



# Tide Rising

Summer 2020

Volume 1, Issue 4



Publisher & Editor: [San Francisco Bay Wildlife Society](#) (SFBWS).

SFBWS is a not-for-profit Friends Group for the San Francisco Bay NWR Complex, working along with many Refuge volunteers to keep our public lands available for you and wildlife.

## TABLE OF CONTENTS

### Refuge Spotlight:

- [Farallon Islands NWR](#)
- [Don Edwards San Francisco Bay NWR: Shoreline Project Update](#)

### Corners

- [SFBWS Friends](#)
- [North Bay Notes](#)
- Environmental Science
  - [Community Science](#)
  - [Salt Pond Restoration Project, Phase 2 Science](#)
  - [Explore from Home](#)

### People of Note

- [Latino Environmentalists: History & Two People of Note](#)

### Staff Changes

### SFBWS Info

- [Donor Summary](#)
- [Membership Information](#)

## Exploration & Learning

### In this issue:

- Learn about the purpose and history of the Farallon Islands National Wildlife Refuge from someone who dreamed about them as a teen.
- Read the latest info on the Shoreline Levee Project in the southern part of Don Edwards San Francisco Bay National Wildlife Refuge (DESFBNWR)
- Both Friends groups share their thoughts about the importance of supporting the San Francisco Bay National Wildlife Refuge Complex
- Be inspired by a Community Science project studying insects and more. Learn about Phase 2 of the Salt Pond Restoration Project. More ideas to explore from home. Read about our latest people of note.

Are you interested in supporting our newsletter production (contributing content, editing, etc.) or an online SFBWS Nature Store (taking merchandise photos, processing orders, set-up, etc.)? We welcome your involvement! Contact [NEWSLETTER](#) (Volunteer) or [Mary Deschene](#) (Nature Store).



Thanks for reading and enjoy the rest of the San Francisco Bay Wildlife Society **Summer** Newsletter!

^^ (ABOVE) Marsh at sunset (*Renee Fitzsimons*)

### San Francisco Bay Wildlife Society

*Editors:* Ceal Craig, PhD; Renee Fitzsimons.

*Contributors:* Ceal Craig, Donna Ball (SFEI), Renee Fitzsimons, Aidona Kakouros (USFWS), Gerry McChesney (USFWS), Matt Brown (USFWS), SFBWS Staff.

## Current Refuge Complex Status

Refuge Status as of July 10, 2020

**Don Edwards San Francisco Bay (DESFB) NWR:** All public programs and volunteer events postponed until further notice.

- If you have a scheduled group program, contact staff person you made the reservation with to discuss options.
- Visitor Center in Fremont & Environmental Education Center in Alviso are currently closed. Check back for status changes.
- If you have questions or concerns regarding the EEC activities and events, please [contact us](#)
- The DESFB NWR Refuge trails remain open from sunrise to sunset. Stay healthy, and take care.

### Other National Wildlife Refuges in the Complex:

- During the current public health emergency, whenever possible, outdoor recreation sites at Refuges will remain open to the public. For local conditions review the information on Refuge websites (for links see [Explore From Home](#) page) and call ahead.
- If visiting a Refuge, please ensure public health and safety by following guidance from the CDC and state and local public health authorities. You can do this by maintaining social distancing, avoiding overcrowding, and using good hygiene practices.

## Farallon Islands National Wildlife Refuge ([More info](#))

*Established in 1909 by President Theodore Roosevelt as a preserve for breeding birds. Also, it is designated a State Ecological Reserve and part of the Golden Gate Biosphere Reserve.*

### Learning about the Farallon Islands....

*by Gerry McChesney, Manager, Farallon Islands National Wildlife Refuge, U.S. Fish and Wildlife Service*

When I was a teenager in New Jersey, I first heard of the Farallon Islands National Wildlife Refuge (NWR). An avid birder, I read of seabirds nesting on jagged rocky cliffs and unusual “vagrant”, or lost, migrant birds that would somehow find their way there. A few years later just after I moved to California, I hopped a ride on a tour boat heading out to the islands. It was early June, during the height of the seabird nesting season. I was absolutely enthralled. The islands were otherworldly and like nothing I had ever seen. Thousands of common murres packed into nesting colonies on the cliffs and slopes. Pigeon guillemots and bizarrely beautiful tufted puffins, with their huge orange peaks and blond tufts, flew about and flocked on the water. Sea lions climbed along the rugged shores. I couldn’t believe that this remote, seemingly forbidden place was just 30 miles off the Golden Gate.



Fisherman’s Bay  
(Gerry McChesney)



Common murre (2015) (Gerry McChesney); Tufted puffin (Maps for Good)

**HISTORY:** The Farallones have a rich and storied history. The first inhabitants were Boston and Russian seal hunters who inhabited the islands between 1807 and 1838. By the time the hunters left, northern elephant seals were nearly extinct and all of the islands’ fur seals had been wiped out.

From the start of the California Gold Rush in 1849 until 1881, commercial eggers lived on the islands, collecting multitudes of common murre eggs each year to supply sprawling San Francisco restaurants and bakeries. The annual harvest demolished the Farallon common murre population; perhaps a million birds strong at the start of the Gold Rush, by the early 20th century only 20,000 remained.

Lighthouse keepers lived on the islands from 1855 to 1972, and the U.S. Navy operated a base between the early 1900s and World War II.

Created by President Theodore Roosevelt in 1909 “as a preserve for breeding birds,” the original Refuge included only the smaller Middle and North Farallones, along with Noonday Rock. In 1969, the larger South Farallon Islands, where the majority of the Refuge’s wildlife resides, were added.

Since assuming management of the South Farallones, the Refuge has worked with its partners to protect and restore the once thriving seabird and marine mammal colonies.

Just a year later, I found myself signing up for a summer internship with Point Blue Conservation Science, which operates a research station in cooperation with the U.S. Fish & Wildlife Service, to help with ongoing seabird and other wildlife studies on the Farallon Islands, or Farallones. I had never done anything like it before. But before the summer was over, I knew that dedicating my career to the conservation of places like the Farallones, and the species that inhabit them, was what I wanted to do. Just over 20 years later I found myself back as the proud Manager of the Farallon Islands NWR.

To help achieve these goals, feral European rabbits and house cats, introduced by earlier inhabitants, were quickly removed. Almost immediately, a species of seabird, the rhinoceros auklet, returned to nest after an absence of over a century. Common murres, once devastated by eggings, have increased to nearly 280,000 birds. Farallon tufted puffins, which declined to as few as 26 birds, have increased to over 300. Elephant seals returned in the early 1970s. In 1996, a Northern fur seal gave birth to the first Farallon pup in over 150 years. Since then, the population has been growing exponentially, now in the low thousands. Populations of three other seals and sea lions also thrive on the islands.

One introduced and invasive species still remains on the islands: the house mouse. Studies have shown these mice have severe impacts on sensitive Farallon species. To help in our efforts to restore the unique Farallones ecosystem and increase its resilience to climate change, the Refuge and its partners are working on an ambitious plan to remove the invasive mice. Removing the mice will help protect and restore the rare ashy storm-petrel, a small, secretive seabird that has its largest nesting colony on the Farallones, as well as the endemic Farallon arboreal salamander and Farallon camel cricket, found nowhere else, and a unique native plant community.

## Don Edwards San Francisco Bay National Wildlife Refuge [\(More Info\)](#)

Formed in 1972, these 30,000 acres are an oasis for millions of migratory birds & endangered species

### South San Francisco Bay Shoreline Levee Project Pauses

by Matt Brown, Refuge Manager, Don Edwards San Francisco Bay National Wildlife Refuge

The South San Francisco Bay Shoreline Project, a federally funded effort to safeguard the north San Jose area between Alviso Slough/Guadalupe River and Coyote Creek from the risk of a 100-year coastal flood event, has been in the planning/development stage for several years. The project is a partnership between the U.S. Army Corps of Engineers (USACE), the State Coastal Conservancy, and the Santa Clara Valley Water District and involves land on the Don Edwards San Francisco Bay National Wildlife Refuge. This effort will eventually result in the construction of four miles of coastal levees to protect against sea level rise, restoration and enhancement of 2,900 acres of tidal marsh and wildlife habitat, and an increase in public access and recreational opportunities along the bay shoreline.

The Refuge has been working closely with the other partners to develop a levee design and construction plan that will minimize the impact to Refuge resources, while maximizing the positive impacts to Refuge visitors.

**STATUS:** The solicitation to construct Reach 1 of the levee was released by USACE last December. Unfortunately, as is the case with many Bay Area projects, the contractor bids to do the work came in substantially higher than anticipated. Ultimately, the decision was made to cancel the solicitation, and spend time evaluating why the bids were so expensive. The Refuge has been working with USACE to evaluate potential cost saving measures...including the possibility of relocating some of the infrastructure at the Environmental Education Center to facilitate 2-way traffic into the construction site, and adjusting the water level in the ponds adjacent to the construction area.

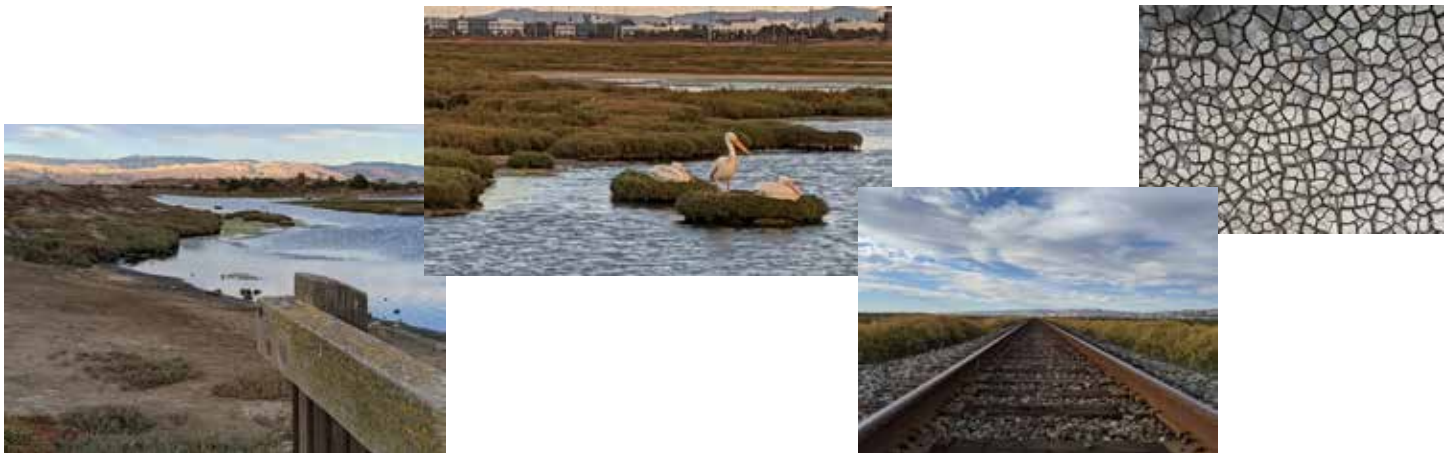
During this delay for at least a year, the Refuge is taking advantage of the pause to complete a levee maintenance project of our own. Later this summer/fall, the Refuge will be raising the elevation of the A13/A15 levee (shown in orange on the image below). The A13/15 levee is currently the low point in the Alviso levee system, and raising it several feet will allow us to ultimately restore the A9-A15 ponds to tidal marsh, while still protecting the railroad line that runs adjacent to the levee.



Project Photos (USFWS)



Don Edwards SFB NWR Photos - early summer (Renee Fitzsimons)





# People of Note

## Latino Environmentalists: History and Two Notable People

by Ceal Craig, Newsletter Editor

Last quarter we explained the impacts Rachel Carson and Florence LaRiviere had on the environment and our Refuges. In this quarter we are focusing on [Latino](#) environmentalists. *Latino Conservation Week*, July 18-26, provided opportunities nationwide to help highlight the Latino community's passion for protecting and enjoying public lands and waters. #LCW2020 was used nationally to help break down barriers to our nation's public lands and waters and inspiring tomorrow's stewards. (See [link](#) for why this article uses Latino vs. Latinx)

Latin American cultures have been caretakers for the environment for centuries. The Aztecs grew their food on floating human-made islands in Mexican lakes, a zero waste society. Many Latino people today "live in front-line communities where they cope firsthand with the effects of pollution and contamination" (Cabrera, 2020, para. 4) in our staunch environmentalists. California Attorney General Xavier Becerra shared how environmentalists are people of "modes means, like my parents,...are some of the best conservationists...they can't afford not to be" (para. 5). Latinos describe how family practices of reuse (e.g., plastic food containers, materials) and repurposing (California Congresswoman Sánchez remembers using mason jars as drinking glasses) are basic to their family culture. (Cabrera, 2020).

While many Californians strongly believe the state should be a leader in climate change, "Strong majorities of Latinos (68%) and African Americans (65%)—and fewer whites (47%) and Asian Americans (46%)—say it is very important" (PPIC, 2018, para. 1). "Latinos (73%) are the most likely to be in favor while whites (64%) are the least likely" (para. 4) to favor California's law that limits greenhouse gas emissions (Assembly Bill 32).

## Latino People of Note

At the Monterey Bay Aquarium, Claudia Pineda Tibbs is the Sustainability and Operations Manager. Earning a B.S. from California State University Monterey Bay in earth systems, science and policy focusing on marine and coastal ecology, she is passionate about education and growing stewardship in youth and teachers with bilingual science conservation communications. She suggests three steps to optimize communicating about science to bicultural and bilingual audiences, activating connections and context, communicating simply and breaking down the vocabulary, and partnering with a science center or museum. (Tibbs, 2018).



*"Making sustainability cool at Monterey Bay Aquarium"*



Fabián García is passionate about "inspiring and encouraging Latinx youth" (Rodriguez, 2019). He is a US Forest Service employee, and a first-generation graduate of UCLA with a master's from CSULA. He is currently a Partnership Coordinator in the Angeles National Forest and is a Director with the Southern California Consortium. This US Forest Service delivers environmental education, outreach and recruitment, kindergarten through employment programs. They hope to inspire underserved urban communities on the importance of natural resources (USFS, 2013).

Several organizations throughout the United States and regionally connect Latino peoples with the environment and nature. Latino Outdoors is one of them. "We inspire, connect, and engage Latino communities in the outdoors and embrace cultura y familia as part of the outdoor narrative, ensuring our history, heritage, and leadership are valued and represented" (Latino Outdoors, 2020). Check out their [StayAtHome activities!](#)

Cabrera, Y. (2020, February 23). Latinos are super green. When will environmental groups realize? Retrieved from Mother Jones, <https://www.motherjones.com/environment/2020/02/latinos-are-super-green-when-will-environmental-groups-realize/>

Latino Outdoors. (2020). Mission. Retrieved from <https://latinooutdoors.org/>

National Associate of Science Writers. (2018). Claudia Pineda Tibbs. Retrieved from <https://sciencewritersmeeting.org/2018/speakers/claudia-pineda-tibbs.html>

Public Policy Institute of California. (2018). Californians' views on climate change. Retrieved from <https://www.ppic.org/publication/californians-views-on-climate-change/>

Rodriguez, R. (2019). 20 Latinx advocates, activists, and conservationists you should know about: A Latinx Heritage Month Celebration. Retrieved from <https://latinooutdoors.org/2019/10/20-latinx-advocates-activists-and-conservationists-you-should-know-about-a-latinx-heritage-month-celebration/>

Tibbs, C. (2018). Communicating ciencia: Resources for engaging the changing faces and voices of mass media. Retrieved from <https://communicatingciencia.org/resources/tibbs/>

U.S. Forest Service. (2013). Southern California Consortium. Retrieved from <https://www.fs.fed.us/r5/scc/>

# Environmental Science on the Refuge

## Community Science Programs in Wildlife Refuges: A powerful tool in our tool belt

by Aidona Kakouros, SFBNWRC Botanist

**Background:** In recent years, the immense growth of Community Science Programs, advanced by the increase of enabling technologies and supported by a growing community of expert scientists, have made tremendous contributions in conservation science (McKinley et al., 2017). A growing number of scientists, land managers, non-for-profit organizations, and government institutions recognize the potential of community science to meet diverse informational needs and formally integrate community science in their work (Ellwood, Crimmins, & Miller-Rushing, 2017). Moreover, community science programs inspire appreciation of nature, offer learning opportunities, and foster environmental stewardship (Freitack & Pfeffer, 2013). For example, the primary goal of *iNaturalist*, a popular community science community network, is to connect people with nature and encourage natural exploration. Naturally, National Wildlife Refuges are the perfect places for nature exploration and learning!

The primary mission of National Wildlife Refuges is to protect wildlife and habitat first and foremost. The US Fish and Wildlife Service strives to offer visitor programs and facilitate activities for the public to enjoy and connect with wild nature. Nonetheless, in some areas, public access needs to be restricted due to the area's fragility and/or management requirements. At the Warm Springs Unit of the Don Edwards San Francisco Bay National Wildlife Refuge (DESFBNWR), a vernal pool grassland home to several species with special conservation status and numerous rare plant species, public access is restricted.

**Problem:** The Refuge runs a robust monitoring program to assess indicator status of key ecological attributes and management effectiveness. These indicators were selected based on best available science. However, during the process of establishing indicators, the staff acknowledged the dearth of information on taxa that according to ecological theory may be key to ecological functions. For example, the diversity and abundance of pollinators can be inextricably related to the health of the vernal pool ecosystem, yet we did not have any data or record for our site. In fact, we realized we knew so little on terrestrial invertebrates in general at Warm Springs. Could community science provide aid here and if so, under what conditions given the constraint of restricted public access?

When designed appropriately, Community Science projects can efficiently fill data gaps and provide low-cost and high integrity scientific data to meet the needs of adaptive management. The expertise, training, and commitment of community science practitioners is directly associated with the success of the project.

**Solution:** Some years ago, Merav Vonshak; a post doc entomologist and a fervent practitioner of community science that organizes bioblitz events all around the South Bay, introduced me to *iNaturalist* community science projects, which I enjoyed attending in my free time. Merav has also volunteered in surveys and weed control projects at Warm Springs, so she was familiar with the site and management. I approached her and discussed my thoughts about the need to know more on the invertebrate status at Warm Springs. The rest was history!

In less than a month we outlined a plan with the goal to record as many invertebrate species present at Warm Springs as possible through the change of the seasons. We used the *iNaturalist* platform to create a project for Warm Springs. Merav organized

small teams of experienced naturalist and insect experts who visited Warm Springs after coordinating with the Refuge approximately every two months. The primary focus of the team visits was to record invertebrates but they also recorded other wildlife and plants.

**Results:** The first visit occurred in Spring 2019 and the most recent in December. So far, a total of 104 insect species and 13 species of arachnids were recorded. Unfortunately, Covid-19 restrictions did not allow for any visit in spring 2020 but we are looking forward to the future when it will be safe to resume. All observations were uploaded to the *iNaturalist* Warm Springs Fauna and flora website through the *iNaturalist* app. This means that the public can access the website and learn more for what lives in Warm Springs which is a tremendous benefit. Merav and some Refuge staff have administrative privilege and can retrieve lists of data. This is a wonderful tool for us! It is a very efficient way to record species presence, especially for species that no formal surveys are in need or possible, and allow for different parties such as partners, other experts etc. to input data in real time, which can be retrieved at any time later. This really saves time from data entry and data management. Finally, the app obscures the exact location of listed species, making it safe to share publicly data. We are so grateful for Merav and all the volunteers that make this happen. If you are curious to see the team's discoveries you can follow this [link](#).

I hope you will be inspired to make your own exploration in nature! Go wild!

A bee of the subgenus *Nomadopsis*.  
(Merav Vonshak)



A wasp of the genus *Euodynerus*.  
(Merav Vonshak)



Team of naturalists at the Warm Springs (USFWS)

**NOTE: we used community science instead of citizen science in this article as a more inclusive term**

### REFERENCES

- Ellwood, E.R., Crimmins, T.M. & Miller-Rushing, A.J. (2017). Citizen science and conservation: Recommendations for a rapidly moving field. *Biological Conservation*, 208, 1-4.
- Freitag, A. & Pfeffer, M.J. (2013). Process, not product: Investigating recommendations for improving citizen science "success." *PloS one*, 8(5), p.e64079.
- McKinley, D.C., Miller-Rushing, A.J., Ballard, H.L., Bonney, R., Brown, H., Cook-Patton, S.C., Evans, D.M., French, R.A., Parrish, J.K., Phillips, T.B. & Ryan, S.F. (2017). Citizen science can improve conservation science, natural resource management, and environmental protection. *Biological Conservation*, 208, pp.15-28.

# South Bay Salt Pond Restoration Project

## Science Program Framework, Phase 2

by Donna Ball, Restoration Project Lead Scientist, South Bay Salt Pond Restoration Project

### Guiding Adaptive Management in the South Bay

The South Bay Salt Pond Restoration Project has long been guided by its Science Program, which – along with the Adaptive Management Plan – was one of the foundational products of the long-term planning process that went into developing the Project. Under adaptive management, the Project undertakes restoration actions in phases, studies their impacts and outcomes, and weaves that learning into planning for the next phase of actions, to improve results.

The Science Program's goal is to bring the best and most relevant science into that adaptive management framework to assist and inform decision-makers in a timely fashion. By coordinating a series of applied studies, modeling, and ongoing monitoring by external researchers, it provides managers with a scientific basis for adaptive management decisions and assists with measuring success toward meeting restoration targets.

#### First Ten Years

During the first ten years of research, much was learned about the key uncertainties identified as part of the restoration planning. That learning and an evaluation of how well the Restoration Project was meeting scientific targets at the end of the first phase of the project is reflected in the [Phase 1 Science Summary](#).

#### Next Decades

In 2019, to begin planning for the next decade of science and monitoring, Project managers began working with Point Blue Conservation Science to develop a Science Framework to assist in implementing Phase 2 of the Restoration Project's actions and begin planning for future phases. Together Point Blue and the Project Management Team developed this Science Framework and several supporting documents.

The products of that work are as follows:

- A [Phase 2 Science Program Framework](#) to help Project managers identify and respond to the most critical and immediate science needs. The Framework establishes a process for pinpointing updated priorities and key scientific questions and monitoring needs before the Project implements Phase 2 monitoring, studies, analysis, and modeling. It is designed to increase our efficiency in data-gathering and analysis, to inform our work and communicate it to the broader San Francisco Bay restoration community.
- The [Climate Change Synthesis](#) provides Restoration Project managers and scientists with an updated understanding of the current science on sea level rise and other effects of climate change. It also identifies ways in which the adaptive management approach to the Project may need to adjust in the face of those changes.
- The [Phase 2 Science Synthesis](#) updates the status of restoration-related science and technology in the South Bay Area region and beyond. It refines the remaining scientific uncertainties and gaps to help managers identify crucial areas for scientific investigation and data gathering going forward, and identifies opportunities for regional synergy

The Project Management Team – led in this work by new Project Lead Scientist Donna Ball – is building out the Phase 2 Science Plan by expanding on the Framework to specify details of the types of studies or monitoring that are identified in the document as priorities to guide ongoing management and planning. The Phase 2 Science Plan will also focus on integrating Project-specific science with other work in the region to improve regional understanding and make more efficient use of resources.

Visit the South Bay Salt Pond Restoration [project website](#) to learn more about the restoration project.

### History Snapshots: Restoration Project

The Drawbridge Presentation & Van Tour program began in late 2008. Then, we drove along the east sides of A16 and A17 and then back down the west sides: a circle. The land bridge between the two ponds didn't exist. Pelicans gathered on northeast corner island in A17.

After islands were built in A16, the fish weir and water control structure from A17 to A16 was built, and finally the levee between A17 and Coyote Creek was breached Oct-31, 2012, the A17 landscape changed and continues to change. Tides go in and out, twice a day, sculpting it.

Now, the Drawbridge Tour group drives along A16's east side, across the new landbridge between A16/A17, to the fish weir building, and up the west side of A17 to the Drawbridge viewpoint. A small example of changes from the Restoration project.





# Friends Corner



## San Francisco Bay Wildlife Society

by Cecilia (Ceal) D. Craig, PhD, President, Board of Directors

<< EEC from A16 trail (Renee Fitzsimons)  
EEC Visitors at Gate (Ceal Craig) >>

June 13, 2020, Saturday,  
about 6pm at the  
Environmental Education Center in  
Alviso/San Jose

**NOTE: Gates closed. EEC closed. Trails open.**



### Dear members, subscribers, & other readers,

Happy summer while we all Shelter-in-Place (SIP). These are challenging times for us all: SFBWS & FWS staff, volunteers, supporters, people's children, grandparents, parents, single people, and all our pets. This rare event affects everyone near and far. We hope you are staying safe and still having some time to enjoy nature nearby.

### On the Trail.....

In mid June after providing my first virtual Drawbridge program, my husband and I went over to the EEC to look for avocet and stilt chicks. I was thinking we were too late as we did not find any.

**Not so!** Renee Fitzsimons, SFBWS BOD VP, coincidentally was walking out on the boardwalk, near the same time (as Renee and I discovered when comparing notes later) and captured a few images of those balls of fluff. Nature's life cycles occur without us to see it. Thanks Renee for sharing your photos!

Renee is an avid hiker and can be found on many trails throughout the peninsula and bay areas. We are both missing those opportunities to see the birds and other wildlife on our Refuges.

### Impacts, Planning, and Changes

SFBWS hopes to find a contractor to be the editor/graphic designer to take over the *Tide Rising* efforts; however, in these times, that effort is on hold. We welcome new volunteers and a Board of Directors member or two! [Write me!](#)

Our major grantor, Santa Clara Valley Urban Refuge Pollution Prevention Program has stated they plan to renew the Watershed Watchers program for July 2020 through June 2021 and we appreciate SCVURPPP's long-term support. This grant ensures we have a full-time interpretive specialist (Hope Presley) and associate (Rachel Caoili). They have been delivering [virtual programs](#) for all ages--Tai chi, virtual walks on the Alviso ponds, and more.

SFBWS is looking for other long term partnerships, to develop and support collaborative programming for the community and schools, habitat stewardship efforts, wildlife research, and recreational opportunities.



Black-necked stilt chicks by EEC Boardwalk  
(Renee Fitzsimons)

### Helpful Links for Data & At-Home Stress Relief

[Resources on COVID-19 and California](#)



Goldfinches in May  
(American & Lesser)



Nasturtiums & tomatoes  
in May



Russian sage in June



Summer cactus blooms  
(Four photos: Ceal Craig)

### Exploration, Observation and Learning

Come explore San Pablo Bay National Wildlife Refuge trails on foot or by bicycle. Trails easily accommodate social distancing and exercise and fresh air are good antidotes to the pandemic blues. The [Recreate Responsibly Coalition](#) developed 7 guidelines for a healthy and safe return to our public lands and waters. The final guideline calls on each of us to Build an Inclusive Outdoors, ensuring people of all identities and abilities feel welcome and safe. Check out the guidelines at [www.recreateresponsibly.org](http://www.recreateresponsibly.org).

### Thirsty birds, big and little

If you can't make it out to a refuge, exploration and learning can begin right in the backyard. Look for a hummingbird when you hear their staccato click, click, click call. This hummingbird came to sip nectar from the agapanthus next to my backyard fence. With a wing span of approximately 5 inches and a body length of 3-4 inches it looks like her outstretched wing reaches to the tip of her beak. In the second photo of the same bird its iridescent green body color is nearly camouflaged among the flower stems.



Contrast the hummingbird weighing less than 2 ounces with a full grown male Canada goose weighing 7-14 pounds. Geese have adapted so well to the urban environment they are considered a nuisance in some settings. These geese are in the perfect place, drinking from Carquinez Strait just prior to sunset.

You might wonder how these birds can survive drinking salt water. When the goose drinks saltwater, the salt is absorbed into their bloodstream like it would be if we drank saltwater. The difference is the goose has a salt

gland that extracts and concentrates the salt. The salt gland is conveniently located behind the bird's eyes so that the concentrated salt can then be excreted out their nostrils. Salt glands are a pretty handy thing to have. The last thing to know about salt glands is newly hatched goslings and ducklings have to be born near freshwater because it takes a while before their salt glands develop. So the next time you see a bird drinking salt water, you'll understand their secret physiological adaptation.

(Three Photos: Francesca Demgen)



Canada geese on Carquinez Strait

Join the **Friends of San Pablo Bay National Wildlife Refuge** by becoming a [member](#).

This Friends group supports three Refuges within the San Francisco Bay NWR Complex: [San Pablo Bay](#), Antioch Dunes, and Marin Islands.



Napa-Sonoma marshes surrounding San Pablo Bay provide extensive wetland system (USFWS)



# Explore from Home

San Francisco Bay Wildlife Society

by SFBWS Staff & Volunteers

## Staying engaged with your local National Wildlife Refuges from home

This past quarter SFBWS staff have been providing virtual webinars and workshops for the public, building on in-person versions usually provided at Don Edwards San Francisco Bay NWR (DESFBNWR). In early July, working with [Saved by Nature](#), SFBWS staff members, Hope Presley and Rachel Caoili, provided a virtual hike (live streamed) for the Boys and Girls Club Summer Science Project. Check it out (edited for length from original): [Virtual Boys & Girls Program at DESFBNWR](#). We appreciate Santa Clara Valley Urban Runoff Pollution Prevention Program's support for this virtual effort.

In June, Ceal Craig, SFBWS & FWS Volunteer, hosted two virtual Drawbridge presentations and a virtual hike using Cris Benton's kite photography. We will offer this program again in August. Check out the SFBWS Facebook page for upcoming dates.

We hope to bring more virtual programs to you in the months ahead until we can offer them on-site.



## Staff Changes

### USFWS Staff Changes

*Leaving* -- Kaitlyn Romero, volunteer biologist has been assisting USFWS biologists at the Warm Springs unit since January 2020 and will complete her volunteer service at end of July.

### SFBWS Staff Changes

*Arriving & Leaving* -- Tracy Flor Figueroa (Summer Camp Associate)

## More ways to support the environment and stay connected to Refuges:

Junior Ranger activity books are a wonderful resource for kids and students! We have three different options to choose from – choose one or choose all. Some activities you can do on your own at home, or by checking out Refuge websites and YouTube videos. We encourage you to come visit us at the Refuge once we are back in operation to complete the book and receive a Junior Ranger Badge!

- DESFB NWR: [Alviso](#) and [Fremont](#)
- [San Pablo Bay NWR](#)

Check out our DESFB NWR [coloring book](#). Great for kids and students of all ages to learn about the Refuge, habitats, and wildlife! Celebrate Earth Day 2020 by participating in the DESFB NWR's Teen Art Show. For details and how to submit your work, [click here](#).

Check out the [webcam](#) at the Farallon Islands provided by a partnership with California Academy of Sciences. You can join the queue to choose different locations and perspectives to find birds flying and seals swimming!

Follow us on our Facebook pages for more fun activities and information: [San Francisco Bay Wildlife Society](#) & [San Francisco Bay NWR Complex](#) and [Friends of San Pablo Bay NWR](#).

The USFWS National Conservation Training Center has a [live webcam](#) of a Bald Eagle nest located on their property in West Virginia! A chick hatched in late March! Watch to see the adults bring the Eaglet food and teach it how to fly.

Explore information about wildlife and habitats on each of our local Refuge's webpage:

- [Salinas River NWR](#)
- [Ellicott Slough NWR](#)
- [Don Edwards SFB NWR](#)
- [Antioch Dunes NWR](#)
- [San Pablo Bay NWR](#)
- [Marin Islands NWR](#)
- [Farallon Islands NWR](#)

Last, but not least, some ideas for learning more about our environment and for helping species in your backyard. See links below

- [Outdoor Sensory Scavenger Hunt](#)
- [19 ways to make your backyard more bird friendly](#)

Participate in Community Cleanup efforts. Going on walks in your neighborhood and noticing litter? Check out our [Blog Post](#) on how you can help cleanup your community to prevent pollution while also staying safe and healthy.

## [National Wildlife Refuge Association](#)

Defends the integrity of the National Wildlife Refuge System with advocacy, restoration and research.

Find out about NWRA, mission, their methods, and the results of four decades of advocacy.

# THANK YOU TO SFBWS SUPPORTERS!

We gratefully acknowledge the following donors who have made gifts to the San Francisco Bay Wildlife Society between April 1 to June 30, 2020.

## Senior/Student

Bonne Curtis-Leibee  
Richard P Santos  
Norma R Zimmer

## Individual

William Donnelly

## Family

Charlene Charles  
Craig & Barbara L Heckman  
Fran Tannenbaum Kaye  
Mary T Light  
Kathleen Yoshikawa

## Participant

Terry Blanchard  
Richard Booth  
Kim Brink  
Renee Fitzsimons  
Jan Z Hintermeister  
Sheila Krishnaswamy  
Robert & Harriet Jakovina  
Karen Latchford  
William K Nisbet

## Sponsor

Sephen Cassidy  
Ambarish Goswami  
Laurel Przybylski



Sunset over the Refuge (Renee Fitzsimons)

## Supporter

Sherlyn Brubaker  
Carol Johnson

## Donations

PayPal Giving Fund

## Help Us Protect Your San Francisco Bay Wetlands!

Mail your donation to: San Francisco Bay Wildlife Society,  
P.O. Box 234, Newark, CA 94560.

You may also become a member at [www.sfbws.com](http://www.sfbws.com).

For a gift membership, call 510-792-0222 ext. 364.

[LINK here](#)

San Francisco Bay Wildlife Society is a not-for-profit 501(c)(3) organization, a Friends group for the San Francisco Bay National Wildlife Refuge Complex.

**YES! I want to support San Francisco Bay Wildlife Society and its programs.**

My membership will help the *San Francisco Bay National Wildlife Refuge Complex* and its south Bay and Outer Bay Refuges

(Don Edwards, Salinas River, Ellicott Slough, and the Farallon Islands)

Enclosed is my contribution of:

<input type="checkbox"/> \$20 Student/Senior	<input type="checkbox"/> \$200 Corporation
<input type="checkbox"/> \$35 Individual	<input type="checkbox"/> \$250 Sponsor
<input type="checkbox"/> \$50 Family	<input type="checkbox"/> \$500 Sustainer
<input type="checkbox"/> \$75 Supporter	<input type="checkbox"/> \$1,000 Leader
<input type="checkbox"/> \$100 Participant	
<input type="checkbox"/> Check Enclosed	<input type="checkbox"/> Credit card payment, use PayPal at <a href="http://www.sfbws.com/donate">www.sfbws.com/donate</a>

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

**Thank you for your support!**

For more than 30 years, the San Francisco Bay Wildlife Society has:

- Introduced the refuge to tens of thousands of students of all ages
- Helped fund the Bair Island restoration and Management Plan, restoration work at Antioch Dunes NWR, and uplands restoration at the Environmental Education Center (EEC)
- Provided Saturday staff in EEC through long-term partnership with the Santa Clara Valley Urban Runoff Pollution Prevention Program
- Provided funding for a new boardwalk at the New Chicago Marsh Trail at the EEC.
- Funded a new greenhouse
- Provided funds for a native plant nursery
- And much more....

**Help continue this tradition by becoming a Supporting Member of the Society.**

Benefits include:

- Tax deduction to the extent permitted by law
- Free book - Exploring Our Baylands
- 15% discount at SFBWS Nature Stores
- The joy of helping protect this important environment
- Free subscription to *Tide Rising* newsletter

[www.sfbws.com](http://www.sfbws.com)

