On July 21, 2015, FFMR was invited to attend one of State Senator Jerry Hill’s “Java with Jerry” events held at Caffé Mezzaluna in Princeton. FFMR President Tom Ciotti had received a telephone call several weeks earlier from Sen. Hill’s office indicating FFMR had been selected to receive the award and inviting FFMR members to attend the event. (Note: The “Java with Jerry” events are held to give citizens an opportunity to speak directly to the senator and have questions and issues addressed by him in person.)

FFMR was represented by President Tom Ciotti and board members Karen Madsen and Linda Ciotti. Ranger Kevin Scott from the San Mateo County Parks Department was also in attendance.

Senator Hill asked President Tom Ciotti to come up and receive the State Senate Certificate of Recognition Community Champion Award. We were honored to meet Senator Hill and proud to receive this honor.

Congratulations to the Friends of the Fitzgerald Marine Reserve who have worked tirelessly to educate student groups and other visitors about the reserve in Moss Beach. In the process, they have emphasized the importance of preserving and protecting natural habitats here in San Mateo County so they can be enjoyed for generations to come.

In 2014 naturalists and other volunteers contributed 4500 hours to the San Mateo County Parks.

I applaud the Friends of the Fitzgerald Marine Reserve for their strong commitment to the San Mateo County Coastside and I am proud to name them a recipient of the Community Champion Award for the 13th Senate District.

Signed Jerry Hill
Senator, 13th District

Tom Ciotti, Senator Hill and Linda Ciotti
El Niño: What Can We Expect?

by Sasha Greenawalt and Janet Pelinka

El Niño, “the little boy” in Spanish, is a reference to the Christ child. Fishermen in South America gave that name to the disappearance of fish every three to seven years at Christmastime. Scientists now know why the fish disappeared. And the phenomenon is still called El Niño.

This phenomenon is keeping climate scientists guessing. This past March the prediction was that the El Niño forming then was too weak and too late to have much impact on North America. Then the patterns used to predict an El Niño’s occurrence and strength changed; they appeared to be similar to those that led to the development of the 1997-1998 El Niño, the strongest recorded in decades. Scientists remain cautious. In an August 14 interview, William Patzert, a NASA climatologist, said there is a main piece missing from the current patterns: a relaxation of trade winds in the central and western Pacific. Michelle L’Heureux, the lead of the El Niño forecasting team at the National Oceanic and Atmospheric Administration (NOAA), says “There is some predictability in the common features that arise with El Niño, which is why we can make forecasts of it, but it won’t be exactly the same every time.”

NOAA forecasters predict a 90% chance of an El Niño that will continue all winter and an 85% chance that it will last into early spring.

Some common features that scientists monitor are a weakening or change in direction of tropical trade winds, a change in sea surface temperatures in the Pacific Ocean, a change in sea level, and a shift in surface air pressure. In non-El Niño conditions, tropical trade winds blow from east to west across the Pacific Ocean, away from South America, moving warm water with them. This movement results in a pile-up of warm water near Indonesia and the Philippines. An El Niño begins when these trade winds slacken or reverse direction, and warm water moves from the western Pacific towards the east in deep waves. As the warm water piles up there, it suppresses the natural upwelling that usually keeps waters cooler along the Pacific coasts of the Americas. To forecast an El Niño, scientists monitor the temperatures in the upper 200 meters (656 feet) of the ocean, looking for a temperature shift from the western Pacific to the eastern Pacific. They also measure velocity and direction of the trade winds. To determine a change in air pressure, the Southern Oscillation Index is followed. This index measures the changes in surface air pressure between Darwin, Australia and Tahiti. During the development of an El Niño the pressure at Tahiti, normally higher than at Darwin, becomes lower.

The graph displayed across the page bottoms shows tides for 8/31/15 to 1/17/16. Where the date appears is midnight. The reefs are accessible for exploring during low tides—at least +1 or below. See: http://fitzgeraldreserve.org/resources.

Beginning in October, the summer morning tides change to afternoon/evening tides. There are almost equally low tides several days before and several days after the noted low tide dates.

The lowest tides this period are:

-0.36 9/30 7:10 pm
-1.03 10/28 6:02 pm
-1.34 11/26 4:48 pm
-0.82 12/12 5:14 pm
-1.20 12/25 4:35 pm
-0.96 1/10 4:56 pm
A shift in the Pacific Decadal Oscillation (PDO) could also affect the development of an El Niño. PDO, a rise and fall of Pacific Ocean heights and temperatures, changes approximately every 20 to 30 years. Collected ocean and atmospheric data have led scientists to think that we have just entered the ‘cool’ phase. In this phase,

An El Niño begins when these [east to west] trade winds slacken or reverse direction, and warm water moves from the western Pacific towards the east in deep waves. As the warm water piles up there, it suppresses the natural upwelling that usually keeps waters cooler along the Pacific coasts of the Americas.

there is a wedge of lower-than-normal surface heights and temperatures in the eastern equatorial Pacific and a warm horseshoe pattern of higher-than-normal surface heights connecting the north, west and southern Pacific. In the 1977-1999 ‘warm’ phase the opposite effect occurred.

Many discussions of El Niño include a reference to the Blob, a large mass of unusually warm water in the Pacific Ocean off the coast of North America. It first appeared near Alaska in 2013 and now measures approximately 1000 miles wide, 1000 miles long and 300 feet deep. “Just the enormous magnitude of this anomaly is what’s incredible,” states Art Miller, an oceanographer at the Scripps Institute of Oceanography. Temperatures of the warmest areas of the Blob are around 5°F above average. “They’re just so far off the mean that they’re shocking,” says Miller. The effect of the Blob on El Niño is unknown. One thought is that the onset of El Niño could temporarily be weakened by this anomaly. This continually evolving mass has been split in two by the seasonal upwelling of cooler water in Northern California.

So what can we expect? A weak El Niño may bring disappointment to those who are hoping for relief from drought conditions in the western U.S. In a strong El Niño, as explained on NOAA’s El Niño Theme Page, warm waters shifting east bring rainstorms with them. The eastward displacement of the atmospheric heat source overlaying the warmest water results in large changes in the global atmospheric circulation, which in turn force changes in weather all over the planet: drier, warmer weather in the Pacific Northwest; cooler and wetter weather in the southern U.S., Peru, Chile and Ecuador; a colder, drier winter in northern Europe; a milder, wetter winter in southern Europe. There can also be flooding in other parts of South America along with droughts in southeastern Africa, South Asia, Indonesia and Australia. Central and southern California could experience disastrous floods and mudslides.

Because an El Niño cuts off the upwelling of cold water from lower levels of the ocean, and the distribution of nutrients along with it, the entire oceanic food chain is affected: the fish either die or migrate north or south into areas where there is more food. Sea birds either die or migrate.

NOAA forecasters predict a 90% chance of an El Niño that will continue all winter and an 85% chance that it will last into early spring. “We have not seen a signal like this in the tropical Pacific since 1997,” says NASA’s Patzert. “It’s no sure bet that we will have a strong El Niño, but the signal is getting stronger. What happens in August through October should make or break this event.”

Temperatures of the warmest areas of the Blob are around 5°F above average. “They’re just so far off the mean that they’re shocking,” says Miller.
Massive, dense, widespread, deep, flourishing, persistent—words used to describe the toxic algal bloom that stretches from Santa Barbara to Washington state and possibly to Alaska, and in some places in the ocean is up to 40 miles wide and 650 feet deep. “This is unprecedented in terms of the extent and magnitude of this harmful algal bloom and the warm water conditions we’re seeing offshore,” says Vera Trainer, manager of the Marine Microbes and Toxins Program at the Northwest Fisheries Science Center in Seattle.

Trainer has been studying algal blooms for 20 years and says this is the worst she has seen. “Harmful algal blooms have usually been limited to one area of the ocean or another, and have disappeared after a few weeks. This one has grown for months, waxing and waning but never going away.” Raphael Kudela, professor of ocean sciences at the University of California, Santa Cruz, describes it this way: “It’s incredibly thick, almost all the same organism. Looks like a layer of hay. “

Unlike blooms that occur in lakes and bays as a result of agricultural runoff, this bloom is created by phytoplankton (free-floating, single-celled plants) flourishing from high concentrations of nutrients driven up from deep in the ocean by changes in ocean currents and climates. While phytoplankton generally sustain the aquatic food web, some species in the diatom genus—namely *Pseudo-nitzxia australis* and *Pseudo-nitzsia multiseries* in California’s waters—generate a neurotoxin known as domoic acid. The toxin works its way up the food chain, and its bioaccumulation can have devastating effects on marine mammals, birds and humans, causing seizures and degeneration of the hippocampus, the part of the brain responsible for memory.

Concern for human health has already led to the closure of more than half of Washington’s coast to Dungeness crab fishing, effectively bringing a premature end to the season for the $20 million industry.

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Hoping to form a clearer picture of its cause, a team of research analysts aboard a National Oceanic and Atmospheric Administration (NOAA) research vessel is mapping the bloom from San Diego to Alaska. “We think it’s just sitting and lingering out there,” said Anthony Odell from the University of Washington. “It’s further offshore, but it’s still there. Some analysts think there may be a connection to the Blob, the large patch of exceptionally warm water sitting in the Pacific Ocean (see this issue’s El Niño article). NOAA expects to complete its surveys by the end of September.

It is not clear if all of this is related to global climate change. NOAA spokesman Michael Misbin says that if climate change progresses as it is projected to, this type of event is more likely to occur. And Pat Gilbert, professor at Horn Point Laboratory, University of Maryland Center for Environmental Science, was quoted in an August 5, 2014 *Seattle Times* article as saying, “There’s no question that we’re seeing more algal blooms more often, in more places; when they do occur, they’re lasting longer and often over greater geographical areas. We’re seeing more events than documented decades ago.”

Some analysts are considering a correlation between El Niño and unusually large algal blooms. The last extensive algal bloom occurred in 1998, also the year of an El Niño that pushed warmer waters nearer the West Coast. That El Niño was one of the strongest recorded in decades. Considering NOAA’s prediction that the present El Niño conditions have a 90% chance to continue through the 2015 to 2016 winter in the northern hemisphere and an 85% chance to last into spring, the algal bloom could indeed return next summer as an even stronger event.
Scholarships Awarded
by Susan Evans

On the evening of May 28, 2015, the Friends of Fitzgerald Marine Reserve gave $5000 scholarships to three HMB High School seniors. The students had attended science classes taught by Joseph Centoni, who had replaced the retiring science teacher, Bob Breen, in 2004.

The scholarships were officially named The Bob Breen Memorial Science Scholarships Awards and we were very fortunate to have Bob’s two sons, Michael and Matt, present to present the awards.

The three students and their majors are:
• Brenna Carroll, who will attend the University of Hawaii at Manoa. She will double major in Global Environmental Science and Marine Biology.
• Pace Farbstein, who will attend UC Santa Barbara and major in Environmental Science.
• Marianne Rogers, who will attend Cal Poly at San Luis Obispo and major in Animal Science and Marine Biology.

When asked about long term goals, the recipients replied:
– Brenna Carroll: My long term goal is to go to graduate school as a Biological Oceanography major and ultimately do fieldwork studying the effects of climate change on planktonic organisms. I am especially interested in microbiology. I am really interested and invested in the ocean because of my proximity to it! I moved here from Georgia, so the ocean was a mystery to me until I was placed right in front of it. The sea along with the great opportunities in school really allowed me to learn, thrive and develop my passion for marine life. It’s a great unsolved mystery. (Brenna took the FFMR Volunteer Naturalist Training Class in 2014).
– Pace Farbstein: Pace currently plans to focus on energy, sustainability and society. He wants to pursue a Master’s degree in sustainability and continue towards a Ph.D. and hopefully become a Professor of alternative energy sources. An alternate plan (after getting his Master’s degree) is to specialize in hydrogen cell vehicles (which could be the future of clean energy transportation).
– Marianne Rogers: Marianne was admitted to Cal Poly as an animal science major, but hopes to double major or at least minor in marine biology. Animals have been central to her life; she feels they have much to teach us. She would like to find hands-on work with people and animals, helping both. She wants to follow her passion for helping, protecting and understanding animals and she envisions practicing and sharing therapeutic and psychological techniques involving animals or working in a foreign country treating diseased animals. She has always enjoyed tidepooling around local beaches, and taking the marine biology class her senior year increased her awe for our ocean as a delicate masterpiece with a great array of undiscovered wonder and untapped resources.

Joseph Centoni reported that all three students were exceptionally excited and honored to receive the scholarships. Congratulations to three very special and deserving students! •

Friends of Fitzgerald Marine Reserve
Membership Secretary, P.O. Box 669, Moss Beach, CA 94038, or through our website: www.fitzgeraldreserve.org

Contribution Levels: Name ________________________________
$25  $100  $1000
$50  $500  Other __________________________
I want to double the value of my gift through my employer’s matching gift program (please enclose the matching gift forms).

City ____________________________ State ________ Zip ________
Email ________________________________

www.fitzgeraldreserve.org • September 2015 5
Learn and Grow ~ Junior Naturalists’ Summer Camp

by Kathleen Hayes

August 3, 2015 marked the second anniversary of the rebirth of the Junior Naturalists’ Program at Fitzgerald Marine Reserve. The program, originally started by Bob Breen, is for children 8-12 years old. The camp lasts one week and fully immerses the attendees in all that the reserve has to offer. It is the mission of the camp to educate the children about their surroundings and inspire them to protect and preserve the environment.

The camp program this year varied from last year’s based on valuable lessons learned. This year campers stayed longer than the previous year. They arrived at 10am and left at 3pm covered in sand, glitter, feathers and smiles. The demographics of this year’s camp varied also. One attendee came from as far away as Sacramento! Others came daily from Palo Alto, Brisbane, Pacifica and San Mateo.

Each day followed a structure that included learning via lecture or workbook, competing in sports and scavenger hunts, and exploring the tide pools and Cypress Grove. There was a special Ranger “Power Hour” where Ranger Katherine Wright put her interpretive degree to good use engaging the children in lessons on wildflowers, seals, shorebirds and more.

Each day had a specific theme. Day One’s focus was on tide pools, as we had a negative tide that day. The children headed to the pools immediately upon arrival. They were all given journals to write and draw in, and they were put into groups of five and assigned a special volunteer docent. The Junior Naturalists loved this first exposure to the sea and many saw chitons and sculpins for their first time ever!

Seaweed and seals were the focus of Day Two. Junior Naturalists arrived at the reserve and immediately headed to the massive beach rack of seaweed at Seal Cove. The Junior Naturalists broke into their house teams and ran up and down the beach collecting different species of algae to drop at the feet of their team leader. They then identified the different types of seaweed with the aid of their leader and some handy field guides. House points were awarded to the team with the most varied species and most identified species. Day Two closed out with a hugely successful Seaweed Fashion Show! Every single member of camp walked the catwalk adorned in bull whip kelp, seagrass, sargassum and feather boa kelp.

They…immersed themselves in the history of the tribe by first painting their own Talking Sticks, then designing their own costumes and headdresses.

Day Three’s focus was on Ohlone Indians. They…immersed themselves in the history of the tribe by first painting their own Talking Sticks, then designing their own costumes and headdresses.

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Day Three’s focus was on Ohlone Indians. The Junior Naturalists...
studied this nomadic coastal tribe by listening to a lecture and reading through their workbooks. They then immersed themselves in the history of the tribe by first painting their own Talking Sticks, then designing their own costumes and headaddresses. After Ranger Power Hour, where they experienced grinding corn in an authentic mortar bowl just like the Ohlone, they turned to face painting and body painting of their own design and they hit the stage! Each house team performed a skit depicting a day in the life of the Ohlone. The Half Moon Bay Review joined us just in time for the first practice run and our rowdy troupe of Junior Naturalists gave them quite a show!

**Sharks and shorebirds took center stage on Day Four.** Campers cycled through four different stations where they learned about sharks from lecture, workbook and video. They then created a line of shark-themed greeting cards by rolling paint over styrofoam plates that had images of sharks pre-drawn by talented volunteers Maria and Betty Sills. Frivolity and competition were the headliners on the final day of camp. Junior Naturalists created marine-themed mobiles and competed in marine-themed games like Barnacle Buffet and Shark vs Prey. Barnacle Buffet is a tried and true classic game that has campers competing to grab “food” with their feet and then carry that “food” (beanbags) back to their team in relay style. It is hilarious to watch and clearly fun to play.

At the camp’s closing ceremony Linda Ciotti was present to hand out beautiful sea star pins to all attendees. Awards were given to the winning house and all campers left the reserve with their arms full of crafts, cookies, prizes, workbooks, journals and memories to last a lifetime.

Volunteers Brenna, Karen K, Kalla, Sandy, Carol, Karen M, Linda T and Janine were on hand daily to assist with the campers and they were spectacular! (I think they had fun too.)

This year we also got volunteers involved in all of the front-end work that went into prepping for each day’s craft and activity. While I am 100% confident the campers enjoyed their time at the reserve, I am just as confident that this event served as a catalyst for the volunteers to come together, enjoy some quality time with one another and leave knowing they made a difference in a child’s life. We are all looking forward to seeing what next year holds for us!
As dawn was breaking on Friday, July 3, nine devoted FFMR naturalists met at 6:30 AM on the reef at Pillar Point to participate in a nudibranch survey organized quarterly by Julie Walters. The sky was clear and the tide was at -1.23. A new record count was reached—404 nudibranchs were surveyed. The beautiful Hopkins Rose was still in abundance, at times just floating on the water’s surface. Also present in large numbers was the *Hiltoni phidiana*. The most unusual find was a *Crimora coneja*, discovered by Dot Norris in a small pool. Julie thanks all who participated and is planning the last survey of the year to occur around Christmastime. ☀

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**July Nudibranch Count**

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**In Memory of Maryann Danielson**

It is with great sadness that we report the passing of Maryann Danielson on August 5, 2015, at the age of 91. Maryann was Chief of Interpretive Services at the San Mateo County Parks Department when the Fitzgerald Marine Reserve was founded, and she played a key role in establishing educational endeavors at the reserve, including the hiring of Bob Breen. She was a founding member of the Friends of Fitzgerald Marine Reserve Board of Directors and served on that Board for many years. Highly respected in the field of ornithology, Maryann authored the section on birds in *The Natural History of the Fitzgerald Marine Reserve*. ☀
Friends of Fitzgerald Win a Red Ribbon in the 4th of July Parade

There were squeals of delight as the naturalists representing Friends of Fitzgerald Marine Reserve marched in Half Moon Bay’s annual Fourth of July Parade. Our lively King Neptune led the way followed by a beautiful young mermaid riding in an ocean-going wagon. “Oh, look at the starfish,” “I see jellies,” “Hey, that’s a bull-whip kelp,” were some of the many comments sent our way. One person claimed she saw an artichoke, but everyone else seemed to know that there were two sea anemones in our contingent, one green, the other blue.

The enthusiasm projected by the crowd of watchers delighted us as well. One man even asked to have his picture taken with two of our jellyfish. We were even more delighted when we were awarded a second-place, red ribbon. Come join in the fun next year—no costumes required. Crab hats are on hand.

One person claimed she saw an artichoke, but everyone else seemed to know that there were two sea anemones in our contingent, one green, the other blue.
A tiny bird called the red knot and a horseshoe crab the size of a dinner plate—strange bedfellows? Not really. The unusual relationship between the two animals is critical to the survival of each of them. In this book Deborah Cramer, a visiting scholar at MIT who writes and gives lectures about science, nature, and the environment, tells us why this is so. But that relationship is merely a part of this astonishing story.

It began on the beaches of Delaware Bay around midnight. Cramer expected to see a few horseshoe crabs coming ashore to spawn as she had in her home in Massachusetts. What she saw surprised her, thousands of horseshoe crabs emerging from the water to lay their eggs and returning to the sea on the next outgoing tide. The following day she observed thousands of migrating shorebirds, among them a few thousand sandpipers called the red knot, named thus because of the female’s breeding plumage—a cinnamon colored face, throat and breast. They were frantically feeding on the horseshoe crab eggs. Her interest peaked by this scene, Cramer set out to follow the migration of this small bird (Calidris canutus rufa), from the southern-most tip of South America to the Arctic, a journey that covers 9500 miles.

Writing in lucid, accessible prose, she proves an able guide. Her trek begins in Tierra del Fuego, which she describes as the “uttermost end of the earth,” the red knot’s wintering site. She describes her situation there: “As would happen so many times during this trip, and during the year that follows, I find myself in a remote place with landmarks I can’t read, my companions people I barely know.” Guided by experts, she is able to find a few thousand knots feeding on tiny mollusks to fatten up for the next leg of their journey to their breeding grounds in northern Canada.

It is Delaware Bay that is the knot’s most important feeding ground, for it is from here that the bird must embark on the final, 2000-mile long leg of its arduous journey to the Arctic. And it is here that the knot gorges on horseshoe crab eggs that provide enough nourishment to enable the bird to double its weight, a necessity if it is to survive the remainder of its northern migration. Horseshoe crabs come ashore in massive numbers for a very brief time in May to spawn. Cramer describes the scene, “Horseshoe crabs plow through the wet sand like armored tanks. It’s hardly an orderly invasion. Desperate to spawn, they clamber over each other, climb my Wellies, and wedge themselves beneath my tripod, barnacle-laden shells clicking against each other.”

The author spends a good number of pages on the horseshoe crab, its history, its importance and its decline. As one of Earth’s oldest animals these crabs have endured for 485 million years and survived all of Earth’s extinctions, even when 90% of all marine life was extinguished. They have been killed as vermin and used as bait and in fertilizer. A surprising and more recent threat comes from mining of the crab’s blood for use by the biomedical industry in bacterial contamination.
tests. Ironically, the role this ancient mariner plays in the protection of our health is leading to its demise. Government regulations enacted for its protection have been inadequately enforced and challenged in court, and the decline of this food source crucial to the red knot persists.

When the breeding season begins in the Arctic, Cramer is there to look for the red knot nests. In no time she finds that in spite of her intense physical preparation at home she “hadn’t fully anticipated the challenges of walking long distances in bulky layers of clothing, simultaneously managing GPS, radio, binoculars, water bottle, field notebook and gun, without dropping any in the snow. I hadn’t learned how to watch for birds in the sky without tripping on the slippery and uneven ground.” At times she trudges through thigh-deep snow and boot-sucking mud and suffers blistered hands despite slathering them with sunscreen. Cramer’s search for red knot nests proves disappointing even though many of the birds are equipped with tiny radio transmitters. She leaves the Arctic with increased admiration for the red knot, “It seems an almost unimaginable feat of endurance that tiny birds could year after year fly thousands of miles to build nests, incubate eggs, and bring forth a new generation in this harsh, spare landscape at the edges of Earth’s northerly lands, at the other “uttermost end of the earth.”

Officially listed as “endangered” in Canada and “threatened” in the U.S., red knots are indeed threatened with extinction, and a good portion of the book addresses this issue. They face danger from whirling wind turbines, tourism, habitat loss, and pollution. Drought, red tides, shifting shores moved by hurricanes, melting ice and ocean acidification, all of which many scientists attribute to climate change, contribute to the downward spiral of the knots’ population. Cramer offers many suggestions of actions that can be taken to reduce or eliminate these threats. She expresses optimism, saying, “The story of the red knot is a story of loss that turns toward restoration and renewal. It is a story of the tenacity and resilience of birds under terrible pressure making long journeys year after year, even as their homes are diminished and their food grows scarce. As we lose our own bearings, their long flights offer a compass.”

While Deborah Cramer’s frequent diversions are interesting and compelling, some readers may find it difficult to stay focused on the flight path of the red knot. Ultimately, though, many will enjoy the journey, and may discover, as I have, that they have become enamored with this determined little bird. ☻
Like Elvis, Jenna has “left the building”—the FFMR building that is. Will we miss her?

Jenna came to Moss Beach 25 years ago from Madison, Wisconsin, via Beloit College where she majored in science writing. While residing in Moss Beach Jenna pursued a career in technical writing. In 1995 she authored “Seashore Life,” a pocket guide for children 6 to 10 years old. Living on the coastside led Jenna to the wonders of FMR and in 2003 she took the FFMR Docent Training class from Sabbie Hopkins and became a tidepool docent—the start of over a decade of service to FFMR.

In the spring of 2005 Jenna decided to use her formidable writing skills on behalf of FFMR and approached then editor Bart Oxley about writing articles for the Friends’ Between the Tides newsletter. Bart was ecstatic to have someone with Jenna’s writing talent involved with the newsletter and later that year convinced her to assume the role of editor, which he had held for 18 years. Soon after becoming editor of the newsletter, Jenna was asked to join the FFMR Board of Directors.

In addition to serving on the Board and being editor of Between the Tides, Jenna was active in organizing Junior Naturalist summer camps, Family Fun Days at FFMR, Beach Cleanup Days and was an avid and excellent photographer of tidepool life, providing many photos for Between the Tides. In 2010 she became heavily involved in an effort to establish an FFMR website.

In 2013, after successfully getting our website up and running, Jenna resigned from the FFMR Board of Directors in order to attend to ongoing family matters. At the same time Jenna and her husband, Morgan, began to yearn to live someplace where it actually rains and has less hustle and bustle than the Bay Area. But she continued to write articles for Between the Tides, run our website, and be involved in other FFMR activities. In 2014 she taught a memorable algae class at the Junior Naturalist summer camp that featured a seaweed fashion show for the campers.

After some searching and extended visitsations, Jenna and Morgan settled on the Port Townsend, Washington, area as their next home. They spent the summer of 2015 preparing to move north. Before she left, the Ciottis forced Jenna to attend a small going away party with those who had worked with her on the Board, newsletter, and her other FFMR endeavors. Many “Jenna stories” were shared, we had her favorite cake (carrot), and, yes, we all sang “Happy Trails” to her.

You bet we’ll miss her!

Jenna and her husband, Morgan, began to yearn to live someplace where it actually rains and has less hustle and bustle than the Bay Area.

Jenna in several guises: with husband Morgan and dog Boomer, Jenna adorned in a kelp boa helping the 2014 Junior Naturalists explore seaweed, and Jenna in her official Fitzgerald Marine Reserve Volunteer Naturalist garb.
Registration for 2016 FFMR Volunteer Naturalist Training Class

The 2016 FFMR Volunteer Training Class consists of 10 Saturday classes, plus six additional hours spent at the Reserve with a mentor. The classes will be held on the coastside near the Reserve and at the Reserve. The schedule for 2016 is: January 9, 16, 23, 30; February 6, 20, 27; March 5, 12, 19. There is no class February 13 (President’s Day holiday weekend). FFMR will host a graduation party on April 2, so please include that in your schedule of classes. The classes will begin at noon and conclude at 5:00 pm.

Volunteer naturalists must be physically capable to navigate the rocks and reef and must be over 17 years old.

Volunteer Naturalists are required to volunteer a minimum of 6 hours per month during the busy season—January through June—and 4 hours per month July through December.

Space is Limited — Your Registration Form and Fee must be received prior to the deadline to hold a space.

Registration Deadline is December 15, 2015

Mail the completed Registration Form with $65 check made payable to FFMR to:
FFMR Training Class
c/o Karen Madsen
P.O. Box 370648
Montara, CA 94037

Name: _____________________________________________________________

Address: ___________________________________________________________

City: ___________________________ State: ______________ Zip: _____________

Phone: ____________________________

Email: ____________________________

How Did You Hear About FFMR’s Training Class? _______________________

For more information email: volunteer@fitzgeraldreserve.org or check our web site: www.fitzgeraldreserve.org