



# THE TERN TIDE

SINCE 1976

Spring 2019  
Volume 43, Issue 1

## 2019 Volunteer Naturalist Class

By Jennifer Robins

The 2019 Volunteer Naturalist training class underwent some significant changes from previous years. The first change is the title of our class. The Community Education Committee, with the approval of the Board of Directors, changed our volunteers' title from Docent to Volunteer Naturalist. Seeing that other environmental organizations have made this change, we recognized that docent carries more arts and cultural connotations and the public is more familiar with the term Naturalist when it comes to environmental education. The second change was to lengthen the class from 6 to 8 weeks. We added some additional topics and expanded the time to allow our new naturalists to feel comfortable talking about the tremendous amount of information offered in the class.

The third change was updating the Training Manual to reflect all the ways an Amigos Naturalist-led tour helps educators meet Next Generation Science Standards that have been adopted by 26 states. The Lead State Partners



*The Amigos 2019 Naturalist Class from left: Cory Butler, Catherine Navetta, Laura Lopez, Monica Gonzalez, Susanne Salcido, Sharon Von Dollen, Jack Scully, Karen Belville, Daniel Fillet and Linda Fillet. Not pictured, Alejandro Navarro. Photo by Thomas Anderson.*

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## Good News

### **Amigos Volunteer Internship Program**

Building your resume? Interested in gaining hands-on experience in marine ecology or nonprofit management? Amigos de Bolsa Chica is now offering student volunteers the opportunity to work alongside our program staff to learn more about Amigos' daily operations and receive experience in the informal science education field. Apply now for 2019 summer program! <http://www.amigosdebolsachica.org/volunteers.php#intern/>

### **Join Amigos de Bolsa Chica on Earth Day, April 13**

Save the date! Bolsa Chica's Earth Day Festival is Saturday April 13, 10:00 am - 3:00 pm, 3842 Warner Avenue (PCH and Warner). It's a great opportunity for some family fun with our community of outdoor enthusiasts. The Amigos will be there with activities, and there will be lots to see and do including, a jump tent, free tours, and interactive activities. To volunteer at the Amigos booth, please contact Jennifer Robins at [jjrobins@dslextreme.com](mailto:jjrobins@dslextreme.com).

### **Native Plant Gardening Returns to the State Beach Visitor Center**

Kim DiPasquale, who has had an interest in native plants for many years now, will be ramping up the Amigos de Bolsa Chica's native plant gardening efforts at the Bolsa Chica State Beach Visitor Center. These efforts not only beautify one of the most visited State Parks in California, they also offer an array of opportunities to teach others about the intricacies of gardening with the native coastal sage plant communities. Volunteer opportunities will be announced in the coming weeks.

### **Congratulations to Board Member Daryth Morrissey**

In the category of it's all connected, congratulations to Amigos' board member Daryth Morrissey who has recently become the President of the American Cetacean Society-Orange County Chapter! FLOW's very own Jill Lemon spoke at ASC-OC's free lecture series on March 28. <http://www.acsorangecounty.org/home.html>

### **Los Cerritos Wetlands Restoration**

The first major restoration at Los Cerritos Wetlands was approved by the Coastal Commission on December 13, 2018. The project includes the addition of restoration of 30 acres of wetlands adjacent to "Steamshovel Slough," nearly doubling the size of the salt marsh. Upland habitat around the marsh will be restored with plants native to the area, oil operations are planned to be removed from 154 acres, and contaminated soils remediated. This will clear the way for a second phase of restoration. Great news for wetlands and our neighbors in Long Beach!

## President's Tern

### **Next Generation Science Standards**

By Charles Falzon

With this year's Naturalist Training now complete, it feels as if our family is growing! We are fortunate to train eleven brilliant new Naturalists with in-depth information on the history, ecology, birds and restoration of the Bolsa Chica, including a brand-new talk on the healing properties of local native plants given by Matthew Teutimez of the Gabrielaño Band of

Mission Indians, Kizh Nation. We are also thrilled to be launching a new volunteer internship program for young volunteers to experience a higher degree of involvement with the general running of Amigos' daily operations. While Amigos is a volunteer-driven organization, and thus always excited to welcome new volunteers and

*President's Tern continued on page 5*

# 2019 Volunteer Appreciation Dinner

By Jennifer Robins

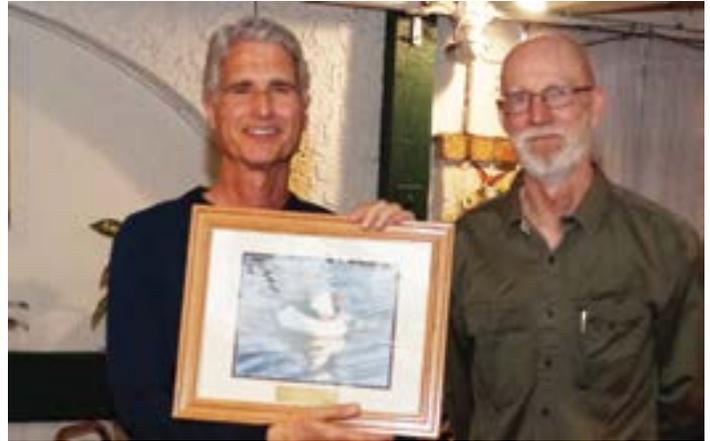
The Annual Volunteer Appreciation Dinner was held at Don Ramon's Mexican Restaurant in Huntington Beach on January 29. The attendees enjoyed a 3-course Mexican dinner. The volunteers represented FLOW Citizen Scientists, Volunteer Naturalists, Amigos Board of Directors, friends and significant others. In order for everyone to get to know each other we asked each person to tell the group who they are, their interest in the Bolsa Chica Wetlands and what activities they participate in with the Amigos de Bolsa Chica. It was a great chance to learn about the history of the Amigos, to meet new members and to hear how some volunteers have devoted many years to maintaining the organization.

Kim DiPasquale was honored as the 2018 Volunteer of the Year. Jerry Donohue and Shirley Dettloff presented Kim with a framed Bufflehead photograph by Thomas Anderson to commemorate the occasion. Kim joined Amigos a little over a year ago and has jumped in to volunteer in multiple ways with the varied activities our organization offers. He is a FLOW Citizen Scientist learning about phytoplankton with microscopes and chemical analysis, and he is a Volunteer Naturalist leading public and private tours at the Bolsa Chica Wetlands. He has become educated about the wetland plants and is teaching the native plants class for our Naturalist Training Class.

Charles Falzon and Shirley Dettloff presented Brian Westcott with an award recognizing his 13 years as Treasurer for Amigos de Bolsa Chica and continued support and active involvement with this organization. Brian is also a FLOW Citizen Scientist and Volunteer Naturalist. He has been an active member for 20 years and has been of great assistance

with a variety of fundraisers as well as our science symposiums.

We are grateful to have Kim and Brian as volunteers and members of the Board of Directors, and this dinner was offered as a thank you to all the volunteers that help with tours, FLOW, booth events and cleanups.



Top: Kim DiPasquale and Jerry Donohue.

Bottom: Brian Westcott, Charles Falzon and Shirley Dettloff. Photos by Thomas Anderson.

## First Saturday of the Month Tour

Free tours of the Bolsa Chica Ecological Reserve led by Amigos docents. 9:00 a.m. to 10:30 a.m.

## Last Saturday of the Month Bird Walk

Free bird walk led by Amigos docents. 9:00 am. Reservations are encouraged, 714-840-1575

Free monthly tours are on a first come, first served basis. Carpooling is encouraged as parking at the Bolsa Chica Ecological Reserve is limited. All tours begin at the south parking lot, PCH between Warner Ave. and Seapoint St.

**President:** Charles Falzon  
**Vice President:** Kim DiPasquale  
**Secretary:** Shirley Dettloff  
**Treasurer:** Brian Westcott

### Directors:

Jerry Donohue	Jennifer Robins
Craig Frampton	Jim Robins
Judith Huck	Bill Stern
Terry Jorris	Joana Tavares
Vic Leipzig	Administrative Director:
Tom Livengood	Thomas Anderson
Daryth Morrissey	
Mel Nutter	

The Tern Tide is published quarterly by  
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**Editor & Graphic Design:**  
Thomas Anderson

# The Joy of Being a FLOW Citizen Scientist

By Judith Huck

For the last five years, I have enjoyed being a volunteer in the Amigos de Bolsa Chica FLOW program. This is a multi-faceted program, which includes sampling water from the ocean and the wetlands on a weekly basis, analyzing these samples, sending a sample to the California Department of Health, and conducting educational programs.



As a volunteer, I give my time to the organization. In return, I receive so much more. I have learned about the importance of our coastal resources and how they benefit us and our environment. I have learned why preserving these resources is so important to us, and how I can play a part in this preservation. I have also connected with an amazing band of people who are working to keep our resources safe and secure for us and for our descendants.

One of the components of the FLOW program is to put the water sample under the microscope to look for plankton. We are mainly interested in phytoplankton, which are single-cell plantlike organisms. They are crucial for many reasons. For one thing, they sit at the bottom of the food chain. Just about every other organism in a water environment can trace their food source back to phytoplankton. Another important function of phytoplankton (as well as of plants) is their metabolism. They use carbon dioxide,

nutrients, and energy from the sun to create the products they need to carry on their life. As a result of this metabolic cycle, they emit oxygen. Animals (yes, that includes humans) take on oxygen to fuel their metabolic cycle and emit carbon dioxide. What a lovely partnership! At least fifty percent of the oxygen in the air we breathe is generated by the metabolic process of the phytoplankton in the ocean. So, without these little critters we don't eat or breathe very well.

We put these samples under the microscope with great anticipation. We are hoping for a variety of phytoplankton to identify. Sometimes the sample is pretty sparse if nutrients are in short supply or predators are in great supply. At other times, it looks like the phytoplankton are having a party! This is the sample we would especially like to see if we have a class of students coming in to learn about the ocean and wetlands. On February 22 we had such a class and were treated to a real wealth of phytoplankton. The photos here of this great sample demonstrate the basis of the amazing biological productivity in the waters at Bolsa Chica.



## *Naturalists continued from page 1*

collaborated with educational associations and the National Research Council to develop the Next Generation Science Standards which help students better understand core scientific concepts, the scientific process of developing and testing ideas, and to have a greater ability to evaluate scientific evidence. Over the summer of 2018, student volunteer intern Raquel Friedmann reviewed our educational materials and identified all the areas our tours address scientific concepts in the NGSS. She then created talking points by grade level for each section of the training manual based on the NGSS as well as identified the specifics in our Educator's Guide which was also recently revised.

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## Naturalists continued from page 4

After a delay caused by rain and the closure of Pacific Coast Highway, the class started on February 7 with eleven students. The students have varied backgrounds and interests: high school students, college students and graduates, retired teachers, a horticulturalist, and volunteers at a variety of organizations. We are fortunate to have people so interested in learning more about Bolsa Chica and teaching others to appreciate the wetlands and the environment.

The class presentations were Elissa Warantz for Birds, Brian Westcott for History, Kelly O'Reilly for Fish and Invertebrates, Kim DiPasquale for Native Wetland Plants, Vic Leipzig for Ecology, Matthew Teutimez (Gabrieleño Band of Mission Indians) for Native American cultural accomplishments, and Jim Robins for Bolsa Chica Restoration. Jill Lemon, FLOW Program Manager, explained how volunteers can become Citizen Scientists and teach school groups about the importance of phytoplankton. Jerry Donohue explained public and private tour procedures, and gave tips and suggestions based on his long experience as both naturalist and

## President's Tern continued from page 2

create opportunities to utilize their talents in novel ways, we are equally vested in the importance of learning and in disseminating scientific fact in our education programs.

Science has been a cornerstone of the Amigos' efforts since the beginning in 1976. We have long-been cognizant that an Amigos de Bolsa Chica tour of the Bolsa Chica is the equivalent of visiting an outdoor laboratory. Since our first "Docent Training Manual" was produced by Sally Jackson and Trude Hurde in 1986, the Amigos has put many hours into designing and providing the most comprehensive training possible to our Naturalists. Last year we revised the content of the training manual again to bring specific attention to the recently adopted Next Generation Science Standards. It is no surprise to some of our veteran volunteers that the information they've talked about for years to students, scouts and adults on wetland tours—the parts of a salt marsh habitat that are living and non-living, the interactions of different species, the uniqueness of each species and their adaptations to the salt marsh habitat, how the food chain benefits the ecosystem, and the importance of salt marsh to the environment—are 3-dimensional illustrations of core concepts addressed in the Next Generation Science Standards.



*From left: Monica Gonzales, Catherine Navetta, Alejandro Navarro, Daniel Fillet, Sharon Von Dollen Linda Fillet, Karen Belville, Bill Stern, Jack Scully, Kim DiPasquale and Laura Lopez. Photo by Thomas Anderson.*

science teacher. Facilitating the class and providing support were Tom Anderson, Kim DiPasquale, Jennifer Robins, Jim Robins and Bill Stern. The class concluded March 28 with the distribution of name badges and Certificates of Completion, and a pizza dinner. We are happy to welcome eleven new Naturalists into the world!

Who knew the Amigos de Bolsa Chica was so far ahead of the curve? One of the purposes of the standards that appeal to the Amigos' long dedication to a principal of winning people over by knowing the facts is that they are designed to combat ignorance of science and help develop greater interest in science among students so that more of them choose to major in the sciences in college. If an Amigos' tour of Bolsa Chica can assist any educator in adding a special dimension to their comprehensive study of environmental issues including community action, protection of endangered species, and coastal wetland ecology, we are thrilled we can do it.

So if you haven't heard, if you know of a teacher in search of a field trip that will help with their curriculum, we want to make sure everyone in our membership knows that that an Amigos de Bolsa Chica tour of the Bolsa Chica Ecological Reserve helps educators meet specific Next Generation Science Standards required for their grade levels. And if you are a student who needs experience in marine ecology or informal science education non-profit management, the Amigos de Bolsa Chica has a role for you.

# Gray Whale Migration

By Daryth Morrissey

Thar she blows! Have you witnessed the telltale heart-shaped blow from the shore or the sea of the gray whale (*Eschrichtius robustus*)? Now is the time to go whale watching to see both northbound and southbound grays on their migration routes. They can be viewed easily from the headlands in Dana Point, Laguna Beach, Crystal Cove, and from the Point Vincente Interpretive Center in Palos Verdes. As of March 24, 2019, the American Cetacean Society's Los Angeles Chapter's Gray Whale Census and Behavior Project (which operates from December 1 through late May at Point Vincente) has counted 540 southbound (including 24 calves) and 1287 northbound gray whales.

The Eastern Pacific Gray whale has one of the longest migrations of any mammal on earth. Every year, they swim up to 14,000 miles from their summer feeding grounds in the Bering and Chukchi Seas down to the warm, shallow water lagoons of Mexico's Baja Peninsula. Being coastal navigators, the whales usually travel within 2.5 miles of shore, which is why they are so easily viewed by humans. In a 24 hour period, they can swim up to 100 miles, but they usually average 75 miles per day. Average speed is 3-6 mph. On average, it takes 2-3 months to complete a southbound migration.

From May to October in their summer feeding grounds, gray whales spend their time sucking up and filtering out up to an acre of crustaceans (gammarid amphipods) from the bottom sediments. During this 130-140 day feeding period, it is estimated that they consume 130,000 pounds of food. This energy is stored in their up to 5 inch thick layer of blubber. They will

not eat like this again until they return home. Sensing that daylight hours are shortening, thus not allowing for as much photosynthesis and food, the grays begin their journey southward. The first to leave are the pregnant females, followed by the males and other females, and lastly the juveniles. About 53% of the births occur before passing Los Angeles.

From January to June, the grays are in their winter birthing and mating grounds in Mexico. Here the males spend their time vying for new parenting

rights, and the new moms feed and train their babies. Gray whale milk is 53% fat, as compared to humans which is 3-5% fat. A newborn calf can consume 30-50 gallons of milk each day, gaining up to 50 pounds daily! The babies need to store this energy in their blubber, for the long migration home and to insulate their bodies from the cold Arctic seas.

Once all of those competing males have left, the moms (cows) train and strengthen their calves on how to swim at the mouths of the lagoons as the tides go out. They can also be seen breaching, jumping out of the water, and spy hopping, sticking their heads out of the water.

Through February and March, the first to leave the lagoons are again the males and females without new calves. Pregnant females and nursing mothers with their newborns are the last to depart. So get on a boat! There are several whale watch companies to choose from in Dana Point, Newport Beach, and Long Beach. Or, bring your binoculars and watch from shore.



*Gray Whale cow with calf. Photo courtesy of Mark Girardeau.*

# The Tidal Inlet Questions

By Shirley Dettloff

What allows the Bolsa Chica Wetland to flourish and to survive: the tidal inlet. This is where the ocean waters flow into the wetland and then flow out again. Without this nourishment, the wetland would die. Before this inlet was created, there were no tidal waters in what is now the larger restored wetland area. After the creation of the tidal entrance, ocean waters flowed into Bolsa Chica and restoration has been a great success. To maintain what has been restored, the tidal inlet has to be dredged on a yearly basis, a very costly operation. The dredging in the current cycle is almost complete, and there is funding for one more year. What happens then?

We must depend on the state coming up with the necessary funding yet there is no guarantee that these funds would be available. Projects up and down the state are vying for state money, and pressure will be put on legislators to fund their projects. This means that all of the organizations that realize the importance of the Bolsa Chica will have to go into action once again and the cry SAVE THE BOLSA CHICA will be heard. It is critical to be successful, but you can imagine the work and the dedication this will take. We must be prepared!

## Meet Amigos de Bolsa Chica's New Vice President

By Jerry Donohue

Kim Dipasquale has taken over the reigns of Vice President for 2019. Kim has a B.S. in Biology from Loma Linda University (1977). He then attended Loma Linda School of Dentistry where he received his D.D.S. (1981). Kim finished his residency in Oral and Maxillofacial Surgery from Loma Linda Medical Center (1985) as well as his M.S. in Oral Surgery (1986). After retiring in 2013 from his practice in Anaheim Hills, the natural world beckoned.

Kim started taking community college courses in geology, ecology, botany and marine biology besides being a student of Sylvia Gallagher in her birding class. In 2017 he completed both the Upper Newport Bay and Amigos naturalist classes. He has led tours for visitors of all ages and is especially gifted in dealing with community college students. He presented the botany portion in the 2019 Amigos Naturalist class where he is one of the facilitators as well.

Another issue has also come forward: the Poseidon project, a desalinization operation planned to be built in Huntington Beach to provide additional water for this area. Mitigation for the operational impacts on the marine environment from the desalinization project could mean that Poseidon will be committed to keeping the tidal inlet open for 50 years. The Poseidon project is now in the long process of hearings and approvals. Currently, the project is going through the Regional Water Quality Control Board and has not yet received a final decision. If approved, the next step would be the California Coastal Commission, a process that may take several months or even years.

So we have two questions: Will the state assume funding the dredging or will, and only if approved, will Poseidon fund maintenance to keep the tidal inlet open? We must watch closely and be prepared to do whatever needs to be done to ensure that the tidal inlet remains a functioning part of the restoration of the Bolsa Chica. We have done it before and I believe our dedication to this magnificent resource will motivate us once again. We fought to save, to restore, and now to make sure that this important natural resource lives for future generations.

Kim wants to build Amigos presence in the community by hosting an Amigos table at Shipley Nature Center on a monthly basis. He also wants to build public awareness of environmental issues by having quarterly naturalist retreats where Amigos volunteers are drawn outside their normal presentation topics. We are hoping that Kim will lead some wetland plant walks in a similar vein as our Bird Walk, the last Saturday of each month.



*Kim leading a tour.  
Photo by Anderson*

Kim is married and has two daughters, a son and two grandsons. He moved to Huntington Beach two years ago from Orange. He likes to hike and take photographs, especially in our beautiful national and state parks. Come take a tour with Kim. Your naturalist eye will be opened and new insights gained.



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(714) 840-1575

## AMIGOS DE BOLSA CHICA MEMBERSHIP APPLICATION

I support the specific and primary purpose of Amigos de Bolsa Chica, which is to advocate the preservation, restoration and maintenance of the Bolsa Chica, to encourage the public acquisition of all the wetlands and sufficient surrounding open space to create a viable ecosystem, and to provide education about the importance of wetlands.

### ANNUAL DUES

\$ 10 Student

\$ 25 Individual

\$ 40 Family

\$100 Sustaining

\$1000 Life Member

Name: \_\_\_\_\_

Address: \_\_\_\_\_

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

Email: \_\_\_\_\_

Phone: \_\_\_\_\_

### Additional Contribution:

\$ \_\_\_\_\_ Fund operational expenses    \$ \_\_\_\_\_ Fund education projects    \$ \_\_\_\_\_ Total enclosed

### Please check if you are interested in volunteering for:

FLOW Citizen Science \_\_\_ Docent training/wetland tours \_\_\_ Wetlands cleanups \_\_\_ Fundraising \_\_\_ Grantwriting \_\_\_

All contributions to Amigos de Bolsa Chica are tax-deductible as allowed by law under IRS Code Section 501(c)3.

No goods or services were provided in consideration of this gift.

Return application to: Amigos de Bolsa Chica, P.O. Box 1563, Huntington Beach, CA 92647