of prey. This adaptation is well suited for a lifestyle of walking and scavenging. The hind toe is less developed, but the middle toe is much longer than the other toes [3].
- No New World vulture possesses a **syrix**, the vocal organ of birds.

## Feeding Adaptations

- Condors have a distinguishing blackish-red to red head and neck which is bare skin, which is an adaptation for hygiene. The bare skin is easier to keep clean and dry after feeding on carrion [3].

## Dimorphism

Andean condors are the only species in the family Cathartidae that exhibit drastic sexual dimorphism [3].

**Males:** While the sexes are alike in coloring and plumage, males are crowned with a dark red caruncle, or comb, on top their head, while the skin of his neck lies in folds, forming a wattle. The irises of the male are brown to gold,

**Females:** Females lack the distinctive comb, and their heads tend to be darker grey. Irises of females are deep red.

## Diet: Carnivore, scavenger

**Diet in the Wild:** Condors are carrion eaters, primarily consuming large carcasses like goat, cattle, sheep, deer, horse and coyote, although they are also known to eat smaller food, such as rabbit and squirrel. Condors prefer fresh kills, but they also eat decayed food when necessary. [3]

**Diet in the Zoo:** various rodents, bird of prey diet, and whole or partial bones.

## Behavior

- *Diurnal, day-active*
- Condors have remarkable soaring and flying capabilities; they are able to soar without flapping for more than an hour, and may cover 100-200 miles per day in search of food [3].
- When not caring for young, most of their time is taken up foraging for food and roosting. Condors spend more time in a day roosting than flying. This time is mostly taken up with preening or sunning. Sunning usually happens first thing in the morning, so they can warm up with the sun's rising. The sun also provides important Vitamin D. [3]

## Home Life

- While they are not migratory, they cover a large amount of territory in search of food, always returning to the same nesting or roosting place.

## Social Structure & Communication

- Condors are not flocking birds but there does seem to be some social structure.
- Andean condors may form mutualistic relationships with smaller turkey vultures (*Cathartes aura*) and black vultures (*Coragyps atratus*), which forage by smell whereas Andean condors forage by sight [3]. Larger Andean condors are much better adapted at tearing into the tough hide of a fresh kill. The smaller vultures benefit from the labors of the condor and feed on what is left of the newly opened carcass [3].
- They do not have songs or vocalizations other than growling, grunting and hissing noises, due to their lack of *syrix*, directed at other condors, in social situations like group roosting and feeding.

## Feeding Behavior

- New World vultures have the unusual habit of **urohidrosis**, defecating on their legs, to cool them evaporatively – just like when humans and other animals sweat [4]. This also, oddly, helps to purify their feet of bacteria from walking on contaminated meat due to their highly acidic feces/urine.
- When condors find a meal, they settle down and gorge themselves, as they are unable to carry anything along with them to save for later. This is partly due to decay of raw meat, and their feet are unable to grasp anything
- Condors regurgitate food for their young, rather than carrying it back to the nests for these same reasons.
- Andean condors are primarily scavengers but have been observed to do some hunting of marmots, birds and rabbits [3].
- When approaching a fresh carcass, Andean condors often start opening the animal near the anus and progress toward the head. One of the first things eaten is usually the liver, followed by the muscle. No significant attempt to open the skulls and eat the brain has been observed [3].

## Ecosystem Role

- The pH of a vulture's gastric juices is between 0 and 1. It more acidic than the stomach contents of humans (1-2pH), vinegar (2.4pH), battery acid (0.8pH) as well as other carnivorous birds, including herons and barn owls.
- The vulture's stomach acid also explains how it survives off its odd diet of rotting meat. Vulture stomach acid is so exceptionally corrosive, that they can safely digest putrid carcasses infected with Botulinum toxin, the rabies virus, hog cholera, and anthrax bacteria that would be lethal to other scavengers.
- A vulture's blood is packed with antibodies, which will attack any bacteria that happen to survive in its stomach.

## Reproduction

- *Oviparous*
- On reaching full maturity, male condors make courtship displays of outspread wings and head bobbing.
- After a female accepts a male's overtures, the birds form lifelong monogamous pairs.
- Nests are found in cliffside caves or among rocky outcroppings and clefts.
- Reproductive rates are extremely low, with a single egg is laid every other year by a breeding pair.
- Both the male and female take turns to incubate the egg for about 54 to 58 days [5]
- If the chick or egg is lost or removed, another egg is laid to take its place. Researchers and breeders take advantage of this behavior to double the reproductive rate by taking the first egg away for hand-rearing, causing the parents to lay a second egg, which they are generally allowed to raise. Both parents care for the single egg and nestling. [3]

## Conservation

- **Use & Trade:**
  - Many South Americans view this condor as a symbol of power, wealth, health, and liberty [4]

- Andean Condors are often included in South American folklore. [4]
  - In Andean mythology, this condor was associated with the sun deity and ruled the upper world.
- Vultures' taste for rotting flesh serves an important purpose of preventing the spread of diseases and bacteria. In areas where vultures have died off, diseases such as rabies and anthrax are rampant.
- **Threats:** In 1970, the Andean Condor was listed as endangered. [4] The main threats include habitat loss and secondary poisoning from eating animals killed by humans. [3]
  - Beginning in 1989, many North American zoos have assisted in breeding programs where captive-born condors are reintroduced to their natural range in Argentina, Venezuela, and Colombia. [4] Despite these and other conservation efforts, the number of wild Andean Condors is continuing to decline (there are about 10,000 individuals in the wild). [1]

#### **Mass accidental poisonings**

- They are often persecuted by farmers because they believe incorrectly that the condors are a danger to their livestock. Multiple education programs have been implemented in order to dispel this myth. Farmers and ranchers commonly poison the carcasses of animals to kill predators which prey on their livestock. Vultures, which are carrion eaters and feed exclusively on dead animals, are inadvertently poisoned. Poison is cheap, easy and effective.
- In Asia, mass accidental poisonings from the use of a veterinary drug used on cattle for inflammation and is fatal to vulture. In Hindu areas, cattle are not consumed when they die, and are left in the field to be cleaned by scavengers. In Asia: 10 million birds dead in just over 10 years (farmers will poison carcasses of livestock that die in the field). Some populations have dropped by 99.7%

#### **Poaching**

- Around the world, poaching still takes place. Often, poachers are only after a specific part of an animal, such as rhino horn or elephant tusk. Game wardens can often identify a poach site because of the presence of vultures circling the carcass. Poachers, in an effort to hide their activities, will poison carcasses so that they can continue to work in an area without attracting attention by officials. Unfortunately, this often results in the death of hundreds, if not thousands of scavengers annually.
- **Predators:** Healthy adult condors have no known natural predators. Young chicks may fall victim to large birds of prey or to foxes if the nest is accessible to flightless predators. Eggs may also be lost to predation [3].

#### **Did You Know?/Fun Facts**

- The oldest known Andean Condor was 79 years old. [4]
- A group of vultures is called a *wake*, *committee*, *venue*, *kettle*, or *volt*. The term *kettle* refers to vultures in flight. *Committee*, *volt*, and *venue* refer to vultures resting in trees. A *wake* is reserved for a group of vultures that are feeding.
- A vulture's stomach acids are so strong, they can even dissolve metal!

#### **Glossary**

**Syrinx** -the name for the vocal organ of birds. Located at the base of a bird's trachea, it produces sounds without the vocal cords of mammals.

**Urohidrosis** -the habit in some birds of defecating onto the scaly portions of the legs as a cooling mechanism, using evaporative cooling of the fluids.

#### **References**

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- [6] T. Kidd, "Vultur gryphus," Animal Diversity Web, 2014. [Online]. Available: [http://animaldiversity.org/accounts/Vultur\\_gryphus/](http://animaldiversity.org/accounts/Vultur_gryphus/). [Accessed February 2015].