Newport Bay
Naturalists
& Friends

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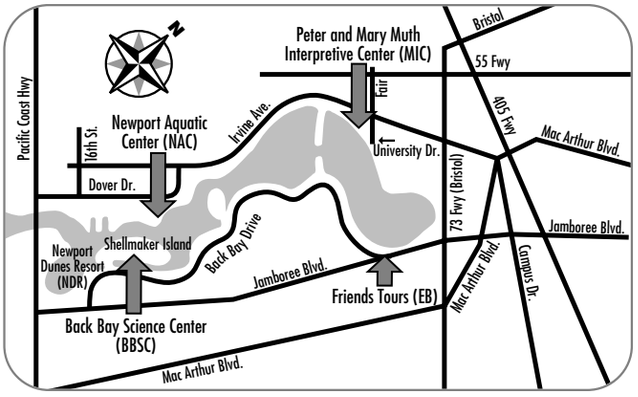

Web Sites

Newport Bay Naturalists & Friends: www.newportbay.org

Peter & Mary Muth Interpretive Center: www.ocparks.com/unbic

Back Bay Science Center: www.backbaysciencecenter.org

California Coastal Commission: www.coastal.ca.gov

Tracks Credits

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◄ Location Key

Peter and Mary Muth
Interpretive Center *(MIC)*
2301 University Drive
Newport Beach, CA 92660

Back Bay Science Center *(BBSC)*
600 Shellmaker
Newport Beach, CA 92660

Newport Aquatic Center *(NAC)*
1 Whitecliffs Drive
Newport Beach, CA 92660

Upper Newport Bay 15th Annual Earth Day

"Learning from Nature"

When: Sunday, April 24—11:00 am to 4:00 pm

Where: Peter and Mary Muth Interpretive Center
2301 University Ave. (at Irvine Ave.)

Scavenger hunt; interpretive programs; children's activities; tanks with sharks, rays and other marine life; science discovery and craft booths; environmental exhibits; live music, and much more. Refreshments available. Also the venue for Newport Film Festival environmental films.

For information: Call (949) 923-2269 or visit newportbay.org

Biodiversity (continued from page 1)

to a traveler's clothing or escaping household propagation. Examples include the familiar and prolific yellow-flowered black mustard, *Brassica nigra,* and white blooming wild radish, *Raphanus raphanistrum.* Both plants cover the hillsides each spring. In some cases, non-native plants were deliberately introduced. Pampas grass, *Cortaderia selloana* is such a species. A native of South America, pampas grass was bought in during the 1800's to use as an ornamental and was actively used for erosion control by public agencies. Other introduced species include California or Peruvian pepper tree, *Schinus molle,* introduced in the 1830's for some plantings in San Diego as well as *Myoporum laetum,* a tough native of New Zealand. It was originally used for screening along the highway and seashore in the San Francisco area.

In their native settings, many of these non-native plants would not be considered pests. Unfortunately, with so much critical habitat already lost in the area, the additional threat represented by non-natives is a very real concern. Diversity is one thing. But when it comes to biodiversity, the natives make it work.

Protecting our native species is an ongoing challenge in the Bay. Want to help? Check the calendar and come to one of our ROOTS Restoration days.

Rosemary Flynn, Naturalist

TRACKS

A Publication of the Newport Bay Naturalists & Friends

March–May

2005

Natives at work: Perspectives on Plants and Biodiversity

Diversity is a term used a lot today, often in reference to a positive attribute. We refer to it when we discuss an investment portfolio or when we select the fruits and vegetables we eat. We may even consider it where we work and where we go to school. Diversity in the natural world, or biodiversity, is also a good thing. It is one of the reasons that Upper Newport Bay (UNB) is so special. Unfortunately, at UNB as at other locations, biodiversity is threatened by adjacent uses, pollution and other factors. In some cases the threat is, in fact, other plants!

Pampas Grass
(*Cortaderia selloana)*

photo ©Don Millar

By definition, biodiversity represents the sum total of species that occur naturally (native) in an area. It also encompasses the relationships and interactions that occur between these organisms. In terms of ecosystems, coastal wetlands are particularly rich in biodiversity; it is here that the exchange of nutrients and energy between land, fresh water and salt water—so vital for life—can take place. As demonstrated at UNB, these interactions support not only open water, mudflat and saltmarsh habitats (and organisms) but also the outlying freshwater marsh, riparian and multiple upland communities. Coastal wetlands also contribute, via tides and currents, to biodiversity on a regional and even global scale.

In recent years, there has been a growing emphasis on the role of native species in biodiversity. Why is it important that species be native? The reason is that plants that are not native tend to upset the interactions and relationships that support biodiversity. Specifically, when non-natives are introduced, they have usually been selected (or self-select) to do well. Invariably, they also lack natural predators. Unfortunately, this advantage is often to the detriment of native species as well as the multitude of organisms that have evolved to rely on these species for nesting, shelter and/or food. When an aggressive non-native comes in, the natives—along with all their supporting interactions and relationships—loose out.

In considering this, it is important to keep in mind that it takes time for an organism to evolve. Indeed, the genetic make-up of any one species has been influenced by geologic, climatic and biotic events that have occurred over millions of years. This is well demonstrated in southern California where much of our flora migrated millions of years ago from surrounding areas of northern Mexico, the Sierra's and Great Basin Desert. Eventually, as time passed and the relationship of these physical features was changed, plants were no longer able to migrate in and out of the region as they had. Instead, these plants came to be a keenly adapted to the setting: the ancestral base for today's native plant species.

Obviously, since these early days, the region of what is now UNB has undergone of a great number of changes and withstood many impacts. Uses and activities in the Bay have ranged from Indian hunting and gathering, commercial salt harvesting, fishing and ranching to boating, camping and general recreation. Most recently, there has been on-site construction and a great deal of adjacent land development. Such events have involved clearing and disturbing the land, which provide ideal opportunities for non-native plants to become established.

Today, perhaps reflecting the attention the subject now receives, there is a whole vocabulary associated with the topic of native/non-native species. A plant is said to be endemic when it is native and restricted to a given area, region, state, country, or continent. A plant is rare when its populations are small and it is considered at risk of disappearing. An endangered species is a species that is in immediate danger of becoming extinct. Technically, a rare or endangered plant is not necessarily a native. Rare or endangered status is, however, closely tied to habitat loss and it is native species that are most affected by that loss.

At this time, UNB is home to several rare species. Southern spikeweed, *Hemizonia parryi ssp australis,* is a native that is considered rare but, remarkably, does quite well in the UNB riparian and upland habitats. Saltmarsh birdsbeak, *Cordylanthus maritimus,* is a native recognized by both the state and the federal government as a rare and endangered species.

The term alien describes plants that are not native and came to the area by chance, perhaps by attaching

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Newport Bay Naturalists & Friends

Sharkmobile is available for your school

Sharkmobile is an outreach program that will bring sharks, rays, sea stars and other marine animals to your school. Participants will enjoy learning about local marine habitats through hands-on activities. For more information or to reserve the Sharkmobile please call (949) 640-9956. Location code: BBSC

Scout programs are available after school and Saturday

Join a naturalist for our 2-hour Brownie and Junior Girl Scout programs and receive a Try-it or Badge; or join us for Tiger Cub, Bear Cub or Webelo badge programs. Call (949) 923-2269 or email scoutssi@sbcglobal.net for reservations and information. Fee is $7 per child. Location code: BBSC

West Nile Virus

Did you know that only female mosquitoes bite, and only about one in twenty of them will bite a bird, person or animal more than once in its entire life? These were among the many interesting facts provided by Michael Hearst of Orange County Vector Control District (OCVCD) in a very informative presentation to the Upper Newport Bay (UNB) Management Coalition on West Nile Virus (WNV) and its transmittal by mosquitoes. Only certain species of mosquitoes carry the virus and very few individual insects are actually infected. The infection is acquired when a mosquito feeds on a bird with the virus in its blood. The virus lives in the mosquito and is transmitted to a new host through the saliva injected with the bite of the mosquito. Humans and animals such as horses are "accidental hosts" in that the mosquitoes prefer to feed on birds.

WNV has been found across the globe. It was first detected in the USA in New York in 1999 and has since spread throughout the country. WNV is now present in all counties in California. The majority of people infected with the virus experience no symptoms, or a mild to moderate illness with fever, unusual fatigue, headache, nausea, body aches, skin rash, or swollen lymph nodes. There is no specific treatment for WNV infection, although supportive care is important. Symptoms appear within 3 to 15 days of being bitten. In a very small percent of cases the virus can cause a serious condition called encephalitis, which means inflammation of the brain. The elderly and those with weakened immune systems are most at risk of severe illness or death. As of 2004 there have been 26 deaths in California, and several hundred throughout the USA. Since only those with severe symptoms are likely to be tested for WNV, any estimate of the number of people infected would be purely speculative. A best guess would be of the order of 1 in 10,000 people in California.

Michael explained that there are 22 species of mosquito found in Orange County. Of these six species can transmit WNV. 85% of the mosquitoes testing positive for WNV are the southern house mosquito found in back yards. Mosquitoes live only a couple of weeks. They normally feed on nectar. Only females that are about to lay eggs require blood meals—one for each batch of eggs laid. To transmit WNV, a female must go through two egg production cycles—one in which it acquires the virus from an infected bird and one in which it transmits the virus to a new host. Only 5% go through this double cycle. There is no evidence so far that the eggs laid by an infected mosquito bear WNV, but studies are being performed. The eggs of most species of mosquito are laid on the surface of stagnant water and hatch on exposure to the water, becoming larvae. Each larva lives and grows in the water and is finally transformed into pupa from which the adult, winged mosquito emerges. During the summer, this cycle can take place in as little time as a week. Thus the elimination of standing water is important in preventing the proliferation of mosquitoes.

Vector Control Districts such as OCVCD are public agencies tasked with monitoring and controlling mosquitoes and other vectors. (A vector is an organism such as an insect or rodent that transmits disease.) OCVCD controls mosquitoes via a number strategies including the use of mosquito fish to eat eggs and larvae and the application of *Bacillus thuringiensis israelensis (Bti)* granules to kill the larvae. Bti is a naturally occurring substance that targets mosquitoes and midges only and does not harm other insects such as dragonflies, or aquatic life. If an area with stagnant water is inaccessible and/or mosquito traps in treated areas continue to show large numbers of mosquitoes (not necessarily those carrying WNV), fogging may be done. In 2004 three locations in OC were being fogged to kill adult mosquitoes, including Big Canyon.

The purpose of the presentation to the Management Coalition was to enable member agency staff to understand the potential for exposure to WNV at UNB and the precautions they should ask the public to take to avoid exposure. A key question from those present was "Is exposure more likely to occur at UNB than elsewhere in OC, including people's back yards?" The answer was "No."

To minimize the risk of being exposed to WNV, the public should:

- Eliminate all accumulations of standing water around the house and yard. Even the saucers under flowerpots can hold enough water for mosquito larvae to develop. Drain, flush or change weekly.
- Stock ponds with fish that eat mosquito larvae. Call OCVCD at (714) 971-2421 or (949) 654-2421 for free fish.
- Make sure that doors and windows have tight-fitting bug screens with no holes or tears.
- Place mosquito netting over infant carriers when outdoors with babies.
- Wear long pants and long-sleeved shirts, and use an approved repellant containing DEET when outside. Be sure to follow the manufacturer's directions for use.
- Avoid outdoor activities at dawn and dusk from May to October in areas where standing water occurs. This includes freshwater marsh and pond areas of Big Canyon and along Back Bay Drive.

For more information, go to www.ocvcd.org.

Roger Mallett, Naturalist

photo ©OCVCD

Southern House Mosquito
(Culex quinquefasciatus)

Upper Newport Bay Calendar of Events

March–May 2005

Steward Days—Every Wednesday, 9:00–11:00 a.m.

Support the Bay's unique genetics at our restoration sites by collecting seeds & propagating plants. Learn how to grow natives in your backyard, attract wildlife and conserve water. For information call (949) 640-0286. Location code: BBSC

Canoe the Back Bay—Every Saturday, 8:30 a.m.

Join a trained naturalist for a guided 2-hour canoe tour of the Back Bay. Fee is $10 per person. Minimum age is 8. For reservations call (949) 923-2269. Location code: BBSC

Kayak Tours—Every Saturday, 10:00 a.m.–Noon

Join a trained naturalist for a guided kayak tour of the Back Bay. Meet at the Newport Aquatic Center. $15 per person, minimum age 8. NBNF members pay $10. Be prepared to get wet. Reservations (949) 923-2269. Location code: NAC

Kayak Tours—Every Sunday, 10:00 a.m.–Noon

Join a trained naturalist for a guided kayak tour of the Back Bay. Meet at the Newport Dunes Resort. $20 per person. NBNF members pay $10. The Dunes charges a parking fee. Reservations (800) 585-0747. Location code: NDR

Scout Programs—Tuesday–Friday after school and Saturdays

Join a naturalist for our 2-hour Brownie or Junior Girl Scout Try-it or badge programs; or join us for Tiger Cub, Bear Cub or Webelo badge programs. Call (949) 923-2269 or email scoutssi@sbcglobal.net. $7/child. Location code: BBSC

Toddler Time— 1st Wednesday of Each Month 10:30–11:15 a.m.
3rd Wednesday of Each Month 9:00 a.m. or 10:30 a.m.

Join Park Staff or a Park Ranger for nature-based story time and hands on fun. Each session offers a different topic. $5 per child per session. Call (949) 923-2275 to register. Location code: MIC

Plein Air Painting— Saturday, Mar. 5, Apr. 2, May 14, 9:00 a.m.–Noon
Wednesday, Mar. 9, Apr. 13, May 11, 9:00 a.m.–Noon
Sunday, Mar. 20, Apr. 17, May 15, 1:00–4:00 p.m.

Enjoy a wonderful morning painting the Back Bay. Jean Marie will demonstrate and present traditional Plein Air techniques. All materials are provided. $15/child, 8-18, $20/adult. Call (949) 923-2275 to register. Location Code: MIC

Walking Tour—Saturday, Mar. 5, Mar. 12, Apr. 2, Apr. 16, May 7, May 21, 9:00 a.m.

Join a trained Naturalist for a 2-hour walk along the bay. Bring binoculars and sun protection. Free. No reservations needed. For information call (949) 923-2269. Location code: BBSC

Roots Restoration Teamwork—Saturday, Mar. 5, Apr. 16, May 28, 9:00 a.m.–Noon

Help restore Back Bay habitat by installing and maintaining native plants while learning about wetland ecology. Reservations required for groups of 5 or more. Refreshments, tools provided. (949) 640-0286 for information and location.

Low Tide Tour of the Bay—Wednesday, Mar. 9, Apr. 6, 1:45 p.m.

Low tide is the best time to view the migratory birds in the Upper Newport Bay. Join a Naturalist on a 2-hour guided tour on our comfortable electric pontoon boat. Fee is $10 per person. Reservations (949) 923-2269. Location code: BBSC

Friends of Newport Bay Walking Tour—Saturday, Mar. 12

Walk along the Back Bay listening to vaturalists, and visit Interpretive Stations featuring natural history specialists. Tours leave every 15 minutes between 9:00 and 10:15 a.m. Free. No reservations required. Information (949) 923-2269. Location code: EB

"Crafty Camouflage"—Sunday, Mar. 13, 10:00–11:30 a.m.

See "Dr. Sue, The Bug Lady's" wonderful walking sticks show their camouflage talent. Learn about how stick insects live. Make your own edible stick model. $10/child, 5 & up. Call (949) 923-2275 to register. Location code: MIC

Night Hike—Saturday, Mar. 19, 7:00–8:30 p.m.

When the sun goes down another world of wildlife becomes active. Join us for a night hike in our nature preserve. RAIN CANCELS. Dress warmly. $5/person, 5 & up. Call (949) 923-2275 to register. Location code: MIC

Electric Boat Tour of the Bay—Saturday, Mar. 26, Apr. 23, May 21, 11:30 a.m.

Join a Naturalist on a 2-hour guided tour of the bay on our comfortable electric pontoon boat. Fee is $10 per person. For reservations call (949) 923-2269. Location code: BBSC

Marine Discovery—Saturday, Mar. 26, Apr. 23, May 21, 8:30–11:30 a.m.

Marine biology students ages 8 and up are invited to participate in a variety of marine life monitoring programs in Newport Bay. Under 16 must be accompanied by an adult. Free. Reservations (949) 640-9956. Location code: BBSC

Native Plant Exploration—Saturday, Apr. 2, 9:30a.m.–11:30 a.m.

Join a Park Ranger for a native plant walk and talk. Explore native plant communities, plant adaptations, plant identification, and invasives. All ages. $5/person. RAIN CANCELS. Registration (949) 923-2275. Location code: MIC

"Crazy Crustaceans"—Thursday, Apr. 7, 6:00–7:30 p.m.

Come, commune with "Dr. Sue, The Bug Lady" and live crustaceans from her traveling arthropod zoo. $10/child, 5 & up. Call (949) 923-2275 to register. Location code: MIC

Astronomy Night—Saturday, April 16, 7:00–9:00 p.m.

Join members of the O. C. Astronomers for an inspirational tour of the night sky including observation with telescopes. Family program. No fee; suggested donation of $2/person. Call (949) 923-2275 to register. Location code: MIC

"The Truth About Butterflies and Moths"—Saturday, May 7, 1:00–2:00 p.m.

"Dr. Sue, The Bug Lady" shares specimens from her traveling arthropod zoo of beautiful butterflies and marvelous moths. $10/child, 5 & up. Call (949) 923-2275 to register. Location code: MIC

Fishing for Science—Friday, May 20, 5:30–8:30 p.m.

Fish for rays, sharks and fish off our dock after a barbeque dinner and a quick preparatory lesson. Fee is $15 per person. For information and registration contact the Sea Base at (949) 642-5031. Location code: BBSC.

Train for a Day, Become a Volunteer—Saturday, May 21, 9 a.m.–3 p.m.

Become a part of this dynamic estuary! Learn about the habitats and wildlife of the bay. Participate in habitat restoration and special events. Assist with tours. Greet and educate visitors. Registration (949) 923-2295. Location code: MIC

Evening Marsh Prowl—Saturday, May 21, 7:30 p.m.

Join a naturalist on a guided tour of the bay at dusk on our Back Bay Science Center boat. Use spotlights and binoculars to search for owls and other night creatures. Fee is $10. Reservations (949) 923-2269. Location code: BBSC.

Twilight Canoe Tour with Barbecue—Saturday, May 21, 4:00 p.m.

Join naturalists and Sea Scouts for a beautiful tour of the Reserve and dinner around the campfire at Shellmaker Island. Fee is $18. Information and reservations (949) 642-5031. Location code: BBSC.

Shark Camp at the Bay—Saturday, May 21, 6:00 p.m.

Learn about the lives of sharks and rays while eating dinner around the campfire. Then help catch, tag and release them off our dock. Fee is $18. Information and reservations (949) 642-5031. Location code: BBSC.

For homeschoolers and others

"Birds and their Amazing Adaptations"—Tuesday, Mar. 1, 1:00–3:00 p.m.

Learn about bird adaptations and migration. Dress for a short bird watching hike. Binoculars provided. Meets meet 3rd grade science standards. $5/child. Call (949) 923-2275 to register. Location code: MIC

"Watch us Grow"—Tuesday, March 29, 1:00–3:00 p.m.

Learn about seeds, how they travel and how they grow. Learn about the habitats and inhabitants of the Bay and take a short nature hike. Meets kindergarten science standards. $5/child. Registration (949) 923-2275. Location code: MIC

"Critter Connections"—Tuesday, April 26, 1:00–3:00 p.m.

Students learn about Bay animals, their habitats and their interdependency and examine animal skulls and teeth to determine what they eat. Meets 1st grade standards. $5/child. Call (949) 923-2275 to register. Location code: MIC

"Mud Meals and Soil Stories!"—Tuesday, May 31, 1:00–3:00 p.m.

Perform hands-on explorations of wetland and upland soil, learn about Bay animals and mud flat habitat and use microscopes to observe the mud. Meets 2nd grade standards. $5/child. Registration (949) 923-2275. Location code: MIC