



Plight of the Condors

Once on the verge of extinction, North America's largest land birds have made a dramatic comeback. To ensure their continued survival, biologists are relying on high-tech gadgets and unusual interventions

By Jane Braxton Little | Monday, January 9, 2012 | 1

The first California condors to enter the wild in five years took a few hesitant hops on a sandstone cliff, craned pinkish necks over the precipice and tentatively tested their nine-foot-plus wings. Since that landmark launch in 1992, wildlife biologists have released nearly 200 condors that were born and raised in captivity, and they've prospered. The world population has rebounded from 22 in 1987 to 396 birds, with wild populations concentrated in Baja California, Arizona, and southern and central California. As these giant scavengers move to reoccupy their full seven-million-square-mile range, scientists are using state-of-the-art technology to guide the Pleistocene-period survivors toward full self-sustainability. They are counting on this and other unusual inventions, such as swapping infertile for fertile eggs, to ensure their full recovery.

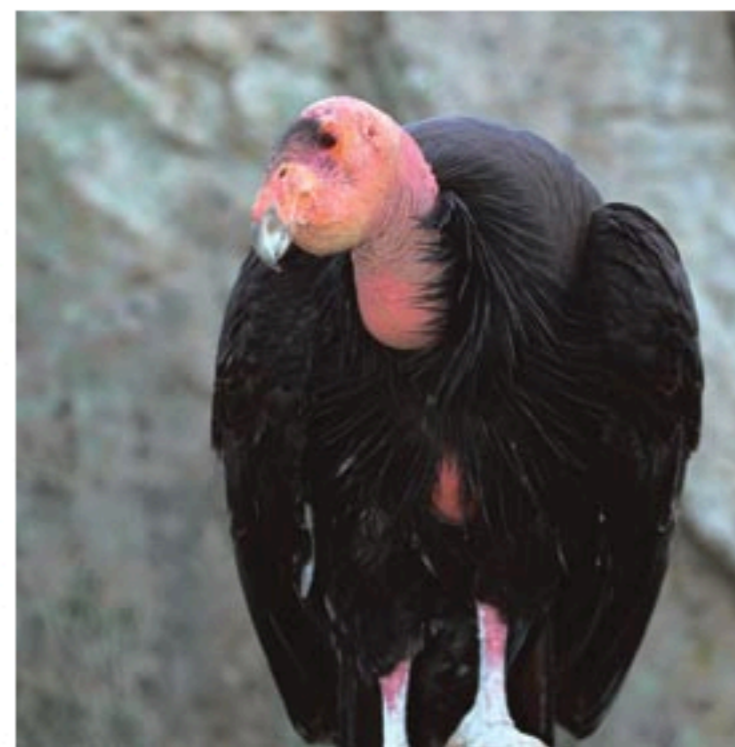
From his office in Ventura, Calif., Jesse Grantham, coordinator of the U.S. Fish and Wildlife Service's condor recovery program, can track each free-flying California condor to within a few feet of its location. He and his colleagues have fitted every 17-pound-plus bird with a radio transmitter and a solar-powered GPS device that sends more than 1,000 daily locator points per bird a day. Too many waypoints in one place for too long signal that a bird is in trouble. Crews then trek through remote canyons to check on the sick or dead condor and run tests on it and the carrion it was eating. The GPS data also help scientists find breeding caves, where they verify the viability of each egg and even switch infertile eggs laid in the wild with fertile ones laid by captive birds.

Scientists are finding that condors face many of the same dangers that stalked the birds 25 years ago, with the main one being lead bullet fragments that lodge in the flesh of carrion. Some nine out of 10 condors have elevated lead levels, a problem that persists despite a ban on the use of lead bullets within condor habitat in California. Bottle caps, DDT, high-voltage power lines and the occasional shooting also contribute, which means the environment still presents "all the mortality factors that nearly caused their extinction," Grantham says.

Using condor telemetry records, however, scientists are removing whatever dangers they can. Near Big Sur, Calif., GPS tracking documented a condor corridor from Anderson Peak to the Pacific Ocean in a canyon where Pacific Gas and Electric (PG&E) maintains a three-mile power line. After three condor electrocutions, flight data helped to convince PG&E to begin burying the power line in August. Elsewhere, scientists are working with solar- and wind-energy developers to avoid condor flight paths when they site projects. They have made headway on the lead issue, too, calling for extending the lead bullet ban and enforcing it more vigorously.

And there are more data to come. Plans include installing tiny digital devices to record condors' heart rate and wing-flapping intensity to learn how wind speed and direction affect their energy usage. By linking flight information to meteorological data, scientists are learning precisely how condors move across the landscape and what places are most important to protect, says Mike Wallace of the San Diego Zoo Institute for Conservation Research.

The \$5-million-a-year condor recovery program has proved that California condors can be coaxed back into successfully reproducing and raising their young in the wild. Grantham and Wallace are optimistic that the telemetric information will help ensure that future populations become self-sufficient—if only something can be done about the lead.



California Condor
Image: Konrad Wothe/Minden Pictures