

THE SANDERLING



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MONTEREY AUDUBON
PO Box 5656
Carmel CA 93921
www.montereyaudubon.org

Wonder Birds

by Michael P. Montgomery

Today the California condor is both the largest land bird in North America and one of the rarest. Twelve thousand years ago it was neither. In fact, for much of its history, the species was only one of many large vulture-like birds inhabiting the New World. It was also widespread, from our own Central Coast to Florida.

But unlike most of their contemporaries, which went extinct 10,000 or more years ago, California condors persisted, albeit with a dramatically reduced range. The dynamics of this decline and persistence, as revealed by the contrast with another group of birds, the teratorns, are the subject of this article.



*A California condor in the Carmel Highlands.
Photo by the author.*

And then there was one...

California condors, like their smaller cousins turkey vultures, are New World vultures of the family Cathartidae. During the Pliocene and Pleistocene epochs, from 5.3 to 2.6 million years ago and 2.6 million to 12,000 years ago, respectively, they were joined in the skies not only by other, now-extinct Cathartid species, but by birds of prey from an altogether different and enigmatic family: teratorns.

Related to vultures, but also similar to storks, teratorns would have been, and probably were to the prehistoric people who encountered them, awe-inspiring. Their name means “wonder bird” in Greek. It is not undeserved: one ancient

South American species, *Argentivas magnificens*, was the size of a small airplane, with an estimated wingspan of 23 feet and a weight of 154 pounds—seven times what modern California condors weigh.

Admittedly, California never saw anything quite that large. But we do have the distinction of being the place where teratorns, in the form of species *Teratornis merriami*, were first discovered, and where they have since been most abundantly found. Named Merriam's teratorn after paleontologist John C. Merriam, *T. merriami* had an 11-13-ft. wingspan. That would have made it slightly larger than the modern California condor, whose wings reach a maximum span of 10 feet.

Merriam's teratorn was first described in 1909 from the La Brea Tar Pits of Los Angeles. It has since become California's, and by extension the world's, best-known teratorn, with the La Brea location alone yielding remains of over 100 individuals. Because these fossils were recovered alongside those of woolly mammoths, giant ground sloths, and saber-toothed cats, among other large mammals, scientists long speculated that Merriam's teratorns were scavengers, alighting on dying animals and suffering with them their tar-trapped fate.



This mural of a La Brea tar pit, painted in the 1920s by Charles R. Knight, depicts a variety of Pleistocene megafauna, some perhaps about to become stuck in the tar. Several Merriam's teratorns can be seen perched and flying in the upper left corner. Image from Wikimedia Commons, commons.wikimedia.org/wiki/File:La_Brea_Tar_Pits.jpg.

In contrast to this view, later studies of the species' bone structure indicated that Merriam's teratorns also, perhaps predominantly, pursued smaller animals on foot. This seems to have been true for other teratorns, too, including *Teratornis woodburnensis* in Oregon's Willamette Valley and *Ailornis incredibilis* in Nevada and southern California. All three species were likely adept at walking and stalking on the ground and at soaring in the sky, but severely limited at takeoff and landing due to their large wings and heavy bodies.

The picture this and other recent research paints of teratorns is paradoxical. They struggled to take off from flat surfaces, yet evolved in the South American pampas. They had the largest wings of any land bird ever known, yet did most of their hunting on the ground. They had a beak well-suited for eating fish, yet their diet—rodents, reptiles, small birds, and the occasional large mammal carcass—seems to have been exclusively terrestrial.

Of these three apparent ironies, the third may actually be most significant. Unlike California condors, which have something of a reputation for scavenging dead whales, and have had that reputation since Lewis and Clark encountered such a scene at the mouth of the Columbia River in 1806, teratorns never seem to have relied on the ocean for food. According to a 2006 study in the journal *Geology*, it may have been exactly this limitation that led to teratorns' extinction.

Eleven thousand years ago, when mammoths, bison, and other terrestrial Pleistocene megafauna were driven extinct by human hunting, ice age climate change, or some combination of the two, California condors on the Pacific coast were fortunate enough to have an alternative source of carrion: beached whales, seals, and other marine mammals.

Condors living farther inland or on less productive coasts like those of Florida or the Gulf of Mexico, where marine life was never sufficiently abundant to supplement the birds' otherwise land-based diet, went extinct. Even as recently as the 1980s, when the wild California condor population declined to a mere 22 individuals, the species' last redoubt was in the Transverse Mountains of its namesake state, just a short distance from the rich and diverse ecosystems of the coast.



Turkey vultures in Pebble Beach scavenge a dead California sea lion, in much the same fashion as condors would. Photo by Blake Matheson, [flic.kr/p/dR24Nk](https://www.flickr.com/photos/dR24Nk/).

Teratorns, on the other hand, had no such recourse. As the authors of the 2006 study inferred from the chemistry of *T. merriami* bones, teratorns did not take advantage of California's so-called "coastal refugium" to the same extent condors did, if at all.

They persisted long enough to interact with early humans, and possibly to enter Native American mythology as thunderbirds, but died out long before modern science could take stock of them.

In one sense, that loss is a pity. Left to infer from fossils, we may never know just how wonderful these wonder birds really were. Yet maybe we don't need to. Maybe the fossils have already taught us the most important lesson they can. Imposing and beautiful as teratorns must once have been, our very own California condors are wonder enough.

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WINTER CALENDAR OF EVENTS

Monthly Lecture Series

On the second Tuesday of each month, Monterey Audubon hosts lectures on a variety of bird- and conservation-related topics. Each talk begins at **7:30 p.m.** at the Pacific Grove Museum of Natural History, with doors opening to the public at 7 for refreshments and socializing. The Society's monthly board meetings are held from 6-7 beforehand. Please visit Monterey Audubon's website (www.montereyaudubon.org/calendar-of-events/) and Facebook (www.facebook.com/monterey.audubon/) for updates and possible program changes.

Tuesday, January 14 –Feathers and Flight: A Journey to the New World Tropics, with Benny Jacobs-Schwartz
Birding guide, naturalist, and photographer Benny Jacobs-Schwartz will take us on a journey through the New World Tropics, sharing his dazzling bird photos, captivating videos, and animated storytelling. His presentation will delve into topics of migration and tropical speciation. He will also highlight some of the region's drivers of biodiversity.



Plate-billed mountain toucans like this one live in Andean forests in Ecuador and Colombia. Photo by Benny Jacobs-Schwartz.

When not traveling, Jacobs-Schwartz is at home growing his business, Birds by BIJS. Begun in response to requests for urban birding outings, Birds by BIJS now encompasses a nature-inspired clothing line, bird photography, wildlife documentaries, and, of course, local and international birding tours.

Jacobs-Schwartz is based in Los Angeles, where he leads public and private birding adventures to urban hotspots. He is also a passionate photographer, and uses his impressive collection of content to leverage his prolific social media presence. He hopes his love of the wild world will inspire others to conserve open spaces around them and look up more often from their phones.

Tuesday, February 11 –Bird Sound Recordings: The New Frontier of Birding and Citizen Science, with Brian Sullivan

By now, most active birders recognize the value in documenting and contributing their avian observations, often with photos, by using eBird, the world's most expansive database for documenting bird distributions. Less understood and appreciated is the importance of documenting bird calls and songs.

The language birds use to communicate defines species as much as, if not more than, their visual attributes. Some species are indistinguishable to the eye, but engage in radically different vocalizations. Brian Sullivan, of the Cornell Lab of Ornithology, will help convince you that it's time to start recording birds. He will also teach you how it's done.



This Caribbean elaenia is a member of Tyrannidae, a family of New World flycatchers whose species are often more easily identified by sound than appearance. Photo by Blake Matheson, taken in Puerto Rico, [flic.kr/p/5SYWHm](https://www.flickr.com/photos/5SYWHm/).

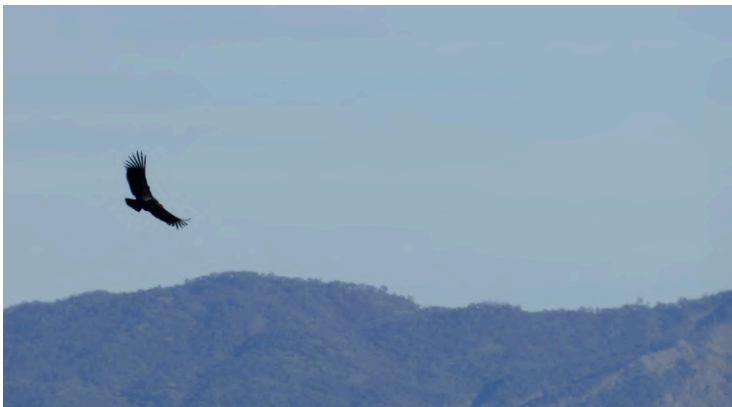
(lecture series, continued)

A Monterey Peninsula resident for over 10 years, Sullivan has conducted fieldwork on birds throughout North America for the past 20. Internationally, birding, photography, and field projects have taken him to Central and South America, Antarctica, and the Arctic. Sullivan has written and been consulted on various books, both popular and academic. He is a co-author of *The Crossley ID Guide: Raptors*, as well as the forthcoming *Princeton Guide to North American Birds*. Sullivan is currently Digital Publications Lead for the Cornell Lab. He is also a former project leader for eBird, as well as a photographic editor for Cornell's Birds of North America Online database. He served as photographic editor for the American Birding Association's journal *North American Birds* from 2005-2013.

Tuesday, March 10 – Success and Setback for the California Condor, with the Ventana Wildlife Society

No bird in our region is more storied than the California condor. Cruising the Big Sur coast on nine-foot wings, living many decades, feasting on whales—see this issue's "Wonder Birds" feature for more on this—and nesting in fire-blasted redwood giants, the condor's magnificence defies belief. Encouragingly, after nearly going extinct in the 1980s, more and more condors are successfully breeding in the wild. But persistent challenges remain, from lead and DDT poisoning to human conflict and, increasingly, the uncertain effects of climate change.

Join conservation biologists from the Ventana Wildlife Society for an overview of the species' status and recovery. Founded in 1977, the Society is a 501(c)3 non-profit committed to conserving native wildlife and their habitats. In addition to helping to successfully recover a breeding population of bald eagles in central California, the organization has long been at the forefront of doing the same thing for California condors.



California condors. From left to right, photos by Michael P. Montgomery and Bob Wick of the Bureau of Land Management, [flic.kr/p/MDNC3Y](https://www.flickr.com/photos/MDNC3Y/).



Weekend Field Trips

Monterey Audubon's field trips visit some of Central California's most notable birding hotspots. Most trips take place on Saturday mornings. While all birders are welcome, spaces are limited, and a number are always held for dues-paying chapter members. Hope to see you in the field!

Saturday, January 18 – Gull Identification Field Symposium, with Blake Matheson

Winter is peak time for a handful of uncommon to mega-rare gull species that occur on California's coast. Yet gull identification remains one of the most persistent field challenges for birders of all experience levels.

(field trips, continued)

Join “larophile” and Monterey Audubon President Blake Matheson for a trip through local gull roosts to enjoy our diversity of winter species and learn the finer points of their identification. The trip is free to dues-paying chapter members, but costs \$40 for non-members. Attendance is limited to 12. Meet at the **Crespi Pond** restrooms at **7: 30** a.m. **RSVP** to Blake Matheson at gypaetusbarbatus1@gmail.com.



Glaucous gulls like this one, photographed at Bird Rock in Pebble Beach in 2013, are rare winter visitors to the Monterey Peninsula. Photo by Blake Matheson, [flic.kr/p/dR7BG7](https://www.flickr.com/photos/dR7BG7/).

Recap of Christmas Bird Counts in the Monterey Bay Region

by Blake Matheson

This past holiday season, hundreds of birders from around the Central Coast participated in the 120th annual Christmas Bird Count, the oldest continuous, curated dataset of bird population statistics in the world. Teams of birders scoured 15-mile-diameter count circles in a series of day-long birding extravaganzas, recording every species and individual seen. The ensuing data will help conservation biologists understand long-term changes in bird populations and distributions.

First up was the Big Sur Christmas Count, covering a region from Palo Colorado Road in the north to Pfeiffer Big Sur State Park in the south and the Los Padres Dam in the east. Participants recorded 118 species, a tally that is below average, largely due to several conspicuous missed species like eared grebe, killdeer, common loon, and black-bellied plover.

Big Sur birders were, however, treated to a multiple count rarities: a young bald eagle sailing over East Molera Trail, a western tanager at Andrew Molera State Park, an evening grosbeak at the Los Padres Dam, a rose-breasted grosbeak near the Big Sur Ornithology Lab’s banding lanes, and a yellow-bellied/hybrid sapsucker also near the Ornithology Lab.

A little less than two weeks after the Big Sur Count, fifty or so birders participated in the Monterey Peninsula Count, which covers a territory stretching from Fort Ord National Monument to Garrapata State Park and from Point Pinos to Corral de Tierra. This year’s roster, 176 species in total, was about average.

The “best” bird was judged to be a handsome and young male summer tanager, closely followed in second place by a Laysan albatross spotted by counters on a Monterey boat cruise.

A week after the Peninsula Count, the wildly popular Moss Landing Christmas Bird Count, sponsored by Bob and Bernadette Ramer, took place on New Year’s Day. Birders tallied 195 species. Some of the highlights were long-tailed duck, Pacific golden plover, black skimmer, Baltimore oriole, red crossbill, and scaly-breasted munia.

Just as much as Christmas trees and “Auld Lang Syne,” birders have come to expect and cherish the Christmas Bird Count as a ritual and an institution. That the results contribute meaningful data to bird conservation is the icing on the Christmas cake.



From left to right, a common loon and red crossbill, two noteworthy finds in this winter’s Christmas Bird Counts. Photos—not taken during the survey—by Blake Matheson ([flic.kr/p/5U1jag](https://www.flickr.com/photos/5U1jag/)) and Joseph Higbee ([flic.kr/p/ppWCxh](https://www.flickr.com/photos/ppWCxh/)), respectively.

Monterey Audubon Society Membership

Monterey Audubon and National Audubon are separate but affiliated 501(c)3 charities. You can join either or both by clipping and mailing this membership card with your dues and any additional Monterey Audubon donation to our PO Box. You can also donate to MAS online at our website, www.montereyaudubon.org/support-audubon.

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