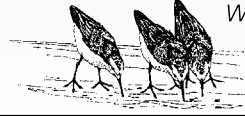


Spring 2006

# Tideline

San Francisco Bay National  
Wildlife Refuge Complex



## Act Locally, Make Friends Globally *How a Salamander brought Russian and American students together*

Volume 26, Number 1

By Ken Clarkson

As we sat in our seats at the Children's Palace of Moscow, listening to the emcee speak in Russian, we were able to ascertain a few familiar words "...United States... Ellicott Slough... Refuge... Renaissance ..."

It was then that our translator leaned over to us and said, "You must stand now and wave! They are introducing you!"

As we rose we were greeted by applause and camera flashes. We were attending the All-Russian Friends of Zapovedniks Youth Congress. A Zapovednik is the Russian counterpart to our national wildlife refuges. Our group consisted of four students from Renaissance High School in La Selva Beach in Santa Cruz County - Tanya Felix, Daniel Mendoza, Jackie Renteria, and John Bejarana - all 17 and seniors. They were accompanied by their teacher Shoshana Coplan, and me - Ken Clarkson, an environmental educator for the San Francisco Bay National Wildlife Refuge Complex.

We had been invited by the Zapovednik EcoCenter of Moscow to join over 500 youths from Russia for a week to share information about the conservation of refuges, visit area refuges, exchange music, and in the process, make new friends. The story of this unique gathering originated in three unlikely locations: Moscow, Russia, Arlington, VA, and at a small national wildlife refuge in southern Santa Cruz County.

### Santa Cruz County

Ellicott Slough National Wildlife Refuge is only 201 acres in size, yet it is one of the few remaining homes for the endangered Santa Cruz long-toed salamander (*Ambystoma macrodacty-*

*lum croceum*) and the threatened California tiger salamander (*Ambystoma californiense*). This refuge, created in 1975, is one of seven national wildlife refuges in the San Francisco Bay National Wildlife Refuge Complex and contains critical habitat for the salamanders. Each year, when the winter rains arrive, the salamanders begin their annual pilgrimage to and from an ephemeral (temporary) pond.

Juveniles from the previous year are the first to emerge from their underground burrows beneath the pond site. They soon leave the vicinity to search for safe havens in the outlying hills. This journey could take them as far as one mile from the pond, quite a distance for a creature only 8-10 cm long. Along the way, the juveniles are likely to pass adult males heading the opposite direction towards the pond. Once the pond has finally filled with water, adult females arrive to be greeted by awaiting males. Mating occurs and females soon lay eggs. Afterwards, adults depart, leaving the resulting larvae to live out an aquatic existence. As the rains abate and the pond slowly disappears, the larvae metamorphose into a juvenile form and disappear beneath the surface to the safety of moist soil below, thus completing the cycle.

A long-toed salamander may live to be 10 years old if it overcomes the many hazards that it may encounter along its journey. There are roads



*Renaissance High School's delegation to the youth conference in Russia- (left to right) Daniel Mendoza, Shoshana Coplan, John Bejarana, their interpreter Evgeniya Parnasova, Tanya Felix, and Jackie Renteria in front of St. Basil's Cathedral in Moscow.*

*Continued page 2*

# How a Salamander brought Russian

*Continued from page 1*

and railroad tracks to cross, years of drought, habitat loss, diseases, and predators to avoid. To help these small animals surmount these obstacles, the refuge has enlisted a group of volunteers to participate in restoration projects. While the refuge is closed to the public to help protect these animals, a small group of students from Renaissance High School are volunteering to help with habitat restoration and data collection.

Renaissance High School lies adjacent to the refuge and is nestled among the ancient dunes of a remnant coastal oak woodland community of La Selva Beach. The first building encountered on the Renaissance campus is a greenhouse, unusual for any school. The salamanders are not the only individuals near La Selva Beach on the road to recovery. Renaissance school is a continuation high school, which serves students that have fallen behind in credits, thus getting them back on track for graduation. For two years students at this school have been participating in several projects to help improve habitat at the refuge and also to collect valuable data for biological

monitoring. Each fall, groups have ventured among the refuge lowland shrubs and trees to collect acorns and coffeeberries. Inside the greenhouse, students propagate native plants, which they eventually plant back on the refuge.

Outside Shoshana Coplan's classroom window sits a rain gauge and a digital thermometer.

The annual salamander surveys need to be timed precisely when heavy storms saturate the ground. By collecting weather data adjacent to the refuge, the students help biologists better predict the timing for these surveys. A few students had the opportunity to assist biologists with these surveys, strapping on headlamps and donning raincoats on cold rainy nights to search the refuge periphery for the migrating amphibians. The landscape surrounding the refuge pond is dotted with occasional rows of inconspicuous blocks of wood. A closer inspection under this wood reveals a microcosm of insects, invertebrates, rodent burrows, and hopefully, a glimpse of a salamander. The students at Renaissance created and deployed these "coverboards" as a way for biologists to monitor the salamanders.

The students are also occasionally spotted wandering the refuge carrying small Palm Pilot handheld computers with attached GPS units. They are participating in a unique program called Naturemapping. Data such as wildlife tracks, scat, and/or direct observation of the animal is collected to map wildlife. This program helps build and update species inventories and map wildlife locations.

## Arlington, Virginia

The U.S. Fish and Wildlife Service's Division of International Conservation was searching for a group of young adults to participate in an opportunity thousands of miles away. The Renaissance High School students, based on their long-standing involvement with Ellicott Slough Refuge, were the perfect choice. Located in Arlington, Virginia, the Division of International Conservation promotes international conservation of biodiversity, with emphasis on rare or endangered species and their habitats. Approximately 100 American and Russian scientists take part in annual exchanges that began in 1972 with the signing of a bilateral agreement on cooperation in environmental protection.

## Moscow, Russia

In November 2005 the first exchange involving high school students occurred between this Division and the Russians. Based in Moscow, Zapovednik EcoCenter, a non government organization, coordinates environmental education and interpretation for many of the natural protected areas in Russia. The year 2005 marked the 3rd All-Russia Friends of Protected Areas Youth Congress, and the first time the invitation was extended to international youth groups. Renaissance High School was selected to be the first participant from the United States, and the only international group, to attend this gathering.

## Friends of Protected Areas Youth Congress

On October 31, 2005, after 27 hours of travel, our group arrived in Moscow. We were tired but energized by the new surroundings and the anticipation of the events to come. The students had prepared for this trip for several months - learning about the local culture and language, creating a poster presentation, and preparing a skit for the Youth Congress. Following a guided tour of the Kremlin, we navigated the Moscow Metro. Unlike the subways in the United States, the Metro was filled with elaborate mosaics, statues, and chandeliers. We eventually reached the Youth Congress site just south of the city.

The opening ceremonies occurred at the Children's Palace of Moscow and involved Russian students, educators, dignitaries from



*Student Daniel Mendoza encounters a California Tiger Salamander while assisting biologists with nighttime surveys at Ellicott Slough National Wildlife Refuge.*

# and American students together

the Russian Ministry of Natural Resources, land managers, and local musicians. During the poster presentations, a sea of small hands surrounded our group as they awaited the Blue Goose tattoos and other gifts we had brought as presents.

On the main stage of the Palace, the Renaissance students enlisted participation from the audience to help present their skit. "Oh nyet!!" the Russian audience cried on cue when they saw the antagonist scattering trash on the refuge, but then cheered wildly as the superhero salamander came to the rescue.

Later during the week the students at the Youth Congress divided into Master Classes. These classes discussed various topics such as how to better educate the public, how to create an environmentally-themed play, how to create interpretive signs for a trail, and how to conduct a sociology study for a refuge. The following day, each group presented its projects from their classes to the entire Youth Congress.

Each member of our group was provided with a translator while at this meeting. Since English is now taught in many of the Russian schools, the translator was usually a young Russian student. The students also participated in an excursion to nearby Prioksko-Terrasny Refuge where they had close encounters with European bison or "Zubers". Once reduced to only 50 animals in zoos, these giants are being bred for eventual release at refuges across Europe and Russia to restore this population to the wild.

The students from the Congress also shared an evening of music and dance, and an entire day in a friendly competition involving sports, challenge activities, and environmentally-themed games. However, the most lasting memories for the Renaissance students came from their time making friends and sharing experiences with their Russian counterparts.

"When I start talking about what we did, all I can think of are all my favorite things, some of which were touring, eating Russian food,

and of course meeting people... Definitely something I'm not going to soon forget," said Tanya Felix.

The experiences of this adventure have hopefully created an important foundation for future students to follow. The fourth Russian Congress will occur in 2007, with the hopes that students helping conservation efforts on refuges in the United States will again participate.

Elena Knizhnikova, Coordinator for the Zapovednik EcoCenter envisions even larger goals. She states, "It could be the start of a big joint effort to develop an international Friends of Protected Natural Areas movement,"

The momentum from this Congress also carries with it a sense of optimism. As student Daniel Mendoza said, "It is my belief that the new generation of environmentalist that I saw in Russia is going to pave the way for a better future in how they conserve nature. ...Russia has a very bright future ahead of it."

Perhaps the students from Renaissance share this future. As teacher Shoshana Coplan reflects, "These are not the usual high school suspects to attend a prestigious academic conference. They proved young people, no matter what stereotypes we hold about them, can take advantage of opportunities and succeed when given a chance."

Similarly, the same might be hoped for the salamanders.

*Ken Clarkson is an Environmental Education Specialist at the San Francisco Bay National Wildlife Refuge Complex.*



*Russian students proudly display their Blue Goose tattoos with Environmental Education Specialist Ken Clarkson during the poster presentation at the Children's Palace of Moscow.*

## TIDELINE

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### Volume 26, Number 1

Editor: .....Carmen Minch

To receive Tideline, email [carmen\\_leong-minch@fws.gov](mailto:carmen_leong-minch@fws.gov), or write to: Tideline, Don Edwards San Francisco Bay National Wildlife Refuge, P.O. Box 524, Newark, CA 94560-0524.

### San Francisco Bay National Wildlife Refuge Complex

Founded in 1974 and administered by the U.S. Fish and Wildlife Service, Don Edwards San Francisco Bay National Wildlife Refuge exists to preserve wildlife habitat, protect threatened and endangered species, protect migratory birds, and provide opportunities for nature study. Six additional refuges are managed from the headquarters located in Fremont: San Pablo Bay NWR, Antioch Dunes NWR, Salinas River NWR, Ellicott Slough NWR, Marin Islands NWR, and Farallon NWR.

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## San Francisco Bay Wildlife Society

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## Tideline is On-Line

Visit our web site, which features past issues of Tideline, at <http://desfbay.fws.gov>

# Twilight Marsh Walk Approaches 10-year Benchmark

Volunteers Gene and Mary Bobik have traipsed along the Tidelands Trail with people in tow for 10 years. What began as a special one-time program at the Don Edwards San Francisco Bay National Wildlife Refuge turned into one of the Refuge's most popular, recurring programs.

"We did our first twilight/night walk during a National Wildlife Refuge Week celebration [in 1995]. It was rather dark but we just went

a fairly short distance because there was a sing-along afterward," recalls Mary Bobik.

Mary, a Grant Coordinator from Cal State East Bay and Gene, an engineer, enjoyed the walk so much they decided to lead groups on night walks the following spring.

Walking in darkness, however, can pose safety problems and the program was soon moved to twilight when enough ambient light remains, even near the end of the program, to walk without using a flashlight.

Evening provides a different perspective of the Refuge and a different experience, as walkers enjoy sights, sounds and smells not often evident

during daytime. One twilight event that Mary distinctively remembers was when a gray fox, a common sighting in the evenings, entertained their group in the parking lot. "The whole group stood on the sidewalk quietly, watching the fox run around the tree and even climb up into the tree. We stood there at least 5 minutes, enjoying seeing the fox's antics."

On another walk, the group was thrilled to see an elusive California clapper rail stroll out from the marsh and walk along the cordgrass. Another memorable moment came when a golden eagle soared over the Visitor Center just as the walk was beginning.

These special sightings and the beauty of the refuge at sunset have enticed the Bobiks to keep offering these tours year after year.

The upcoming Twilight Marsh Walk on April 8 will mark 10 years of Gene and Mary Bobik's dedication to interpreting natural wonders of the Don Edwards San Francisco Bay National Wildlife Refuge. The Refuge would like to invite you to an informal reception at the Visitor Center Auditorium where you can meet and greet the Bobiks before attending the walk. The reception is at 6:30 p.m., and the walk will begin at 7:00 p.m. Please call the Visitor Center at 510-792-4275 ext. 43 Tuesday – Sunday, to make a reservation.

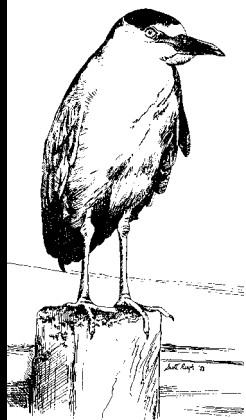


Gene and Mary Bobik

Don Edwards San Francisco Bay National Wildlife Refuge invites you to a

## Twilight Marsh Walk Reception and Walk

Join Gene and Mary Bobik for an early reception with refreshments before heading out onto an evening stroll on the Tidelands Trail.



**When:** Saturday, April 8  
**Where:** Visitor Center Auditorium  
1 Marshlands Rd, Fremont 94536  
**Time:** 6:30 p.m. Reception  
7:00 p.m. Twilight Marsh Walk

Space is limited!  
Please call 510-792-4275 ext. 43 for reservations.



# Trails of the Don Edwards San Francisco Bay NWR

Did you know that the Don Edwards San Francisco Bay National Wildlife Refuge spans nine cities and three counties, and contains over 30 miles of hiking trails? In the next few issues of *Tideline*, Refuge Manager and birding enthusiast Clyde Morris will highlight trails found on America's first urban National Wildlife Refuge.

**Name:** Tidelands Trail

**Miles Roundtrip:** Option 1: 1 1/3-mile loop, Option 2: 1-mile loop, Option 3: 1 1/3-mile loop

**Degree of Difficulty:** Easy

**Uses Permitted:** Hiking & biking; dogs permitted on 6 ft. leash

**Trail Surface and Elevation:** Hard packed gravel, flat section meets American Disability Standards. Most of trail is flat except for Option 3 which goes to the **150-foot** high top of Headquarters Hill with a view of South San Francisco Bay

**Highlights:** Wildlife viewing; Trail traverses through uplands, tidal slough, salt pond and tidal salt marsh habitats;

**Connection with other Trails:** Connects with 5-mile Newark Slough Trail; 0.4 mile LaRiviere Marsh Trail; 0.2 mile Harrier Spur Trail; and 0.4 mile Quarry Trail to Coyote Hills Regional Park; 3-mile Marshlands Road (car & bicycle access to the Dumbarton Fishing Pier). During the summer shorebird breeding season Marshlands Road is closed to cars at the Quarry Trail junction, becoming a 3-mile bicycle and hiking trail to the Pier.

**Directions to Trailhead:** The trailhead is at the Refuge Visitor's Center Parking Lot. The Visitor Center is on Marshlands Road. From Highway 84 on the east side of the Dumbarton Bridge in Fremont, take the Thornton Avenue exit. Drive 0.6 miles south on Thornton Avenue to the first road on the right; Marshlands Road which is the Refuge's entrance road. Follow Marshlands Road 0.5 miles to the stop sign. Turn left into the Visitor Center parking lot.

**Introduction:** This trail provides three loop options and is a good introduction to the tidal marshes and salt ponds of Don Edwards San Francisco Bay National Wildlife Refuge. The tidal marsh is home to the endangered California clapper rail and salt marsh harvest mouse, two species only found in San Francisco Bay's remaining tidal marshes. You can hike the mostly flat sections in Options 1 and 2. Or, under Option 3, you can hike uphill to a wonderful view of South San Francisco Bay from the highest point on the refuge, Headquarters Hill. It is

worth doing at any season of the year. The Visitor Center is open Tuesday through Sunday 10:00 AM – 5:00 PM where trail maps are available.

**Wildlife Viewing:** Low tide is the best time to see shorebirds. During the fall, winter, and spring, willets, greater yellowlegs, and black-necked stilts forage in Newark Slough and open water areas of tidal marsh. At high tide, many species of shorebirds including Western and least sandpipers, dowitchers, and dunlins feed along the salt pond shoreline, tidal marshes and rest on the pond's small islands. Year-around residents included Bewicks wren, Northern mockingbird, California towhee, black phoebe, great and snowy egrets, northern harriers and red-tailed



*Photo: J. and K. Hollingsworth*

hawk. In the summer, most birds are breeding in the north, but Forester terns which carry small fish to their nestlings on islands in the ponds and cliff and barn swallows which nest on the bridges and other refuge structures can be seen. During the winter, northern shovelers, buffleheads and eared grebes can be found on the pond or in the oxbow sloughs between Newark Slough and Marshlands Road. In upland habitats, winter brings golden-crowned, fox and white-crowned sparrows and hermit thrushes. White-tailed kites, golden eagles, and peregrines falcons are common in the winter, but are also possible at any time.

**Historical Interests:** On the south end of Headquarters Hill is the site of what former owner August Schilling of Schilling Spices fame tried to make into a public park. All that remains today are the tall agave plants which attract Anna's hummingbirds when in flower and some decaying cement steps. This is an excellent place

*Continued next page*

## Trails of the Don Edwards San Francisco Bay NWR continued

to examine the chert and serpentinite rocks that makes up Headquarters Hill which, along with Coyote Hills Regional Park, is the only natural hill along the South San Francisco Bay shoreline. All other “hills” along South San Francisco Bay are former landfills built in tidal wetlands. At the overlook on top of this hill, you can still see remnants of old pipes and wooden structures left over from the salt production days in the tidal marsh to the east. These former salt production crystallizer beds have been restored to tidal marsh in the 1980s and are named for Florence and Philip LaRiviere, long-time leaders of the Citizens to Complete the Refuge which pushed for the establishment of this national wildlife refuge in the 1960s and 1970s. Also from this vantage point, you can see the steep, gouged section of hillside which is left over from the days when this hill was used as a quarry to build local roads.

**Tidelands Trail Option 1 and 2 (mostly flat):** Begin by following the signs for the Newark Slough Learning Center at the north end of the Visitor Center parking lot past the flag pole. Head down the gravel trail for about 100 yards until you reach a junction in the path. There are picnic tables under trees, a chemical toilet, and a viewing platform at this junction.

*Option 1 (longer route):* Turn right and go down the switchback toward the Newark Slough Learning Center. Continue and follow the signs for the Tidelands Trail. After crossing the footbridge, turn south to walk along the edge of the salt pond. An old hunter’s cabin left over from the days of commercial duck hunting on the bay is to your left. Cross over the slough on the second footbridge. Walk up the short switchback to another junction and turn south (to the right) to round the south end of Headquarters

Hill. Continue along the marsh shoreline on the Harrier Spur Trail to Marshlands Road. Walk north (to the left) along the road back to the Visitor Center parking lot.

*Option 2:* Head south and traverse the hillside overlooking Newark Slough, the salt ponds and the bay shoreline three miles away. The trail meets the longer loop trail described in Option 1. At this junction, continue hiking around the south end of Headquarters Hill, to the Harrier Spur Trail and to Marshlands Road back toward the Visitor Center parking lot.

**Tidelands Trail Option 3:** This option offers the best view but is mostly dirt and steep in some places. From the Visitor Center parking lot walk uphill on the paved road at the north end of the parking lot toward the Visitor Center. Continue past the Visitor Center to the viewing platform at the top of Headquarters Hill. On a clear day, from the top, you can see most of South San Francisco Bay from Redwood City to the north down to San Jose to the south. Excellent views of Dumbarton Bridge, the old Dumbarton railroad bridges and the Hetchy Hetchy pipeline as they cross the marsh to the southwest. To the southeast in the distance are Cargill Salt Company’s white salt mounds (produced from the refuge’s salt ponds), and the towns of Newark and Fremont. To the north is Coyote Hills Regional Park which is connected to the refuge by the Quarry Trail. Just below the hill to the east is LaRiviere Marsh. Continue down the steep slope, around the south end of Headquarters Hill, and follow the signs for Tidelands Trail. You will have the option of crossing the footbridges or traversing the hillside to return to the Visitor Center parking lot.

For more information on this and other refuge trails and activities, consult the web site: [www.fws.gov/desfbay](http://www.fws.gov/desfbay) or call 510-792-0222.

## Going Native Garden Tour

What’s special about California native plants? They are adapted to our soil and climate, and are easy to care for. Many of our native plants are naturally water-wise and drought tolerant. They support a wide variety of wildlife that has co-evolved with them. And their distinctive look and elegant beauty gives your garden a sense of place that is uniquely Californian.

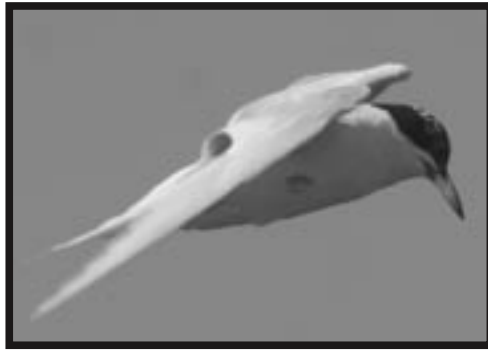
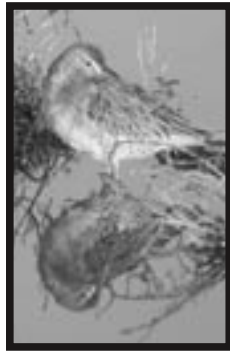
Gardens that are water-wise and low maintenance, aesthetically pleasing as well as attractive to birds and butterflies: growing numbers of Bay Area homeowners are incorporating native plants into their gardens, and you can see many of them firsthand on the Bay Area’s 4th annual tour of home gardens landscaped with California native plants. The Going Native Garden Tour

returns Sunday, April 30, 2006, from 10 a.m. to 4 p.m.

This tour opens a variety of gardens for viewing - from townhome lots to 1-acre plots, from newly planted gardens to established ones. You won’t have to go far to see one: these gardens are located all over the Santa Clara Valley and the Peninsula. Visit as many as you like - for pictures, for ideas, for inspiration.

The tour is open to all. Admission is free; registration is required at [www.GoingNativeGardenTour.org](http://www.GoingNativeGardenTour.org) before April 29, 12 noon, or until the tour reaches capacity, whichever comes first. Space is limited; register early to ensure a place. For more information, email [info@GoingNativeGardenTour.org](mailto:info@GoingNativeGardenTour.org).





# SOUTH BAY BIRD FEST!

**Saturday, May 6  
11am – 3pm**

**All Activities are FREE!**

- Guided Bird Walks**
- Refuge Safari Tours**
- Hands-on Activities**
- Live Owl Programs**
- Magic Shows**
- Story Time**

**Street Fair with Santa Clara Valley Audubon Society, Santa Clara Valley Water District, San Francisco Bay Bird Observatory, Wildlife Rescue, Environmental Volunteers, Children's Discovery Museum, Bay Nature and More!**



**Don Edwards San Francisco Bay National Wildlife Refuge  
Environmental Education Center in Alviso**

**For more information call (408) 262- 5513 or check our website**

**<http://www.fws.gov/desfbay/birdfest.htm>**

South Bay Bird Fest is sponsored by: City of San Jose, San Francisco Bay Wildlife Society, Santa Clara Valley Urban Runoff Pollution Prevention Program, and US Fish & Wildlife Service

# Thank you San Francisco Bay Wildlife Society Donors!

We gratefully acknowledge the following donors who have made gifts to the San Francisco Bay Wildlife Society between October 22, 2005 and January 13, 2006. These gifts will be used for capital, environmental education, habitat restoration, and interpretive programs at the Don Edwards San Francisco Bay National Wildlife Refuge.

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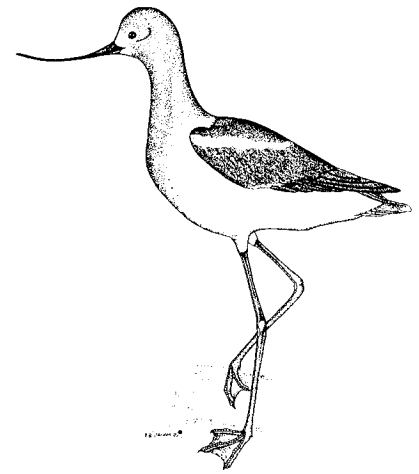
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## Help Us Help the Refuge

Mail your donation to: **San Francisco Bay Wildlife Society, P.O. Box 234, Newark, CA 94560.** You may also fax your membership donation using a Visa or MasterCard number to 510-792-5828.

For a gift membership, call 510-792-0222 ext. 40.

San Francisco Bay Wildlife Society is a nonprofit 501(c)(3) organization which raises money and awareness for the San Francisco Bay National Wildlife Refuge Complex.

**YES!** I want to support San Francisco Bay Wildlife Society and its programs with my membership. My dues include a subscription to *Tideline* and 15% discount at the Don Edwards SF Bay National Wildlife Refuge bookstore. Enclosed is my contribution of:

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Phone \_\_\_\_\_ **Thank you for your support!**



Don Edwards San Francisco Bay National Wildlife Refuge

# Earth Day Cleanup!

1 Marshlands Rd, Fremont 94536

Saturday, April 29

8:30 a.m. – 12:00 p.m.

Protect wildlife and the environment! Join us on our Annual Earth Day Cleanup. We'll supply latex gloves and trash bags. Wear sturdy shoes, a hat, and clothes you don't mind getting dirty in.

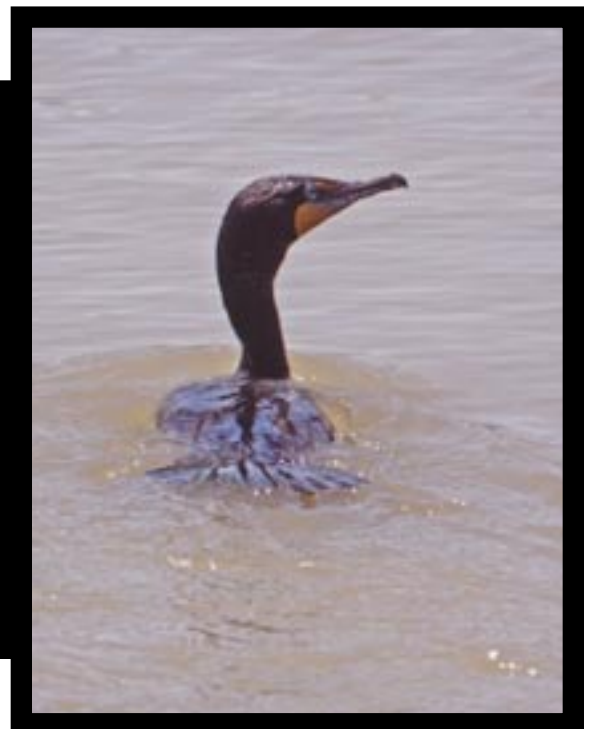
No Reservations needed. All groups welcome.

For more information, call Carmen Minch at 510-792-4275 ext. 38



**The Don Edwards San Francisco Bay  
National Wildlife Refuge proudly  
features the photography of  
Steve Saperstein in the Visitor Center  
in Fremont.**

**The exhibit will run through March 2006**



# Spring Activity Schedule

## March

*Saturday, March 4*

### **Wicked Weeds – Noxious Plants on the Refuge**

**Visitor Center, Fremont**  
**10:00 a.m. – 11:30 a.m.**

Discover which silent invaders are skulking in the marsh and in the upland habitats, wreaking havoc and destruction to all those that live near them. During this walk, see which plants are the culprits, and hear how these invasive non-native weeds can alter the environment. Led by Carmen Minch.

*Saturday, March 11*

### **Twilight Marsh Walk**

**Visitor Center, Fremont**  
**5:30 p.m. – 7:00 p.m.**

Experience the salt marsh at twilight on an easy stroll along Tidelands (1 1/3 mile) Trail. At the setting of the sun we will observe the beginning of nature's night shift. Come discover the sights, sounds, and smells of the refuge as night descends. Meet at the observation deck. Not suitable for young children. RESERVATIONS REQUIRED. Call 510-792-0222. Led by Mary and Gene Bobik.

### **Salt Pond Tour**

**Meet at Bayfront Park, Menlo Park**  
**10:00 a.m. – 12:00 p.m.**

Did you know that the largest tidal wetland restoration project on the West Coast is happening right here in San Francisco Bay? Hear more about this project and view some of the salt ponds acquired by the Don Edwards San Francisco Bay National Wildlife Refuge. Geared toward adults. RESERVATIONS REQUIRED. Call 510-792-0222 ext. 43 for reservations and directions.

### **Exploring the Dunes**

**Antioch Dunes NWR, Antioch**  
**10:00 a.m. – 11:00 a.m.**

Did you know there's a National Wildlife Refuge in Antioch? Here's your chance to explore this refuge that is usually closed to the public. This guided tour (1-1.5 mile) will focus on the wonders of Antioch Dunes National Wildlife Refuge. Wear sturdy shoes for the sandy hike along the dunes. All ages welcome. No reservations required. No facilities. Contact 510-521-9624 for additional information and directions.

*Sunday, March 12*

### **Where Does All the Water Go?**

**Environmental Education Center, Alviso**  
**2:00 pm. – 3:30 p.m.**

Are you curious about where wastewater goes after we flush, rinse, wash, and shower? Come enjoy a presentation about how the San Jose/Santa Clara Water Pollution Control Plant cleans wastewater. After the presentation there will be a short tour that will get participants up close and personal with wastewater and the refuge habitats involved. Appropriate for ages 10 and up. Reservations required. Call Tina at 408-262-5513 ext 104.

*Saturday, March 18*

### **Springtime Stroll**

**Environmental Education Center, Alviso**  
**2:00 p.m. – 4:00 p.m.**

Get out of the house and join Ed Kantack for a stroll through New Chicago Marsh. See what a change of seasons brings to various habitats around the Education Center. Geared towards age 8 and up. Dress warmly as it can get quite breezy. RESERVATIONS REQUIRED. Call Laurie at 408-262-5513 ext. 102.

### **Family Bird Walk**

**Visitor Center, Fremont**  
**10:00 a.m. - 12:00 p.m.**

Let family walks become a shared time of nature learning. We'll begin by helping kids create their personal birdwatching field guides, and then head out onto the trails to find those birds. Learn about the salt marsh habitat along the way. A limited number of binoculars are available to borrow. Recommended for children ages 5-10. RESERVATIONS REQUIRED. Call 510-792-0222. Led by Cathy Bell.

### **South Bay Salt Pond Restoration Presentation**

**Visitor Center Auditorium, Fremont**  
**3:00 p.m. – 4:00 p.m.**

The South Bay Restoration Project will transform South San Francisco Bay in the next few decades. How will this affect habitat, wildlife, and wildlife-oriented recreation? In this slide presentation, hear about the project, the role of the Don Edwards San Francisco Bay National Wildlife Refuge, and how you can become involved with the largest tidal wetland restoration project on the West Coast. Geared for ages 12 and older. Call 510-792-0222 ext. 43 for reservations.

*Sunday, March 19*

### **Adult Beginning Birdwatching**

**Environmental Education Center, Alviso**  
**10:30 a.m. – 12:00 p.m.**

Can you tell an avocet from a black necked stilt? If not, join birding enthusiast, Ceal Craig, for a beginning birdwatching program and get to know the most common refuge visitors. Start with a slide show inside to learn how to recognize the regulars, and then try your new skills on the trail. Program intended for adults. RESERVATIONS REQUIRED. Please call Laurie at 408-262-5513 ext. 102.

*Saturday, March 25*

### **Botanical Wanderings**

**Visitor Center, Fremont**  
**2:00 p.m. – 3:30 p.m.**

Discover the diverse spring habitats from the hilltops to the marsh. Use our free plant list to help identify the great variety of plants that thrive in this unique urban refuge. Bring binoculars to get a better look at birds and animals we may encounter on the trail, or borrow a pair of ours. Led by Alvin Dockter.

*Sunday, March 26*

### **Salt Pond Tour**

**Meet at Bayfront Park, Menlo Park**  
**2:00 p.m. – 4:00 p.m.**

Did you know that the largest tidal wetland restoration project on the West Coast is happening right here in San Francisco Bay? Hear more about this project and view some of the salt ponds acquired by the Don Edwards San Francisco Bay National Wildlife Refuge. Geared toward adults. RESERVATIONS REQUIRED. Call 510-792-0222 ext. 43 for reservations and directions.

### **Salinity Sleuths**

**Environmental Education Center, Alviso**  
**2:30 p.m. – 4:00 p.m.**

Step into the shoes of a scientist and strap on our field detective packs for a hands-on investigation where we will collect water samples, use plant clues, and do some sleuthing around to answer the question "How salty is it?" You will need to bring along keen senses of taste, smell and sight to determine which plants and animals live in the refuge's salty habitats! Reservations required. Call Tina at 408-262-5513 x104.

**Don Edwards San Francisco Bay National Wildlife Refuge**

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# Spring Activity Schedule

## April

### Saturday, April 1

#### It's Not My Fault!

Visitor Center, Fremont  
1:00 a.m. – 3:00 p.m.

The San Francisco Bay region is a complex maze of faults, mountains, and other geologic formations. We will explore the formation of the San Francisco Bay and the hill upon which the Visitor Center sits. Geared toward adults. Led by Cathy Bell.

#### Twilight Marsh Walk

Environmental Education Center, Alviso  
6:00 p.m. – 8:00 p.m.

Join Laurie McEwen for a twilight walk through New Chicago Marsh. Learn a bit about Drawbridge, the ghost town on the refuge. Find out about the Salt Pond Restoration Project. Experience a completely different environment as the sun goes down and the night creatures come out. Watch for barn owls, then warm up inside with a cup of hot chocolate and stay for a look at the night sky. Suitable for all ages, children welcome. RESERVATIONS REQUIRED. Please call Laurie at 408-262-5513 ext. 102.

#### Night Skies

Environmental Education Center, Alviso  
7:00 p.m. – 8:30 p.m.

Learn what stars and planets are visible tonight, and their interesting histories. Make your own star chart to take home. Then venture outside to look at the night sky through a telescope. Bring your own binoculars or spotting scopes if you have them. Dress warmly. Fun for the whole family. Star viewing subject to weather conditions. Led by Ralph Libby. RESERVATIONS REQUIRED. Please call Laurie at 408-262-5513 ext. 102.

### Sunday, April 2

#### Bird Adaptation Creations!

Environmental Education Center, Alviso  
2:00 p.m. – 4:00 p.m.

Ever wondered what it would be like to be a bird living at the refuge? Come uncover the mysteries of the bird world. Learn about bird adaptations, explore a bird skeleton, and make human-sized bird wings, beaks, and feet to take home! A short refuge walk will be included to check out the feathery beasts during this breeding season. All ages welcome. Reservations required. Call Tina at 408-262-5513 x104. In cases of wet weather, the program will carry on without the walk.

### Saturday, April 8

#### Exploring the Dunes

Antioch Dunes NWR, Antioch  
10:00 a.m. – 11:00 a.m.

Did you know there's a National Wildlife Refuge in Antioch? Here's your chance to explore this refuge that is usually closed to the public. This guided tour (1-1.5 mile) will focus on the wonders of Antioch Dunes National Wildlife Refuge. Wear sturdy shoes for the sandy hike along the dunes. All ages welcome. No reservations required. No facilities. Contact 510-521-9624 for additional information and directions.

#### Salt Pond Tour

Meet at Bayfront Park, Menlo Park  
10:00 a.m. – 12:00 p.m.

Did you know that the largest tidal wetland restoration project on the West Coast is happening right here in San Francisco Bay? Hear more about this project and view some of the salt ponds acquired by the Don Edwards San Francisco Bay National Wildlife Refuge. Geared toward adults. RESERVATIONS REQUIRED. Call 510-792-0222 ext. 43 for reservations and directions.

#### 10th Anniversary Twilight Marsh Walk

Visitor Center, Fremont  
6:30 p.m. – 7:00 p.m. Reception  
7:00 p.m. – 8:30 p.m. Walk

The Bobiks have been leading Twilight Marsh Walk on the refuge for 10 years! Come warm your hands on tea or hot chocolate in the visitor center at 6:30 p.m. before experiencing the salt marsh at twilight. At the setting of the sun we will observe the beginning of nature's night shift. Come discover the sights, sounds, and smells of the refuge as night descends. Meet at the refuge visitor center. Not suitable for young children. RESERVATIONS REQUIRED. Call 510-792-0222 ext. 43. Led by Mary and Gene Bobik.

### Sunday, April 9

#### Adult Beginning Birdwatching

Environmental Education Center, Alviso  
10:30 a.m. – 12:00 p.m.

Spring is a great time to spot birds on the refuge. Everything is aflutter: finding a mate, building a nest, staking out territory, looking for food, and enjoying a bit of sun between rain showers. Join birding enthusiast, Ceal Craig, for a beginning birdwatching program and get to know the most common refuge visitors. Start with a slide show inside to learn how to recognize the regulars, then try your new skills on the trail. Program intended for adults. RESERVATIONS REQUIRED. Call Laurie at 408-262-5513 ext. 102.

### Saturday, April 15

#### Wonderful Wildflowers

Environmental Education Center, Alviso  
10:00 a.m. – 11:30 p.m.

Winter showers bring wildflowers! Discover what's in bloom on an informative wildflower walk around the Education Center with June Smith from our Native Plant Nursery. Find out why gardening with natives is beneficial to backyard birds and everyone living in our watershed. Which native plants would look good in your garden? RESERVATIONS REQUIRED. Call Laurie at 408-262-5513 ext. 102.

#### Family Bird Walk

Visitor Center, Fremont  
10:00 a.m. - 12:00 p.m.

Let family walks become a shared time of nature learning. We'll begin by helping kids create their personal birdwatching field guides, and then head out onto the trails to find those birds. Learn about the salt marsh habitat along the way. A limited number of binoculars are available to borrow. Recommended for children ages 5-10. RESERVATIONS REQUIRED. Call 510-792-0222. Led by Cathy Bell.

#### South Bay Salt Pond Restoration Presentation

Visitor Center Auditorium, Fremont  
3:00 p.m. – 4:00 p.m.

The South Bay Restoration Project will transform South San Francisco Bay in the next few decades. How will this affect habitat, wildlife, and wildlife-oriented recreation? In this slide presentation, hear about the project, the role of the Don Edwards San Francisco Bay National Wildlife Refuge, and how you can become involved with the largest tidal wetland restoration project on the West Coast. Geared for ages 12 and older. Call 510-792-0222 ext. 43 for reservations.

### Saturday, April 22

#### Earth Day Short Film Festival

Visitor Center Auditorium, Fremont  
11:00 a.m. – 3:00 p.m.

While on your hike at the Don Edwards San Francisco Bay National Wildlife Refuge, stop by the Visitor Center and watch a short video on varied topics about the refuge and the San Francisco Bay. See schedule below:

11:00 a.m. **Drawbridge Documentary** by Will Zavala (21 min.)

12:00 p.m. **Salt Pond Habitat Restoration** by Judy Irving (6 min.)

1:00 p.m. **Returning Home: Bringing the Common Murre Back to Devil's Slide Rock** (24 min.)

2:00 p.m. **Kids by the Bay** by Judy Irving (19 min.)

**Don Edwards San Francisco Bay National Wildlife Refuge**

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# Spring Activity Schedule

## Zoo Birds!

**Happy Hollow Park & Zoo, San Jose**  
10:00 a.m. – 11:30 p.m.

Interpretive Specialist Laurie McEwen and volunteer Jen Stankiewicz take "Children's Beginning Birdwatching" on the road. This is a new children's birdwatching program teaching kids about the wild birds that live at Happy Hollow Park & Zoo. The wild birds found at the zoo are common backyard birds, making this a great program for kids to learn about the birds they see at home. Program is free with park admission. Suitable for ages 5 and up. RESERVATIONS REQUIRED. Call Vanessa Rogier at 408-277-3065.

## Slough Whoop?

**Environmental Education Center, Alviso**  
1:00 p.m. – 3:00 p.m.

Whoop...whoop...whoop did that owl eat? Bet you can find out! Come solve the mystery of who ate whom and learn a bit about these nocturnal predators with Ed Kantak. We will watch a slide show on owls, hike the habitats and search for owl clues, and get a chance to dissect owl pellets to discover exactly who that owl ate! Reservations required. Call Tina at 408-262-5513 x104.

*Sunday, April 23*

## Hawk Walk

**Meet at Visitor Center Entrance, Fremont**  
9:00 a.m. - 11:00 a.m.

Join Laurey Hemenway on a leisurely walk through the refuge and learn to differentiate between the various raptors. Identify other migratory birds in the upland and salt marsh habitats. Wear comfortable shoes and bring a bird book and binoculars. Recommended for ages 8 and up. RESERVATIONS REQUIRED. Call 510-792-0222.

*Saturday, April 29*

## Annual Earth Day Cleanup!

**Visitor Center Parking Lot, Fremont**  
8:30 a.m. – 12:00 p.m.

Join us for our annual Earth Day Cleanup and help protect wildlife! We'll supply laytex gloves and trash bags. Wear sturdy shoes, a hat, and clothes you don't mind getting dirty in. Water is also recommended. No reservations needed. All groups welcome. For more information, call Carmen Minch at 510-792-0222 ext. 38.

## Botanical Wanderings

**Visitor Center, Fremont**  
2:00 p.m. – 3:30 p.m.

Discover the diverse spring habitats from the hilltops to the marsh. Use our free plant list to help identify the great variety of plants that thrive in this unique

urban refuge. Bring binoculars to get a better look at birds and animals we may encounter on the trail, or borrow a pair of ours. Led by Alvin Dockter.

*Sunday, April 30*

## Bike the Bay

**Meet at visitor Center Flagpole, Fremont**  
10:00 a.m. – 12:00 p.m.

A slow and easy 5-mile bicycle tour of the marshes and salt ponds along dirt levees and trails. Learn about the ecology and history of the salt marshes of San Francisco Bay. Bring helmets (mandatory), bikes with knobby tires, water, and a lunch if you wish to eat with the group at the end of the tour overlooking the marsh. RESERVATIONS REQUIRED. Call 510-792-4275 ext. 43. Led by Norton Bell.

## A Ghost Town in San Francisco Bay?

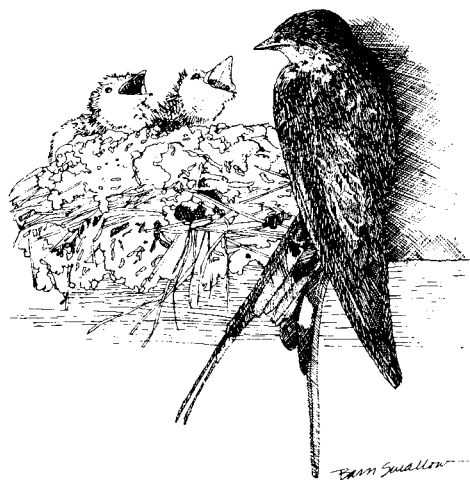
**Visitor Center, Fremont**  
3:00 p.m. - 4:00 p.m.

That's right! On Station Island nestled in the salt marshes of south San Francisco Bay, the town of Drawbridge once boomed. Was it a quiet, peaceful community of nature lovers, or a rip-roaring gang of two-fisted rowdies? Excellent slide show and presentation. Presented by Pat Anthony.

## Salt Pond Tour

**Meet at Bayfront Park, Menlo Park**  
2:00 p.m. – 4:00 p.m.

Did you know that the largest tidal wetland restoration project on the West Coast is happening right here in San Francisco Bay? Hear more about this project and view some of the salt ponds acquired by the Don Edwards San Francisco Bay National Wildlife Refuge. Geared toward adults. RESERVATIONS REQUIRED. Call 510-792-0222 ext. 43 for reservations and directions.



*May*

*Saturday, May 6*

## South Bay Bird Fest

**Environmental Education Center, Alviso**  
11:00 a.m. – 3:00 p.m.

It's time to celebrate long distance frequent flyers! You may remember this event as International Migratory Bird Day – same great event, new spiffy name. Festival fun all day long. Come take a nature walk, make a bird identification book, visit environmental organizations at our street fair, watch a live bird presentation and be amazed by the Magic of Water show. Great family fun, all ages welcome. Food vendor on site so you can grab lunch or a snack. Check our website for a more detailed schedule of events: <http://www.fws.gov/desfbay/birdfest.htm> or call the Education Center at 408-262-5513. Everything (except the food) is FREE!

## Salt Pond Tour

**Meet at Bayfront Park, Menlo Park**  
10:00 a.m. – 12:00 p.m.

Did you know that the largest tidal wetland restoration project on the West Coast is happening right here in San Francisco Bay? Hear more about this project and view some of the salt ponds acquired by the Don Edwards San Francisco Bay National Wildlife Refuge. Geared toward adults. RESERVATIONS REQUIRED. Call 510-792-0222 ext. 43 for reservations and directions.

*Sunday, May 7*

## Adult Beginning Birdwatching

**Environmental Education Center, Alviso**  
10:30 a.m. – 12:00 p.m.

May is our favorite time for birding on the refuge. Baby birds are bursting out all over the place. Join birding enthusiast, Ceal Craig, for a beginning birdwatching program and get to know the most common refuge visitors. Start with a slide show inside to learn how to recognize the regulars, and then try your new skills on the trail. By the end of the program you'll be able to tell a baby avocet from a baby barn swallow. Which is cuter? You be the judge! Program intended for adults. RESERVATIONS REQUIRED. Call Laurie at 408-262-5513 ext. 102.

## Habitat Hike

**Environmental Education Center, Alviso**  
2:00 p.m. – 3:00 p.m.

Are you feeling the itch to go exploring? Come take a walk and discover the exciting world of wetland habitats! We will explore the salt marsh, sloughs, salt ponds and more on this short and easy trek! We will

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# Spring Activity Schedule

identify plants, birds, and whatever other animals we see and learn how people have affected their habitat. Recommended for ages 7 and up. Reservations required. Call Tina at 408-262-5513 ext 104.

*Saturday, May 13*

## **Morning Birdwalk With Clyde** Environmental Education Center, Alviso 8:30 a.m. – 10:00 a.m.

Join refuge manager, Clyde Morris, for a morning birdwalk along the boardwalk and levee trails. Morning is an especially nice time to visit the marsh. The slant of the sun's rays casts a glowing light over the marsh, and there's usually no wind. Discover migratory birds nesting in the salt marsh, on islands in the salt ponds, and even along the freshwater slough. Program geared for adults. RESERVATIONS REQUIRED. Call Laurie at 408-262-5513 ext. 102.

## **Exploring the Dunes** Antioch Dunes NWR, Antioch 10:00 a.m. – 11:00 a.m.

Did you know there's a National Wildlife Refuge in Antioch? Here's your chance to explore this refuge that is usually closed to the public. This guided tour (1-1.5 mile) will focus on the wonders of Antioch Dunes National Wildlife Refuge. Wear sturdy shoes for the sandy hike along the dunes. All ages welcome. No reservations required. No facilities. Contact 510-521-9624 for additional information and directions.

## **A Trip Back in Time** Visitor Center, Fremont 10:30 a.m. – 12:00 p.m.

Revive the vanishing knowledge of the history of the Don Edwards San Francisco Bay National Wildlife Refuge grounds by strolling the trails with docent Ray Studer. Ray spent most of 2004 researching the on-site salt production, railroads, and homes that were located on the refuge grounds until the 1950s. Using a collection of old photographs, the last vestiges of a way of life can be traced back to the 1850s that led to the construction of the town of Newark in 1876.

## **South Bay Salt Pond Restoration Presentation** Visitor Center Auditorium, Fremont 3:00 p.m. – 4:00 p.m.

The South Bay Restoration Project will transform South San Francisco Bay in the next few decades. How will this affect habitat, wildlife, and wildlife-oriented recreation? In this slide presentation, hear about the project, the role of the Don Edwards San Francisco Bay National Wildlife Refuge, and how you can become involved with the largest tidal wetland restoration project on the West Coast. Geared for ages 12 and older. Call 510-792-0222 ext. 43 for reservations.

## **Twilight Marsh Walk** Visitor Center, Fremont 7:00 p.m. – 8:30 p.m.

Experience the salt marsh at twilight on an easy stroll along Tidelands (1 1/3 mile) Trail. At the setting of the sun we will observe the beginning of nature's night shift. Come discover the sights, sounds, and smells of the refuge as night descends. Meet at the observation deck. Not suitable for young children. RESERVATIONS REQUIRED. Call 510-792-0222. Led by Mary and Gene Bobik.

*Saturday, May 20*

## **Bike the Levees** Environmental Education Center, Alviso 10:00 a.m. – 12:00 p.m.

Join Ed Kantack for a slow and easy 5.5 mile bike ride around the salt ponds and New Chicago Marsh with several planned stops. There should be good bird viewing and a glimpse of Drawbridge. Learn a little about the history of Drawbridge, Alviso, and the salt ponds. Helmets are a must. Bikes with knobby tires highly recommended along with water and sunscreen. Geared to age 10 and up. RESERVATIONS REQUIRED. Please call Laurie McEwen at 408-262-5513 ext. 102.

## **Botanical Wanderings** Visitor Center, Fremont 2:00 p.m. – 3:30 p.m.

Discover the diverse spring habitats from the hilltops to the marsh. Use our free plant list to help identify the great variety of plants that thrive in this unique urban refuge. Bring binoculars to get a better look at birds and animals we may encounter on the trail, or borrow a pair of ours. Led by Alvin Dockter.

*Sunday, May 21*

## **Bike the Bay** Meet at visitor Center Flagpole, Fremont 10:00 a.m. – 12:00 p.m.

A slow and easy 5-mile bicycle tour of the marshes and salt ponds along dirt levees and trails. Learn about the ecology and history of the salt marshes of San Francisco Bay. Bring helmets (mandatory), bikes with knobby tires, water, and a lunch if you wish to eat with the group at the end of the tour overlooking the marsh. RESERVATIONS REQUIRED. Call 510-792-4275 ext. 43. Led by Norton Bell.

## **Critter Café** Environmental Education Center, Alviso 2:00 p.m. – 3:30 p.m.

Water is pretty boring stuff, right? No way! Come take a closer look at some of the tiny, wiggly, squiggly creatures we'll find in San Francisco Bay slough water samples. Learn about macroinvertebrates and

plankton -- the tasty treats that shorebirds are eating at our five-star marsh 'cafes' at the Refuge. Recommended for ages 6 and up. Reservations required. Call Tina at 408-262-5513 ext 104.

## **Salt Pond Tour** Meet at Bayfront Park, Menlo Park 2:00 p.m. – 4:00 p.m.

Did you know that the largest tidal wetland restoration project on the West Coast is happening right here in San Francisco Bay? Hear more about this project and view some of the salt ponds acquired by the Don Edwards San Francisco Bay National Wildlife Refuge. Geared toward adults. RESERVATIONS REQUIRED. Call 510-792-0222 ext. 43 for reservations and directions.

*Sunday, May 27*

## **Community Service Day** Environmental Education Center, Alviso 9:45 a.m. – 12:00 p.m.

Calling all high school students looking to fulfill community service requirements, Scout groups looking to earn a service badge, and anyone else who just wants to pitch in at a one-time refuge project. Come help us remove non-native invasive species from the Education Center's habitats. Gloves and tools provided. Expect to get dirty. Long pants and long sleeve shirts are recommended but not required. Recommended for ages 9 and up. RESERVATIONS REQUIRED. Call Laurie at 408-262-5513 ext. 102.

*Saturday, May 28*

## **Drawbridge Video** Environmental Education Center, Alviso 1:00 p.m. – 1:30 p.m.

Have you heard whispers about a ghost town in San Francisco Bay? Find out about this fascinating town that lived for 100 years on an island in the south bay. Watch a 30 minute program about the natural history of one of the most unusual ghost towns in the American West. Reservations advised. Call Laurie at 408-262-5513 ext. 102.

## **Refuge Safari** Environmental Education Center, Alviso 2:00 p.m. – 3:30 p.m.

Grab your binoculars, jump in a minivan, and head out with Laurie McEwen on a birding safari around the salt ponds. We'll travel over 5 miles of trail looking for wildlife. Learn about salt ponds and the restoration project currently underway. We'll stop and take a peek at the remains of Drawbridge as we pass by. Best for ages 7 and up. Vehicles do not accommodate child safety seats, so no small children are allowed. Space is limited. Reservations are essential. Call Laurie at 408-262-5513 ext. 102.

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# Field Trips to the Refuge

## Don Edwards San Francisco Bay National Wildlife Refuge

*The Refuge offers field trip programs at both our Visitor Center in Fremont and Environmental Education Center in Alviso.*

### General Field Trip Program Information

FREE field trip programs are offered at two sites at the Don Edwards San Francisco Bay National Wildlife Refuge. Wetland Round-Up and Trekking the Refuge field trip programs are offered at the Visitor Center in Fremont, and Wetland Round-Up and Slow the Flow are offered at the Environmental Education Center in Alviso. These programs actively involve teachers, adult volunteers, and students in investigating the diverse habitats and wildlife at the refuge. The hands-on, small-group activities are designed to teach basic ecological concepts and to introduce endangered species, migratory birds, and wetland habitats to students. All programs have been correlated to the appropriate State of California Education Standards.

Educators and Youth Group Leaders conduct their own field trips after attending a Field Trip Orientation Workshop. The Orientation Workshops provide the information you need to design and conduct your own field trip. In addition, adult volunteers must be recruited to lead the activities at the different learning stations and to chaperone the rotation groups of students. We provide easy to follow "scripts" for each station, but both "leaders" and "chaperones" are strongly encouraged to attend a Field Trip Orientation Workshop. It is our policy that lead educators must attend every two years.

### Field Trips at the Visitor Center in Fremont

**Wetland Roundup** - Investigate creatures of the mud flats, plankton and other creatures in the slough, and the pickleweed in the salt marsh. This field trip is designed for grades K-6, for up to 65 students. Wetland Roundup is offered Tuesday-Friday from February - June, 2006.

**Trekking the Refuge** - Trek the 1-mile Tidelands Trail, and learn about the natural history of the refuge! Then explore the pickleweed in the salt marsh, the brine shrimp in the salt pond, and the plankton in the slough! Available only at the Visitor Center in Fremont, Trekking the Refuge Field Trip is designed for grades 3-6, for up to 36 students. Trekking the Refuge is offered Tuesday through Friday from February - May, 2006.

### Field Trip Orientation Dates at the Visitor Center in Fremont

**Wetland Round-Up Field Trip Orientations  
Visitor Center in Fremont**  
4:00 p.m. - 8:00 p.m.

Tuesday, March 21

Tuesday, April 18

**Trekking the Refuge Field Trip Orientations  
Visitor Center in Fremont**

Tuesday, March 7

Wednesday, April 12



# Field Trips to the Refuge

## Field Trips at the Environmental Education Center in Alviso

### Wetland Round-Up Field Trips

Investigate the butterflies in the butterfly garden, taste pickleweed in the salt marsh, or discover the creatures that live in the slough water on a Wetland Round-Up Field Trip. This field trip program is designed for up to 65 students in grades K-6. Wetland Round-Up is offered Monday - Thursday from February - June, 2006.

### Field Trip Orientation Workshop Dates at the Environmental Education Center in Alviso

**Wetland Round-Up Field Trip Orientation**  
4:00 p.m. - 8:00 p.m.

**\*\* Please note: The cut off date to make a reservation is the Friday before each orientation date.**

Thursday, March 2

Tuesday, April 4

Wednesday, April 26

**\*\*There are still a few field trip dates available in March and April. May and June dates are booked.\*\***

**To make a field trip reservation at the Don Edwards San Francisco Bay National Wildlife Refuge in Alviso, call Genie Moore at 408-262-5513.**

### The Slow the Flow Program

Slow the Flow provides an experiential learning environment for students and educators to explore the topics of water use, wastewater treatment, and habitat preservation. Activities and presentations focus on the relationship between personal habits and their effects on local habitats. Slow the Flow is an environmental education program offered at no cost through the cooperating efforts of the City of San Jose, U.S. Fish and Wildlife Service, and the San Francisco Bay Wildlife Society. The program offers field trips at the refuge, classroom presentations, and outreach presentations

Programs are geared for 5th - 12th grades. A modified field trip is available for college groups. Educators are also encouraged to contact us to discuss options for customizing field trip and presentation activities and schedules.

Slow the Flow programs are available to educators and groups located in San Jose, Alviso, Milpitas, Santa Clara, Saratoga, Monte Sereno, Los Gatos, Campbell and Cupertino.

Slow the Flow Programs are available throughout the year in Alviso. Reservations for the Slow the Flow program are on a first come basis. Call Tina Simmons, the Slow the Flow Program Coordinator at 408-262-5513 ext. 104 for more information, or to schedule a field trip or presentation.

**PASS IT ON!!**

*Please help us spread the word about our FREE, fun, and educational field trip programs!! If you know a teacher that would be interested in these programs please pass on your copy of Tideline or have them give us a call for more information!! Thank you for your help!*

## Free Discovery Packs available at the Visitor Center and Environmental Education Center!

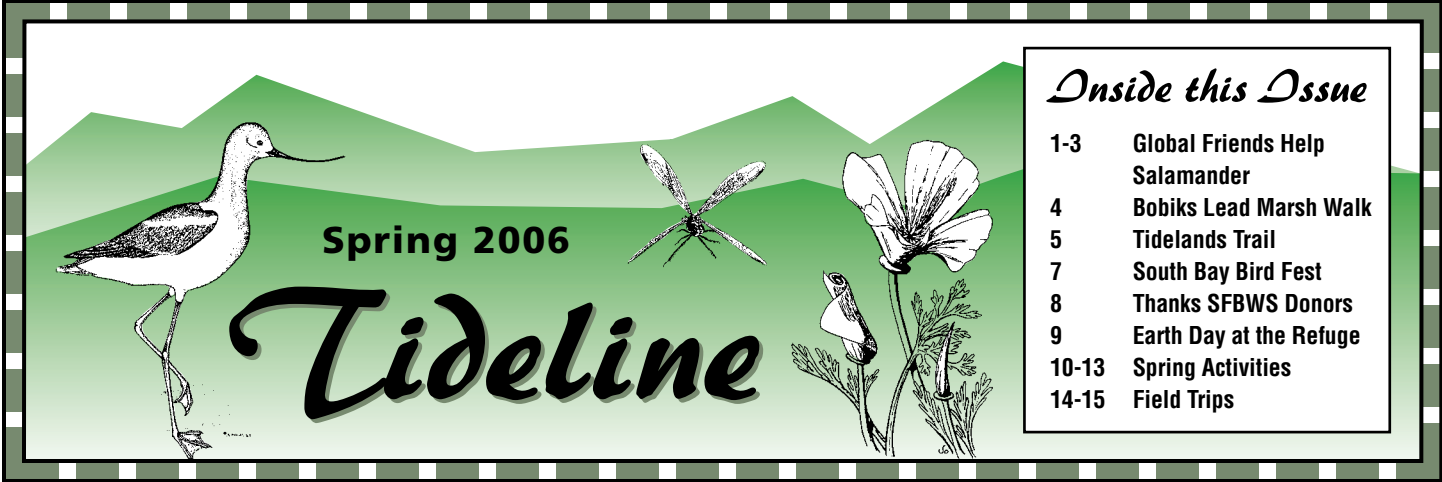
Explore the salt marshes, salt ponds, and the birds of the refuge with your family or small youth group! The Discovery Pack includes an activity booklet, and equipment such as dip nets, magnifying lenses and bug boxes that you will need to take a close look at the salt marsh plants, the brine shrimp, and the birds. The pack is suitable for up to six people, ages kindergarten - adults. There are also group packs available for 12-24 people (only in Fremont). Please call in advance if you would like a group pack. You can check out the Discovery Packs free of charge at the Visitor Center in Fremont or at the Environmental Education Center in Alviso. The Visitor Center is open Tuesday-Sunday from 10:00 a.m. - 5:00 p.m. For questions or to reserve a group pack in Fremont, please call 510-792-0222. The Environmental Education Center is open Saturday and Sunday from 10:00 a.m. - 5:00 p.m. For questions, please call 408-262-5513.

UNITED STATES  
DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE  
DON EDWARDS SAN FRANCISCO BAY  
NATIONAL WILDLIFE REFUGE  
P.O. BOX 524  
NEWARK, CALIFORNIA 94560

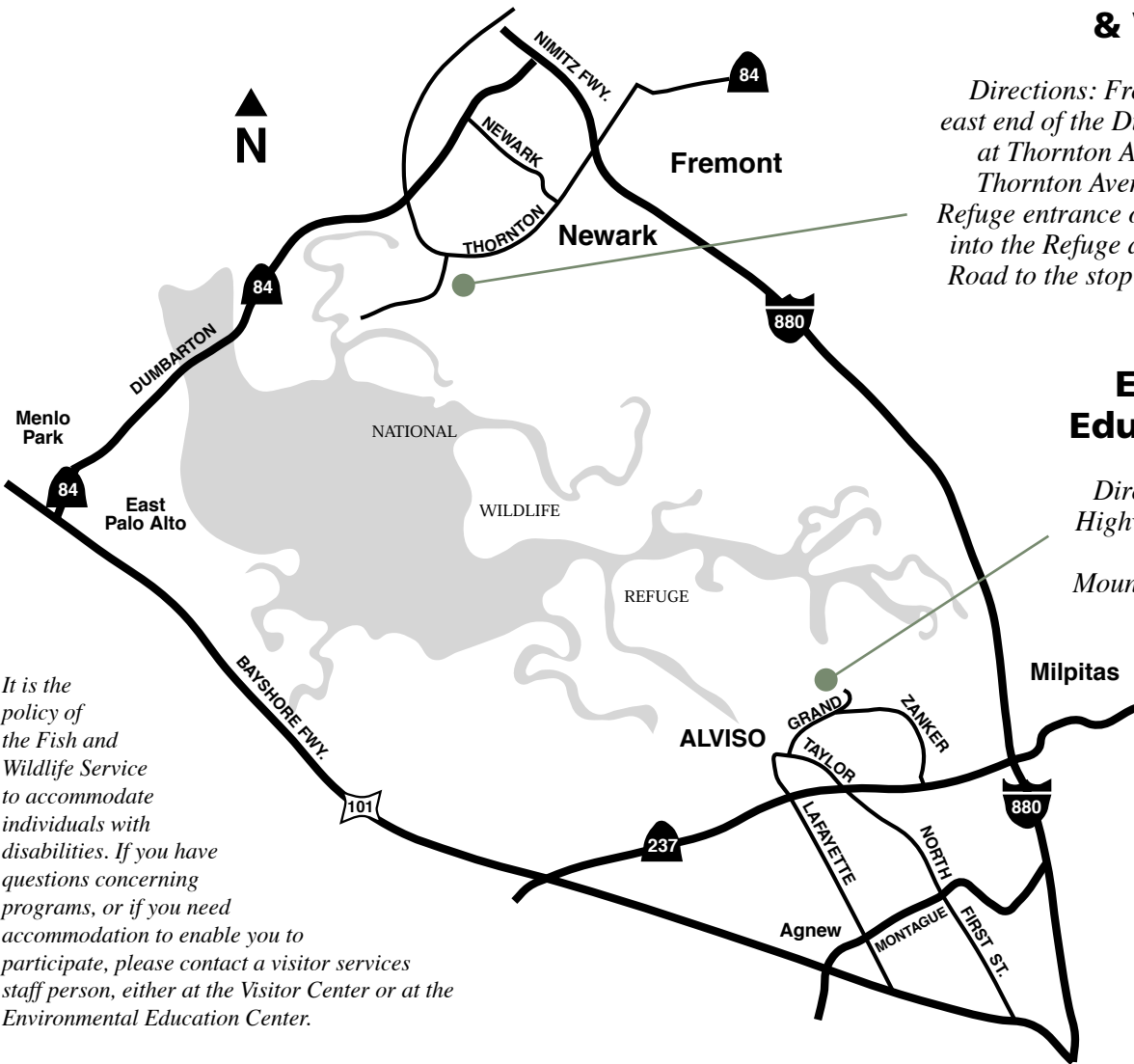
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**Headquarters & Visitor Center**

(510) 792-0222

*Directions: From Highway 84 (at the east end of the Dumbarton Bridge), exit at Thornton Avenue. Travel south on Thornton Avenue for 0.8 miles to the Refuge entrance on the right. Turn right into the Refuge and follow Marshlands Road to the stop sign. Turn left into the parking lot.*

**Environmental Education Center**

(408) 262-5513

*Directions: From I-880 or Highway 101, exit on Highway 237 toward Mountain View/Alviso. Turn north onto Zanker Road. Continue on Zanker Road to the Environmental Education Center entrance road (a sharp right turn at Grand Blvd.) The distance from 237 to the entrance road is 2.1 miles.*

*It is the policy of the Fish and Wildlife Service to accommodate individuals with disabilities. If you have questions concerning programs, or if you need accommodation to enable you to participate, please contact a visitor services staff person, either at the Visitor Center or at the Environmental Education Center.*