

My Life with Birds

by Diego Blanco



Diego found the practice of field sketching rewarding and effective as a means of learning about bird identification and anatomy.

When I was nine years old, my mother took me to a local bookstore. Near the register, I noticed a new book on display. It was small and orange, with a blue bird on the cover and a compact speaker attached. I decided to purchase a copy. I was fascinated by the audio component of *The Backyard Birdsong Guide* and spent hours reading about the birds and listening to their songs.

It wasn't long before I began to recognize the songs of birds I heard around me, from house finches and mourning doves to yellow-rumped warblers. I also started making sketches of birds I saw, as well as birds from around the world that I found interesting. Over time my library of bird books grew, as did my knowledge and my passion for learning about birds and the natural world as a whole.

Into the Wild

After several years of armchair enthusiasm, I joined the Pasadena Audubon Society. I had read about the organization online and figured it might be a way for me to get out and see more birds. It was great to be in the field with people who knew several orders of magnitude more than I did about birds. They taught me what to pay attention to when identifying birds, including markings, habitat, and time of year. It was also through the Audubon Society that I learned about events such as the release of California Condor AC4.

In the 1980s, there were only 22 condors left on Earth. To save the species from extinction, a team of U.S. Fish and Wildlife biologists captured the entire wild population for a breeding program. The effort worked, and the condors are making a recovery. AC4 ("Adult Condor 4") was one of those original condors. He had been in captivity for around 30 years, and the time had come to retire him from the breeding program. I planned to attend the 2015 release of AC4 at the Bitter Creek National Wildlife Refuge, and an Audubon Society member suggested that I write about the experience.

I wrote about how AC4 was born in the wild but had lived his entire life in captivity, and I described what it was like to witness

him being released into the wild. I was thrilled when the U.S. Fish & Wildlife Service published my article online. The experience only increased my desire to learn more about birds and ornithology—the scientific study of them.

Research at Last

Later that year, I took a field trip with the Polytechnic Paleontology and Ornithology Club, which I'd founded the previous year at my school, to see the ornithology collections at Occidental College. There, I met the collections manager, Dr. James Maley, and asked him about potential volunteer or research opportunities. In early 2016, I began volunteering in the ornithology lab with Dr. Maley. My work consisted of archiving specimens, determining how many of the birds of Mexico were represented in the collection, and preparing study skins. While it was great to be in the lab, I wanted more: I wanted to do research.

Then, last summer, I learned online about Western Field Ornithologists (WFO), an organization of amateur and professional field ornithologists that promotes the study of birds in the American West. Through WFO, I applied for and received a Youth Scholarship to conduct population surveys with several eminent ornithologists in Central Sierra. Assessing the number of a species in a given area can tell us a lot about the health of the habitat, and I was grateful for the experience. Later, when WFO put out a call for abstracts in anticipation of their upcoming annual conference, I saw an opportunity to conduct research.

After consulting with Dr. Maley, I decided to pursue a project on elegant quail at Occidental's Moore Lab of Zoology. The elegant quail (*Callipepla douglasii*) is a species of primarily ground-living



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birds related to pheasants and partridges that inhabit a limited range west of Mexico's Sierra Madre Occidental mountain range. The last substantive research on elegant quail had been published in 1943. Incredibly, the Moore Lab's collection included 117 specimens of elegant quail (by comparison, a typical specimen collection might include three or four individuals). Such a big sample could allow us to contribute significantly to the scientific knowledge of this bird.

An Evolutionary Puzzle

In addition to the nominate subspecies, four other subspecies of elegant quail are normally recognized; one inhabits the northern end of the bird's range, and the others, the central and southern divisions. Hypothesizing that we would find much more variation among subspecies than was originally described, Dr. Maley and I studied the birds' anatomical measurements and plumage patterns.

After recording each bird's wing, tail, lower leg, and beak length, we recorded each specimen's subspecies, sex, age, and location where it was obtained as indicated by its tag. We then set out to assess each specimen's plumage characteristics—including the color of its throat and back, extent of spotting on the breast, degree of redness or rusty



markings on the flanks, and crest color—independently of its prescribed range. First, we identified each specimen to subspecies based solely on established plumage characteristics. Then we identified the subspecies based only on geographic data.

We found the difference in tail length between subspecies to be the only statistically significant result with regard to anatomical measurements, pointing to plumage characteristics as the main differentiating factor and indicating much greater variation in morphology within and among subspecies than was previously thought. Interestingly, we also found that subspecies at the northern end of the bird's range were interbreeding—something previously unknown in this species—and producing offspring that exhibit characteristics typical of more than one subspecies. Future DNA studies of each subspecies could better illustrate the evolutionary relationships of various elegant quail populations.

Advancing the Knowledge

In September, I traveled to Fortuna, California, for the annual Western Field Ornithologists conference. Between a packed schedule of lectures, field trips, and scientific presentations, I gave my own presentation, "Geographic Variation and Intergradation in Elegant Quail," to an audience of around 200 scientists and birders. My presentation was met with great interest and congratulations from conference attendees. It was an incredible feeling to get such feedback on my research from this esteemed group!

My research taught me not only about the elegant quail, but also about the finer points of scientific research and the research process as a whole. The findings contributed to our understanding of this bird and paved the way for further study of its population dynamics, habitat, and evolutionary history. DNA studies are the next step, and I hope to be a part of this and other ornithological research in the future. ■



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