SAN DIEGO BIRD ALLIANCE

Sketches

75 Years of Protecting Birds

PHIL UNITT

Invites Us to Think Deeply About Nature

SPECIAL ISSUE

People-Powered Community Science

15 ways You Can Make a Difference

Spring 2026
VOLUME 77 • NUMBER 2

TO PROTECT THE FUTURE OF SAN DIEGO'S BIRDS

Phil Unitt Looks to Their Past

by LaTresa Pearson, Sketches Editor

Cabinet after cabinet, drawer after drawer, lifeless birds lie in rows. Composed mostly of skins and skeletons, almost 53,000 bird specimens, each carefully tagged, sit neatly tucked away in the San Diego Natural History Museum's collection—some of them dating back to the 1800s. I admit I find it a little macabre to be in their presence, but these birds have much to share with those willing to discover their stories. And it's hard to imagine anyone who has been more dedicated to finding and telling their stories than Phil Unitt, the museum's longtime curator of birds and mammals, who officially retired at the end of February.

While Unitt spent nearly four decades as curator, his connection with the museum and its collection goes back to 1974, when he began volunteering with Joe Jehl, curator of birds and mammals at the time. Unitt was a freshman at San Diego State University (SDSU), and Jehl was filling in as professor of an ornithology class in which Unitt was enrolled. It was Jehl who introduced Unitt to the specimen collection, as well as to the art of specimen preservation. Jehl also introduced the young college student to the department's library, which not only contains well-known journals such as *The Auk, The Condor,* and *Bird Lore* (now *Audubon* magazine), but also extensive field notes from his predecessors and localized articles, which expanded his perspective of the birds around him.

When I meet with Unitt at the museum to discuss his career, he tells me that the centerpiece of the Department of Ornithology is its collection, so his primary role throughout the years has been caring for and growing the collection, as well as helping others to use it and to learn from it. "Our collection is the physical record of our ever-changing environment," he tells me. "Something I feel strongly about is that every generation should leave a physical record. Nowadays, with everything being digital, the physical record is just as important, because it's science and it still exists when the power goes out."

Unitt says the physical record includes the specimens, as well as their labels, which provide important information such as when and where the bird was collected, who collected it, the condition of the bird when it was collected, and other details that help provide context for researchers. "It's also the skills to make those specimens, because that's an art form and a discipline that takes a lot of effort to master," he says, crediting Suzanne Bond, who was an assistant to Joe Jehl, for passing her mastery on to him. Unitt has been tirelessly dedicated to continuing her tradition of training students, volunteers, and staff in the art of specimen preparation.

"Every generation should leave a physical record."

Beginning about 30 years ago, Unitt added another dimension to the museum's physical record by taking tissue samples from each specimen, which are then archived at SDSU. He estimates that the museum has given the university between 6,000 and 7,000 tissue samples for use in research, including studies of genetics, contaminants, and stable isotopes.

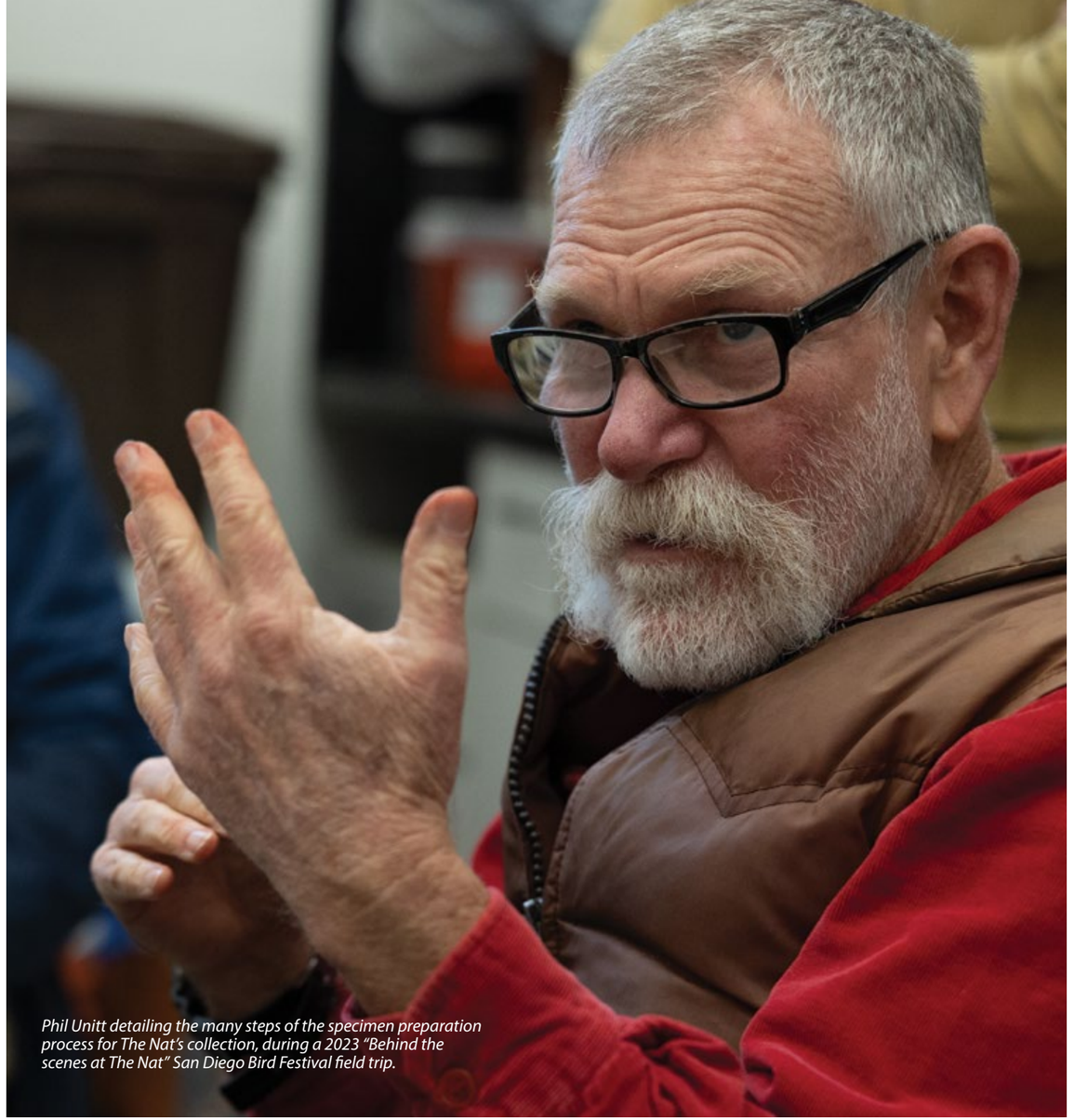
While maintaining and growing the specimen collection has been an important part of Unitt's role as curator, he tells me an equally important part has been discovering and telling the stories inherent to the collection. As we talk, he opens a drawer to one of the specimen cases and pulls out a small, shallow box of Horned Larks and launches into what he considers to be one of the most exciting stories he's discovered in the collection.

"The Horned Lark is famous for its geographic variation throughout North America, and you can imagine, for a bird that runs around on the ground in the open, there's strong selection for it to match the background color of the prevailing dirt. One of those variations is a very pale subspecies in the deserts of southeastern California that is well exemplified by our historical collection," he says, picking up one of the light-colored specimens, which was collected in 1923 from Holtville in the southeastern part of the Imperial Valley.

Unitt then points to some other specimens in the box, which one of his friends collected from the Imperial Valley in the 1990s. "They're darker in various ways, both the dark centers of the feathers and the brownish edges," he says. At the time he first noticed the mismatch, Unitt says he raised the possibility that the darkening of the feathers could be an adaptation to match the darker background color of the Imperial Valley due to modern irrigation. "If you look at a Google Earth image of southeastern California, you see this dark blob of irrigated agriculture, surrounded by all this pale sand and desert," he says.

Years later, Unitt tells me he mentioned the possibility of this adaptation to Nick Mason, a graduate student at SDSU, who suggested they do a study. They went to the Imperial Valley in July and August of 2013 and 2014, just after the Horned Larks had molted, and collected 10 specimens each year. Mason ran analyses on the feathers and confirmed they were darker and more variable.

"We believe this is the first example in birds of a shift in color in response to environmental change, paralleling the famous example of the Peppered Moths in England during the Industrial Revolution," says Unitt. "That such a thing could happen in birds within a century, nobody had reported that before. So, this is one of the most exciting discoveries of my career."



Phil Unitt detailing the many steps of the specimen preparation process for The Nat's collection, during a 2023 "Behind the scenes at The Nat" San Diego Bird Festival field trip.

Photo: Tim Downs

In addition to the specimens, the museum's vast collection of ornithological literature has also been central to Unitt's work. "When I was a young student coming into our library before the days of the internet, this was a window to the world and a window into the past," he says. "To be able to see that it wasn't this way 100 years ago. It wasn't this way 50 years ago. To be able to absorb that history. I can't do anything without having that perspective in mind because that's just part of my brain now."

I ask Unitt if he's read everything in the museum's library. "No. No, no, no, no," he says emphatically. "But, on birds? A hell of a lot of it. When it comes to the historical literature on California and Baja California birds, that I have read, I would say, the vast majority. If you were to look at the literature from the 1800s and the first half of the 1900s, I feel pretty confident that I'm intimate with that literature."

The literature he has found pivotal to his work ranges from a small article written by Clarence Sharpe in 1907 titled, "The Breeding Birds of Escondido," to the monumental work, *The Distribution of the Birds of California,* by Joseph Grinnell and Alden Miller, which was published in 1944.

Unitt says he has used the Sharpe article as a touchstone for several projects, and he believes every birder should read *The Distribution of the Birds of California*. "To this day, there isn't anything on that level of detail that covers the whole state and is so meticulously documented," he says. Grinnell also published the three-volume *A Bibliography of California Ornithology*," which Unitt says has been foundational. "Reading bibliographies doesn't sound very exciting, but if you flip through that, you can see what's there and what's not there," he says. "That really familiarized me with the history of the literature."

Another work that has been pivotal in his career is *An Account of the Birds and Mammals of the San Jacinto Area of Southern California* by Grinnell and Harry Swarth, which was published in 1913. The work documents the findings of a large survey Grinnell and Swarth led in the San Jacinto Mountains beginning in 1908. While Frank Stephens, the museum's first director, wrote about seeing the Gray Vireo in Campo in 1876, not much was known about the species and its habitat until Grinnell and Swarth's survey. "They made a big deal out of the Gray Vireo because none of them had seen it before," Unitt tells me. Grinnell and Swarth had estimated that there were about 1,000 Gray Vireos in the San Jacinto Mountains. After their survey, however, the species dropped out of sight in San Diego County until it was rediscovered as a breeding species during surveys of the Laguna Mountains conducted by wildlife biologist Michael Evans in 1978.

Then, in 1999, while working on the *San Diego County Bird Atlas*, Unitt discovered the Gray Vireo as a wintering bird in California for the first time. After learning that Sonora's wintering Gray Vireo population feed principally on elephant tree fruit, Unitt organized an expedition to the largest stand of elephant trees in the Anza-Borrego Desert, and the expedition paid off.

For the centennial of the Grinnell and Swarth survey of the San Jacinto Mountains, Unitt and his colleague, Lori Hargrove, led a team to resurvey the same area. "When we did our survey of the San Jacinto Mountains, from 2008 to 2014, we were able to find only a couple [of Gray Vireos], and we went back to the very same areas they had been and searched intensively," says Unitt. "It was clear that the population had collapsed." But why?

The California Department of Fish and Wildlife, which has added the Gray Vireo to its list of Species of Special Concern, and the Cleveland National Forest provided funding for Unitt and Hargrove to investigate the reasons for the Gray Vireo's decline in Southern California. They found that a primary culprit was the Brown-headed Cowbird, which parasitizes the nests of other birds. Not coincidentally, Brown-headed Cowbirds started showing up in San Diego County in large numbers in about 1915, after Grinnell and Swarth's survey. "They did [the survey] in the last years before the invasion of the Brown-headed Cowbird," Unitt tells me. "Two teams spent four to five months in the San Jacinto Mountains, and down to the [mountains'] base, they didn't have a single cowbird, but they had a thousand Gray Vireos."

Phil Unitt discovered a rapid color shift in Horned Larks by comparing specimens collected in the 1920s to ones collected in the 1990s.

Photo: LaTresa Pearson

If Unitt hadn't read *An Account of the Birds and Mammals of the San Jacinto Area of Southern California*, he wouldn't have known that the Gray Vireo, the rarest breeding bird in San Diego County, was once numerous. "To someone who doesn't know the history of the Gray Vireo, it's just a little gray bird with a name on a list," he says. "But once you understand the history and how the ecology is part of that, then it becomes a whole conservation story reflecting some broad ecological issues."

Unitt, himself, has added a great deal to the ornithological literature, serving as editor of *Western Birds* (the quarterly journal of the Western Field Ornithologists) for the last 40 years, writing numerous scientific papers, co-authoring the *Birds of the Salton Sea: Status, Biogeography, and Ecology*, and, of course, authoring the massive *San Diego County Bird Atlas*.

When I ask him what he hopes his legacy will be, he tells me, "Someone who maintained and transmitted and developed the tradition of understanding nature and its changes *deeply*. We can say that San Diego County's birds are as well-known as those anywhere in the world. And that I was a part of that is very gratifying. Future generations will be able to use this information to understand the changes in their time."

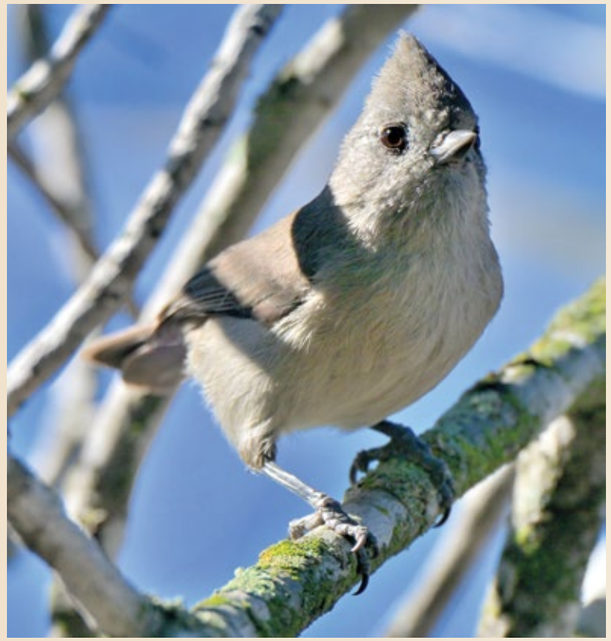
While Unitt has officially retired, he says he's not going anywhere. He is maintaining a role at the museum as emeritus curator of birds and mammals to help make the transition for his successor as smooth and constructive as possible. He will continue to train students, staff, and volunteers in the art of specimen preservation, and he will continue to seek out and tell the stories held within the museum's collections.

Join the California Bird Atlas Project

Did you know that more birds breed in California than in any other state? In fact, our state hosts at least 75% of the global breeding populations of 14 species of birds. Among those commonly seen in San Diego, 99% of Allen's Hummingbirds, 96% of Nuttall's Woodpeckers, and 94% of Oak Titmice breed only in California.

At the same time, California is one of just six states in the country that doesn't have a Breeding Bird Atlas. While here in San Diego we are fortunate to have the *San Diego County Bird Atlas*, we are among just 15 of California's 58 counties to have a Breeding Bird Atlas (and the first that also includes wintering birds and vagrants). Combined, these atlases cover less than 17% of California's land area and are concentrated in coastal, population-dense regions.

That's why San Diego Bird Alliance is proud to be a founding partner of California Bird Atlas (CBA), a new nonprofit that recently launched the first-ever statewide effort to map California's breeding birds. The project officially started on eBird on January 1 and will continue through December 30, 2030. The goal is to produce the most complete dataset ever assembled on the distribution, status, and behavior of all breeding bird species across California's habitats and counties.



Ptoto: Oak Titmouse by Refael Bar

Breeding Bird Atlases are important because they document not only the detailed locations and ranges of breeding birds, but they also document breeding timing, behaviors, and habitat, which is required by regulatory agencies to develop effective conservation strategies. "Many regulatory processes require actual data on actual birds," Sam Safran, science director of the California Bird Atlas, told attendees of CBA's first virtual town hall meeting in March. "For example, the Migratory Bird Treaty Act prohibits take of active nests, not potential nests in potentially suitable habitat. So, there is a lot of value in documenting actual occurrences of birds breeding."

With rapid environmental change due to the climate crisis, Safran said, "It's critically important to have a handle on where and when and how these birds are reproducing across the landscapes we care about." Research shows that birds are already breeding earlier due to warming temperatures. The Oak Titmouse, for example, breeds 12 days earlier, on average, than it did just 30 years ago. "This is the kind of detailed phenological data that atlasing is going to provide on a very large scale," Safran said. (*Breeding phenology* is the study of the timing of events, such as migration, nest building, egg-laying, and rearing young in relation to environmental conditions.)

The project is already off to a phenomenal start. According to Van Pierszalowski, executive director of CBA, their original goal was to have 15,000 checklists submitted to the atlas project by the end of March, but they surpassed that in just the first 26 days. By March 19, they had already received 51,598 atlas checklists from nearly 2,800 birders. "We have been beyond thrilled by the level of excitement statewide, up and down the state, of people submitting checklists," Pierszalowski told town hall attendees.

"This is going to be so valuable for the work that we do, especially as we try to stay on top of how birds are responding to climate change," Lesley Handa, SDBA's lead ornithologist, told conservation committee members during a virtual presentation by Pierszalowski in January. "I hope that all of you are really inspired to go out there, learn your birds, and help contribute to the atlas. You have five years to do this!"

Data for the project are collected through a custom-built eBird Atlas Portal, which was developed in collaboration with the Cornell Lab of Ornithology. You can contribute to the atlas by downloading the free eBird app and then clicking on "Join Project" at https://ebird.org/atlascalifornia/home. The page also includes links to detailed instructions for entering data and using breeding codes. When using the eBird mobile app, be sure to select "Choose Projects" on the home screen and select "California Bird Atlas" to submit your data to the project.

Volunteers Play a Critical Role in Monitoring Endangered Birds

by Karina Ornelas, Community Science Coordinator

For the past several years, I have led community science projects with San Diego Bird Alliance (SDBA) to support monitoring and conservation efforts for endangered species, including the federally and state-listed Light-footed Ridgway's Rail (LFRR, aka Clapper Rail) and the state-listed Belding's Savannah Sparrow.

The LFRR is an elusive bird that relies on coastal wetlands. If you're lucky, you may spot them walking on the mudflats looking for food or catch a glimpse of them among the pickleweed or the cordgrass. Frequently, however, you may only hear their call emanating from deep within the marsh. Because these birds are rarely seen, due to dense marsh vegetation, population changes can easily go unnoticed during long-term monitoring.

The 2025 U.S. State of the Birds report points out that secretive marsh birds such as the LFRR are declining, as indicated by eBird Trends, due to habitat loss and fragmentation caused by urban development, by sea level rise, and by environmental changes. In addition, the Ridgway's Rail is an IUCN Red List tipping-point species, which means they have perilously low populations and steep declining trends (IUCN, International Union for Conservation of Nature).

To support long-term monitoring of the LFRR, SDBA has been collaborating with Richard Zembal and Susan Hoffman, who have led the annual census surveys of the LFRR in California since 1980. Zembal has been the principal investigator and Southern California LFRR expert for the past 46 years. He and Hoffman are longtime lead permitted biologists for the statewide monitoring of the LFRR and are associated with the Clapper Rail Recovery Fund and Huntington Beach Wetlands Conservancy. Together, they have been central to the recovery monitoring of the LFRR by documenting population trends across California coastal wetlands and by evaluating and guiding the statewide recovery strategy.

Monitoring the LFRR includes the use of two types of census surveys: one using playback to elicit responses from rails and one using passive listening. The surveys that use playback are authorized and led by the permitted biologists, following established protocols. I lead the passive-listening surveys, which do not use playback. We conduct these surveys throughout the breeding season, which is generally from mid-March through August. (At Kendall–Frost Marsh, the breeding season is from February 15 through September 15, as I have seen breeding activity occur as early as February 15.) The locations we have surveyed with Zembal using playback are the Tijuana Slough National Wildlife Refuge, Kendall–Frost Marsh, and the San Diego River.

SDBA helps recruit and train volunteers who aid with these annual surveys, which are highly dependent on volunteer participation to cover large areas, such as the Tijuana Slough and the San Diego River. This is an amazing opportunity for volunteers not only to gain hands-on experience in standardized data collection for this highly secretive marsh species, but also to have the chance to enter wetland areas that are usually off limits to the public.

For playback surveys, we meet at a location, go over protocols, and listen to playback of rail calls before going out into the field. Then, volunteers are placed in designated survey points where they listen for rail vocalizations and carefully record detections on a map. At the end of each survey, we all gather at the meeting point to compile the data. Zembal creates a master map with the preliminary rail count.

Photo: LFRR by Tim Downs

For passive-listening surveys, the procedure is essentially the same, except without the use of playback. In 2025, we conducted passive-listening surveys at J Street Marsh, Paradise Creek, South Bay, and Bayshore Bikeway (Silver Strand Bikeway). After I lead passive-listening surveys, I prepare a report and send it to Zembal, so he can compare trends and add the results to his database and annual report.

"I am elated that SDBA is taking stewardship responsibility for the LFRR, endangered denizen of our coastal marshes, by helping monitor their annual populations in San Diego County," says Zembal.

The Belding's Savannah Sparrow (BSS) is another focal species for our monitoring work. Like the LFRR, the BSS relies on coastal wetlands. According to the *San Diego County Bird Atlas*, their primary habitat is in the upper marsh zone where they nest exclusively. The *Atlas* also points out that they are a sedentary species, so if we lose coastal wetlands, the BSS will probably have nowhere else to go.

One of the looming threats to coastal wetlands is sea level rise, and king tide events give us a preview of how coastal wetland species will be affected by rising waters. In Mission Bay, SDBA conducts surveys to assess impacts on both BSS and LFRR during king tide events. As with the LFRR surveys, the king tide surveys depend heavily on volunteers. Volunteers assist by recording the number of BSSs observed during three-hour survey windows and documenting conditions before, during, and after peak tides. Some lucky volunteers survey from kayaks. During each survey, we have three groups that focus on BSS from land and three groups that kayak. Two of the kayak groups focus on LFRR and one kayak group focuses on BSS. We share these survey results with Zembal to incorporate into the annual census. Surveys such as these help us better understand how extreme tidal events displace these vulnerable species and inform future conservation planning.

For the November 6, 2025, king tide event, rail expert Hiram Moreno, a Ph.D. candidate at the Ensenada Center for Scientific Research and Higher Education and a biology professor at the Autonomous University of Baja California, helped us to identify rails and shared his knowledge of BSS and LFRR. LFRRs are found in the coastal wetlands of Southern California and Northern Baja California, and evidence suggests that the birds move between these connected wetland habitats, as LFRRs tagged in Southern California have been found in Baja California. This is a reminder that conservation does not have borders, and having binational collaboration is essential for conservation.

"Participating in the king tides kayak surveys for Ridgway's Rail in KFM (Kendall–Frost Marsh) at Mission Bay has been a powerful example of how science and community engagement can work together," says Moreno. "Monitoring during extreme tidal events not only strengthens our understanding of habitat vulnerability but also reinforces the importance of binational collaboration for coastal conservation."

It is currently the breeding season for the Light-footed Ridgway's Rail, and we are conducting surveys. If you are interested in getting involved, contact me at kOrnelas@sandiegobirdalliance.org. In addition, here's the link to register to participate in surveys: https://secure.sandiegobirdalliance.org/np/clients/sandiegobirdalliance/subscribe.jsp?subscription=155

Photos: Belding's Savannah Sparrow by Tim Downs; Group photo by Karina Ornelas

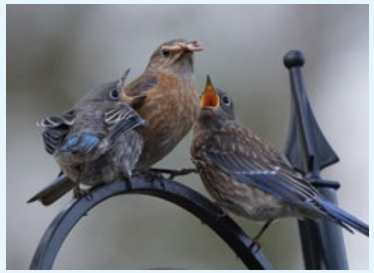
Community Science

Have Fun, Learn New Skills, and Make a Difference with These Local Projects

USFWS Western Grebe and Clark's Grebe Nesting Survey
PROJECT DESCRIPTION: Volunteers conduct at least one site visit (preferably three) to survey grebes at each location. Locally, the data will help document when grebes are present and breeding to inform advocacy regarding reservoir management. USFWS will use the data to assess population distribution, hybridization of the two species, and nest colony success rangewide, as well as to evaluate factors associated with successful nesting to improve conservation efforts.
WHEN IT TAKES PLACE: Annually, May–June, through 2030
WHO CAN PARTICIPATE: Anyone
LEARN MORE: email Lesley Handa at Lhanda@sandiegobirdalliance.org

Intermountain West Shorebird Survey
PROJECT DESCRIPTION: Survey data will be gathered for shorebird distribution and abundance in one of the most important migratory corridors in North America, and compared with historical data gathered during the last shorebird survey, 1989–1995, to identify factors that influence the abundance of shorebirds.
WHEN IT TAKES PLACE: April 24–30, Spring Peak Shorebird Survey Window/ August 9–22, Fall Peak Shorebird Survey Window. This is the final year of the survey.
WHO CAN PARTICIPATE: Anyone who can identify shorebirds in breeding and non-breeding plumage, and who can commit to one survey day in the spring and one survey day in the fall.
LEARN MORE: https://www.imwss.org/

California Bluebird Recovery Program
PROJECT DESCRIPTION: This statewide nestbox monitoring program focuses on supplementing habitat for cavity-nesting birds and tracking breeding *phenology* (how climate affects bird breeding behavior). Volunteers monitor nestboxes weekly during the breeding season. Local target species include Western Bluebird, Oak Titmouse, White-breasted Nuthatch, Bewick's Wren, and more.
WHEN IT TAKES PLACE: Weekly, February–August
WHO CAN PARTICIPATE: Volunteers who can commit to weekly monitoring, February–August
LEARN MORE: www.sandiegobirdalliance.org/what-we-do/conservation-1/california-bluebird-recovery-program.html



Pacific Flyway Shorebird Survey
PROJECT DESCRIPTION: This long-term monitoring program is designed to guide the management and conservation of wintering shorebirds. Volunteer surveyors are encouraged to take ownership of a route and survey it one day each year. Local sites are San Diego Bay and the Salton Sea.
WHEN IT TAKES PLACE: Annually on one survey day between November 15 and December 15
WHO CAN PARTICIPATE: Ideal candidates will have their own optics (binoculars and scope) and the ability to follow a protocol and enter data online into the Avian Knowledge Network.
LEARN MORE: https://migratoryshorebirdproject.org/pfss/.

Photos: Clark's Grebe by Tim Downs; Western Bluebirds by LaTresa Pearson

Torrey Pines Native Bee Monitoring Project
PROJECT DESCRIPTION: Volunteers (Wannabees) conduct structured surveys by walking a specified path at Torrey Pines State Natural Reserve for 60 minutes while photographing all native bees observed and then submit the photos to iNaturalist. They also photograph all blooming plants to help researchers better understand which plants best support native bees.
WHEN IT TAKES PLACE: Ongoing
WHO CAN PARTICIPATE: Anyone with access to the internet and a camera or smartphone with a good camera. There is no ongoing commitment.
LEARN MORE: https://torreypine.org/bee-monitoring-project/

California Native Bee Society Bee-o-Blitz
PROJECT DESCRIPTION: This inaugural iNaturalist-based bioblitz project will include events in San Diego County, as well as events with partner organizations across the state. Participants join the "California Bee-o-Blitz" project on iNaturalist and then photograph as many native bees as possible and submit them to the project.
WHEN IT TAKES PLACE: May 16–24
WHO CAN PARTICIPATE: Anyone who joins the iNaturalist project and has access to a camera or a smartphone with a good camera.
LEARN MORE: https://calnbs.org/bee-o-blitz/

Photos: Green sweat bee and Monarch butterflies by Cindy Pencek

North American Butterfly Association (NABA) Count
PROJECT DESCRIPTION: The data collected in these counts are used to help monitor the geographical distribution and relative population sizes of butterfly species across North America. Counts take place in South and Northwest San Diego County. Teams generally consist of three to five people, with at least one butterfly expert.
WHEN IT TAKES PLACE: The South San Diego County Count is April 11, and the Northwest San Diego County Count is July 18.
WHO CAN PARTICIPATE: Anyone
LEARN MORE: For general information, go to https://naba.org/butterfly-counts/. For the South San Diego County Count, email Hector Valtierra at valtierra@live.com. For the Northwest San Diego County Count, email Jill Lingnell at jilllingnell@hotmail.com

Xerces Society Western Monarch Count
PROJECT DESCRIPTION: After training on how to record data, volunteers are assigned to a local spot to visit during the count period. At the site, they use binoculars and/or a camera to count monarch butterflies as they roost.
WHEN IT TAKES PLACE: Annually, October–January
WHO CAN PARTICIPATE: This intensive community science project asks for participants who can commit 15+ hours each fall–winter, attend virtual and field training workshops, follow survey protocol, and submit data electronically.
LEARN MORE: https://westernmonarchcount.org/.

iNaturalist Border BioBlitz Moth Surveys
PROJECT DESCRIPTION: Led by iNaturalist Ambassador Hector Valtierra, these surveys extend from Border Field State Park to Yuma, Arizona. Participants count moths and contribute their data to iNaturalist as part of the Border BioBlitz project to record as many species as possible along the U.S.–Mexico border.
WHEN IT TAKES PLACE: April 23 in Clover Flat (east of Campo); May 2 in Long Potrero (north of Potrero County Park). Additional moth surveys will take place in April and May, the entire month of June for the iNaturalist SnapShot CalCoast project, and July 18–26 for National Moth Week. Moth surveys occur from 30 minutes after sunset until about 9:30 or 10 P.M.
WHO CAN PARTICIPATE: Anyone
LEARN MORE: Email Hector Valtierra at valtierra@live.com. Additional survey details will be posted on social media: Follow Valtierra on Instagram at radiowilderness and on Facebook at Radio Wilderness. You can also follow Valtierra on iNaturalist at Biohexx1

The Christmas Bird Count

The Longest-Running Community Science Project

The year 2025 marked the National Audubon Society's 125th annual Christmas Bird Count (CBC), and 83,000 participants in 21 countries counted more than 44 million individual birds, representing more than 2,500 species. The CBC is the longest running community science project in the world, and the data collected have proven invaluable to researchers tracking global bird population trends—a remarkable feat for something that started as a simple request in a magazine article.

The magazine was *Bird Lore*, the precursor to *Audubon* Magazine, and the request for readers to join in "a new kind of Christmas side hunt, in the form of a Christmas bird-census" was made by ornithologist Frank Chapman, who served as *Bird Lore's* editor and publisher, as well as a scientist in the Ornithology Department at the American Museum of Natural History in New York.

Chapman wanted to counter an ecologically devastating tradition called the "Christmas Side Hunt," which was popular in New England throughout the 1800s. During "Side Hunts," teams competed to see who could shoot and kill the most birds and other animals.

From the beginning, the idea behind the Christmas Day bird census was to record the number of bird species seen and their relative abundance to create a database that researchers could use to follow population trends well into the future. During that first CBC, 27 birders conducted 25 counts, primarily in the northeastern United States and Canada, identifying 89 different species and 18,500 individual birds.

One of the participants in those early counts was Clinton Abbott, who conducted some of the first counts in New York City's Central Park. Luckily for us, Abbott was later hired to direct the San Diego Natural History Museum (The Nat) in 1922, and he brought the CBC with him. That year, he and Laurence Huey, The Nat's Curator for the Department of Birds and Mammals at the time, conducted the first CBC in San Diego. Their count appeared in *Bird Lore*. The magazine and Huey's extensive field notes and collected specimens from that first San Diego count are part of The Nat's collections, so we have an amazing record of what it was like. According to Phil Unitt, emeritus curator of birds and mammals at The Nat, Huey ended his field notes by describing the first San Diego CBC as "the perfect day."

In a presentation about the San Diego CBC at The Nat in January, Unitt pointed out that just one or two teams conducted the count for the next 20 years (primarily Abbott and Huey). The San Diego Bird Alliance (then the San Diego Audubon Society) took over the San Diego CBC in 1953 and turned it into a true community science event.

"Encouraging the community to participate is critical," Unitt told the audience at his presentation. "I'm an example of that, because my own first exposure to other birders was the San Diego Christmas Bird Count in 1971."

San Diego County now has several groups running counts in different regions during the CBC. SDBA joins The Nat and other groups for the San Diego count, which covers most of the South Bay. There are also counts in Escondido, Rancho Santa Fe, Lake Henshaw, Anza-Borrego, and Oceanside–Vista–Carlsbad. SDBA also sends a team to participate in the South End Salton Sea CBC.

Following, SDBA Director of Education Sandy McCann provides a peak behind the scenes of the 2025 San Diego CBC; SDBA Lead Ornithologist Lesley Handa discusses the importance of the South End Salton Sea CBC; and SDBA Anstine Nature Preserve Coordinator Hannah St. John shares her experience participating in the 2025 Anstine site count for Buena Vista Audubon's Oceanside–Vista–Carlsbad CBC.

—LaTresa Pearson, *Sketches Editor*

SAN DIEGO CBC

The People Behind the 2025 Christmas Bird Count

On December 20, 2025, more than 200 birders rose before dawn, bundled up against the winter chill, and headed into wetlands, neighborhoods, reservoirs, and coastlines across southern San Diego County to participate in the annual San Diego Christmas Bird Count, coordinated locally by SDBA in partnership with The Nat.

The 2025 count marked a milestone: 210 participants contributed a record-setting 364.1 party hours in the field (the total amount of time a team spends actively looking for birds in their assigned circle). This number marks the highest volunteer turnout in the history of the count. From seasoned field leaders to first-time participants, volunteers worked in teams to ensure that every corner of the 15-mile count circle was carefully surveyed. While the final tally of 218 species reflects an impressive day of birding, the true story of the CBC is the dedication behind those numbers.

Months before count day, a committee begins the complex work of organizing routes, recruiting and assigning team leaders, coordinating access to sensitive sites, and communicating with dozens of partner agencies and land managers. For the 2025 count, access was secured to key areas including Cabrillo National Monument, Border Field State Park, Sweetwater Reservoir, and parts of San Diego Bay, a logistical effort that required planning, relationships, and persistence.

On count day itself, volunteers fanned out across habitats at sunrise. Some hiked rugged terrain. Others scanned shorelines in wind and salt spray. Neighborhood teams walked block by block. Many participants devoted an entire day, and often additional scouting time beforehand, to ensure their assigned area was fully covered.

After sunset, the work continued. Data needed to be compiled, reviewed, and submitted with care. Every observation became part of a dataset that spans more than a century, helping scientists understand long-term changes in bird populations and habitat health.

What makes the San Diego Christmas Bird Count especially remarkable is its growth. Surpassing 200 observers for the first time demonstrates a deep and growing commitment within our community. Experienced birders mentor newer participants. Team leaders share knowledge. Friendships are formed in the field. The count is as much about connection as it is about conservation.

The Christmas Bird Count is often described as a census of birds, but it is equally a testament to people. It represents thousands of volunteer hours, decades of tradition, and a shared belief that careful observation matters.

To everyone who participated in 2025—thank you. Your time, energy, expertise, and enthusiasm make this effort possible. Whether you led a team, counted from your neighborhood, coordinated logistics, or helped compile data, you are part of a tradition that strengthens both science and community.

—Sandy McCann, Director of Education

Photo: Alexis Luz

SOUTH END SALTON SEA CBC

A Birding Bonanza with a Mission

With more than 400 species of birds concentrated around the Salton Sea year-round, the South End Salton Sea (SESS) CBC is an annual opportunity to participate in a winter birding bonanza with species we don't often see in San Diego, such as large flocks of Sandhill Cranes, Snow Geese, Abert's Towhees, Verdins, and, if lucky, multiple Mountain Plovers. Assigned areas within the CBC circle can quickly rack up several thousands of individual birds, and for San Diegans who usually bird close to home, the high numbers at the sea can inspire awe. Rare bird appearances can be unpredictable, and you never know which birds you may find the day of the count! In 2024, our team was delighted to see the first ever Tricolored Heron and the circle's fourth Reddish Egret—two birds that had been absent from the count circle during the previous day's scouting.

While many CBCs take place on the weekend, this count is uniquely scheduled on the third Tuesday in December, commemorating a longstanding tradition initiated by Salton Sea bird expert Guy McCaskie during the first count. Because the SESS CBC circle falls inside SDBA's chapter boundary, we began sending a team to participate in the annual count in 2019. Our investment in this CBC is vital to help monitor the changes to bird populations using this critically important habitat.

In 2021, the State of California began construction on the Species Conservation Habitat (SCH) project at the southern end of the Salton Sea. The project is creating a network of ponds with islands and areas of varying water depths to provide important fish and bird habitat. Because we began participating in the SESS CBC prior to its construction, the count is helping to track the progress and successes of this major wetland restoration effort. In 2025, SESS CBC Coordinator Chris McCreedy, reported the most species observed since 2015 with 131,748 birds representing 156 species for the circle. He also noted that the restoration project is catalyzing bird activity in other parts of the circle.

With bird populations facing dramatic declines and lithium extraction development projects tentatively planned inside this CBC circle, which could accelerate habitat loss and diminish air quality, the SESS CBC will be invaluable to tracking future changes to bird populations that congregate in the interior portion of the southern end of the state, shared by San Diego County.

—Lesley Handa, SDBA Lead Ornithologist

Photos: Burrowing Owl by Tim Downs; Sandhill Cranes by Cindy Pencek

OCEANSIDE–VISTA–CARLSBAD CBC

Surveying Anstine Nature Preserve

Buena Vista Audubon oversees the Oceanside–Vista–Carlsbad CBCs, and one of the birding groups starts their route at SDBA's Anstine Nature Preserve, located on the outskirts of Vista. I joined the 2025 group at the preserve in the foggy early morning hours of December 14. Dense fog can limit visibility, but with a group of 10 birders of varying skill levels, we had plenty of eyes and ears to get the job done.

As our group walked the trails of Anstine, we recorded 32 bird species and approximately 180 total birds. Counting the total number of birds seen is especially important for the dataset, to see the changes in population density year to year. This also means it's important to try not to double-count any birds. Our group stuck together, making it easier to communicate new species sightings for the list and to ensure everyone had the chance to see (or hear) the birds.

During our count, multiple large flocks of Cedar Waxwings flew overhead, and we saw a handful of American Robins—two species of birds that are typically found in the winter in San Diego but can have changes in flock density due to factors such as food availability or weather. Just a few years ago, there was an irruption of American Robins across the county in numbers that hadn't been seen in decades. Population trends in CBC data can be used for informing habitat management decisions.

After wrapping up data collection at Anstine, some members of the group left, while others joined to continue collecting data at Rancho Guajome Adobe and Guajome County Park. (Species tracking continues even when traveling either on foot or by vehicle.) Meanwhile, other birding groups concurrently collected data in other parts of the circle. Many of the participants came together after birding to compile each team's data and to talk while enjoying snacks at the Buena Vista Audubon's Nature Center. Overall, the Oceanside–Vista–Carlsbad count had 140 participants, who reported 186 species of birds.

—Hannah St. John, Anstine Coordinator

Photos: Group photo by Alexis Luz; Anstine photo by Hannah St. John

If you have not yet experienced a Christmas Bird Count, we invite you to join us. Mark your calendars for Saturday, December 19, 2026, for the next San Diego Christmas Bird Count, and keep an eye on our Events Calendar for related opportunities.

Join SDBA for the 2026 City Nature Challenge and Border BioBlitz

by Karina Ornelas, Community Science Coordinator

A great way to dip your toes into community science is to join the San Diego Bird Alliance (SDBA) for the annual City Nature Challenge and Border BioBlitz. During these events, you photograph as many species of wild plants and animals as possible during the specified time period and then upload your images to the iNaturalist app or iNaturalist.org website.

The annual City Nature Challenge encourages people in cities around the world to get out and observe nature. The 2026 event will take place April 24–27 and is coordinated locally by the San Diego Natural History Museum, the San Diego State University Biodiversity Museum, and the UC San Diego Natural Reserve System. Over the four-day period, you take photos of all the wild plants and animals you see (both native and non-native) and then upload your observations to iNaturalist by May 10. Between April 28 and May 10, you can learn about the plants and animals you observed as the iNaturalist community helps to identify them, and, in turn, you can help identify the plants and animals other participants observed. (For general information about the City Nature Challenge, go to https://www.sdnhm.org/education/community-science/city-nature-challenge/)

The Border BioBlitz is a community science project to record as many species as possible along the United States–Mexico border. The observation period for this year's Border BioBlitz will be the entire months of April and May and will focus on a 15-kilometer-wide area on either side of the border. (For general information about the Border BioBlitz, go to https://www.sdnhm.org/education/community-science/border-bioblitz/)

For both events, SDBA creates projects on iNaturalist with boundaries that align with our restoration sites. This allows us to track how our sites are doing and how wildlife and plants are thriving. Documenting biodiversity at these sites supports ongoing scientific research and helps track the progress of habitat restoration and conservation efforts. The valuable data collected also helps bring regional, binational, and global attention to the ecological importance of San Diego's coastal and riparian habitats.

This year, we will again host the SDBA South Bay BioBlitz with events at our South Bay restoration sites at the Tijuana Slough, Emory Cove, Grand Caribe, Sweetwater Bike Path, and Otay Valley Regional Park, as well as our restoration sites at Kendall–Frost Marsh, San Diego River Mouth, 10th Street, Famosa Slough, Rose Creek, and our Silverwood and Anstine preserves. We will also participate in the first binational Border BioBlitz on April 18 and 19, in Ensenada, Baja California, Mexico. This will include two full days of activities, such as hiking, talks, and more. Many of these events will be bilingual (English/Spanish), increasing access to community science and strengthening participation across diverse communities. These inclusive efforts reflect our ongoing commitment to environmental justice and equitable access to nature.

To participate, join the SDBA 2026 South Bay BioBlitz project on iNaturalist https://www.inaturalist.org/projects/sdba-2026-south-bay-bioblitz. To learn more about our planned events during the City Nature Challenge and Border BioBlitz, please see the Events Calendar on our website. Hope to see you all for the 2026 BioBlitz!

Photos: Brittlebush with Salt Marsh caterpillar by Arianna Ruiz; Western Fence Lizard and Yellow-crowned Night Herons by Karina Ornelas

Únete a SDBA para el Reto Naturalista Urbano 2026 y el BioBlitz de la Frontera

por Karina Ornelas, Coordinadora de Ciencia Comunitaria

Una gran manera de introducirte a la ciencia comunitaria es unirte a San Diego Bird Alliance (SDBA) para participar en el Reto Naturalista Urbano anual y en el BioBlitz de la Frontera. Durante estos eventos, fotografías tantas especies de plantas y animales silvestres como sea posible durante el período de tiempo especificado y luego subes tus imágenes a la aplicación iNaturalist o al sitio web iNaturalist.org.

El Reto Naturalista Urbano anual anima a las personas en ciudades de todo el mundo a salir y observar la naturaleza. El evento de 2026 se llevará a cabo del 24 al 27 de abril y es coordinado localmente por el Museo de Historia Natural de San Diego, el Museo de Biodiversidad de la Universidad Estatal de San Diego y el Sistema de Reservas Naturales de UC San Diego. Durante el período de cuatro días, tomas fotos de todas las plantas y animales silvestres que ves (tanto nativos como no nativos) y luego subes tus observaciones a iNaturalist antes del 10 de mayo. Entre el 28 de abril y el 10 de mayo, puedes aprender sobre las plantas y animales que observaste mientras la comunidad de iNaturalist ayuda a identificarlos y, a su vez, puedes ayudar a identificar las plantas y animales observados por otros participantes. (Para información general sobre el Reto Naturalista Urbano, visita https://www.sdnhm.org/education/community-science/city-nature-challenge/)

El BioBlitz de la Frontera es un proyecto de ciencia comunitaria para registrar tantas especies como sea posible a lo largo de la frontera entre Estados Unidos y México. El período de observación para el BioBlitz de la Frontera de este año será durante todo el mes de abril y mayo y se enfocará en un área de 15 kilómetros de ancho a cada lado de la frontera. (Para información general sobre el BioBlitz de la Frontera, visita https://www.sdnhm.org/education/community-science/border-bioblitz/)

Para ambos eventos, SDBA crea proyectos en iNaturalist con límites que se alinean con nuestros sitios de restauración. Esto nos permite dar seguimiento a cómo están nuestros sitios y cómo la vida silvestre y las plantas están prosperando. Documentar la biodiversidad en estos sitios apoya la investigación científica en curso y ayuda a monitorear el progreso de los esfuerzos de restauración de hábitat y conservación. Los valiosos datos recopilados también ayudan a atraer atención regional, binacional y global sobre la importancia ecológica de los hábitats costeros y ribereños de San Diego.

Este año, nuevamente organizaremos el SDBA South Bay BioBlitz con eventos en nuestros sitios de restauración en el sur de la bahía como Tijuana Slough, Emory Cove, Grand Caribe, Sweetwater Bike Path, y Otay Valley Regional Park, así como en nuestros sitios de restauración en Kendall–Frost Marsh, Río San Diego, 10th Street, Famosa Slough, Rose Creek, y nuestras reservas Silverwood y Anstine. También participaremos en el primer BioBlitz de la Frontera binacional el 18 y 19 de abril, en Ensenada, Baja California, México. Esto incluirá dos días completos de actividades, como caminatas, charlas y más. Muchos de estos eventos serán bilingües (inglés/español), aumentando el acceso a la ciencia comunitaria y fortaleciendo la participación de comunidades diversas. Estos esfuerzos inclusivos reflejan nuestro compromiso continuo con la justicia ambiental y el acceso equitativo a la naturaleza.

Para participar, únete al proyecto SDBA 2026 South Bay BioBlitz en iNaturalist. Para aprender más sobre nuestros eventos planeados durante el Reto Naturalista Urbano y el BioBlitz de la Frontera, consulta el Calendario de Eventos en nuestro sitio web.

¡Esperamos verlos a todos en este BioBlitz 2026!

San Diego Bird Alliance
4010 Morena Blvd. Ste. 100
San Diego, CA 92117

Nonprofit Organization
U.S. Postage
PAID
SAN DIEGO, CA
Permit #37

SAN DIEGO PRESS CLUB 2023 WINNER EXCELLENCE IN Journalism AWARDS
SAN DIEGO PRESS CLUB 2022 WINNER EXCELLENCE IN Journalism AWARDS
SAN DIEGO PRESS CLUB 2020 WINNER EXCELLENCE IN Journalism AWARDS
SAN DIEGO PRESS CLUB 2019 WINNER EXCELLENCE IN Journalism AWARDS

A Life List Is More Than a Number—It's a Journey

It's a life full of stories, of moments of wonder, and mind-enriching experiences. Come join us on the trail—there's so much to see!

When you become a **San Diego Bird Alliance member** and discover all the ways to enjoy our region's more than 400 bird species, other wildlife, and their habitats, you'll find yourself caught up on a journey that can last a lifetime!

By joining at any level, you help us achieve our mission — and help protect our natural heritage.

Join or Renew as a Member. Make monthly or yearly contributions, meet other bird enthusiasts, and enjoy member benefits.

Volunteer. There are many ways to contribute your time

Make a Donation. Make a tax-deductible gift to support our initiatives, our many programs, and both of our sanctuaries.

Leave a Legacy. Make plans today for a gift tomorrow and become part of our esteemed Golden Eagle Legacy Club.

We encourage you to become a member of San Diego Bird Alliance, especially if you are already a National Audubon member.

To become a member, visit:
sandiegobirdalliance.org/joinourflock/become-a-member.html

SAN DIEGO BIRD ALLIANCE

Sketches

SKETCHES is published quarterly.
For details on submissions and deadlines, please contact LaTresa Pearson at tresepearson@gmail.com

Editor-in-chief: **LaTresa Pearson**
Art Director: **Tim Downs**
Associate Editor: **Shari Dorantes Hatch**

The office is open to visitors. Please call in advance to confirm someone will be present.

4010 Morena Blvd. Ste. 100, San Diego, CA 92117

Messages can be left at any time by email:
info@sandiegobirdalliance.org.
(Emails might be more effective than calling.)

San Diego Bird Alliance Office: 858-273-7800

California Audubon Society: ca.audubon.org
National Audubon Society: www.audubon.org
National Audubon Activist Hotline: 800-659-2622
National Audubon Customer Service: 800-274-4201
San Diego Bird Alliance is a chapter of the National Audubon Society

Audubon

Visit our website at www.sandiegobirdalliance.org

Log on for online resources. ***Please visit our website for all calendar items and registrations.***

Like us on Facebook:
facebook.com/sandiegobirdalliance

Follow us on Instagram:
instagram.com/sandiegobirdalliance

Together we defend our region's birds, unique biodiversity, and threatened habitats through advocacy, education, and restoration.

Cover photo: Tim Downs