The Kite Call

Ohlone Audubon Society, Inc.

A chapter of the National Audubon Society
Serving Southern & Eastern Alameda County CA

Our Mission: To celebrate and protect birds and their habitats in Southern and Eastern Alameda County
www.ohloneaudubon.org

Calendar

Feb 21 FIELD TRIP
American Cyn Wetlands

Mar 3 GENERAL MEETING
(via zoom)

Mar 4 FIELD TRIP
Quarry Lakes

Mar 12 FIELD TRIP
L. Elizabeth & Gomes Pk

Apr 7 GENERALMEETING
(via zoom)

ZOOM MEETING INSTRUCTIONS:

https://us06web.zoom.us/meetings/82091982477/invitations?signature=EpuCp6rqjLtJSHTCPhEGSgKnfPvzdX0nHkKHwp1BUAQ

Join instructions:

Ohlone Membership Meetings

Membership Meetings

"We Put the Venture in Adventure: Across the Central Coast with Magpies, Martins, and Hummingbirds"

By Gregor Yanega,
PhD, Conservation Project Manager at the California Central Coast Joint Venture, American Bird Conservancy

Date: Tuesday, March 3, 2026 Time: 7:30 PM
Via Zoom (instructions below to left)

Dr. Yanega will talk about the role that the California Central Coast Joint Venture and the American Bird Conservancy plays in connecting landscapes, people/ partners, and birds in a common cause. He will also talk about active projects that are underway focusing on Yellow-billed Magpie oak Savanna habitats, statewide surveys of martins, and Allen's hummingbird coastal riparian habitat.

Gregor Yanega is the Conservation Project Manager at the California Central Coast Joint Venture of the American Bird Conservancy. He grew up in the forested cloudscapes of the Pacific Northwest, the lands of the S'Puyalupubsh (Puyallup) peoples. Beginning with an avid interest in natural history and ornithology, it was a small step forward to embark on a career in conservation biology and land stewardship. He works to support the diversity and beauty of the central coast by finding enduring and sustainable ways to help birds and humans thrive together. His initial work was in support of the ABC's Marbled Murrelet Recovery efforts. Gregor is also an accomplished writer with an extensive collection of publications spanning peer reviewed literature to children's books.

APRIL 7, 2026 GENERAL MEETING VIA ZOOM 7:30 PM

COLOMBIA: South America's Birding Mecca

BY Benny Jacobs-Schwartz

Explore the birdiest country on Earth! Discover Colombia's five regions, the power of the Andes, and why this nation hosts nearly 2,000 bird species and over 80 endemics. A vibrant journey through extraordinary habitats and unforgettable birds. (More details next issue!)

Field Trips

American Canyon Wetlands
Saturday, February 21, 8:30am - noon
Leaders: Kathy Robertson & Bob Dunn
katbirdca@aol.com

The low-lying flood plains found in American Canyon include mudflats, tidal and seasonal wetlands, former salt ponds, riparian corridors, and marshes. The wetlands are home to many species of birds, both residents and winter visitors. This is a hotspot for wintering waterfowl, shorebirds, and raptors.

Directions: *From I-80, north of Vallejo, take the Hwy 37 exit, westbound. After approx. 2 miles, take Hwy 29 northbound, towards Napa. Follow Hwy 29 for about 1.5 miles, then turn left on West American Canyon Rd. Follow this road until it dead-ends at Wetlands Edge Dr., then turn right. At Eucalyptus Dr., turn left and enter the parking lot on your left. Bring a lunch if you'd like. There are picnic tables at the parking area.*

Lake Elizabeth & Gomes Park - Fremont
Thursday, March 12, 9:00am - noon
Leader: Bob Toleno
bob@toleno.com

Lake Elizabeth provides excellent late winter birding. Breeding Allen's and migrating Rufous Hummingbirds may be near the palm trees, swallows will be foraging over the lake, and early migrants might be found in the willows. We'll walk on mostly paved sidewalks a little over half a mile to Gomes Park. On the way, we'll visit the stand of willows, where we should see warblers, goldfinches, and maybe nesting Scaly-breasted Munias. Plan to walk about 2 miles round trip, mostly on paved paths. Heavy rain cancels.

Directions: *From I-880, exit at Stevenson and go east (towards the hills).Turn right at Paseo Padre Parkway and follow the signs for the Aqua Adventure Waterpark. The parking lot for the Waterpark dead ends at the south end of the lake. Meet at the five tall palm trees at the lake end of the parking lot.*

Quarry Lakes Regional Recreation Area
Wednesday, March 4, 9:00am - noon
Leader: Kathy Robertson & Karen Kramer
katbirdca@aol.com

Join us at Quarry Lakes in Fremont to explore the lakes for wintering waterfowl. Pelicans, grebes, ospreys, loons, ducks, cormorants, and sometimes rare gulls are found on the lakes, while the trees hold woodpeckers, kinglets, Yellow-rumped Warblers and more. Bald Eagles moved into the area in Fall 2015, and several other raptor species are possible. We'll also be on the lookout for early spring arrivals. Be prepared to walk about 2 1/2 miles on flat, gravel paths. Scopes are helpful. Parking fee is $5 unless you have an EBRPD annual pass. Heavy rain cancels. Pre-registration is not required, and all are welcome.

Directions: *Exit I-880 at Decoto Road and go northeast (away from the bay, towards the hills). Turn right on Paseo Padre Parkway, then left on Isherwood Way. Continue on Isherwood past the Isherwood staging area through several stop signs to reach the main park entrance on your right, on Quarry Lakes Drive. From Mission Blvd., take Nursery Avenue to Niles Blvd. and go west (away from downtown Niles). Turn left on Osprey Drive, then left on Quarry Lakes Drive. After passing the entrance kiosk, turn right and drive to the far end of the parking lot, and park near the demonstration garden.*

Western Screech, Ohlone field trip Garin Park
2/2/26
Photo by Alex Milhano

(Field Trips Continued)

Upcoming special birding tours!

Tour: **Breeding Birds and Migrants of Inyo County (plus a little Mono)**

Dates: **May 25 - 30, 2026** Leaders: **Bob Toleno and Juli Chamberlin**

Cost: $975 per person for a shared room, $1,175 for a single
The tour will be limited to ten participants, and there are just 3 spaces left!!
Email bob@toleno.com to join the fun.

Proposed Tour: **Southern Arizona** Dates: **August 1 - 9, 2026**

Leaders: Bob Toleno and Juli Chamberlin Cost: TBD
The tour will be limited to ten participants, and a minimum of seven will be needed for the trip to happen. Email bob@toleno.com if you're interested.

SAVE THE DATE !

Sierra Weekend trip—June 20-21, 2026 Yuba Pass & Sierra Valley

Leaders: Pat Gordon (pagpeg@aol.com) & Diana Brumbaugh

The Time is Now: California's First Statewide Breeding Bird Atlas

By Van Pierszalowski, Executive Director, California Bird Atlas (CBA)

"This article was originally published in the Winter 2026 issue of The Gull, Golden Gate Bird Alliance's quarterly magazine, and is republished here with permission. ***Ohlone Audubon is also a founding partner***

In early 2024, I was asked to take over leading a second Breeding Bird Atlas (BBA) for Los Angeles County. I accepted, and soon after realized I needed to step back and understand the bigger picture.

First, I set out to understand exactly what a BBA is. BBAs are large-scale efforts that mobilize trained community scientists and professional field technicians to collect fine-scale, behavior-based data, such as courtship, nesting, and fledging, all georeferenced across a statewide grid.

The resulting baseline is exceptionally powerful foundational data essential for land managers, agencies, and conservation groups to detect trends, prioritize conservation efforts, and track how ecosystems are responding to rapid change.

I knew some states had done statewide BBAs, but I was shocked to learn that 44 of 50 U.S. states had conducted at least one. Even further, 19 states had conducted more than one statewide BBA, with four working on their third.

Meanwhile, California has taken a county-by-county approach. Since fieldwork began for the first Marin County Breeding Bird Atlas in 1976, there have been some truly invaluable county-specific projects. There have also been several county atlases that were abandoned due to insufficient resources. As of today, only 15 of California's 58 counties have successfully published BBAs. This means over 80 percent of the state's land area remains under-surveyed in this gold standard way.

Luckily, recent advances in participatory data collection platforms like eBird, combined with the unprecedented growth of the birding community, now make a statewide effort achievable. And it could not be at a more important time.

(Continued on page 4)

California Atlas *(continued)*

Climate shifts are accelerating, ecological conditions are growing more unpredictable, and California urgently needs stronger, spatially-explicit tools to guide strategic land acquisition, habitat restoration, and conservation action.

With my initial background research on BBAs out of the way, I spent the next year on a listening tour, having hundreds of conversations with conservation leaders across California, county and state BBA coordinators, agency representatives, and of course, birders.

The sentiment was nearly unanimous: it won't be easy, but we need to do this.

To coordinate this effort, I founded a new 501(c)(3) nonprofit called California Bird Atlas (CBA) along with a founding board of directors that includes respected leaders such as Andrea Jones (Audubon California). I also assembled a science advisory committee chaired by Morgan Tingley (Professor of Ecology and Evolutionary Biology, UCLA) to guide project design and methodology.

At the same time, I started reaching out to local conservation groups who I thought I might support the development of the organization and its custom-built eBird Atlas website. More than thirty organizations stepped forward with seed funding, including Golden Gate Bird Alliance, Audubon California, Western Field Ornithologists, and dozens more.

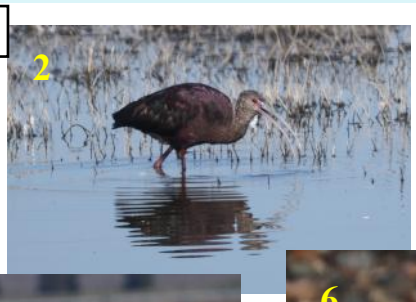
Now that we have raised sufficient early support, here is the plan:

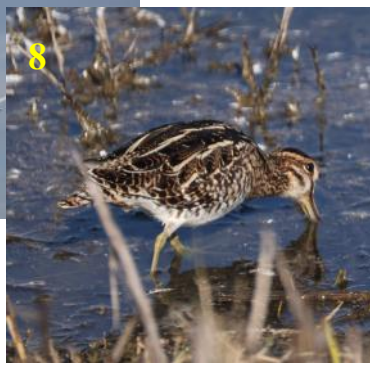
This landmark initiative will begin year-round fieldwork on **January 1, 2026, and continue through December 31, 2030** with the expressed aim of producing the most complete dataset ever assembled on the distribution, status, and behavior of all breeding bird species across California. It will combine broad-based community science with targeted surveys in historically under-surveyed regions. Data will be collected primarily through a custom-built eBird Atlas website, developed in collaboration with the Cornell Lab of Ornithology.
To structure the survey, California will be divided into approximately 16,500 atlas blocks, created by subdividing USGS 7.5-minute topographic quadrangles into six equal units, each about three miles by three miles. This grid-based approach ensures consistent coverage across deserts, rangelands, mountains, and coastal habitats. All observations will be georeferenced with precise latitude and longitude coordinates, enabling robust spatial analyses at multiple scales. Rigorous quality control measures will be applied throughout to ensure scientific integrity and usability.

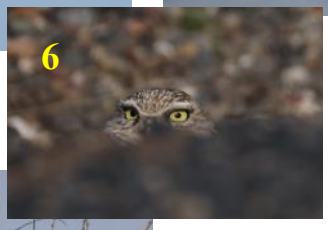
The best part: anyone can contribute. Learn how to support the effort by donating, signing up for our mailing list, and volunteering at www.californiabirdatlas.org.

I cannot wait to meet many of you in the field. This is going to be *extremely* fun.

OHLONE TRIP PHOTOS







Sacramento Valley Refuges trip 1-17-18/26
1—Phainopepla **2**– White-faced Ibis **3**-Tundra Swans **4**-Snow Geese **5**-Sandhill Cranes **6**-Burrowing Owl **7**- Western Meadowlark **8**-Wilson's Snipe (Photos by Yuki Ikezi)

2025 HAYWARD-FREMONT CBC REPORT

On December 14, 2025, 74 field observers and a handful of feeder watchers participated in the 2025 Hayward-Fremont Christmas Bird Count. The weather was perfect, making for very enjoyable birding, and the CBC dinner was the biggest since I've been participating, with 44 attendees.

Our species total for the day was **179**, four less than our record-setting count last year, but still above average. Highlights included: **7 Ross's Geese** at Hayward Shoreline; **2 Barrow's Goldeneyes, 1 Black Rail**, and **2 Pacific Golden-Plovers** in Eden Landing; **2 Swamp Sparrows** and the long-returning adult **Glaucous Gull** at Coyote Hills.

Besides those uncommon birds, we also had very high counts of others. **370 Red Knot** were seen at Don Edwards (our highest count in at least a decade), **182 Redhead** (most in Eden Landing), an astounding **58,553 Dunlin** (our highest count by far!), **33,328 Western Sandpiper** (also our highest ever), and **23 White-breasted Nuthatches** (more than double our previous best). All in all, it was a great CBC!

See the complete list at **https://ebird.org/tripreport/460099**

-Bob Toleno, co-compiler

2025 EASTERN ALAMEDA CBC REPORT

The **17th annual Eastern Alameda Christmas Bird Count,** originally led by Rich Cimino and Jeff Miller, was held on Friday, December 19th in pleasant weather (no pun intended). Our **78** participants finished the day having found **144** species, a couple below our historical average but the highest count in the last 6 years. We tallied a total of **25,743 birds**, which is significantly lower than our 30,512 average but higher than the average of the last 5 years.

We added no new species to our count circle, but did have some notable sightings. There were **2 Redheads** at Poppy Ridge Golf Course, a **Common Loon** off El Charro Road, **42 Long-billed Curlews** north of I-580 near Livermore Avenue, and **175 Mountain Bluebirds** in one flock near Tesla Road.

Species missed included Cinnamon Teal (second year in a row), Black-crowned Night Heron, Sora, Common Gallinule, Black-necked Stilt, Lewis's Woodpecker, Red-breasted Nuthatch, House Wren, Golden-crowned Kinglet and Common Yellowthroat.

We had **high counts for Greater White-fronted Geese (213), American Pipits (328), Orange-crowned Warbler (7), Bald Eagle (13), Anna's Hummingbird (307), Common Raven (360 versus less than 100 average the first 10 years), and American Kestrel (122 being higher than our first 10 year average).**

Some species with notable low counts:

- 325 Mallards was down from our historical average of 511.
- 158 Ring-necked Ducks; the average our first 10 counts was 330
- 4 Common Goldeneyes ties for lowest count versus historical average of 24
- 28 Common Mergansers is less than half our historical average
- 129 Wild Turkeys was our lowest count to date
- 40 Double-crested Cormorants was our lowest count versus 220 average
- 19 Great Blue Herons was our lowest count versus 33 average.
- 9 White-tailed Kites continued a low trend; the average of our first 10 counts was 43.
-

We also had lowest ever counts of Sharp-shinned Hawks, Steller's Jays and Western Scrub-jays. Other species seeing consistent declines are Nuttall's Woodpecker, Loggerhead Shrike, Yellow-billed Magpie, Northern Mockingbird, Tricolored Blackbird and House Sparrow.

We would like to thank all of the participants and also Lawrence Livermore Labs, East Bay Regional Parks, San Francisco Public Utilities Commission, Livermore Area Recreation and Park District, Zone 7 Water Agency and Koopmann Family Ranch for allowing us access to areas normally off limits.

Until the 3rd Friday of December, 2026. . .

-Leslie Koenig and Derek Heins
eac.cbc@gmail.com

President's Corner

Technology keeps expanding into birdwatching. I am a big user of eBird. I hope you have found it useful as well. One of the things the eBird folks have been asking for is recordings of singing birds. If you are an eBird user on your cell phone, here is a quick "how to" on uploading bird songs along with your checklist.
Here's the **mobile app version**

Record the bird
Use your phone's voice recorder *(I use Voice Memo on my iPhone)*
Complete and submit the checklist in the **eBird Mobile** app.
Open the checklist
Go to **My Checklists** → tap the checklist.
Add audio to your checklist
Tap the **species name**.
Tap **Add Media** → **Audio**.
Upload or attach the recording.
Tag the sound
Choose **Song**, **Call**, or **Other**.
Add notes if needed.
Save
Done! The audio is linked to that species and stored in **Macaulay Library**.

Add that song from your next Bewick's Wren to your eBird checklist

That's all there is to it. Give it a try the next time you are listening to that singing Bewick's Wren.

There is a new way to get involved in Citizen Science and that is through the new **California Breeding Bird Atlas.** There is a detailed article elsewhere in this Kite Call on the project. (ED NOTE: page 3)

Go to the California Breeding Bird Atlas on eBird at **https://ebird.org/atlascalifornia/home** and sign up. Next time you open eBird, you will see an option for "Projects". Don't hit that button yet. The Atlas project only wants eBird list of actual breeding activities by birds. Let's say you are out at Sunol and spot 37 species, but you also saw an Oak Titmouse going into a nest hole and an American Robin carrying nesting material. You are going to submit one checklist like you always do for the 37 species. Then you are going to back to your home screen and now hit that "Projects", pull down and hit California Breeding Bird Atlas. This will open a new checklist for Sunol where you will only list Oak Titmouse and American Robin. Not too hard. I have been on the Project for a few weeks but haven't seen any breeding activity, so haven't submitted a checklist, but I am on the lookout.

These are two ways to add to Citizen Science. I hope you try them out.

Bill Hoppes

Still Seeking New Program Chairperson!!!!!!!!!!!!!!!!!!!!!!!!!!!!

The Ohlone Audubon Society is currently looking for a new Program Chairperson to serve on our Board. The Program Chair is responsible for arranging presenters for our monthly virtual membership meetings (first Tuesday of the month), as well as for our three in-person events: June Membership Potluck Picnic, September Membership Appreciation Picnic, and December Holiday Cookie Exchange. The Chair also reserves venues for the three in-person events. The Board meets virtually the second Thursday of each month, except for July and December. We would love to have you join the Board! If interested or if you have any questions, please email our president, Bill Hoppes, at **hoppes1949@gmail.com.**

Conservation

East County Conservation

Tri-Valley Conservancy Issues First Vineyard Replanting Loan

This month the Tri-Valley Conservancy (TVC) awarded its first low-interest loan through a new program to revitalize south Livermore's wine industry. The Sponsored Replanting Program offers 15-year, low-interest loans of up to $15,000 per acre to wine grape growers to replant varietals like cabernet franc and sauvignon blanc, varietals in demand and suited to the Tri-Valley. The loan program is open to vineyard owners who have conservation easements with the Tri-Valley Conservancy.

Thatcher Bay Vineyards, the first participant in the loan program, will use the funds to replant eight of their 16 acres with cabernet franc.

TVC's Board of Directors approves each loan with the funds coming from the TVC. TVC decides which varietals can be planted based on varietals identified by the University of California, Davis as having the greatest potential for success in the Tri-Valley.

-Bill Hoppes

From a Press Release:

New Lawsuit Challenges Newark's Approval of Housing Project in Flood Zone

Environmental groups raise concerns that the "Mowry Village" project would expose future residents to sea level rise, impact Bay wetlands, and harm wildlife

Newark, CA - In response to the Newark City Council's contentious approval in December of the proposed "Mowry Village" development project on Newark's San Francisco Bay shoreline, the Citizens Committee to Complete the Refuge and San Francisco Baykeeper filed a lawsuit challenging the City of Newark's plan to construct 226 housing units, the vast majority of which will be market-rate single-family units, on the site of an auto scrap yard.

Located in an area of the South Bay shoreline that already experiences significant flooding and surrounded on three sides by creeks and wetlands, the environmental organizations' lawsuit alleges that the City of Newark failed to conduct an adequate environmental review.

Newark's assessment does not properly account for or mitigate the impacts of the Mowry Village project on wetlands and endangered wildlife species that are located immediately adjacent to, or in the vicinity of, the development site. These species include the federally endangered Salt Marsh Harvest Mouse and the Western Burrowing Owl, nominated for protection under the California Endangered Species Act.

The lawsuit also claims that Newark failed to properly evaluate the risks of toxic pollutants and contaminated groundwater at the site. Specifically, sea level rise risks pushing up and spreading contaminated groundwater from the site, posing a serious future danger to both people and wildlife.

"For years, we have detailed the many harmful environmental impacts of the Mowry Village project on the Bay's wetlands and at-risk wildlife species, along with the risk of building on a flood-prone site in the path of rising seas. Yet Newark has chosen to ignore the science, approving a flawed project that fails to properly assess, avoid, or mitigate these very real impacts," said Carin High, Co-Chair of the Citizens Committee to Complete the Refuge.

"This is a contaminated, environmentally sensitive site that already floods regularly during high tides, including just recently during the King Tides," said San Francisco Baykeeper Executive Director Sejal Choksi-Chugh. *"We absolutely recognize the urgent need for affordable housing across the Bay Area, but this project fails to meaningfully address that need. Plus, placing new housing in a location that already floods is reckless, puts future residents at risk, and reflects a deeply flawed, short-sighted decision."*

On December 11, 2025, the Newark City Council voted 3 in favor, with 1 opposing, and 1 abstaining, to certify the Final Environmental Impact Report and approving the Mowry Village development project, proposed by developer Integral Communities. In opposing the project, Vice-Mayor Eve Marie Little said, *"It's not a matter of if it's going to flood, it's a matter of when it's going to flood. Clearly, this is not safe or a sustainable situation in any way."*

(Continued page 8)

Conservation (continued)

(Mowry Village Wetlands continued)

The Newark City Council majority approved this project over the vocal opposition of over 750 Newark residents who signed a "Say No to Mowry Village" petition, along with over 2,000 residents from nearby communities and a dozen environmental and climate organizations. State wildlife and water agencies have consistently expressed their concerns regarding the Mowry Village project's impacts on water quality and wildlife. More than 40 Bay scientists have urged regional leaders to protect the 500-acre Newark baylands from development and add them to the adjacent Don Edwards San Francisco Bay National Wildlife Refuge, highlighting the unique and valuable role of these mostly undeveloped baylands to support the long-term resilience of the Bay's wetlands to climate change. The lawsuit was filed on January 9, 2026, in Alameda County Superior Court. Citizens Committee to Complete the Refuge and Baykeeper are represented by Jason Flanders of the Aqua Terra Aeris law firm, and Baykeeper is also represented by in-house counsel led by Eric Buescher, Managing Attorney.

Mowry Village site, January 2026. Photo by SF Baykeeper

- Carin High

ORANGE COUNTY BIRD OF PREY CENTER

Ohlone Audubon Society (OAS) recently provided a $500 donation to the Orange County Bird of Prey Center (OCBPC), a 501(c)(3) non-profit organization. The donation goes to their Bird Release Sponsorship Program. Every year, the OCBPC heals hundreds of raptors in crisis who need support getting safely returned to their natural territory.

OCBPC is over 30 years old and works with one of its founders, veterinarian Dr. Scott Weldy. There are flight cages onsite for pre-release conditioning. Injured raptors are rehabilitated and released back into the wild. The site is privately located in Orange County Parks property and is not open to the public.

In addition to the Bird Release program, there is an Education program, in which OCBPC volunteers take raptors to schools, Scout meetings, park programs, civic groups, public television specials, and nature centers. 100% of the fees for the public education goes to the care, feeding, and rehabilitation of the birds treated at OCBPC. The site has several flight enclosures, both for the wild birds and for the educational ambassadors.

There are also Raptor Ecotrek Tours, where birders can meet OCBPC raptor ambassadors and go on an adventure in the backcountry with scenic views of the canyons and raptors flying overhead. Rehabilitated birds also get released back into the wild during these outings. Tickets can be purchased from and donations made to OCBPC.

For more information on the Orange County Bird Of Prey Center, please visit their website: **https://www.ocbpc.org/**

-Marlina R. Selva

Wild and Scenic Film Festival

Experience the beauty, adventure, and ingenuity shaping our world on thee big screen
Bankhead Theatre, Livermore
Friday, February 27 5—9 pm

Eco-Fair 5-6:40PM Panel Discussion 5:30-6:15PM
Films Part 1 6:45-8PM Part 2 8:25-9:20
With local wine, beer, and treats!
More info and tickets **https://livermorearts.org/events/**

We thank each of you for your invaluable support—whether renewing, donating, or joining us this year. Your generosity is greatly appreciated.

New and Renewing Members

Denise Bedford
Andrea Bennett
Val Blakely
Rebecca Bradley
Aarati Brahme
Natalie Brophy
Donna Case
Maggie Clark
LaVonne Coleman
Rebecca Flanigan
Deborah Frederick
Sara Jane Frisbee
David Furst
Paulette Garcia
Liza Garza
Ramesh Gopalan
Pat Gordon
Kimia Habibi
Mike Hall
Philip Hirschberg
Karen Kramer
Lyun & Chris Lazik
Dawn Lemoine
Edward Lyke
Patricia Mahoney
Paul McCollom
Carol McGabe
Daniel McGee
Sheila Moore
Marty Morrow
Dina Oakes
Wendy Parfrey
Tamara Reus
Deanna Rose
Eric & Pamela Ryan
Gail Ryujin
Francine Salvaggio
Patricia Shannon
Rita & Joseph Sklar
Karen Smith
Shana Sorensen
Michael Stein
Barbara Sullivan
Christina Tarr
Harvey Trop
James & Valerie Watts
Sunil Wijeyesekera
Joyce Wilson
Julice Winter

Donations

Denise Bedford
Rebecca Bradley
Natalie Brophy
Maggie Clark
LaVonne Coleman
Mr & Mrs. Ed Ellebracht
Rebecca Flanigan
Sara Jane Frisbee
Carol & Jeff Garberson
Liza Garza
Pat Gordon
Mike Hall
Philip Hirschberg
Karen Kramer
Lyun & Chris Lazik
Carol Long
Edward Lyke
Patricia Mahoney
Marty Morrow
Tamara Reus
Deanna Rose
Edward & Pamela Ryan
Gail Ryujin
Patricia Shannon
Rita & Joseph Sklar
Michael Stein
Barbara Sullivan
Harvey Trop
James & Valerie Watts
Sunil Wijeyesekera
Joyce Wilson
Julice Winter

Carol Long
in memory of George Trabert, in honor of his loving wife Marilyn
Dina Oakes (in memory of Phil Gordon)

In passing -
We send our condolences to Joanna Dixon and her family. Husband and father Ken recently passed.

Motus Networks

By Bill Hoppes

During one of our recent general meeting presentations, the speaker spoke of Motus Networks. It was clear that many of our members were unfamiliar with this topic so I thought I would provide some information on these networks and how they are working to explain migration pathways on the Pacific Flyway.

Every year, billions of birds undertake epic migrations—some flying thousands of miles between breeding and wintering grounds. These movements are among the most awe-inspiring phenomena in nature, yet for much of science's history they remained largely mysterious. Where do birds stop along the way? How long do they stay at key sites like the San Francisco Bay? What threats do they face along the Pacific Flyway? Today, a global research initiative called Motus is helping answers to emerge—pinpointing the movement patterns of birds with an unprecedented level of detail.

What Is Motus?

At its core, Motus (Latin for "movement") is an international collaborative wildlife tracking system that uses automated radio telemetry to study the movement and behavior of small animals, especially birds. Unlike traditional bird banding, which can only record where a bird was physically re-captured years after it was tagged, Motus can detect tagged birds in real time as they pass by strategically placed receiving stations.

Here's how it works:

Researchers attach tiny digital radio transmitters (called *nanotags*) to birds. These tags weigh as little as 0.2 grams, light enough to be used even on very small species.

When a tagged bird flies within range of a Motus receiver station—typically up to about 10–12 miles away—the station detects the bird's unique signal.

Each detection (called a *ping*) is recorded and later uploaded to a central database where scientists can track the timing, direction, and pattern of movements.

Motus Tower in operation

Because these stations are part of a widespread network, they can detect tagged birds across landscapes, regions, and even continents. A bird tagged in British Columbia, for instance, may be detected weeks later at a station in Mexico or our own Bay Area.

Today, the Motus network includes thousands of stations around the world, over 400 research projects, and data from tens of thousands of tagged animals, including birds, bats, and large insects.

Why Motus Matters for Bird Science

Bird migration is a complex ecological puzzle. Many species travel along traditional routes called *flyways*, staging at key wetland and coastal sites to rest and refuel. One of these major corridors is the Pacific Flyway, stretching from Alaska down to South America and passing right through California's coastal wetlands, including the San Francisco Bay. Understanding how birds use these habitats is critical for effective conservation, but conventional research methods have inherent limitations.

(continued page 11)

Motus (continued from page 10)

Motus changes the game for several reasons:

- Automated detection: Stations continuously monitor for moving tags, providing seamless data without the need to physically recapture birds.
- Lightweight tags: The small size of Motus transmitters allows researchers to study a wider range of species, including songbirds and shorebirds that were too small for traditional GPS tags.
- Collaborative scale: Because stations share a unified data system, information collected in one region benefits researchers everywhere in the network.
- Ecological insights: Data on arrival times, stopover duration, and seasonal flight patterns help scientists understand how birds respond to climate change, habitat loss, and human-made barriers like wind farms or urban sprawl.

In short, Motus provides a powerful window into the minute-by-minute journeys of birds, turning invisible migratory movements into robust, actionable data.

The San Francisco Bay Area and Motus

Wood Thrush with Motus transmitter attached. Note antenna trailing along tail

For many years, the central and eastern United States were the best-studied regions of the Motus network. The West Coast, including California and the San Francisco Bay Area, had comparatively fewer Motus stations, resulting in limited coverage along the Pacific Flyway.

That has been changing. In recent years, local researchers, conservation organizations, and government partners have worked to expand Motus coverage across the Bay Area and northern California. This effort reflects both the region's ecological importance and its unique role as a migratory stopover for many bird species.

Stations in the South Bay

According to the San Francisco Bay Joint Venture, a consortium of conservation groups, Motus towers have been added to the South Bay—a landscape of salt ponds, tidal marshes, mudflats, and estuarine habitats that attract shorebirds, waterfowl, and songbirds during migration seasons.

These stations expand the Bay Area's ability to collect detailed movement data for species that stop here along their migratory paths. For instance:

- Scientists can now track timing and duration of visits by shorebirds like Western Sandpipers and Red Knots.
- Researchers learn when and how long birds use specific habitats, helping map priority areas for conservation and restoration.
- Early data hints at discoveries about long-distance movements and the connectivity between distant populations—such as birds that breed in the far north and winter in Central or South America before returning through the Bay Area in spring.

(continued on page 12

Motus (continued from page 11)

Local Partnerships

The growth of Motus in the Bay Area has been a collaborative achievement. Organizations including Audubon Canyon Ranch, National Park Service, and San Francisco Bay Bird Observatory have deployed stations, shared expertise, and coordinated tagging projects. These local networks not only fill geographical gaps but also strengthen community involvement in bird conservation science.

What do we learn when birds are tracked through networks like Motus?

1. Timing and Stopovers
Birds do not fly continuously from breeding to wintering grounds—many make crucial stopovers to rest and feed. Motus data reveals exactly when a tagged bird arrives at a site like the South Bay, how long it stays, and when it departs. These patterns differ across species and years, often in response to environmental conditions.

2. Migration Routes
Rather than guessing probable flyways, researchers can reconstruct real routes taken by individuals. Some birds move inland around barriers like mountain ranges; others follow coastlines closely. These distinctions matter when planning habitat protection.

3. Conservation Priorities
By correlating movement data with habitat maps, scientists identify critical stopover sites that deserve protection or restoration. This is especially useful where land is under pressure from development or climate change.

Looking Ahead: Challenges and Opportunities

Despite its transformative power, Motus is not without challenges:

- Station placement matters: Topography, infrastructure, and local ecology influence how effectively a receiver detects passing birds.
- Coordination and costs: Installing and maintaining stations requires funding, personnel, and collaboration, which can be barriers for smaller research groups.
- Tag limitations: While lightweight, nanotags still have limited range and signal life, so tracking data must be interpreted carefully.

Yet every new station added, every bird tagged, and every dataset shared brings bird science closer to its goal: Understanding the full picture of migratory behavior so we can protect the species and ecosystems that depend on it. The Bay Area's growing contribution to the Motus network is an exciting chapter in this story—one that enriches local knowledge while connecting us to the bird migrations that link continents and cultures.

Here are local examples of Motus station activity and specific bird movements recorded (or expected) in the San Francisco Bay Area, based on recent research and tracking efforts:

1. First Detections at Richardson Bay — Red Knot
One of the most exciting early Motus records in the Bay Area came from Richardson Bay Audubon Center. In May 2023, this station recorded its first tagged bird detection: a Red Knot that had been tagged in northwest Mexico. After flying along the Pacific Flyway, the bird passed by Richardson Bay, where the Motus receiver "pinged" its signal. It spent about 2 minutes and 39 seconds within range before continuing north toward Washington State. This detection provided hard data on timing and stopover use through the Bay Area—information that simply wasn't available before Motus coverage existed.

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2. Swainson's Thrush Long-Distance Flight

Before the Bay Area had its own towers, Motus data from other networks showed remarkable long-distance movement by a Swainson's Thrush — another migratory songbird species — that traveled nearly 3,728 miles in just 34 days. While this specific bird wasn't detected in the Bay Area itself, the record highlights the scope of Motus data and what we *could* learn as more stations come online locally. Once Motus coverage continues expanding across the Bay, scientists expect similar discoveries with species that use Bay Area habitats as critical stopovers on their migrations.

3. A Network Expansion Across the Bay

Motus stations in the Bay Area have grown quickly in just a few years. Working groups and research partners have placed stations at a variety of natural areas and elevated sites that help capture signals from passing migrants. Examples include:

- Stations on Burnside Road in Sebastopol and Mount Barnabe near Lagunitas
- Receivers at Richardson Bay Audubon Center in Tiburon
- Towers on Wolfback Ridge above Sausalito
- Coverage in Napa Sonoma Marsh
- Additional sites in urban and semi-urban areas such as El Cerrito, Milpitas, San Jose, Stanford University, and near Half Moon Bay
-

4. Tagging Threatened Species — Western Snowy Plovers

Local scientists are now using Motus to study threatened species such as the Western Snowy Plover, which nests on sandy shorelines and salt marsh edges around the Bay. By fitting these small shorebirds with Motus nanotags and using data from multiple stations, researchers hope to answer questions like:

- Where do plovers go when they leave a nesting site?
- Which habitats do they use during migration?
- How long do they stay in and around the Bay?

5. Broader Pacific Flyway Data Filling Gaps

Even outside the Bay Area proper, Motus data shows birds passing through or near the region along the Pacific Flyway. For instance, research across California and up into Oregon and Washington is collecting movement information on shorebirds, songbirds, and other migrants — and those detections can intersect with Bay Area station data if birds fly within range.

For example, at refuges farther north, researchers have tagged and tracked seasonal use by species like Western Sandpipers and Dunlin. Because these birds are part of the same migratory system that passes through the Bay, their trajectories help contextualize what is likely happening locally once coverage improves.

Motus Interactive Data Dashboard

The official Motus website (https://motus.org/) offers an interactive data dashboard where you can:

- Find specific stations
- Search by species
- Explore individual animal movements
- See detections on a map

This dashboard includes filters for things like detection timelines and estimated paths between). The Motus network also has an interactive map of receiving stations that shows:

- Where towers are located globally
- Recent detections picked up by those stations
- Which tagged birds have been detected nearby

This map helps you see coverage and where birds have passed through in the Pacific Flyway including potentially through California and the Bay Area. Some Motus projects provide project-specific tracking pages where you can watch the recorded paths of tagged birds.

Motus networks are a new nexus of technology and ornithology, helping provide answers to migration mysteries that have defied explanation for hundreds of years and providing guidance for local, regional and international conservation efforts.

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