

Rescued from Extinction

On a recent trip to Arizona, I spotted a miracle: three California condors, some of North America's rarest birds! If they hadn't been targeted for a rescue effort, condors by now might well have joined a long list of extinct birds. As part of a dramatic and ultimately successful rescue effort in the mid-1980s, 22 individuals were captured and a recovery breeding program was established. Condors raised in this breeding program were first reintroduced to Grand Canyon in 1996. In 2003, the first nestling fledged in the wild. By fall 2014, there were 425 living condors. The three birds I saw, then, represent nearly 1% of the total population of California condors alive in the world at the time.

The rarity of the California condor and its impressive and ongoing recovery are not its only wow factor. These birds also have dramatic physical and behavioral features: With a nine-foot wingspan, condors beat out even the golden eagle for the spot as the largest bird of North America. Weighing in at over 25 pounds, condors rely on their wings to provide the lift necessary to become airborne. Though lacking the extended sternum and associated musculature present in many birds and required for sustained wing flapping, condors manage to travel more than 150 miles a day in search of food, a feat they achieve starting off on the high cliffs where they live, catching updrafts at sunrise, then soaring off with minimal flapping. The Grand Canyon, with its high walls and winds, was therefore an ideal choice as a reintroduction site for the captive breeding program.

In my fall 2015 Naturalist's Corner piece, I described how the declining Eastern wolf mated with the coyote, producing the much larger Eastern coyote that is now experiencing quite a comeback in New England. Genetic features of the wolf live on in this new coyote. By contrast, as the only member of its genus, the California condor has no close relative to carry on its traits or to bolster its prospects for survival. With only a small number of condors remaining in the 1980s, condors were facing extinction unless humans could help.

But perhaps it was humans who had imperiled condors in the first place. Condor fossils, which have been found all over North America, reflect especially large populations in the Pleistocene, when our last ice age occurred some 10,000 years ago. It's likely that condors flew over Springfield while the ice was retreating, feeding on large carcasses of the Pleistocene megafauna. A warming climate at the end of the last ice age curtailed the condor's range to the west. Far more recently, ranchers, seeing condors feeding on dead cattle, mistakenly assumed them to be predators and shot them. Like the wolf, this huge bird was falsely assumed to be dangerous and a threat to livestock. So while it was end of the ice age that initially reduced the condor's numbers, it has been humans in this age who threaten to strike the final blow.

At the start of the captive breeding program, 22 surviving condors were taken to California zoos. Eggs were laid and hatchlings emerged. As condors cannot smell (probably a good thing for an

animal that eats carrion!), instead relying on eyesight to locate food, zoo workers were able to coax babies to eat using puppets made to resemble the head of an adult condor. Eventually, the program succeeded in raising young condors to maturity and reintroducing them to the wild.

Even with these breeding and reintroduction efforts, the condor is not out of trouble just yet. Low reproductive rates and substantial risks in early life create ongoing concerns. Condors do not reach sexual maturity until six years of age. Females lay just one egg every two years, and then high rates of predation on their young mean survival to maturity is uncertain. Thus, the low number of eggs and the long wait to reproductive age work against increasing the condor's population numbers. Individuals that do survive to adulthood often live up to 60 years.

Even today, human biases and less than thoughtful activities pose a threat. As a New World vulture, the California condor is not what you might call "cute" or "beautiful". In fact, many who see a condor close up, with its featherless head, call the bird downright ugly. Many Americans seem to see valor in birds that kill their prey, yet are disgusted by carrion eaters. As a result, the condor likely will never become a poster child for conservation and restoration efforts. Poisoning, too, is a concern. Hunters leave behind bodies of prey animals full of lead buckshot, resulting in lead poisoning in condors (as well as in those eagles who will eat carrion). Some condors have been recaptured and put through chelation therapy to rid them of the lead, using the same approach used to treat a child with lead poisoning. Fortunately, legislation recently enacted requires hunters in condor country to use an alternative to lead in their bullets. Another condor killer is power lines. Power line-aversion conditioning for birds raised in captivity has helped to save some birds from this danger.

Each bird raised through the captive breeding program is released with a number and a radio transmitter on its wings, to enable long-term monitoring. The birds I saw on the Colorado River were identified as H9, 53, and 30. By entering these numbers in an online database, I was able to find out about the birds' parentage, their age and release date. H9 is a 6-year-old female, 53 is an 8-year-old female, and 30 is a 6-year-old male. When I spotted them, all three birds were spending the morning preening and spreading their glorious wings to soak up some sunshine. Soon the sun would bring thermals up, from the river far below, and off the condors would soar, into the wide blue sky above. I wished them well!

~Sonya Vickers