Together we defend our region's birds, unique biodiversity, and threatened habitats through advocacy, education, and restoration.
Gravity-challenged Grebes, Black Bellies, and Butter Butts Fly the Gauntlet Each Fall

by Lesley Hands, SDAS Lead Ornithologist

Early in my waterbird studies in Mission Bay, I learned that one of our constant winter visitors, the Eared Grebe, has a rather uncommon migration story. Before arriving in San Diego, Eared Grebes participate in a molt migration, travelling to far-away sites that provide food and safety from predators. These birds annually make the difficult and treacherous trek, during which thousands may die, to the hypersaline Mono Lake in California and Utah’s Great Salt Lake before arriving to help them double their weight. They then grow new flight feathers, contract their digestive organs to one-third their normal size (rendering them incapable of eating), and regrow their heart and pectoral muscles to prepare for their nocturnal migration to winter sites. What’s even more impressive: Eared Grebes go through a similar process three to six times annually; meaning they are flightless nine to ten months out of the year—the longest known flightless period for any bird worldwide with the ability to fly.

Here in San Diego, we are fortunate to be able to witness the migration stories of numerous species of birds, such as the Eared Grebe. In addition to the hypersaline environments at the San Diego Saltworks, you can find large numbers of Eared Grebes, in their winter black-and-white plumage, inhabiting coastal waters, as well as smaller populations in freshwater lakes and reservoirs throughout the county. Grebes and other diving birds, such as loons, have legs located at the back of the body, which are perfect for propelling while foraging underwater but nearly useless for walking on land. Watching Eared Grebes expertly navigate underwater is fascinating and delightful. My favorite viewing location is the Kendall-Frost Marsh, which is open to the public on the second and fourth Saturday of each month for “Wonder the Wedlands” events. For those who love passersines, the fall arrival of a variety of warblers to the county is a welcome sight. The widespread Yellow-rumped Warbler, affectionately named “butter-butt” for the yellow plumage above the tail, is usually the first warbler beginner birders can identify. Two subspecies converge in San Diego, the Audubon Warbler, which breeds in western Canada, the western United States, and Mexico, and the Myrtle Warbler, which breeds in Canada and the northeastern United States. I find it comforting to hear the ubiquitous “chick” vocalizations of Yellow-rumped Warblers while strolling through Chollas Creek or almost anywhere in the county during the fall. Their widespread presence confirms the relative stability of the population and also represents the stability of western forest birds, a bright spot in an otherwise gloomy forecast for many bird species.

2019 study indicated overall losses of 30% of birds over the past 50 years in 13% of the species. Warblers are hardily influenced, too, so paying attention to the tides will increase your chance of seeing them. Elegance, an underappreciated iridescent quality that hosts marvels for fisheries and marine conservationists, and Myrtle Warbler, along with millions of other birds, navigate through areas that seasonally host high concentrations of birds, creating migratory bottlenecks. These key areas, such as California’s Central Valley and the Colorado River Delta, host 65 million birds in the fall, and 17 million birds during spring migration, respectively. Disasters associated with climate change such as fires, drought, and flooding in these key areas could prove devastating if they occur at critical times. Protection of these areas is vital to the stability of the many bird species that depend on them.

Eared Grebes and Black-bellied Plovers are also highly vulnerable to the challenges posed by climate change. Hotter temperatures are shrinking the hypersaline habitats that Eared Grebes depend on, and because they gather in such concentrated numbers, it is imperative that we protect and manage those unique habitats to ensure this species continues well into the future. The Black-bellied Plover breeds in the arctic, and, as this area continues to experience changes in environmental conditions faster than any other region in the world, Black-bellied Plovers and other arctic breeding shorebirds are being forced to quickly adapt or face the possibility of extinction. The combination of low reproduction and long lifespan for the species, along with drying tundra ponds, shrub encroachment, and changes in weather events, and the mismatch of food availability to feed their young, will make it increasingly difficult for them to adapt.

On a positive note, technological advancements are providing fresh insights into bird migration, which will help us better target conservation efforts. With scientific devices shrinking in size and weight and an overall reduction of costs for each device, these advancements allow scientists to study smaller and smaller migrating birds, for progressively longer periods. With traditional bird banding and tagging efforts, a unique identifier is provided to an individual bird, which must then be recaptured to gather data. Now, a variety of other methods are available to study bird migration, which expand the ability to gather data. Scientists are deploying devices such as Radio Frequency Identification (RFID) tags, radio and satellite tracking devices, geolocators, and Passive Integrated Transponder (PTT) tags that can gather information, and then be recaptured to gather data. Upon receipt of the information, you will be awarded a certificate with details of the individual bird, such as the age and other locations where the bird was banded or observed. To explore migration data by species, the National Audubon Audubon’s Bird Migration Explorer provides visualization of migration data from individually tracked birds. In addition, Cornell Lab of Ornithology has developed an app, that uses weather surveillance radar to gather information on the numbers, flight directions, speed, altitude, and modes of migrating birds in flight.

I invite and encourage you to join us at San Diego Audubon Society to help protect and ensure the future survival of migratory bird species in San Diego County. While addressing climate change may seem beyond our reach, wild animals are unable to defend themselves from the effects they rely on. It is up to us to lead the social advances necessary to slow the effects of climate change. We can facilitate conservation efforts of migratory birds that traverse international borders by supporting policies that protect and ensure the future survival of migratory bird species in San Diego County. Climate Vulnerability +3.0 °C (Stable)

Global Population Size 1,000,000 (Category: LC Least Concern)

Yellow-rumped Warbler

Setophaga coronata

Flashing its trademark yellow rump patch as it flies away, calling for confirmation, this is perhaps our best-known warbler. The Yellow-rumped Warbler, common in the fall migration journey.

and Russia, and the Neotropical Migratory Bird Conservation Act, which seeks to fulfill long-term protection of neotropical migratory birds traversing international borders by supporting local projects such as the Migratory Bird Treaty Act, signed by the United States, Canada, Japan, Mexico, and partners.

We can continue to lead the nation in bird biodiversity by working locally and conserving rapidly declining populations through local work projects, such as our California Least Tern habitat restoration in Yucaipa, and support collaborative efforts to provide protections, including the Migratory Bird Treaty Act and the Neotropical Migratory Bird Conservation Act, which seeks to fulfill long-term protection of neotropical migratory birds traversing international borders by supporting local projects such as the Migratory Bird Treaty Act, signed by the United States, Canada, Japan, Mexico.

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This stocky plover breeds in high Arctic zones around the coasts of the continents.

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Unlocking the Secrets of Bird Migration

On October 13, 2022, a four-month-old Bar-tailed Godwit, dubbed B6, departed from Alaska to head for wintering grounds in Australia and New Zealand. Eleven days later, the intrepid young bird landed in Tasmania, 8,245 miles away, breaking the record for the longest documented nonstop flight by any animal, according to the U.S. Geological Survey (USGS).

We know about this amazing feat because B6 is part of a study by a team of scientists from the USGS, Max Planck Institute, and the U.S. Fish and Wildlife Service, who set out to track juvenile Bar-tailed Godwits from their breeding sites near Nome, Alaska. First-year birds had never been tracked before, so the scientists wanted to better understand how these juveniles navigate to their wintering grounds thousands of miles away.

To track B6, scientists attached a five-ga...
Birds That Tell a Winter’s Tale
by LaTresa Pearson, Sketches Editor

Late winter through early spring is the time to catch the spectacular migration of Swainson’s Hawks through the Borrego Valley. Beginning mid to late February and peaking mid March to late April, thousands of Swainson’s Hawks migrate through the Borrego Valley from Mexico, Columbia, and Argentina on their way to breeding grounds as far north as Alaska. The hawks feed on flying ants, dragonflies, and the caterpillars of White-lined Sphinx Moths. Citizen scientists can help count the hawks during the Borrego Valley Hawkwatch.

White-crowned Sparrows begin showing up the third week of September, traveling more than 2,500 miles from Alaska to spend the winter in Southern California. Large numbers of this species can be found throughout most of the county.

Among the five North American thrushes in the genus Catharus, Hermit Thrushes are the only ones to winter in the United States. Arriving in late September, they are commonly found in chaparral and riparian or oak woodlands foraging on the ground for insects or picking berries from shrubs. They’re common winter visitors at Silverwood Wildlife Sanctuary.

As the tools of modern science continue to give us a more complete picture of bird migration, in all of its complexity and astonishing secrets, we are developing the knowledge to better protect these denizens of the skies. We now know that the “instrument panel” for migratory birds may include solar and mapping, and learned or imprinted behaviors. In the Northern Hemisphere latitudes, birds migrate for one basic reason: to survive. It is our goal to tip the odds more in the birds’ favor, at least at this point on the map.

Arriving in late September from their breeding grounds in northern North America and the mountains of the West, Ruby-crowned Kinglets are another widespread winter migrant in San Diego County. The tiny, olive-green bird, with its striking white eye ring and rarely seen ruby crown, is most common in riparian and oak woodlands but can also be found flitting amongst the branches of urban eucalyptus and pines.

“mapping,” and learned or imprinted behaviors. In the Northern Hemisphere most flyways follow a north/south orientation, but there are pelagic birds (such as albatrosses) that travel latitudinally, even circumnavigating the globe. Migratory irruptions are usually precipitated by food availability, such as with the Pinyon Jay. Flyway journeys usually require stopover habitat for rest and, just as critically, feeding. Mortality rates climb dramatically when these sanctuaries are damaged or destroyed. Our region’s fall/winter migration and, just as critically, feeding. Mortality rates climb dramatically when these sanctuaries are damaged or destroyed. Our region’s fall/winter migration

Common Loons in Western Canada and Alaska migrate to the Pacific Coast, showing up in San Diego in the greatest numbers between November and March. Unlike their dramatic black-and-white patterned breeding plumage, their winter plumage is a drab gray with white underneath. They can most often be found near the shore and in tidal bays and estuaries. Needing open waterways to take flight, they are vulnerable during migration if a storm brings them down on land.

Four wintering ducks, the Northern Pintail, American Wigeon, and Green-winged and Cinnamon Teals (above) cluster on a narrow spit in the San Diego River flood channel. While some duck species are resident, many are seasonal, and provide a colorful display of diversity in the colder months.

During the winter (November through March) Surf Scoters are the most common bird on San Diego Bay as well as offshore, with more than 5,000 recorded during 2021’s Christmas Bird Count. They feed largely on mussels, which they swallow whole. Their powerful gizzard pulverizes the shell. They also have salt glands above their eyes which grow larger in the winter.
Conservation: A Year of Big Wins

ReWild Mission Bay
We have worked with more than 60 organizations in our ReWild Coalition and gave 19 presentations to community groups. We had more than 600 people at Love Your Wetlands Day in February 2022. Our activities in the marsh and connections to Kumeyaay tule boatbuilders brought new depth to our event and helped us make the argument for Wildest restoration of the northeast corner of Mission Bay.

In partnership with UCSD, we started Wonder the Wetlands events, and twice a month, docents help open Kendall-Frost Marsh to the public for birding and solitude. This event helps us show the beauty and value of tidal wetlands.

Staff members have been appointed to the City of San Diego Climate Action Plan Review Committee, and we are helping to craft recommendations and policies to codify wetland restoration as a climate-action goal.

California Least Terns
Through our hard work, in concert with the City of San Diego Rangers, other partners, and a lot of luck, California Least Terns had a relatively good nesting season in 2021, with more than 200 nests and 90 fledglings.

The 2021-22 restoration season in Mission Bay involved 422 volunteers and more than 28 events.

We have established restoration partnerships with the San Diego National Wildlife Refuge, Port of San Diego, and City of San Diego.

More than 2,000 pounds of invasive plants and hundreds of pounds of trash were removed and over 425 native plants installed throughout the County.

Other Conservation and Advocacy Programs

Our Native Seed Library program has grown. We now have nearly 30 libraries open for lending, including one at the Barona Cultural Center.

Building off our good name and position in Mission Bay, our staff is improving bird habitat protection by beginning vegetation monitoring and nest mapping of Black Skimmer, Caspian Tern, and Forster’s Tern nesting locations.

We continue to push for a seat at the planning table for Western and Clark’s Grebes at Lake Hodges. Our Audubon Advocates program enrolled another 20 Advocates, who are ready to learn environmental campaign strategies and share their priority projects with us.

We expanded our campaign on Native Plant Proclamations and were successful in convincing every municipality in the Otay Valley watershed.

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Education: Back on the Trail

In-person field trips resumed in spring of 2022. The students and our staff were excited to get back out on the trails. We reached nearly 1,000 students and provided more than 3,500 nature lessons throughout San Diego County.

Anstine Adventures programs expanded to provide 783 nature lessons to 261 students through on-campus and field-trip programs to the Anstine-Audubon Nature Preserve. We piloted a Junior Adventurers on-campus program for first- and second-grade students at Vista Unified School District to prepare them for their third-grade field trips in upcoming years.

Silverwood’s Science Discovery fourth-grade program taught 630 nature lessons to 210 fourth-grade students from the Lakeside School Districts. We provided students with in-class lessons, research projects about native species, and a field trip to the Silverwood Wildlife Sanctuary.

OutdoorExplore reached 195 elementary afterschool students with 1,509 nature lessons in San Diego, Chula Vista, and Escondido school districts through virtual, on-campus, and field-trip programs.

Sharing our Shores South Bay introduced 297 students to the local and migratory birds of South San Diego Bay through virtual and field-trip programs, providing 597 nature lessons about the San Diego Bay National Wildlife Refuge. Students created conservation-themed posters to educate the public about threatened birds and shared their work through a virtual art show.

Our Sanctuaries: Havens for Birds and Living Labs for Nature Enthusiasts

At San Diego Audubon, we are fortunate to provide a welcoming space for our visitors to reconnect with nature, and throughout the past few years, we have come to realize that there are few things more important for our mental health than our connection to the natural world. Birds and bird lovers alike are welcome to connect in our two well-managed properties, Silverwood and Anstine-Audubon.

Silverwood Wildlife Sanctuary: Recovering a Landscape as It Once Was

Silverwood hosted 1,695 visitors throughout the year.

142 students and youth group members, including students from the University of San Diego and Girl and Boy Scout Troops, participated in nature and ethnobotany programs.

125 adults from hiking, ecology, and birding groups participated in special programming.

Staff and volunteers worked to eradicate most of the germinating target species of invasive plants in hotspot zones within 69 acres of invasive plant sites. This helped to promote the growth of many native annuals, including three species new to Silverwood: Soliva spathularia, Soliva reflexa, and Polypogon commutatus var. fisherianus.

Volunteers spent 375.5 hours hosting Sunday events, 78 hours removing invasive weeds and restoring native species, and 37 hours maintaining trails.

Of the 130 species of birds that have been reliably recorded at Silverwood over the last 60 years, 73 species were recorded for the past year, including three separate sightings of an American Bald Eagle.

Anstine-Audubon Nature Preserve: A Pocket-Sized Nature Experience

The preserve hosted 732 visitors throughout the year, who were able to observe White-crowned Sparrows at our feeders, Cedar Waxwings darting among the trees, Western Bluebirds feeding on wild grapes, and Hooded Mergansers swimming through our pond. Events included a Hummingbird Photography workshop, native seed collection with the California Native Plant Society, work parties, and a Spring Fling community event.

Through the dedicated work of a local Eagle Scout group, an outdoor education deck was built to provide space to prepare native plants and wildflower seed bombs for planting and restoring the native habitat at the preserve.

The California Climate Action Corps summer program provided more than 160 volunteer hours for fire clearance and creating defensible space on the boundaries and trails at the preserve. The fellow also completed a capstone project, designing a Native Seed Library from native seeds collected from the preserve.

Anstine garage with bird house framed by Cleveland Sage and Bush Sunflower. By Rebekah Angona
Our Flock: Together We Defend Our Region’s Birds, Unique Biodiversity, and Threatened Habitats

Our community rallied to support San Diego Audubon in heartwarming and impactful fashion, contributing $7,049 volunteer hours given by 989 volunteers, valued at $211,118 of services.

You migrated throughout the county to join us for Birding for Beginners, Yard Sales, Bird Outings, and a fully recovered San Diego Bird Festival engaging more than 600 of our favorite people.

San Diego City Audubon Club’s efforts remained a point of pride and importance to our collective efforts, launching the first ever Environmental Justice Conference, launching a Native Seed Library on campus, and completing a beautiful local birds mural in an otherwise drab parking garage.


**Contributions & Membership** $444,941 39%

**Grants** $834,558 73%

**Program Fees** $(292,289) -25%

**Other** $1,538

**Total Revenues** $1,149,426

**Conservation, Education, Sanctuaries** $785,150 73%

**Management** $148,527 14%

**Fundraising** $139,135 14%

**Total Expenses** $1,072,812

**Beginning Assets** $148,527 14%

**Total Assets** $150,590 14%

**Ending Assets** $6,977,664

**Balance** $76,614

10000 and above

Conrad Prebys Foundation
Donor Family Foundation
National Audubon Society

$25,000-99,999

County of San Diego
Malt Nature Fund
PORT of San Diego

$9,999 and under

California Coastal Conservancy
Fire Safety Council of San Diego County Friends of San Diego Wildlife Refuge Genetech Foundation
Hispanic Access Foundation

$10,000-$24,999

California College of San Diego
City of San Diego
David & Margaret Engel Fund

Government, Foundation, & Corporate Partners

$1,000,000 and above

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TernWatchers’ Program

**Gives Lessons in Conservation and Life** by Kyla White, SDAS Volunteer

Last summer, I volunteered with San Diego Audubon for the first time.

I had come across an Instagram post advertising the TernWatchers program, which trains and enlist volunteers to monitor California Least Tern nesting sites for predators in Mission Bay. It sounded like the perfect opportunity for me to expand my skills in observation, data analysis, and timely communication, which would aid me in completing my second undergraduate degree in Wildlife Biology. As a bonus, I would be volunteering for an organization that has done so much good in San Diego.

Throughout my time with the TernWatchers Program, I felt supported, cared for, and valued. Everyone I worked with was beyond wonderful and encouraging, and they will be a huge factor in my decision to return for a second season of volunteering. Both the previous Conservation Manager, Megan Flaherty, and the new manager, Cristina Santa Maria, helped me use my time with TernWatchers as an internship credit for my degree. Because of both of them, I was able to use this volunteering opportunity to gain skills, meet new people, and be one step closer to earning my degree.

During volunteer shifts, observing our adorable California Least Tern friends from a safe distance gave me a sense of peace. I feel incredibly lucky to have been able to witness bird parents raising their young to be fully-functioning adults by the end of the breeding season. There’s something really special about watching birds, and really all life, simply exist. Every aspect of the TernWatchers program was phenomenal, and I could not have asked for a better volunteering experience.

**Government, Foundation, & Corporate Partners**

- California Prebys Foundation
- Dorrance Family Foundation
- National Audubon Society
- California Coastal Conservancy
- Fire Safety Council of San Diego County
- Friends of San Diego Wildlife Refuge
- Genetech Foundation
- Hispanic Access Foundation
- MIT
- Nordinson Foundation
- USD Water Justice Exchange