



The President's Tern

2019 Volunteer Accomplishments and Appreciation

By Charles Falzon

It is my pleasure to use this column to thank 2019's dedicated volunteers and to tell you the numbers of participants in our tours, bird walks and FLOW classes. I'm also including all the offsite venues we participated in, as well as several presentations that originated with the Amigos. This list of accomplishments creates an impressive picture of the Amigos de Bolsa Chica's education and outreach work. And it could not have been achieved without donations from our members, some small grants, and our incredibly dedicated and knowledgeable volunteers. Thank you ALL for your time and amazing efforts!

109 visitors participated in our first Saturday of the month public tours. Three months were cancelled due to rain. Thank you to the following Naturalists who assisted on Saturdays: Jim Robins, Elissa Warantz, Bill Stern, Kim DiPasquale, Nancy Boyd-Batstone, Jennifer Robins, Terry Jorris, Barbara Felberg-Jackson, Sharon Von Dollen, Chuck Drescher, Cat Navetta, Bob Johnson, Karen Belville, Linda Fillet, and David Lasky.

57 visitors participated in our last Saturday of the month Bird Walks. Thank you to Terry Hill who led the walks each month (no rainouts!).

For private, scheduled tours for school and scouts,

we had 14 tours serving a total of 428 participants. Volunteer Naturalists who led these groups were Al Vari, Kim DiPasquale, Terry Jorris, Barbara Stewart, Jim Robins, Nancy Curtis, Jerry Donohue, Chuck Drescher, Vic Liepzig, Nancy Boyd-Batstone, Terry Hill, Karen Belville, Sharon Von Dollen, Ron Davis, Jennifer Robins, Susan Hardgrave, Linda Fillet, and Daniel Fillet.

406 students from nine elementary school through community college classes participated in FLOW Field Trips. The Citizen Scientists who assisted with these Field Trips were Jerry Donohue, Bill Stern, Nancy Curtis, Jennifer Robins, Annie Daw, Kim DiPasquale, Judy Huck, Kyoko Kremp, Linda Fillet, Cat Navetta, Jack Scully, Daniel Fillet, Roman Garcia, Jim Robins, Chuck Drescher, Terry Jorris, Kacey Chea and Gigi Harvey. Those who turned out on Fridays to collect and analyze water samples were Morgan Haberin, Michelle Gonzalez, Carli Dobbins, Emma Leigh Brown, Penelope Guzman, Alastair Lunt, Patricia LaVoie, Cassandra Lacey, Dario Boneda, Amber Davis, Hong Seo, Eugene Seo, Armin Kalalang, Kaleigh Holguin, Angelica Straus, Elena Pagter, Justin Stanphill, Justin Tang, Chris Akana, Jena Jimenez, Savannah Rhodes, Maya Lamperts, and Nadia Bonkris.

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Update on Poseidon

By Shirley Dettloff

A presentation and update on the Poseidon Desalinization project was held for the Santa Ana Water Quality Control Board of Directors at the Huntington Beach City Council Chambers on December 6. Shirley Dettloff, Kim Dipasquale, and Charles Falzon represented the Amigos de Bolsa Chica. While the Amigos de Bolsa Chica is neutral on the project itself, our interest is the mitigation that is required of Poseidon if the project is approved by the Coastal Commission. We wanted to convey to the board the importance of the proposed mitigation plan and our approval of it. Poseidon will be required to keep the tidal inlet open and functioning as well as complete additional restoration. The restoration will take place in the muted tidal area referred to as the Fieldstone property. They will also be required to implement a water circulating system to ensure that the restoration will function properly.

If the project is approved, the Amigos de Bolsa Chica feels that the mitigation must be done in an area close to the Poseidon project. Many times in the past, mitigation is done many miles from the area where the project is being built. Our speakers conveyed to the board how important the restored wetlands are, and the fact that funds for keeping the tidal inlet open and functioning would be depleted after this year's dredging.

There was a very large crowd in attendance, those in support and those in opposition. After the staff presentations, each side was able to present their case. Poseidon's presentation included the support recently given to the project by the Orange County Water District. Former Senator Barbara Boxer gave a "rousing" speech in favor of the project. Coastkeepers, who along with several environmental groups oppose the project, presented their case. The public was then allowed to give his or her testimony, limited to 2 minutes for each speaker. It was a very long day, and I thank our speakers for staying the entire day to show why the mitigation should be done at Bolsa Chica. A final vote on the project will take place sometime in April, so we don't know as yet how this will turn out, but it is our job to make sure that if a project is approved, that Bolsa Chica must be the site for their mitigation.

BE THE CHANGE: Climate Solutions for a New Decade

Saturday, February 1, 2020, 9:00 am – 3:00 pm
Orange Coast College, 2701 Fairview Road,
Costa Mesa, CA 92626

A day to learn, share, engage and start solving our climate crisis. EVERYONE IS INVITED! Topics covered will include reforestation, regenerative agriculture, soil management, blue carbon, pros and cons of various forms of alternative energy, carbon capture, risks and potential of geo engineering proposals and individual changes to everyday behaviors and lifestyle. This conference will bring our community together to learn and discuss existing climate change mitigation strategies. Folks will have a chance to attend smaller follow up events and to stay connected through social media.

The afternoon is devoted to exhibits and poster presentations by local groups like the Amigos as well as high school and college students. This allows direct interaction with conference attendees (science fair style) to share information about climate solutions. This is a free event. Get tickets on Event Brite: <https://www.eventbrite.com/e/be-the-change-climate-solutions-for-a-new-decade-tickets-73476888351?aff=ebdssbeac>. Sponsored by Ridge to Reef, Newport Bay Conservancy and growing group of partners.



Sponsored by Newport Bay Conservancy and UCI's Ridge 2 Reef

CLIMATE SOLUTIONS CONFERENCE

SATURDAY, FEB. 1, 2020
ORANGE COAST
COMMUNITY COLLEGE
FROM 9 AM - 3 PM

<https://climatesolutions2020.eventbrite.com>

The poster features a stylized globe on the right side, showing the Americas in green and blue. The text is white and black on a dark blue background.

The Amigos de Bolsa Chica 2020 Naturalist Training Class

The next Naturalist Training Program will be held Tuesdays, February 4 and March 3, and Thursdays, January 30, February 13, 20, 27, March 12, 19 at the Bolsa Chica State Beach Visitor Center, 7:00-9:00 pm.

January 30 will be introductions and the short film, Saving the Bolsa Chica Wetlands. On February 4, Matthew Teutimez, Tribe Biologist with the Gabrieleno Band of Mission Indians speaks on Native American history. On February 13, Brian Westcott will present the History of Bolsa Chica, and Jim Robins will talk about Restoration. On February 20, Vic Leipzig will present the Ecology of Bolsa Chica. On February 27, Elissa Warrantz will present Birds and Endangered Species. On March 3, Kelly O'Reilly will present Fish and Invertebrates of Bolsa Chica and Kim DiPasquale will discuss Wetland Native Plants. March 12 is a FLOW Presentation and the class quiz. On March 19 we will review the quiz, take a group photo and discuss the importance of being an Amigos Naturalist.

Class fee is \$75.00 which includes a Naturalist Training Manual and a photo binder. There is also a \$25 Amigos membership fee if you are not already a member. Other requirements include attending at least one public tour on a first Saturday of the month; and attending two field trips, a Bird Walk with an Amigos Birder, and a Perimeter Tour with Vic Leipzig, dates and times to be arranged.

If you are interested in registering for the Amigos Naturalist Training, please email info@amigosdebolsachica.org to get started. **All current Naturalists (and Docents!) are encouraged and welcome to attend any or all classes for free.**

The Amigos Prune the South Parking Lot

By Kim DiPasquale

If you've been to the Bolsa Chica Ecological Reserve South parking lot lately you will have noticed that the view of the bay has been significantly enhanced. The improvement represents the hard work of many individuals who donated their time on two separate weekends for pruning the foliage around the perimeter of the lot.

Tom Pfeifer and about thirty of his environmental science students along with Vic Leipzig, Jerry and Lori Donohue and myself pruned between two and three feet off the tops of the shrubs. We also removed two highly invasive Brazillian Pepper trees. This project was performed under the direction of the Bolsa Chica Ecological Reserve manager, Kelly O'Reilly, over two Saturdays, September 14 and October 26.

In addition to improving the general visibility of the bay the project was also done in hopes of minimizing the vandalism and theft that commonly occur in the lot. Now that we are getting the first rains of the season we can expect to see the various plant species coming to life and looking better than ever. For those readers who are interested in participating in future projects around the Reserve and at the Bolsa Chica State Beach Visitor Center please contact Kim DiPasquale at kimdipasquale@gmail.com.

Big thanks to Tom Pfeifer's environmental science students from Segerstrom High School who came out to help prune the overgrown shrubs around the the south parking lot at the BCER. Photo by Tom Pfeifer.



The Science of Communicating Climate Science

By Thomas Anderson

There is now a body of science devoted to the communication of climate science, in particular, how to communicate this complex subject to non-experts. Progress on changing our collective addiction to fossil fuels has been greatly limited by many factors that go into our understanding of climate change and what we can do about it. So how do we communicate more effectively when we are talking about climate change? This is the question Joana Tavares is asking as part of her PhD studies at UC Irvine.

“The Science of Communicating Climate Science: Strategies I’ve Tried and New Approaches to Test” was the title of the presentation Joana gave to 30+ people on October 17 at Bolsa Chica State Beach Visitor Center. Joana asked the audience about their perceptions of climate change. Are scientists united on the cause? Do solutions to the problem already exist? What are the causes of our inability to act?



Joana Tavares discusses communication concerns with attendees of her presentation. Photo by Thomas Anderson

The science on climate change—the effects of increasing carbon dioxide in the atmosphere—has been clear and known since 1959. 97 per cent of scientists on Earth agree that climate change is real and caused by the burning of fossil fuels. Global CO₂ emissions continue to rise on every continent except Europe. All the technology currently exists to make an immediate switch to clean energy. If we weighed the costs of this massive change against the cost of mitigating damages caused by increasing floods, droughts, more intense weather, disruption to economies and food production, it would not cost a cent more to make the switch.

These facts, however, are mostly lost to the failure of effective communication. Politicians and corporations exploit this failure. The Yale Program on Climate Change (<https://climatecommunication.yale.edu/>) conducts scientific research on public climate change knowledge, attitudes, policy preferences, and behavior at the global, national, and local scales. It has found that our opinions about climate change are shaped more by cultural issues and experiences than by simple knowledge of facts. Political orientation and educational attainment affect our views more than access to information. We all process new information through filters, through our “baggage.” Studies have shown that around the world people align information with their political views. In the United States, conservatism creates a strong filter regardless of the amount of education, and climate change is often perceived as a “liberal” issue. Values and emotions determine behavior and beliefs.

How then, Joana asks, do we effectively discuss climate change with others? Through trial and error she has found four keys that assist effective communication. First, know your audience. Be respectful. Use facts of scientific consensus but understand that not everyone speaks the same language or cares about the same specifics. Discern whether you are talking to people who are concerned or who will never be convinced. You cannot simply tell someone he or she is wrong or make them feel guilty. Second, be human. Do not be afraid to show that you are vulnerable, afraid, excited; find your voice. Worry, interest and hope were the strongest words associated with people who are concerned about climate change. Tell personal stories about your direct observations and experiences in nature to which your audience can relate. However, do not feed into fear. Fear paralyzes and disempowers, fear makes people think there is nothing they can do.

Third, be prepared for everything but do not take what comes personally. Understand how everyone is shaped by his or her emotions and cultural experience. Know when to be silent or walk away. Fourth and last, focus on what is most important: pathways to solutions. Talk about the economic benefits of growing clean energy sources: “Aren’t great new jobs already coming out of our demands for change?” Most people care if they do not personally know how to effect change.

Golden View Meets FLOW

By Jerry Donohue

A key part of the California State Parks Foundation grant the Amigos recently received was creating curriculum for the FLOW program that was suitable for Kindergarten through 5th grade students. Another key part of the California State Parks Foundation grant was to bring new students to State Parks and Beaches. Once the new curriculum was completed, we then needed to enlist teachers who would bring their students on a FLOW Field Trip. Last summer the Amigos held an Educators Day workshop to introduce teachers to FLOW and our wetland tours. It was there we met Monica Hines, a second grade teacher from Golden View Elementary School in Huntington Beach. Monica was especially interested in the FLOW program since she wanted to integrate microscopes into her environmental science curriculum.



Golden View is a K-5 Environmental Science School. They have a 2.5 acre farm which has chickens, rabbits and a goat. Each class also has a designated garden bed to grow produce. This seemed the ideal school to be the first elementary school to participate in FLOW. Monica Hine's interest in FLOW bloomed into four busloads totaling 190 students who spent three days in November and December visiting the Bolsa Chica Ecological Reserve and Bolsa Chica State Beach on FLOW Field Trips.

These young students participated in the FLOW program identifying phytoplankton and testing water quality. Water quality testing allowed students to use nets to collect plankton during their mini tour of the wetlands. Back at the State Beach Visitor Center, students looked through microscopes and circled corresponding plankton on their worksheets. With

chemical tests they determined what nutrient levels (phosphates, nitrates and ammonia) were present in the water during the fall time frame. The Amigos plans to visit the campus in the spring and bring microscopes and water chemistry gear along with spring water samples to determine seasonal change.



The Amigos has been eager to partner with more local schools hoping that their proximity to the Bolsa Chica would elicit greater participation in our education programs as well as greater environmental awareness in the community. We look forward to a long term relationship with this remarkable school.



Third grade students from Golden View Elementary in Huntington Beach received lessons in microscopy, a mini wetland tour, and became the first K-5th grade students to participate in FLOW. Photos by Monica Hines.



Girl Scout STEM Expo

By Daryth Morrissey



Amigos de Bolsa Chica was honored to participate again this year in the Girl Scouts of Orange County STEM Expo at California State University Fullerton on Sunday, November 17. In case you are unfamiliar with the acronym “STEM”, it stands for Science, Technology, Engineering, and Mathematics. This 4th annual Expo was jointly coordinated with CSUF’s College of Engineering and Computer Science, the Association of Computing Machinery-Women (ACM-W) and the Girl Scouts of Orange County.

Amigos was one of 31 external organizations selected to host a table activity along with 13 clubs from Cal State Fullerton. There were three Computer Science Clubs, eight Engineering Clubs, and two Science Clubs. Some of the Companies/Organizations present were: Northrop Grumman, Bionerds, Kaiser Permanente, OC Crime Lab, Neuropsychology-Loma Linda, Society of Women Engineers, Aquarium of the Pacific, Cyber Youth Tech, and The Energy Coalition. The Titan Hall was alive with activities! Drones were flying, robotic cars were built, catapults launched marshmallows, and video games were being created. The event was at capacity, attended by 400 excited, engaged, enthusiastic and inquisitive Girl Scouts!

Amigos did a section of the FLOW Program. We had recent water samples collected from the Tidal Inlet, microscopes, and take away plankton sheets that the girls could write on and circle the kind of plankton they identified. We had Snowy Plover bookmarks, flyers explaining our FLOW Program and registration process for the leaders, copies of the most recent Tern Tide, and Junior Naturalist booklets from the American Cetacean Society-OC Chapter.

Two science teachers, Jerry Donohue (retired) and myself (currently working) volunteered to represent

Amigos. I also was a speaker for the Career Corner where I spoke about my STEM volunteer activities. The biggest thrill for both of these teachers was to see the level of interest in all of the table events. Science was not a new adventure; the girls came with their well-developed academic vocabulary and prior knowledge to build on while they all experienced this Expo. As teachers, our hearts were bursting. These girls have an incredible future ahead!



Jerry Donohue and Daryth Morrissey at the Orange County Girl Scouts STEM Expo in November..

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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.

Thank You to Our Generous Supporters!

We have had excellent response to our year-end appeal letter, and as of December 18, we want to say thank you to the following supporters who wish to be recognized in the Tern Tide:

Al Vari, Bob Mandic, Terry & John Hill, Ed Zschoche, Bob Hogan, Trude Hurd, Ed Harnby, Thelma Teitel, Lawrence Parmeter, RHS Enterprises, Terri Taylor, Maria Buhbe, Florence Purdy, Sheila Harlow, Susan Hardgrave, Emily Renzel, Thomas Anderson, Dr. Melvyn & Patricia Sterling, Vic Leipzig, Brian Brady,

Nancy Boyd-Batstone, Peter Knapp, Thomas Greeley, Winona Gustafson, Mike & Barbara Sentovich, Marilyn Rowe and Jerry and Lori Donohue.

Thank you - the Amigos de Bolsa Chica cannot continue with out you!

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The Amigos also participated in various community events and produced several educational events with the following volunteers:

- Amigos Naturalist Class: Presenters and facilitators were Brian Westcott, Bill Stern, Kelly O'Reilly, Kim DiPasquale, Elissa Warantz, Jim Robins, Matthew Teutimez, Jerry Donohue, Dr. Vic Leipzig, Jennifer Robins, Jill Lemon and Thomas Anderson.
- Bolsa Chica Earth Day: Kim DiPasquale, Chuck Drescher, Cat Navetta, Bill Stern, Tom Pfeifer, Zion Pfeifer, Daryth Morrissey, Jim Robins, Jennifer Robins, Judy Huck, Cory Butler and Tom Pfeifer's environmental studies students.
- Earth Day at Golden West College: Jim and Jennifer Robins.
- Fountain Valley High School STEAM Fair: Tom Pfeifer, Nancy Curtis, Monica Gonzalez, Linda Fillet, Daniel Fillet, Jerry Donohue, Jim Robins, Jennifer Robins, Zion Pfeifer, Tom Pfeifer's environmental studies students.
- Educator's Day: Kim DiPasquale, Jill Lemon, Linda Fillet, Jerry Donohue, Jim and Jennifer Robins.
- Girl Scout Conference: Jim and Jennifer Robins, Jerry Donohue and Nancy Boyd-Batstone.
- Golden West College Science Night: Jerry Donohue, Daryth Morrissey, Jennifer Robins and Jill Lemon.
- California Coastal Cleanup: Jim and Jennifer Robins, Nancy Boyd-Batstone, Sharon Von Dollen (and husband) and Elissa Warantz.
- Girl Scout STEM Expo at Cal State Fullerton: Jerry Donohue and Daryth Morrissey.
- Amigos Naturalist Nights at the State Beach Visitor Center: Kim DiPasquale, facillitator; Dr. Vic Leipzig, Dr. Christine Whitcraft and Joana Tavares, presenters.



Goldenwest College's annual Science Night is one of several local community events to which the Amigos take a portable version of the FLOW Program and it is always popular. Photos by Daryth Morrissey.



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THE TERN TIDE

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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