

BETWEEN *the* TIDES



F r i e n d s o f F i t z g e r a l d M a r i n e R e s e r v e
APRIL 2009

County Seeks Funds for FMR Projects

Three major projects to enhance the visitor's experience are underway at the Fitzgerald Marine Reserve (FMR):

- A giant concrete recreation of a slice of the intertidal environment which can be walked around and touched
- Interpretive signage throughout the reserve featuring bold graphics
- An improved bluff-top-to-beach trail at the Seal Cove entrance

The San Mateo County Department of Parks, working in conjunction with the San Mateo County Parks and Recreation Foundation, plans to raise \$500,000 to complete these key projects in 2009.

Julia Bott, Director of the Foundation, says these three projects were chosen largely because “the planning and permitting phases are very far along or complete. Partial funding for implementation has been secured and additional funding requests are under review.”

Cecily Harris, Financial Services Manager for the San Mateo County Department of Parks, acts as project manager for each of these efforts and will work closely with Julia on funding.

A Super-sized Slice of Intertidal Life

The most ambitious of the three 2009 projects is an Interpretive Reef—a giant sculptural re-creation of a slice of the intertidal environment. The exhibit is designed to invite visitors to explore it with their hands as well as their eyes.

The “Conceptual Plan for Interpretation at Fitzgerald Marine Reserve” established by the San Mateo County Department of Parks calls for an “Outdoor Interpretive Exhibit.” The county hired Mario Chiodo of Chiodo Art Development to design and build the Interpretive Reef. Chiodo has developed a scale model of the project which features boldly colored creatures clinging to rocks, peering from beneath fronds of kelp, and sheltering within cracks and crevices. The model was unveiled in a public comment meeting held in Half Moon Bay in November of 2008 and subsequently displayed at the county parks offices in Redwood City. Most recently it was the centerpiece of a Foundation fundraising kickoff party hosted by FFMR supporters Janine and Jon Miller of Moss Beach.



continued on page 3

A model of the Interpretive Reef.

*The Interpretive Reef
will include*

*...mussels
three feet long*

*...a snail
as big as a rabbit*

*...a crab the
size of a dog*

Friends of Fitzgerald Marine Reserve

P.O. Box 669
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Phone: 650.728.3584
www.fitzgeraldreserve.org

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Steven J. Durkin
Sarah Lenz

Our Mission:

To inspire the preservation of our unique intertidal environment through education and the support of research.

The graph displayed across the page bottoms shows tides for 11/24/08 to 6/22/09. Where the date appears is midnight. The reefs are accessible for exploring only during low tides. See: www.fitzgeraldreserve.org/resources.html and click on "high and low tides," for a more detailed tide chart. **Note:** the lowest tides this period are:

-1.41	4/27	6:58 am
-1.90	5/26	6:47 am
-1.94	6/23	5:46 am
-1.53	7/22	5:28 am
-.93	8/19	4:21 am

FFMR Welcomes New Naturalists

The Friends of Fitzgerald Marine Reserve volunteer naturalist program continues to expand and improve. Please welcome the newest graduates of our naturalist training class to our ranks:

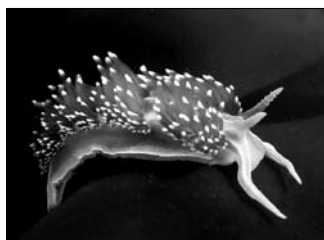
Mike Davis	Matthew Kammerer	Michelle Miller	Linda Theroff
Dave Dewey	Nicole Larson	Jeffery Moebus	Kelsey Urgo
Nina Feero	Alfred Lemaster	Phillip Posk	Jack Vidosh
Kim Flannigan	Michelle Lemaster	Allen Shah	Christina Wilder
Lara Garay	Britta Lorenz	Scott Snow	

Our volunteer naturalists are crucial to the visitor program at the reserve. Naturalists sign up for scheduled tours during which they guide a small group of visitors, or they can rove out on the reef among visitors to answer questions. Especially on weekends and holidays, our reefs are explored by families from all over the Bay Area and tourists from all over the world. One typical year from January to June our naturalists put in 141 volunteer hours of unscheduled tours. Without their help, it would be difficult to ensure a safe and enjoyable experience for reserve visitors.



On weekends and holidays, roving naturalists help educate the visiting public about FMR's precious resources.

FMR on TV in April



John-Albers Mead's striking photo of a hermissenda.

Quest, a 30-minute program that airs weekly on KQED, explores science, the environment, and nature. The April 17th program was devoted to how the Bay Area may be impacted by global climate change. This episode was filmed in part at Fitzgerald Marine Reserve. If you missed this episode, you can find it on their web site: <http://www.kqed.org/quest>, then click on the "Stories" tab to view the previously broadcast stories. You can also view a *Quest* profile of FFMR board member John Albers-Mead and his extraordinary tidepool photos, first aired on Tuesday, November 18, 2008.

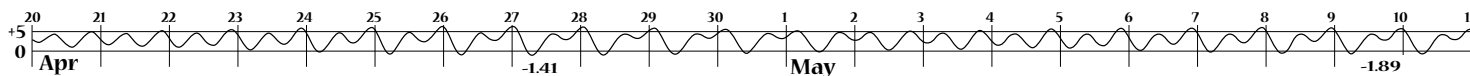


Craig Miller, Senior Editor, KQED Climate Watch filming at Fitzgerald Marine Reserve.

Family Fun Days, but No Junior Rangers

This summer we'll be kicking off our "Family Fun Days." At these weekend events, members of all ages will be invited to share in-depth exploration of topics such as geology, seaweed, and birds with reserve staff and volunteer naturalists. Check our next issue for more information!

We're sorry to report that we won't be offering a Junior Rangers day camp this summer.



FMR Projects *continued*

The full-size Interpretive Reef will resemble three small islands surrounded by a rubberized surface that complies with the Americans with Disabilities Act (ADA) requirements and also meets playground safety standards. Sculpted cement over a steel armature will represent FMR's reef and the plants and animals that inhabit it, but everything will be shown at dozens of times their real-life sizes. California mussels, for example, will measure three feet long, rather than three inches; a snail will be as big as a rabbit; a crab will be the size of a dog. Visitors of all ages will be able to move around and between the islands, which will be six feet tall at the highest point. The structure's total footprint will be about 38 by 16 feet.

County parks staff envision the Interpretive Reef as a gathering place for the introductory talks that volunteer naturalists give to school groups before beginning tours. Julia points out that the accessibility of the Interpretive Reef will make it possible for less able-bodied visitors to share the experience of exploring the tidepools. "I can envision kids coming up from the tidepools and being able to point out to their grandparents what they saw.

The Interpretive Reef is likely to be installed in the vicinity of the parking lot, but its final placement is still undetermined. The county is working on a funding agreement to complete a survey of the main parking lot area and the lot around the ranger station, which Cecily hopes will take place this spring. (Estimated to cost

\$6,000-8,000, the survey will not only identify the placement of the Interpretive Reef, it will also be used in transforming the parking lot into a watershed-friendly demonstration "green" parking lot, a project that has already been granted some funding and should be completed in 2010.)

Once the survey determines possible locations for the Interpretive Reef, Cecily says, "It's a public process. San Mateo County Department of Parks Director Dave Holland plans to hold on-site public meetings when the installation site is chosen. We'll use big sheets of plastic to represent the exhibit's footprint, and posts to indicate how high it will be." The meeting will be announced via mailings and press releases to area newspapers.

The projected total cost of the Interpretive Reef, including its installation, is \$785,000. A National Oceanic and Atmospheric Administration (NOAA) appropriation that the county received in 2008 provides about \$400,000 of that, but to qualify the work must be completed before the end of 2009. To date, about \$30,000 of the NOAA earmark has gone to Chiodo Art Development for the design and the scale model. (More on the NOAA appropriation later in this article.)



The Interpretive Reef will probably be located in the current parking lot. The parking lot itself will become a "green" demonstration project.

County parks staff envision the Interpretive Reef as a gathering place for the introductory talks that volunteer naturalists give to school groups before beginning tours of the reef.

Interpretive Signage Will Greet and Educate Visitors

The Interpretive Signage project will create a set of 17 signs that use engaging pictures and text to explain various aspects of the reserve.

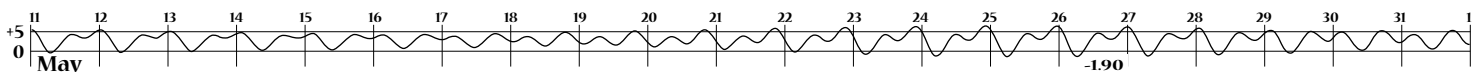
Featuring colorful graphics, the signs will give visitors important information about the reserve. Some will cover rules and regulations; others will provide descriptions of intertidal features, natural phenomenon, plants, birds and animals. They'll play an important role in educating visitors who arrive when volunteer naturalists and staff are not available.

The signs measure 24-by-36 inches and are 1/2-inch thick digitally-printed high-pressure laminate panels. "They last well, they handle UV

exposure well, and replacements will be affordable," says Cecily. The signs will be mounted on aluminum powder-coated black posts and installed with consideration for ADA requirements. Several will be located in the main parking lot, a few others at the Seal Cove entry, a few along the Pillar Point Marsh trail and the Pillar Point bluff, and some at Nye's Overlook. ➤



Interpretive signs will be located throughout the reserve at strategic overlook points along the main trail.





New welcome and regulations signs will be installed at the Seal Cove entrance.



New interpretive signs will replace old ones.



The Seal Cove access trail will undergo improvements that include wider stairs, railings, landings, and interpretive signage.

The committee reviewing the signs includes NOAA scientists, Ranger Steve Durkin, Ranger Sarah Lenz, and FFMR board members Pam Larkin and Mary DeLong.

In April or May there will be a public meeting on the coast where anyone interested can review and comment on full-size printouts of the signs before they are finalized. The meeting will be announced via mailings and press releases to area newspapers.

Funds from the 2008 NOAA earmark have been used to pay Fallon Multimedia the full \$33,505 bill for the design of the signs and the fabrication of most of them. The NOAA appropriation can only be used to pay for one copy of each sign, so the county needs to raise another \$12,000 for multiple copies of the Welcome and Regulations signs, which will be erected at each of the reserve's entries.

Improving Access at the Seal Cove Trail

Since the reserve was established, access to the reef from the Seal Cove entry at the corner of Terrace Avenue and Cypress Avenue in Moss Beach has been via a steep path that runs from bluff-top to beach. Segments of the path are steps carved out of the cliff and shored up with lumber. There are no handrails. During wet weather the path erodes and steps sometimes wash out.

Every summer the FMR rangers and their helpers spend at least a few days repairing the stairs, backfilling washouts and rebuilding steps in anticipation of the visits of thousands of school children who tour the reserve. "The steps are in good shape for this year," Ranger Sarah Lenz reported at the beginning of the 2008-2009 school year. "We put quite a bit of work into them."

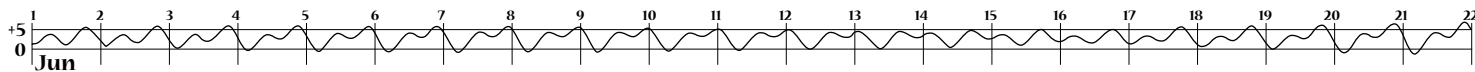
The Seal Cove access has become increasingly important over the last few years. During that time FMR's resident harbor seals have started to rest in shallower areas of the intertidal reef and even right up on the sand. "This is a sign of our success in protecting these animals and making them feel safe and comfortable in their own home," says Ranger Steve Durkin, "but it does make access to the reef tricky sometimes." Federal law prohibits approaching any marine mammal closely enough to alter its behavior, so visitors have increasingly needed to climb down and up the Seal Cove trail to visit the reef without disturbing resting harbor seals.

The county has planned for years to replace the steep path with a better trail that includes segments of stairs with handrails and is wide enough to let people pass each other. In 2008 the county hoped to improve the Seal Cove trail using money from the mitigation financial settlement resulting from the 1998 M/T *Command* oil spill. Those funds paid for the new design and the necessary permits, but proved insufficient to cover the cost of actually building the trail.

The new trail will deviate from the current path from bluff top to beach to correct drainage problems, minimize erosion, and attach soundly to bedrock.

Halfway down, a five-foot-wide gravel walkway will lead to a 6-foot-by-15-foot redwood viewing platform. An interpretive sign will be located at this overlook.

The most innovative feature of the trail will be the lowest section of stairs, which will rest on the beach. Constructed of wood, it is expected to periodically be damaged or even demolished by rough surf. This "sacrificial" staircase section



will be built so that FMR staff can quickly and easily repair and replace it at reasonable cost.

The engineer's estimate for the cost of building the Seal Cove Stairs is \$314,400. Cecily says the county has already applied for a grant from California State Parks that might pay up to half of the cost of building the stairs (as of this writing, the review of the grant is frozen until various state budget issues are resolved) and about \$40,000 remains from the M/T

Command oil spill funds that can be put towards construction. The county will put the job out for bids when the funding is lined up.

Coming Up with \$500,000

As with past projects at the reserve, the \$500,000 needed to complete the Interpretive Reef, the Interpretive Signage project, and the Seal Cove access will come from a mix of public and private sources.

"Julia looks at private dollars. I look at public dollars in the form of grants and other funding," Cecily explains. "Public" means the money comes from some government body—local, county, state, or federal. The grant being reviewed by the State Parks which may provide funds for the Seal Cove Trail is one example of public funding. The NOAA earmark the reserve received in 2008 is another example.

The March 2008 issue of "Between the Tides" described how Fitzgerald Marine Reserve had been granted this federal budget earmark of \$669,750 through NOAA. "The grant did have a variety of cuts and administration charges," Julia notes. Cecily says the final amount received was actually \$424,080.

A little over \$63,000 of the \$424,080 earmark has been spent so far: \$30,000 on the design and



The reserve viewed from the Seal Cove end.

The most innovative feature of the trail will be a "sacrificial" staircase section built so that FMR staff can quickly and easily repair and replace it at reasonable cost.

An Overview

Making The Projects Happen

These sorts of projects aren't simple! A partial list of what is involved:

- Enormous coordination of a variety of private and public funding sources
- Tracking of the multitude of restrictions set on use of funds by each funding source
- Managing and distributing the monies
- Adherence to government regulations
- Planning, meeting and communication coordination
- Surveys
- Requests for proposals from design firms and contractors
- Public input
- Oversight of all the work
- and much more!

Funding

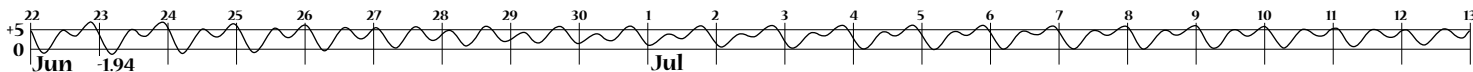
- National Oceanic and Atmospheric Administration (NOAA)
- A mitigation financial settlement resulting from the 1998 M/T *Command* oil spill

Additional necessary funding for these projects as well as several future projects being pursued by and/or from:

- San Mateo County Department of Parks (Dave Holland, Director; Cecily Harris, Financial Services Manager) in conjunction with the San Mateo County Parks and Recreation Foundation (Julia Bott, Director)
- California State Parks
- California State Water Board Area of Special Biological Significance grant
- San Mateo County-Wide Water Pollution Prevention grant
- 2008 *Cosco Busan* oil spill mitigation financial settlement

Others Involved:

- Gulf of the Farallones National Marine Sanctuary (GFNMS)
- Chiodo Art Development: design and building of the Interpretive Reef
- Fallon Multimedia: design of signs and fabrication of most of the signs
- Friends of Fitzgerald Marine Reserve (especially Pam Larkin and Mary DeLong, board members)
- Fitzgerald Marine Reserve staff (especially Rangers Steve Durkin and Sarah Lenz)



...there is a long list of future projects... ranging from vegetation management and creek restoration to building the Interpretive Center and revamping the parking lot into a green demonstration project.

model of the Interpretive Reef, and \$33,505 on the Interpretive Signage project. This leaves less than \$400,000 available. ➤

Since the Seal Cove Stairs project is “shovel-ready,” couldn’t the remaining appropriation funds be used to pay for it?

Unfortunately, funding often comes with constraints, and in the case of the NOAA earmark, there are constraints on what it can be spent on: only interpretive exhibits, not the design of the Interpretive Center itself, nor the building of any structures. There is also the requirement that any projects it funds must be completed by the end of 2009.

“We received the (earmark) funding by working with the GFNMS (Gulf of the Farallones National Marine Sanctuary) to get funds in their budget for an approved program for interpretive exhibits,” says Julia. The Seal Cove trail is not an interpretive exhibit, so the earmark funds cannot be used for its construction.

The NOAA appropriation also cannot be used to hire staff or fund programs. Like most public grants, it must be spent on capital improvements—non-consumable physical assets, such as the Interpretive Reef and the Interpretive Signage. Operations costs, such as staff salaries, vehicle fuel, educational programs, infrastructure maintenance, and other day-to-day operating costs typically cannot be covered by public grants.

The 2009 fundraising campaign for the FMR projects outlined in this article will be driven and administered by Julia and the Parks and Recreation Foundation. Donations will be made directly to the Foundation, rather than to FFMR, and the Foundation will manage the funds. “We track donations in a variety of ways and will keep records of funds dedicated for these projects...Given that most restricted funds are liquidated within a couple of years, our investment strategy is very conservative, basically maintaining funds in insured money market, savings or CD accounts,” Julia says.

Unlike the county, the Foundation raises funds in the private sector, working with corporations, individual donors, and charitable organizations. These donors may put constraints on what their donations are used for; for example, a donor could direct that their money be used for the Seal Cove trail only. But often private funds can be used for daily operations, maintenance, programs, and other non-capital projects.

Cecily says there is a long list of future projects to be implemented at FMR, ranging from vegetation management and creek restoration to building the Interpretive Center and revamping the parking lot into a green demonstration project. Grants already in the works to support these future efforts include a California State Water Board Area of Special Biological Significance grant and a San Mateo County-Wide Water Pollution Prevention grant that will help pay for parking lot improvements.

“We’ve also submitted a long list of projects for consideration for funding from the 2008 *Cosco Busan* oil spill mitigation financial settlement,” Cecily says.

Everyone agrees that raising \$500,000 in a faltering economy is an ambitious goal, but Julia dismisses the possibility of missing the mark. “Our question is how to raise the money to finish these projects...There are a lot of ‘nos’ in the fundraising business,” she concedes, “but the focus is on success.”

FFMR will only play a supporting role in the fundraising efforts. “Implementation of the capital projects is happening and helping the County with that is really the mission of the Foundation,” says Julia. “Our mission statement is more poetic than that but in reality, we fund.”

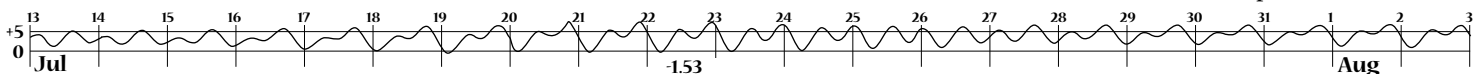
The San Mateo County Parks and Recreation Foundation is a 501(c)(3) charitable organization and contributions are tax-deductible. If you would like to make a contribution to one of these projects, or want to be involved in the fundraising process, you can contact Julia directly at Julia@SupportParks.org or:

San Mateo County Parks Foundation
215 Bay Road
Menlo Park, CA 94025
650.321.5812

If you don’t have the time or interest to get directly involved in the fundraising, but have connections with donors, corporations, or chari-



Pillar Point Marsh is also under the stewardship of the County Department of Parks and will get new signage as well.



Joseph Centoni Fits into Bob Breen's Big Shoes

by Mary DeLong

The Fitzgerald Marine Reserve (FMR) and Half Moon Bay High School have been intertwined since Bob Breen, FMR's first ranger, started teaching marine biology there in 1995. Class started before 7 am, and field trips literally began at the break of dawn, but every year there was a waiting list of students hoping to get into the class.

Many of Bob's former students became involved with FMR after attending college. Ryan Huber and Michael Bass each became Park Aides, for example. And Kelsey Urgo and Matt Kammerer are currently taking the docent training class. But it is Bob's former student Joseph Centoni who really brings this association full circle: Joseph now *teaches* the high school's marine biology class after Bob's retirement last fall.

Joseph grew up in Moss Beach. His family started taking him to FMR as a toddler. They spent many hours looking into the tidepools and discovering all the creatures, and later he attended Junior Ranger Summer Camp.

His family has always been education- and science-orientated. Jeff Centoni, Joseph's father, is currently teaching science at Cunha Middle School, and also taught science at Half Moon Bay High School for many years. His mother, Diane, was a teacher and is now a school administrator in Livermore. His younger brother, Jonathan, is studying marine biology at Humboldt State University.

Joseph was a student in Bob's class during the 1999-2000 school year. Bob says, "He was an outstanding and conscientious student. That year the class participated in the National Ocean Science Bowl held at UC Santa Cruz and had their best showing ever." After graduation Joseph went on to UC Santa Cruz, where he double-majored in environmental sciences and philosophy with a minor in politics.

Joseph's name came up in meetings last year when Bob decided to retire. Everyone thought he would be a great asset to the high school community, and he was hired to teach the marine biology class, which is held twice a week and starts at 6:45 am. "These kids are self-motivated and very involved with the school," Joseph says. "They love to be out in the field."

They take field trips to FMR whenever low tide permits, and go farther afield to such destinations as the Long Marine Lab at UC Santa Cruz and the Monterey Bay Aquarium.

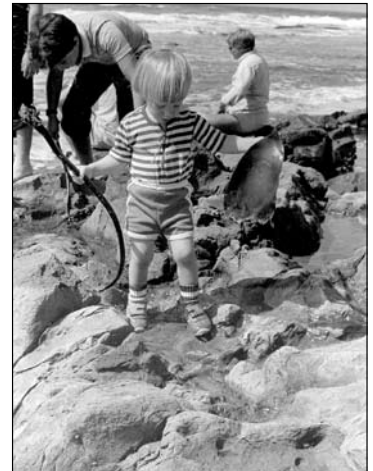
High school student Emily Tucker says, "Mr. Centoni is doing a good job following in Mr. Breen's large footsteps." She says most of her marine biology classmates are college-bound. She hopes to attend UC Santa Cruz and study marine biology or mycology and plants. In May, Joseph's high school students will act as FMR tour guides to three classes of 4th graders from El Granada. Emily is excited to share her new knowledge with younger kids.

In addition to his work at Half Moon Bay High School, Joseph also teaches science to 4th and 5th graders at El Granada Elementary School.

Next year the high school will expand the class to five days a week and hopes to be able to award college credit. The class will start a bit later in

the morning, but there will still be plenty of early morning trips to FMR.

It is wonderful to see this circle of life reflected in the community of the reserve. The Friends of Fitzgerald Marine Reserve wish the best for Joseph and all the budding scientists he is educating at Half Moon Bay High and El Granada Elementary School. ♦



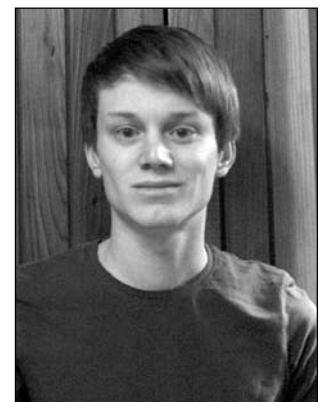
Coming Full Circle

—Joseph, exploring FMR at age 3 (above)

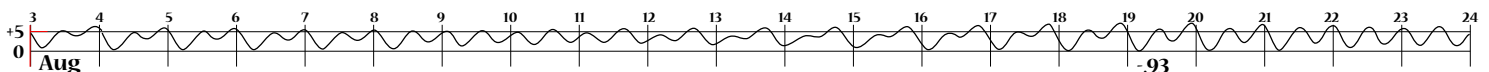
—an FFMR Junior Ranger

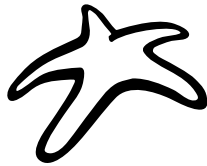
—a student in Bob Breen's marine biology class at HMB High

—now teaching the marine biology class at HMB High



A recent self-portrait of Joseph.



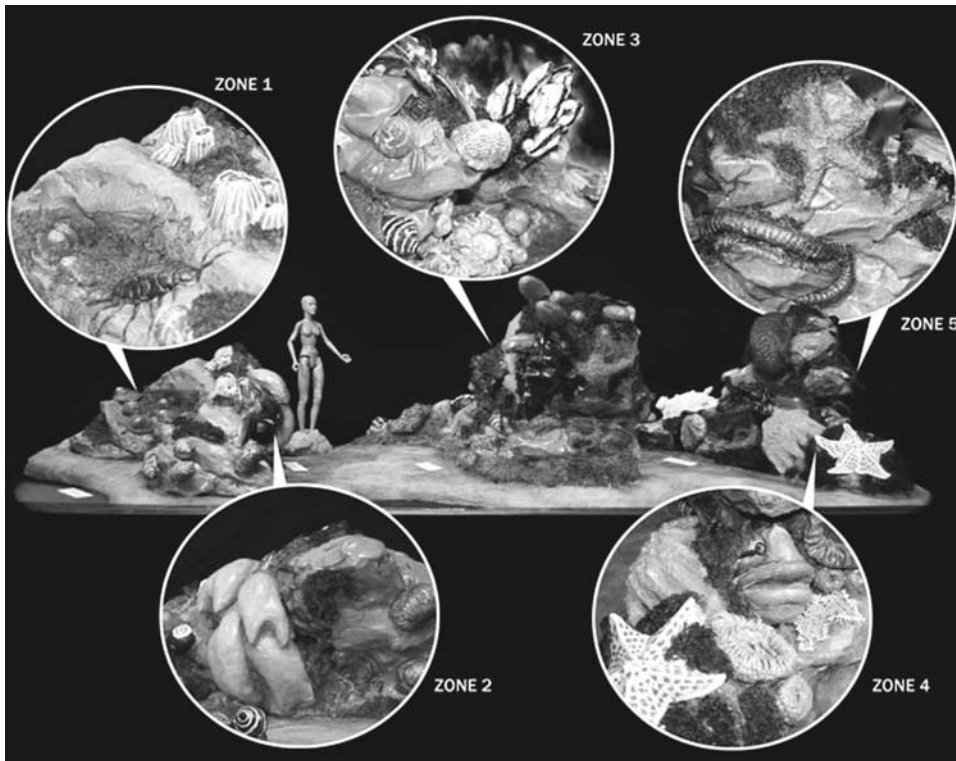


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Interpretive Reef Exhibit

The Outdoor Interpretive Reef Exhibit will represent the low, medium and high tide zones of the Fitzgerald Marine Reserve with plant and animal species authentically colored and located, but dozens of times the actual size.

The exhibit will serve as a gateway to the reserve supporting informal individual and family visits, formal education, as well as launching the tours of docent-led school groups to FMR. Visitors will learn about the hierarchy of the reef from low to high tide inhabitants and learn about the habits of individual species.

*See article beginning on page 1.
Graphic courtesy of San Mateo
County Department of Parks.*

Friends of Fitzgerald Marine Reserve

Membership Secretary, P.O. Box 669, Moss Beach, CA 94038

Contribution Levels:

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 \$50 \$500 Other _____
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 Please contact me about volunteer opportunities.

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City _____ State _____ Zip _____

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