

Bay Lines

MARINE
SCIENCE
INSTITUTE

500 Discovery Parkway
Redwood City, CA 94063-4715



DISCOVERING OUR BAY

Spring
2006

www.sfbaymsi.org

Bottlenose Dolphins in the Bay!

On March 1, 2006, MSI instructors and Atwater High School students aboard the *Brownlee* were treated to a truly rare sight. Two bottlenose dolphins swam up to the boat while in Redwood Creek to send the students off on an unforgettable voyage. They were still swimming around in the creek three hours later when the *Brownlee* returned. No one from MSI had ever seen dolphins this far south in the San Francisco Bay!



Earth Day Festival



MSI held its 6th annual Earth Day Festival on Saturday, April 29th. Over 350 people from around the Bay Area came to celebrate the Earth and the San Francisco Bay with us. Families enjoyed Discovery Voyages, a host of programs on our shore and a performance by the *Banana Slug String Duo*. Thanks to all those that attended for your support of MSI as we strive to bring marine science to life.

Kids come face to face with a bat ray while on our ship on SF Bay

A Strategic Plan

MSI has partnered with the Stanford University Alumni Consulting Team (ACT), a group of Stanford University Graduate School of Business Alumni who are volunteering their time to help create a new strategic plan for MSI. ACT enables alumni volunteers to provide pro-bono management consulting services to the nonprofit community.

ACT's goal for this project is to "work with MSI to develop a strategic plan that guides subsequent decisions regarding programs, funding, facilities, marketing, and staffing. A high-level plan is envisioned, focused on market needs/segments, stakeholder interests, core competencies, and financial requirements. Development of this plan is the first step in fully implementing MSI's vision and mission."

This 6-month program will wrap up in June, when ACT presents its findings to MSI's board. We are thrilled and thankful to have their experience and expertise to help map out the future of MSI.

Meet the Staff

Dennis Rogers — Land Programs Manager

Dennis is a transplant from the East Coast, having grown up in Cape Cod and attending the College of the Atlantic. He came to MSI in 2002 to manage the numerous land programs including Shoresides, Inland Voyages, Tidepools and Science at Shoreline. In his free time, Dennis enjoys surfing, mountain biking, swimming and hiking. He is shown here with his favorite fish — the white sturgeon.



Where'd the Leopard Sharks Go?

Last spring *Bay Lines* reported about the abundance of adult and baby leopard sharks in the South Bay. They seemed to be coming up in just about all of our trawls. This year, however, is a different story.

When the *Brownlee* returned from the Delta in March, we quickly noticed that many of the leopard sharks brought on board were very stiff and stressed. Then by April, there was hardly a leopard shark to be seen at all. At first puzzled by this anomaly, our scientists simply looked to the skies for the answer.

It seemed that just about every day in March and April we were braving cold, rainy days. With all the rain in such a short amount of time this year, fresh water runoff poured into the Bay, causing the salinity to drastically drop down to 8ppt (parts per thousand)! The normal salinity lows for the spring is about 17ppt.

Most likely the stiff shark anomaly was the sharks inability to cope with the sudden drop in salinity from all the rain runoff. Wisely, the leopard sharks migrated north to deeper waters and higher salinities.

We are happy, however, that the crowd-favorite leopard sharks are once again coming up in our trawls as the salinity of the Bay returns to normal.

Science @ Shoreline

This spring MSI will enter its 10th year of offering the students and teachers of the Mountain View/Whisman school district a unique environmental education program. **Science at Shoreline** allows middle school students to act as docents for third grade students visiting Shoreline Park in Mountain View.

This year the students of Mr. Bhattacharya's biology class at Crittenden Middle School are integrating an ecology component into their normal biology curriculum. Not only are the students learning about the unique history and ecology of the estuarine habitat at Shoreline, but they are also gaining valuable teaching skills. Mr. Bhattacharya's students are now ready to share their knowledge and experience of the habitat with elementary students by leading field trips at Shoreline Park. Some field trip dates are still available for third grade classes. Interested teachers can sign up by emailing Dennis Rogers at Dennis@sfbaymsi.org.

Science at Shoreline is the result of a Partnership between ALZA Corporation, Crittenden

Middle School, The Marine Science Institute and The City of Mountain View's Shoreline Park.



Students use telescopes to bird-watch over the salt marsh at Shoreline Park

Translating the Tides

WATER

Water
Graceful untamed sea;
Undulating tides of calm,
Beautiful water.

Sea is temperamental;
Anger blooms beneath the depths,
Forevermore is calm.

Limited survival;
Ecosystem of food chains,
Predator and prey.

Sam Griebstein
4th Grade
Program Funder: Juniper Networks Foundation

New Board Members

We would like to welcome three new members to MSI's Board of Directors — David Chute, Chung Lam and Rick Bradley. We are also pleased to announce that Medea Bern is the new board chair. All come to MSI with a diverse background of expertise that will no doubt benefit our mission. The board is working closely together, and with MSI staff to take our programs to the next level of excellence.

Fun Facts

- ◆ The SF Bay formed a mere 10,000 years ago—only a blip on geographic time scales.
- ◆ The most common sponge in the South Bay is the red beard sponge, which was introduced in the 1940s.
- ◆ Sharks have been around for over 400 million years. To put that in perspective, the dinosaurs lived 65 millions years ago!

Life in the Bay

Plainfin Midshipman — *Porichthys notatus*

If you find yourself bored and looking for something to do this spring or summer, you could always go to a plainfin midshipman symphony – no need to dress formal! Simply drive to Sausalito and sit on the shoreline by all of the house boats. If you're lucky you'll hear the monotonous drone of hundreds of male plainfin midshipman fish humming away in a gleeful attempt to attract females.

But be sure to go at night, because during the day the plainfin midshipman fish tend to spend their time motionless, buried in the muddy bottom. At night, however,

is when the fun starts as they hover just above the Bay's bottom sounding off regular grunts and humming noises



Plainfin midshipmans grow to lengths of 15 inches and can live for at least 7 years.

(Sausalito residents, however, don't always agree about the fun of this symphony).

You might not know it by its unpleasant looks, but this musical novice has other talents. Underlining its mouth and body are rows of photophores that can produce a blue-green light. It is rare, however, for these photophores to light up in the Bay because the water lacks a certain zooplankton (an ostracod) which chemically reacts with the photophores to produce light.

Finally, among its list of notable talents is the ability to breathe air for long periods of time. No one here at MSI is sure exactly how long that is, but it is believed to be up to an hour!

Bay Lines is produced by
Tyler Hammer



THE RAINS ARE ALMOST GONE AND THE SUN IS SHINING – SPRING IS HERE! WE HOPE TO SEE YOU AND YOUR FAMILY AT ONE OF OUR GREAT UPCOMING EVENTS. ONLINE REGISTRATION CAN BE DONE VIA OUR WEBSITE AT WWW.SFBAYMSI.ORG. IF YOU HAVE ANY QUESTIONS, CONTACT TYLER AT 650-364-2760, EXT. 16 OR BY EMAIL AT TYLER@SFBAYMSI.ORG.



CHABOT SPACE & SCIENCE CENTER ADVENTURE DAY

Saturday, May 13th

11:00am ~ 4:00pm

Come explore the final two human frontiers – outer space and the deep ocean – at Chabot Space and Science Center in Oakland (www.chabotspace.org). A MSI naturalist will be on-hand to take you through this amazing facility. First, we will start the day off with an incredible journey into the depths of Earth's oceans for the "The Living Seas" movie in Chabot's 70 foot MegaDome theater. Then be amazed as you travel through our solar system in their state-of-the-art digital planetarium. Finally, you will be free to explore the hundreds of hands-on science exhibits for the rest of the day at your own leisure. Recommended for children 5-12 and adults. Online Registration Required. Cost: \$13/person.

SEASIDE STORY HOUR — ROCKY SHORE INVERTEBRATES

Saturday, May 20th

11:00am ~ 12:00noon

Join MSI for tales of the rocky shore habitat and the critters that call it home. This **FREE** event is held on the third Saturday of every month (except December) at the Redwood City Library's Main Branch on 1044 Middlefield Road in downtown Redwood City.

SEASIDE STORY HOUR — SEA AND SHORE BIRDS

Saturday, June 17th

11:00am ~ 12:00noon

Join an MSI naturalist for stories and an artifact-led discussion about sea and shore birds. This **FREE** event is held on the third Saturday of every month (except December) at the Redwood City Library's Main Branch on 1044 Middlefield Road in downtown Redwood City.

TIDEPOOLING AT HALF MOON BAY

Saturday, June 17th

8:45am ~ 10:45am

It's time to go tidepooling! If you haven't experienced the wonders of Pacific Coast tidepools, this is a must-attend event. Join MSI naturalists at Pillar Point for a guided tour of the Pacific Coast tidepool habitat. Become proficient at finding and identifying rocky shore species as well as learning how they have adapted to live in this ever-changing and challenging environment. Bring the whole family! Children 5 and over welcome. Online Registration Required. Cost: **Free!** (for MSI members only).