

The Mountain Chickadee

Newsletter of the Sangre de Cristo Audubon Society
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Photograph by Tom Taylor

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The Sangre de Cristo Audubon chapter represents a landscape that has been occupied for millennia by peoples of diverse cultural backgrounds. We honor that diversity and believe that just as we strive to protect biodiversity, we must include and respect the diversity of the many people and cultures that call northern New Mexico their home.

Birding in a Pandemic

As Covid-19 infections spread inexorably across the country this spring, birding – along with many of our other usual activities – became more and more problematic. Our region of New Mexico may have dodged the worst pandemic scenarios, thanks to early and strict social distancing, but the potentially deadly virus was and is still widespread enough to be a very real concern for us all.

Our thoughts and profound sympathies go to the thousands of people who experienced the death or sickness of loved ones. And hopefully we can all pitch in, even in small ways, to help the many people who have lost their jobs, and the businesses that have struggled to survive.

Amid this national catastrophe, the difficulty we've had in birding with friends, or even solo, isn't atop the list of concerns. And yet, for those of us who love birds and are concerned for their well-being and survival, they will always inspire us with wonder, excitement and fascination. They give us joy, and sometimes they even give us hope. And so, while our strategies for engaging with birds may have shifted, they have endured.

Nationwide, thousands of people have found comfort in birds during the crisis. According to the Associated Press, downloads of the National Audubon Society's bird identification app in March and April doubled over that period last year, and unique visits to its website were up by a half-million. And more than 2 million observations - a record - were sent to Cornell's eBird on Global Big Day on May 9.

Meanwhile, many top local birders modified their approaches. Early on, Tom Taylor, an accomplished bird photographer and member of the Sangre de Cristo Audubon chapter board, gave up his birding trips around the state to focus on nearby sites, making sure to maintain social distancing by not stopping for food or gas. One place he visited was a grassland near Santa Fe Community College that previously had been unproductive for him. This time it yielded the best look he has ever had of a Horned Lark, a tough bird to see up close.



Horned Lark
Photo by Tom Taylor

Albert Shultz - also on the Sangre de Cristo chapter board – tackled outdoor chores that alerted him to the seasonal arrival of Turkey Vultures and Broad-tailed Hummingbirds. And his occasional solo birding walks at Pecos National Historic Park, while lacking the social interaction of a group outing to see rare species, rewarded him with a classic look at Common Mergansers flying over the Pecos River.

With stay-at-home guidelines in place, Jon Hayes, Audubon's state director for New Mexico, found he had more time for birding walks

Keep Up on Our Latest Events and Field Trips!
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Inside the Box with a Western Screech Owl

A few years ago, Terry Morgan and his wife, Zita, were walking in the front door of their house near Las Campanas one evening, when Zita Morgan stopped and stared. "There's an owl above your head," she told her husband. Sure enough, there was a Western Screech Owl roosting in the eaves of their front portal.



The sighting piqued Terry Morgan's interest, so he decided to put up an owl nesting box on a tall pole in his back yard. He wasn't sure any birds were even using it, until one day, "I saw an owl stick its head out of the box," he said. Finally, last September, Morgan installed a video camera in the false roof of the nesting box to see – well, whatever he might see inside. By March, a female Western

Screech Owl was laying eggs inside the box, and by mid-April things were getting crowded: in addition to the mother owl, there were six small, fuzzy white owlets and a dead kangaroo rat all sharing the tight quarters.

The camera is linked to his computer via software, and Morgan has been posting videos and still photographs of the nest online almost daily this year. They provide an

intimate look at a nesting owl and how she goes about caring for and feeding her owlets. And he has seen some interesting behavior, including fierce competition for the nesting box itself; he counted an owl being chased out of the box 31 times in February alone before the current resident finally settled in. As the female incubated the eggs, she chirped from time to time, and soon her mate would deliver a mouse. After the owlets hatched, she began to leave the box from time to time to forage on her own.



Morgan, who is retired, combs through hours of videotape to select the images he posts online, and kept a log of the nesting activity. The last of five surviving owlets left the box on May 16. "We've lived out here for 35 years," he said, "but you never really know what's out here."

View photos and videos of Terry Morgan's [Owl Box](#).

Audubon Activities

Field Trips

The Sangre de Cristo Chapter of the Audubon Society has canceled all field trips through June 2020 due to the Covid-19 crisis. The safety of our members and supporters is of utmost importance; please bear with us during the uncertainty of this difficult time. In early July the chapter board will reevaluate whether to proceed with field trips scheduled for later in the year, which currently include:

Saturday, July 25

Tererro & Pecos Canyon

Sunday, August 30

Santa Fe Ski Basin

Saturday, September 19

Manzano Mountains Hawkwatch at Capilla Peak & Campground

Saturday, October 3

Rio Mora NWR

Sunday, October 18

Valle De Oro NWR

Climate Watch May-June Counts Canceled

It comes as no surprise that Audubon has announced the suspension of the national Climate Watch program for the current May-June count period. The suspension stems from the ongoing efforts to practice social distancing to slow the spread of Covid-19 in our communities, and is particularly unfortunate given the heightened bird activity that many of us find so delightful at this time of year. Thanks to all of you who have participated in this citizen-science project in the past. The next Climate Watch winter count, January 15 - February 15, 2021, is currently scheduled to take place as usual.



Evening Programs

The next evening program of the Sangre de Cristo Chapter of the Audubon Society is scheduled for 6:30 p.m. on Wednesday, September 9. However, please check our [Website](#) for updates as our schedule could change due to the ongoing Covid-19 crisis.

Evening programs are illustrated talks on bird conservation and other topics concerning the natural world. The programs are held in the new Henderson Pavilion at the Randall Davey Audubon Center and Sanctuary, at the end of Upper Canyon Road in Santa Fe. Abundant parking is available; bring a flashlight. Everyone is welcome, there is no charge and the building is wheelchair accessible. A brief update of environmental issues and chapter activities precedes each program.

Audubon New Mexico

Randall Davey Audubon Center and Sanctuary

In consideration of health concerns, the Randall Davey Audubon Center & Sanctuary will be closed until further notice. All regularly scheduled programming and events have been cancelled or postponed.



This includes the Saturday morning bird walks and weekend house tours. However, the trails will remain open from 8 a.m. to 4 p.m. Monday through Saturday for hiking and enjoying nature. Please check our social media posts for virtual events, and check back for further information regarding reopening and resuming of regular programming. Thank you and stay healthy! <https://twitter.com/audubonnm>

Dry Year Ahead for Our State's Rivers

A marginal snow accumulation season and a dry spring has left the stream flow forecast throughout New Mexico well below average. Statewide, temperatures climbed during April, setting unexpected records as much as 10 degrees above normal and leading to rapid increases in the amount of snow melting off the northern mountains.

As of May 1, forecasts for stream flow in the Rio Grande Basin ranged from 29% to 69% of average. Forecasts for stream flow in the Pecos River Basin ranged from 62% to 69% of average for the period May to July.

Natural Resources Conservation Service

Like Birds? Join Audubon!



Sangre de Cristo Chapter: <https://audubonsantafe.org/>
Audubon New Mexico: <https://nm.audubon.org/>

Birding in a Pandemic

(Continued from P. 1)

near his home. He also began filling his backyard feeders more regularly, and keeping a closer eye on them, which led to sightings of Pinyon and Woodhouse's Scrub Jays, followed by early spring migrants such as Say's Phoebes and Black-chinned Hummingbirds.

As the pandemic continued into May, many facilities, including the Randall Davey Audubon Center in Santa Fe, where Taylor leads Saturday morning bird walks, remained closed. So he took up writing a weekly article for the center's Facebook page based on photos he's taken on spring trips around the country. And an outing with one other person on Global Big Day, one of birding's most popular spring events, yielded 32 species in five hours.



Cedar Waxwing
Photo by Tom Taylor

Meanwhile, Shultz passed on Global Big Day but kept an eye on a Black-billed Magpie nest near his house, where nestlings seemed to be growing active toward mid-month. Hayes birded solo on Global Big Day, limiting himself to hiking and biking as he visited the Sandias and the Paseo del Bosque Trail in Albuquerque (final tally: 56 species).

As he went, he noticed what seemed to be unusually large numbers of people birding and enjoying the outdoors. And Hayes found that uplifting. "I hope the connection being forged with the natural world during this challenging time will outlast our current circumstances and remain a part of the post-Covid-19 era," he said.

Cutting-Edge Conservation by CNMAS

The Melrose Woods are a nine-acre stand of cottonwoods and white poplars surrounded by grasslands near Melrose, NM, about 187 miles east of Albuquerque. During spring and fall migrations, unusual birds turn up in this small stand of trees: an astonishing 44 species of warblers have been sighted here, a greater diversity than seen in Magee Marsh, Ohio or Cape May, New Jersey. Overall more than 400 species of birds have been reported.

The Central New Mexico Chapter of the Audubon Society has worked to protect this small parcel on New Mexico State Land Office property for nearly a decade, and as of May 8 the chapter became the leaseholder of Melrose Woods. The land office, under the direction of Governor Michelle Lujan Grisham, wants to open more New Mexico Land Trust sites to the public, and saw Melrose Woods as the first of many such projects.

Work on trail building and debris removal is scheduled to begin June 1. As a proof of concept for opening trust lands to the public for recreation, the Melrose Woods project is important not only for lovers of New World warblers but for the future of birding on public lands in New Mexico.

Environment News

New Research Links Air Pollution to Higher Coronavirus Death Rates

Coronavirus patients in areas that had high levels of air pollution before the pandemic are more likely to die from the infection than patients in cleaner parts of the country, according to a new nationwide study that offers the first clear link between long-term exposure to pollution and Covid-19 death rates. In an analysis of 3,080 counties in the United States, researchers at the Harvard University T.H. Chan School of Public Health found that higher levels of the tiny, dangerous particles in air known as PM 2.5 were associated with higher death rates from the disease.

Overall, the research could have significant implications for how public health officials choose to allocate resources like ventilators and respirators as the coronavirus persists. It found that a person living for decades in a county with high levels of fine particulate matter is 15 percent more likely to die from the coronavirus than someone in a region with only one unit less of the fine particulate pollution. Counties with higher pollution levels "will be the ones that will have higher numbers of hospitalizations, higher numbers of deaths and where many of the resources should be concentrated," said Francesca Dominici, a Harvard professor who led the study.



Dr. John R. Balmes, a spokesman for the American Lung Association and a professor of medicine at University of California, San Francisco, said the findings were particularly important for hospitals in poor neighborhoods and communities of color, which tend to be exposed to higher levels of air pollution than affluent, white communities.

The study also could have far-reaching implications for clean-air regulations, which the Trump administration has worked to roll back over the past three years on the grounds that they have been onerous to industry. Most fine particulate matter comes from fuel combustion, like automobiles, refineries and power plants, as well as some indoor sources like tobacco smoke. Breathing in such microscopic pollutants, experts said, inflames and damages the lining of the lungs over time, weakening the body's ability to fend off respiratory infections.

"The study results underscore the importance of continuing to enforce existing air pollution regulations to protect human health both during and after the Covid-19 crisis," the study said.

New York Times

Coronavirus and the Environment: Some Good News, Not for Long

Ironies abound during this pandemic. As much of our world has ground to a halt, air-pollution levels have plunged dramatically. Global greenhouse gas emissions are on track to drop nearly 8 percent this year, the largest decline ever recorded. That would put global emissions back at levels last seen in 2010, wiping out an entire decade of growth in the use of fossil fuels worldwide. But experts cautioned that when the pandemic subsides and nations restart their economies, emissions could easily soar again unless governments make concerted efforts to shift to cleaner energy as part of their recovery efforts.

Reinvigorated scrutiny of trading live wildlife - including wild birds - could be another positive thing to come out of the crisis. COVID-19 likely originated in a Wuhan wet market, which sells live produce and is a hub for both legally and illegally trafficked wildlife. The 2003 SARS virus, a predecessor to the current pandemic, is also thought to have come from a wet market in China similar to the one in Wuhan.

The United States recently called on China to permanently shut down the country's wet markets. Australia urged an international scientific investigation of the health risks associated with them. However, while some of the wet markets sell wild animals, the vast majority of them do not. Beijing officially banned the country's live-animal markets in February, but it has resisted closing all of the wet markets, which serve daily needs for many Chinese.

Elsewhere, some waterways have turned clearer. Shortly after Italy entered lockdown, images of crystal-clear canals in Venice - usually clouded with mud and other pollutants - were widely shared. Meanwhile, as nearly all of us humans retreated to our homes, other animals became bolder. Wild goats were spotted wandering through the deserted streets of a village in Wales. Coyote sightings soared in San Francisco.



However, one of the worst environmental side effects of the coronavirus pandemic is a rapid increase in the use of disposable plastic, from medical equipment

like disposable gloves to plastic bags and packaging for prepackaged and takeout foods. Another concern: With the coronavirus dominating headlines, the climate crisis has been pushed to the sidelines. The UN climate conference has been postponed until 2021. So while there is some good news for the environment since the pandemic began, we're unlikely to see any long-term change as a result.

Climate News

Current Megadrought in the Southwest Is the Worst in Centuries

A new study has found that the 2000–2018 drought over southwestern North America was the second driest 19-year period since 800 CE - as bad or worse than droughts that led ancestral Pueblo Indians to abandon their elaborately constructed dwellings and migrate to new places.

Historical documents from the Spanish Entrada into what is now the U.S. Southwest include anecdotal evidence for unusual aridity in the late 16th century. The new study determined that the 16th-century megadrought was in fact the worst multi-decadal drought episode in the Southwest over the past 1200 years - but not by much. The second-worst event occurred from 2000 to 2018, and may be ongoing. The study, led by Park Williams, a bioclimatologist at Lamont-Doherty Earth Observatory at Columbia University, also pinpointed substantial human contribution to the severity of the current megadrought.

Megadroughts are dry spells more severe and sustained than any witnessed during the 20th-century period of instrumental observations. The 16th-century megadrought affected much of North America but was most severe and sustained over the southwestern United States and northern Mexico, disrupting agriculture and social order.

Scientists haven't yet deciphered the causes of megadroughts, but increased solar activity, reduced volcanic activity and cold La Niña-like conditions in the tropical Pacific are among the candidates. One of the study's most sobering conclusions, however, is that nearly half of the severity of the current megadrought can be attributed to human-caused climate warming. In the absence of this human contribution, the 2000–2018 interval would have been just another episode of reduced precipitation, low soil moisture and poor tree growth in the U.S. Southwest.

Climate models predict that conditions might worsen by the mid-21st century. Meanwhile, declines in wildlife populations and the over-appropriation of water resources might have made nature and society less resilient to heat waves, water shortages and wildfires. Fortunately, reasonable policy options exist to begin muting human-caused climate change, including a number of "no-regrets strategies" to promote energy efficiency and innovation.

Science

Renewable Energy: A New Milestone

The United States is on track to produce more electricity this year from renewable power than from coal for the first time, new government projections show, a transformation partly

driven by the coronavirus pandemic, with profound implications in the fight against climate change. It is a milestone that seemed unthinkable a decade ago, when coal provided nearly half the nation's electricity. And it comes despite the Trump administration's three-year push to revive the ailing industry by weakening pollution rules on coal-burning power plants.

The cost of building large wind farms has declined more than 40% in that time, while solar costs have dropped more than 80%. Now the coronavirus outbreak is pushing coal producers into their deepest crisis yet. As factories, retailers, restaurants and office buildings have shut down nationwide, demand for electricity has fallen sharply. And because coal plants often cost more to operate than gas plants or renewables, many utilities are cutting back on coal power first.

The report from the Energy Information Administration estimates that electricity from America's coal plants this year will drop for the first time below both nuclear power and renewable power, a category that includes wind, solar, hydroelectric dams, geothermal and



biomass. In just the first four and a half months of this year, U.S. renewable energy facilities have outproduced coal on 90 separate days - shattering last year's record of 38 days for the entire year.

Coal is the dirtiest of all fossil fuels, and its decline has already helped drive down U.S. carbon dioxide emissions 15% since 2005. This year the agency expects America's emissions to fall by another 11%, the largest drop in at least 70 years. The pandemic makes these projections uncertain, but some decline is expected, partly because Americans aren't driving as much but mainly because coal plants are running less often.

Electric companies used to worry that using more than a fraction of wind and solar would make it difficult to keep the nation's lights on, since the sun isn't always shining and the wind isn't always blowing. But utilities have discovered ways to tackle this problem by using technologies like better weather forecasting and, increasingly, vast battery storage projects such as those planned in Nevada and California.

Even if coal does manage to rebound later this year, experts say that the dramatic shift in the nation's electricity system is unlikely to be just a blip. "Coal's been pushed to the margins, and it's wind and solar that are the cheapest options," said one energy expert.

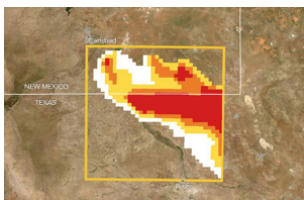
New York Times

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Satellites Reveal Extreme Methane Emissions in the Permian Basin

Oil and gas operations in the sprawling Permian Basin are releasing methane at twice the average rate found in previous studies of 11 other major U.S. oil and gas regions, a new study using methane-tracking satellites has found. The study was authored by scientists from Environmental Defense Fund, Harvard University, Georgia Tech and the SRON Netherlands Institute for Space Research.

“There’s so much methane escaping from Permian oil and gas operations that it nearly triples the 20-year climate impact of burning the gas they’re producing,” said co-author Dr. Steven Hamburg, chief scientist at EDF. Based on the satellite data, the operations are losing methane at a rate equal to 3.7% of their gas production. The wasted methane – the main component in natural gas – could supply 2 million U.S. households.



Aerial survey of Permian Basin methane emissions

Methane is a potent greenhouse gas that causes over a quarter of today’s global warming. Reducing methane from oil and gas operations is the fastest, most cost-effective way to slow the rate of warming, even as the necessary transition to a net-zero carbon economy takes place. Satellites are an important new methane measurement tool that can cover large areas faster and more frequently than other methods. They can also provide data on remote, hard-to-reach gas-producing regions around the world.

The Permian Basin straddles the border between New Mexico and Texas, and is one of the world’s most prolific oil regions, producing 3.5 million barrels of crude and 11 billion cubic feet of natural gas per day (about 30% and 10% of the respective U.S. totals in 2018). Despite an anticipated decline in drilling and oil production during the current Coronavirus pandemic, the EDF and other environmental groups fear the crisis could actually lead to higher methane emissions due to a temporary policy by the EPA that allows companies to suspend air monitoring and other environmental compliance. And it’s still too early to know whether the recent slide in oil prices will result in a change in methane emissions, according to the EDF, which advocates a comprehensive state-level methane rule to curb emissions.

EDF

Wild and Scenic Gila River Gains Support

The most environmentally sensitive portions of New Mexico’s Gila River watershed would be protected under a bill introduced by the state’s two U.S. senators, Tom Udall and Martin Heinrich. The bill would place parts of the Gila River, its wilderness area and the San Francisco River tributary under the Wild and Scenic Rivers designation to preserve their natural beauty, recreational opportunities and diverse wildlife for future generations.

The 650-mile Gila is the state’s last free-flowing river, and was named the country’s most endangered waterway in an American Rivers report due to climate change and a proposed dam project. Heinrich said he’s confident Congress will pass the bill, though he cautioned it could take a while. The bill has broad support from “a well-rounded coalition” of environmental groups, nature enthusiasts, anglers and boaters, he said.



The bill wouldn’t affect a controversial proposal by a state agency to build a dam on private land abutting the Gila, because the designation only covers public lands. The proposed dam should be viewed as a separate issue from the wild and scenic designation, which focuses on the more majestic public areas, said Allyson Siwik, executive director of the Gila Conservation Coalition. The bill is about preserving the river’s historic value and protecting wildlife, such as the 350 species of birds and the unique native fish, she said. However, the bill would prevent any future water diversion from being created along the stretches that are the most scenic and rich in wildlife.

Santa Fe New Mexican

Upper Pecos River Protection Sought

A coalition of local farmers, anglers, ranchers, community members and government agencies has petitioned the New Mexico Water Quality Control Commission to designate portions of the Upper Pecos River Watershed as Outstanding National Resource Waters under the Clean Water Act. The designation would allow current activities such as farming and ranching to continue, but requires new activities to show that they will not degrade water quality.

The action comes amid mounting concerns over a mining company’s proposal to conduct exploratory drilling for gold, zinc and copper in the Santa Fe National Forest near Tererro. The petitioners include San Miguel County, the Village of Pecos and the Upper Pecos Watershed Association. The commission scheduled a public hearing on the issue for November.

Western Environmental Law Center



President's Column

Tom Jervis

Spring is here, reminding us of nature's glories at this time of year. We have been happy to see and hear Lesser Goldfinch, Black-headed Grosbeak and Western Tanager, among others, back from their winter travels. Birdsong is all around.

Unfortunately the coronavirus has largely curtailed our ability to share our enjoyment of birds. Our spring visitors know nothing about this situation, of course. But we've had to forego birding trips with friends and acquaintances, and our chapter field trips have been canceled at least through mid-July and perhaps beyond. Even our chapter's fall programs could be at risk.

This is a burden, though hardly significant compared to the ones borne by our Native American neighbors and others who have been hard hit by the virus. In the same way that the first Ash-Throated Flycatcher to be spotted near our house this season embodies the beauty of nature, the pandemic is a brutal reminder of its complexity and awesome power, sometimes even in its tiniest organisms. She gets the last word, and we ignore her warnings at our peril.

While the coronavirus and climate change can both be traced in a broad sense to human activity, including overpopulation, the parallels between our society's response to the pandemic and to climate change are absolutely uncanny. There are still those who call both "fake news" and promote happy talk that there really is nothing to worry about. That is getting more difficult to do with the pandemic still raging, and the same will be true - though on a different time scale - of climate change. These are things that do not just happen to "other people." To be sure, some folks are suffering more severely from the virus, and some will bear the greater brunt of the consequences of climate change. But we should not delude ourselves into some kind of magical thinking that we and our families and neighbors will somehow be exempted from the consequences of both.

Meanwhile, it's also true that any remedies for both the pandemic and climate change will require cooperation among peoples and nations around the world. So together let's renew our appreciation and respect for the natural world. Let's also work to bring sanity and understanding to our interaction with the world at all scales, and double down on our efforts to combat climate change. In this year that saw the 50th anniversary of Earth Day on April 22, let's go outside, listen to the birds singing and revel in their beauty. But, mindful of all of nature, let's also be sure to wash our hands regularly and wear masks.

Oldest Fossil of Modern Birds Is a "Turducken"

Go to a Cajun restaurant in New Orleans and you might be offered a slice of turducken: a fancy dish of chicken stuffed inside of a duck stuffed into a turkey. Now, paleontologists have their own version: the oldest modern bird skull ever found, a seagull-size Cretaceous shorebird that had features of ducks, chickens and turkeys.

Whereas the earliest birds, like the 150-million-year-old Archaeopteryx, look very different from today's, the new fossil has clear characteristics of modern land and waterfowl, perhaps offering a glimpse of their common ancestor. Discovered near the Dutch town of Maastricht, in famous fossil beds that formed between 66.8 million and 66.7 million years ago, the turducken predates the split between the duck lineage and that of both chickens and turkeys - and so has traits of all three. It lived just before the mass extinction caused by an asteroid impact that killed off the dinosaurs.



Most of the bird's body is missing, but a piece of leg bone suggests it had long legs for its head size. Combined with the fact that the Maastricht deposits formed in a shallow sea, the fossil's proportions suggest it was a shorebird about the size of a modern seagull.

In a Nature paper, Field and his colleagues named the bird *Asteriornis maastrichtensis*, for Asteria, the Greek goddess of falling stars who turns herself into a quail. The falling stars nod to the asteroid impact and extinction that struck not long after the bird lived. Some scientists have argued that modern birds evolved in the Southern Hemisphere, because the oldest modern bird fossils found until now came from Antarctica. But the new fossil is likely older than the Antarctic ones, arguing against that assumption.

Science

Purchase the Mexican Gray Wolf Conservation Stamp!

Jessica Gama has won the 2020 Mexican Gray Wolf Conservation Stamp contest. The stamps have been issued annually since 2011 by the New Mexico Wilderness Alliance. All proceeds from the Mexican Gray Wolf Conservation Stamp sales directly benefit activities to support Mexican gray wolf conservation and education projects.

Buy your Mexican Gray Wolf Conservation stamp [here](#).

