BETWEEN the TIDES

Friends of Fitzgerald Marine Reserve

DECEMBER 2008

The Pinniped Affair: Confessions of a Pacific Marine Mammal Center Volunteer

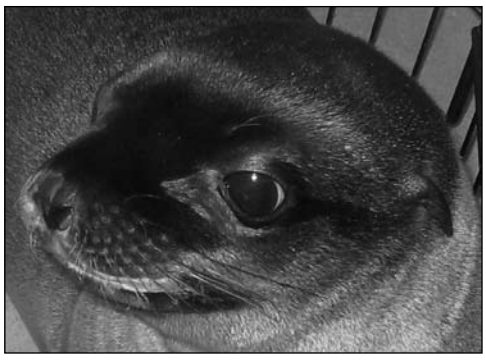
by Suellen Zima
All photos in this article courtesy of PMMC

***Editor's Note**: Suellen Zima is a Friend of Fitzgerald Marine Reserve who lives in southern California. In this essay, Suellen shares some of her experiences as a volunteer with the Pacific Marine Mammal Center (PMMC) in Laguna Beach. -- JK*

Adorable Chauncy

It's hard to believe there was a time I couldn't have even guessed the meaning of the word, "pinniped." Since 2001, I have spent most of my Sunday afternoons in the company of the creatures with that lofty appellation, which is the scientific designation of seals, sea lions, and their kin. I know I'm in love.

Although I can't claim it was love at first sight, there was a definite attraction I felt when I wandered into a marine mammal rescue center in Laguna Beach on my way to somewhere else. As the docent on duty explained facts about the animals I saw that day, she mentioned that she was a volunteer. I actually felt a thrill run through me when she said that. And I signed up. The duties of an animal care volunteer seemed just too energetic and risky given my slow reaction time and no health insurance. But I thought I could handle a docent's job of greeting visitors, explaining about the animals, and doing presentations for groups such as scouts and school children.



Nick

Given the natural patterns of seal and sea lion rescue, the center's busiest time is usually in the spring and early summer. Slower months allow more time to read up on pinnipeds, ask questions of the staff, and just enjoy being in the sun and company of whichever patients we have at the time. Gracie, a beautiful, large, misnamed male Great Egret, usually hangs out nearby waiting opportunistically for fish at feeding time.

I have gone from not having a clue as to the differences between seals and sea lions to telling people how to distinguish our three main groups of patients—sea lions, harbor seals, and elephant seals. I have gotten to know some of the staff, who are also mainly volunteers, and have come to understand why they choose to spend their leisure hours cleaning out pens and risking being bitten by ungrateful patients. I have discovered a different group of people than I had known before.

The patients are named by the rescuers according to the seasons, holidays, where they were rescued, movie heroes, current events, size, and personalities. Sometimes we go through periods of naming them according to themes, such as different types of cheese or fashion designers. *continued on page 3*

Friends of Fitzgerald Marine Reserve

P.O. Box 669
Moss Beach, CA 94038
Phone: 650.728.3584
www.fitzgeraldreserve.org

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:

-1.89	12/13	5:07 pm
-1.69	1/10	4:06 pm
-1.17	2/8	3:49 pm
-1.41	4/27	6:58 am
-1.90	5/26	6:47 am

Board of Directors News

We are sorry to report the resignation of Friends of Fitzgerald Marine Reserve board member Tina Conway.

"She's just been a great benefit to the reserve and the Friends," says Ranger Steve Durkin, citing Tina's Field Trip Foundation and the way she brought the Environmental Volunteers to the reserve.

"She's always given the most dynamic and engaging welcome talk. The kids are always mesmerized by her," Ranger Sarah Lenz adds.

President Mary DeLong says, "Tina pushed us to a new level of professionalism and brought a lot of experience with her own foundation to the board. She was the driving force of our fundraising efforts as well as changing our logo."

Fellow board member Linda Ciotti says, "I will really miss Tina's presence, knowledge, and thoughtful consideration of matters that come before our board. She was on the design committee for the interpretive center and involved in the meetings with the Acorn Group where her judgment and insight were very helpful. She also had really good ideas for the training class and continuing education events. Over the last two years she handled the interpretive techniques and teaching strategies for the training class. Her enthusiasm and past experience with other non-profits was so valuable to the board."

Tina says that her Field Trip Foundation, which provides field trip transportation and support for classrooms in disadvantaged schools, continues to thrive. "We are scheduling our trips now for the elephant seal haul-out in a few months. This season, we will sponsor over 1200 students at Año Nuevo in eight to ten weeks. Scheduling each for a classroom program in advance is always a challenge, but it's a much richer experience for the students when they are well prepared."

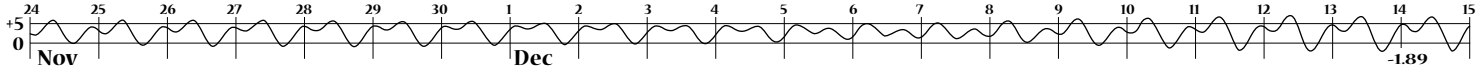
Tina plans to continue volunteering as a naturalist at FMR, so we will continue to see her giving her inspiring "welcome" talk to groups and leading tours on the reef. We want to thank Tina for her years of service as a board member. Her dedication and creativity were an inspiration to us all!

The county parks management team has decided that having rangers sit on the board as voting members is a conflict of interest, so Ranger Steve Durkin and Ranger Sarah Lenz have resigned. They will continue to act in an advisory role. ◆

Coastal Cleanup 2008

More than 63,000 volunteers turned out for the 24th annual California Coastal Cleanup Day on September 20, 2008. They picked up more than 814,154 pounds of trash and an additional 132,277 pounds of recyclable materials at 750 lakes, ocean beaches, inland waterways, and other sites. Locally, county parks staff and Friends of Fitzgerald Marine Reserve volunteers helped sign in clean-up volunteers at the Mirada Surf West/Surfer's Beach area. A total of 60 volunteers worked from 9 a.m. to noon and recovered 500 pounds of trash and another 250 pounds of recycling. ◆

FMR staff help volunteers check in at a past annual Coastal Cleanup.



Pinniped, *continued*

The names are not given to them so we can "talk" to the animals. These are wild creatures, and they will be returned to the wild when healthy again. Bonding to humans is not a goal and definitely not preferable for these animals to whom people usually mean trouble, pain, pollution, and even death. Although some pinnipeds are attacked by sharks and killer whales, their most fearsome enemies both directly and indirectly are humans.

There have been a handful of exceptions to the "no touching, talking, cuddling" rule. These have been sea lion infants whose mothers died from domoic acid poisoning. Following the food chain, algae, small marine plants, are eaten by fish like sardines and anchovies and then in turn are ingested by pregnant females who eat voraciously in the springtime before giving birth in the summer. Why certain types of algae sometimes produce this poisonous domoic acid is still unknown, but research is ongoing. Unfortunately, the toxin accumulates as it moves up the food chain and often these pregnant females suffer permanent brain damage and death as a result.

Since the sea lion mother normally has a close, intimate relationship with her baby for eight to twelve months, the infants simply die without deep bonding. And so we have hand-raised, cuddled, bottle fed, and played with these infants. But, since we are not able to teach them how to survive in the wild, we raise them for about six months and then find a permanent zoo or wildlife park for the rest of their lives.

Over the years, I remember several animals as individual personalities. Summer was brought in looking exactly like the starving sea lion in one of our posters. Every rib poked out of her pathetic body. Parasites and worms had robbed her body of nutrition. Slowly she came back to life again and was returned to the wild looking like a poster sea lion for "happy and healthy."

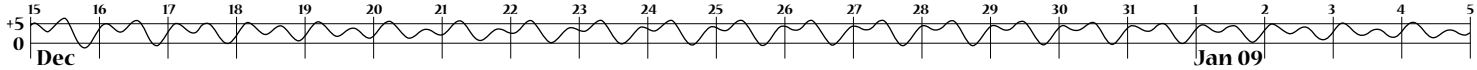
Little Tyke was a harbor seal that lost her mom before she learned how to fish. After being force-fed, she didn't seem interested in learning how to fish for herself. Patiently probing the child psychology of a pinniped's mind, our staff tried various ways of giving fishing lessons to Little Tyke. Eventually, Little Tyke got the hang of swallowing a fish, but had no interest in "catching" it. Since we feed them dead fish that don't move, the staff tied a string to the fish to make it wiggle in the water. Little Tyke became more interested, but was frightened to put her head deep into the water in the big pool. What to try next? A kiddie wading pool was the answer because Little Tyke eventually dared to put her head into the shallow water to scoop up the fish.

Different capture techniques are used during rescues.

Pet crates are used to transport patients to and from rescue and release sites.

Because Little Tyke was so young when she came to us, she stayed a couple of months beyond the usual two or three. After five months, she was released with another harbor seal. Her recollections of the open sea were few and long ago because she had only only spent about two weeks in ➤

JoJo



Nutritious vitamin-enriched seafood "milkshakes" are administered to some patients.

the wild. When she was brought close to the sea, and her kennel door was opened, she only tentatively came out. Overwhelmed, she stuck like glue to her buddy. With several looks back at us with confusion—and did I detect excitement?—she followed her bigger adopted brother. We hoped she'd be as happy, healthy, and well fed as she had been with us. I can't deny a lump in my throat.

But the very first release I saw was the incarnation of pure joy. Three sea lions that had been together for a few months were brought "home" together. When their kennel doors were opened, they literally raced for the sea and kept going and going and going—out and out and out—and, most amazingly, porpoising in absolute synchrony all the way.

The very first release I saw was the incarnation of pure joy . . . When their kennel doors were opened, they literally raced for the sea and kept going and going and going...

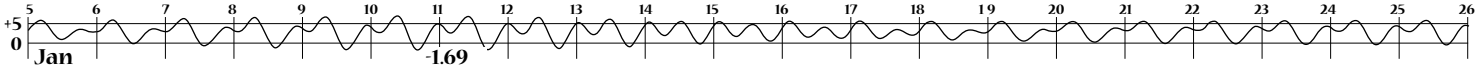
On reflection, our joy was tempered by the thought of the dangers we had sent them out into. Not only could they be killed by storms and sharks, but also by the intentional and unintentional cruelty of humans. Humans have been known to club, gaff, or shoot sea lions that are competing for the same fish. Such was the fate of two magnificent adult male sea lions that were shot in the shoulder, rendering them unable to swim. I watched helplessly as they died from man's inhumanity to animals.

It is not only Walt Disney who

Moonbeam

anthropomorphizes animals into characters we can understand. And yet, watching the seals and sea lions, I can really see many of the same characteristics of humans. Some adjust easily to the unfamiliar surroundings and human caretakers. Some become aggressive. Some passive-aggressively refuse to eat in a show of resistance to their caretakers. Some are playful, curious, and cute. Others behave much like brats and bullies who gang up on weaker members of their own species.

Is it only my imagination when I see dignity and stoicism in the face of a dying animal? Their pain and suffering is universal. Do some know they are dying? Ask the caretaker who had a young sea lion crawl into her lap, put its head on her shoulder, sigh, and die. One might expect this of a trained animal that had ➤



bonded to a human trainer, but our animals are wild and unbonded. We are brought together by their medical needs. While there is no encouragement of bonding, there is definitely communication.

Humans agonize endlessly, politically and morally, about euthanasia, but there is no need for Kevorkians to champion the cause in the veterinary world. It has long been believed that putting animals to "sleep" is humane. At our center, after a sedative is administered, I have watched our staff of caretakers stand protectively around the animal, much like a deathbed vigil, while the solution that will stop its heart is given.

Death is an inescapable consequence of life, whether for a plant, an animal, or a human. This is a reality no one can change. When an animal dies in our care, either naturally or by euthanasia, our veterinarian performs a necropsy. I find it interesting that some of the animal care workers will do anything to keep an animal alive, but once it's dead, they don't watch the necropsy. I feel sad the animal has died, but I am keenly interested in watching the necropsy and learning how much our bodies have in common.

"Just like us," the vet often comments as he cuts, slices, and probes. It is during a necropsy that we can see all too clearly the cancer, the stomachs and intestines clogged with indigestible plastic bags and balloons, fishhooks and lines, and other indications of how humans are destructively changing the environment for all living creatures.

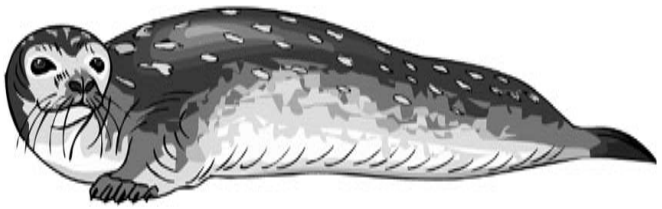
Getting to know the animals and their caretakers has enriched my life in many ways. The pinnipeds led me to study oceanography at our community college. During the oceanography course, I heard some enticing information about Iceland. I chose going to Iceland as my celebration for my 60th birthday. My desire to see whales in the wild strengthened and, in February of 2005, I spent an absolutely incredible afternoon surrounded by gray whales in Baja California, Mexico.

Now that I have mentally entered a watery world more complex than I ever imagined, I envy my pinniped friends who can close their nostrils, hold their breath and dive deep for long periods of time. I envy their grace in the water and their comfort in a world that is so foreign, fascinating, and frightening to me. ◆

Palmer

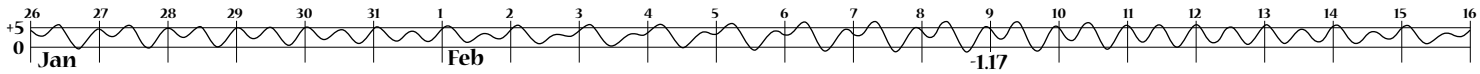
Young people tour the PMMC to learn about the pinnipeds being treated and how they can help preserve ocean life.

. . . watching the seals and sea lions, I see many human characteristics. . . . Some are playful, curious, and cute. Others behave much like brats and bullies who gang up on weaker members of their own species.



About the Pacific Marine Mammal Center

The Pacific Marine Mammal Center is a nonprofit organization in Laguna Beach, California, founded in 1971. Over the years a small paid staff and many dedicated volunteers have rescued, medically rehabilitated, and released hundreds of harbor seals, northern elephant seals, California sea lions, and northern fur seals. The center also performs research and offers outreach programs to increase public awareness of marine mammals and their environment. For more information, go to www.pacificmmc.org.



Salova Comes Back Home

On August 23, 2008, an emaciated male harbor seal pup was rescued from FMR by the Marine Mammal Center (MMC). After several weeks of medical treatment for lungworms *(Otostrongylus)* and malnutrition, Salova was released back into the intertidal zone at FMR on September 12. Unlike most of the rehabilitated pinnipeds released at the reserve, Salova is a member of the colony that calls FMR home. We hope he stays here so that we can all watch him live a long and healthy life.

A small group of volunteers and staff gathered to welcome Salova home.

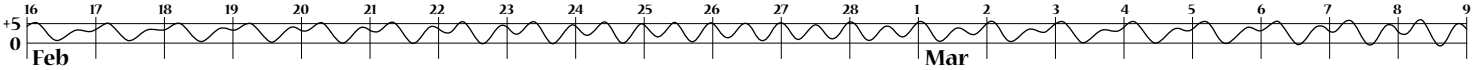
Salova peered through the bars of his crate as Park Aide Dominic Marconi and MMC workers carried him down to the beach.

After examining his new surroundings from his open crate for a few minutes, Salova wiggled cautiously out.

Salova's somewhat ragged appearance was caused by natural molting or sloughing of the fur that happens annually.

Salova plunged right in and swam a few laps around one of our giant tide pools as he settled back in.

Salova's well-wishers moved down toward the waterline to watch him settle in.



Ranger Steve

Ranager Steven J. Durkin's official title is "San Mateo County Department of Parks Park Ranger III." But the supervising park ranger at Fitzgerald Marine Reserve (FMR) is better known as simply "Ranger Steve" to the kids and volunteers he works with. Steve has spent 28 years (five of those part-time) working for the county in eight different units. His first full-time job with the county was working in the Coyote Point Marina, a position for which he took several weeks of training with the U.S. Coast Guard.

"I enjoyed moving from park to park, meeting new people, and learning about new ecosystems," Steve says. He had been working at the Crystal Springs unit for about eight years when he was tapped to work with Bob Breen, then the supervising ranger at Fitzgerald Marine Reserve. "I had the great fortune of working under Bob's guidance for about seven years before he retired."

FMR is exactly where Steve wants to be now; he has formed a deep connection with the reserve and has no intention of moving to any other park unit. "Any given day, I know I may witness something amazing washing ashore." In his years at FMR, Steve has had the opportunity to learn hands-on about a deepwater-dwelling ratfish, a bat ray, a puffin, a giant octopus, and most recently a leatherback turtle (*see related story page 8)*. These encounters usually send him scrambling for reference books to learn more. "There's a sense of wonder and exploration every day I go to work—what's today going to bring?

"Once I noticed a harbor seal at the surface, and it seemed to be eating, behavior I'd not seen before. When I got my binoculars on it, I realized it was holding a tentacle from a giant octopus, clasping the tentacle between its forelimbs, and chewing on it like it had a snowcone."

Steve was raised in Pacifica, one of five kids. "We used to sneak into what is now San Pedro Valley Park to explore and catch snakes and lizards until the farmer who owned it ran us off with a shotgun," Steve recounts with a laugh. "I started volunteering at San Pedro as soon as it became a park, then became a park aide, and finally a ranger." It's fitting that Steve now makes his home in San Pedro Valley Park, where he is the resident ranger.

Much as he loves being a ranger, Steve initially planned to follow in the professional footsteps of his father, who taught high school in San Francisco. Because of his broad interests in science and nature, he studied earth science and geology in college, but ended up cutting his education short to take his first job as a ranger. He has taken various continuing education courses over the years and is one class away from getting a parks management degree.

Steve loves working at FMR in part because it does give him a chance to teach in an amazing natural classroom. "I get to spend about sixty-five percent of my time here doing interpretive work, interacting with kids of all ages, and instilling a sense of stewardship. I love seeing the *ah-ha* moment in a kid's eyes when they get what an amazing place this is. I especially love working with inner-city kids who are thrilled by the new environment and are jazzed by the whole experience." The rest of his work hours are divided between law enforcement and maintenance.

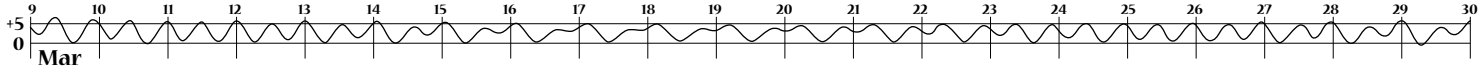
The biggest downside to the job of being supervising park ranger at FMR is the toll that all the time in the field and the manual labor of maintenance takes on his body. "I was a gazelle when I first got here, leaping around on the reef without a care in the world. Now my knees are going!"

Steve's hobbies include photography and playing guitar. He's also a singer, and has performed in choirs, musicals, plays, and recitals. He has been the front man in several bands and enjoys everything from opera to rock-and-roll.

The travel bug has taken him to the Galapagos, New Zealand, and Europe in the past. More recently his strong interest in Asian culture has led him to explore Vietnam, Thailand, Malysia, and Myanmar (Burma). He hopes to travel to the calving lagoons of the gray whales in Baja California, Mexico some time soon.

He lives alone and adores his pug, Nina Boboh, who is named for a figure in an Indonesian fairy tale. ◆

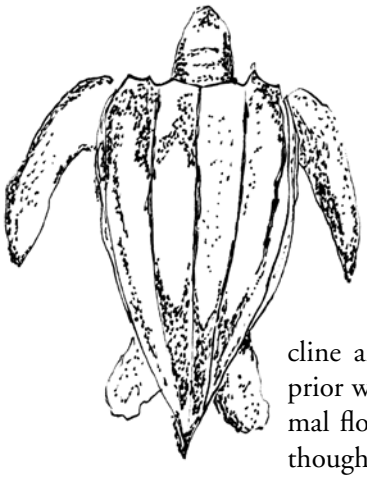
"Once I noticed a harbor seal at the surface, and it seemed to be eating, behavior I'd not seen before. When I got my binoculars on it, I realized it was holding a tentacle from a giant octopus, clasping the tentacle between its fore-limbs, and chewing on it like it had a snowcone."



Leatherback Sea Turtle

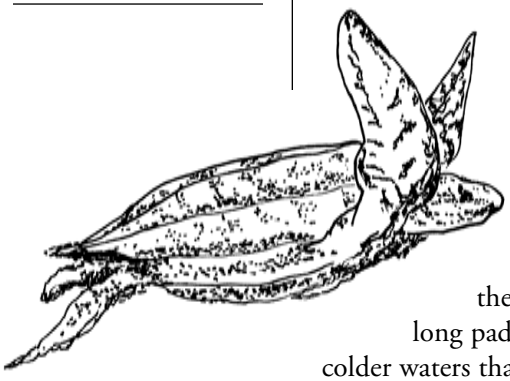
by Sarah Lenz

Art by Kelly Huber · Photos by Jenna Kinghorn



On Sunday September 7, 2008 at 5:30 in the evening I received a startling phone call from two Fitzgerald Marine Reserve park aides: the remains of a leatherback sea turtle had washed into the syncline area and was close to the beach! The prior week Ranger Steve had spotted the animal floating offshore. Dominic and Michael thought that they would be able to pull the deceased and decaying animal ashore. After about an hour of wrestling the huge marine reptile through the crashing surf, the leatherback turtle officially made landfall at Fitzgerald Marine Reserve (FMR). The three of us sat back in awe as we took in the incredibly majestic marine reptile.

Leatherbacks eat their body weight—as much as 2000 pounds—in jellyfish every day!



Unlike the hard shells of other sea turtles, the carapace of the leatherback turtle is made up of thin, interlocking bone-like plates covered with a leathery skin that gives the animal its name. Seven narrow ridges, thought to make it a more efficient swimmer, run the length of its back, and it has long paddle-like flippers. It can tolerate colder waters than other marine reptiles, due in part to its massive size, which can exceed 9 feet in length and 2000 pounds. Dark green or black in color, the turtle is often speckled with white or pink blotches.

Ray Bandar of the California Academy of Sciences and Ranger Sarah Lenz confer over how to handle the beached remains of a leatherback turtle.

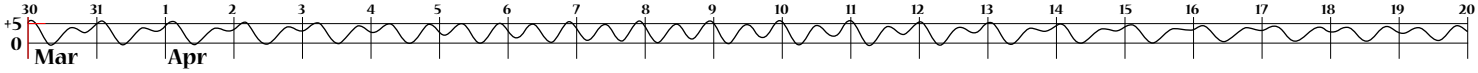
The critically endangered leatherback sea turtle *(Dermochelys coriacea)* that landed at FMR was approximately 76 inches long—over six feet! The cause of death has yet to be determined and may never be known, since the body was in advanced stages of decomposition, although the Marine Mammal Center (MMC) staff collected tissue samples for study.

I never expected to have the opportunity to see inside the mouth of a leatherback but when Ray Bandar from the California Academy of Sciences came to collect the skull we went in for a closer look. Leatherbacks have special adaptations for feeding on their favorite food, jellyfish. We felt the very strong mouth hook that initially grabs the jelly as well as the fleshy triangular protrusions, called *esophageal papillae,* inside of their mouth that extend all the way down their throat. These esophageal papillae help them keep the slippery jellies down.

Leatherbacks eat their body weight—as much as 2000 pounds—in jellyfish every day! They must seek out lots of their favorite prey. Leatherbacks can dive to depths of over 1400 meters and hold their breath for up to one hour while foraging for food. The Gulf of the Farallones National Marine Sanctuary as well as the Monterey Bay National Marine Sanctuary hold large amounts of leatherback food: moon jellies *(Aurelia labiata)* and sea nettle *(Chrysaora fuscescens)*. In fact every year leatherbacks makes a long distance swim to the waters just off our coast to forage.

There are two distinct groups of nesting populations of Pacific leatherback sea turtles. The Eastern Pacific group can be found on select beaches in Costa Rica. Those turtles from Costa Rican stocks migrate south in search of food.

The other Western Pacific group of leatherback turtles nests on beaches in Indonesia and Papua New Guinea. These leatherbacks are the ones that make the 4,000 mile journey across the Pacific Ocean to our rich coastal waters to feed on the abundant supply of jellyfish which can usually be found here just off shore ➤



during the months of August, September, and October. It was only as recently as 2000 that researchers discovered the turtles we see off of our coast are not, as many people had thought, from the stocks in Costa Rica.

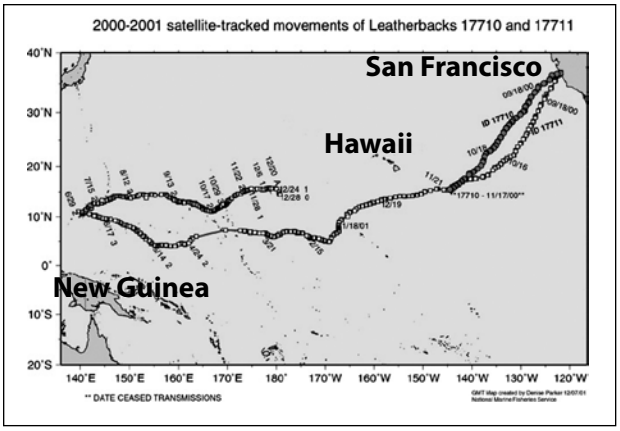
The first leatherback to tell the amazing tale of the Indonesian stock's migration all the way across the Pacific Ocean basin was captured at sea by researchers and scientists in Monterey Bay in September 2000. A satellite transmitter was attached to the female leatherback and off she went for a year, during which she was tracked all the way to the Mariana Trench just north of Papua New Guinea (see map to the right). Ongoing monitoring work continues to find out more about where these amazing marine reptiles go to feed. They are tracked with satellite transmitters that can send back information on location, salinity, temperature, and diving depth for up to two years. National Marine Fisheries Service utilizes the NOAA ship *David Starr Jordan* for research cruises in the continuing study of Leatherback Use of Temperate Habitat (LUTH) along the Central California Coast under chief scientist Scott Benson.

Aerial surveys are conducted in conjunction with the research vessel to help find the elusive marine reptiles. The spotter plane looks for "turtle water" which is dark green to reddish and full of gelatinous zooplankton. The LUTH cruise will help define important foraging habitat for leatherbacks and hopefully lead to protected migration corridors where turtles can have less of a chance of fisheries interaction. The weekly accounts of the 2008 LUTH cruise can be found at: http://swfsc.noaa.gov/prd-luth.aspx.

Life for a juvenile leatherback sea turtle starts deep in a sandy chamber dug out by its mother. An important factor for leatherback population dynamics is that the cooler the temperature of the sandy chamber in which the eggs incubate, the more males are produced. Warmer nest temperatures produce more female leatherbacks.

The nest is on a gently sloped beach free of debris or vegetation that baby turtles might get hung up in during their dash to the water. Most importantly, the site must be free of back lighting from homes or other development, so that the baby turtles can see the glimmer of moonlight on water and be guided in the right direction to reach the ocean.

After approximately two months of incubation in their cool sandy chamber, the small turtles begin to break free of their leathery eggs. In synchronization with each other, approximately 65 to 85 hatchlings struggle free from their eggs. They then rest for a day still under the protective layer of sand and feed on what remains of their egg yolks, getting themselves ready for their climb to the surface.



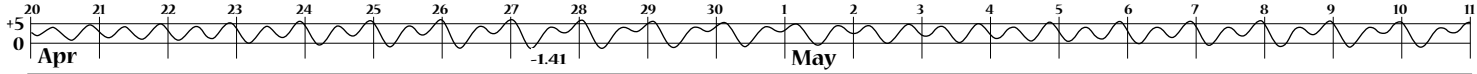
Map of the satellite tracks of two leatherback turtles migrating between the coast of California and Papua New Guinea. Graphic courtesy of NOAA. Read more at swfsc.noaa.gov/textblock.aspx?Division=PRD&ParentMenu.

For the next several days they make an upward migration. It can take anywhere from three to seven days for the hatchlings to reach the surface. When they do reach within a few inches they will stop if it the sand is too hot, as this means it's daylight. Turtle hatchlings do much better if they emerge under the cover of darkness. However even then in the dark of night there are predators lined up on the beach waiting for the newborns to break the surface. Vultures, crabs, night herons and other unfriendly greeters can make a hatchling turtle's time on earth rather short!

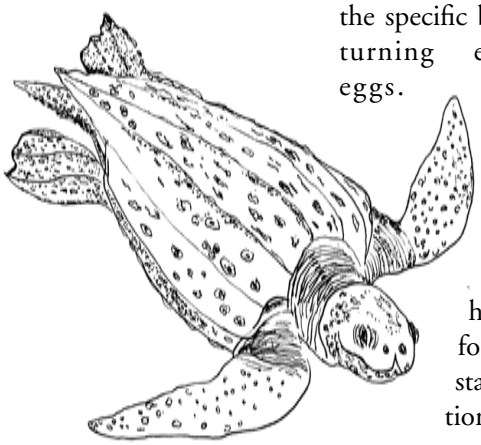
The Western Pacific group of leatherback turtles nests on beaches in Indonesia and Papua New Guinea. These leatherbacks are the ones that make the 4,000 mile journey across the Pacific Ocean to our rich coastal waters to feed on the abundant supply of jellyfish.

For those that do make it to the cool ocean waters, this will be the last time the males feel their body weight on their flippers—they will never touch land again! Only the females, after reaching sexual maturity in approximately 10 to 15 years, will come back to ➤

Ray Bandar and Ranger Sarah Lenz measure the beachcast remains of a leatherback turtle. The specimen, which turned out to be a female tagged by researchers in Monterey Bay in 2003, stretched 80 inches from beak to tail.



Leatherback, *continued*



the specific beach they have imprinted on, returning every two to three years to lay her eggs. Researchers are still trying to learn how long a leatherback can live.

She will start the nesting cycle over: select a sloping beach without too much debris or backlighting, spend up to two hours carefully excavating a chamber for her eggs, and go into a trance-like state while she lays the next generation of leatherback sea turtles.

On October 20, 2008, a second very decayed leatherback carcass washed up on Montara State Beach, and again the cause of death was not readily apparent. This animal had a Passive Integrated Transponder (PIT) tag that identified it as a female, age unknown, first captured and tagged in Monterey Bay on August 29, 2003. According to LUTH chief scientist Scott Benson, "Upon release, she moved southwest and crossed the dateline. Her last known position before the stranding was ~N1:00' / E165:00' after transiting through the islands of Kiribati. She was less than 1000 miles from nesting beaches in the Solomon Islands and about 2000 miles from West Papua beaches when we received her final transmission in April 2004." The surf barely moved her 80-inch-long body on Montara State Beach as a representative of the Marine Mammal Center took tissue samples and Ray Bandar removed her skull.

Ray Bandar opens the mouth of a dead leatherback turtle to reveal the fleshy triangular esophogeal papillae that line the mouth and throat. These papillae help the turtle hang on to its slippery favorite food, jellies.

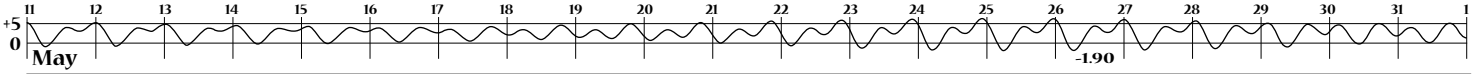
Ray Bandar collects the skull of the second leatherback turtle. Ray routinely collects the skulls of beachcast animals in the area.

These two specimens are not the first deceased leatherbacks to wash up on area beaches. Others arrived in 1970, 1972, 1998, and 2005. Some animals suffered propeller strikes while others were victims of shark attack. Leatherback sea turtles face many perils in their life journey: the nets and hooks of fisheries, egg collecting by humans and wildlife, and loss of habitat. In order to protect these critically endangered marine reptiles many countries and jurisdictions must work together to conserve their nesting habitat, migration habitat, and foraging habitat. One of the most informative books I have read on the species is *Voyage of the Turtle* by Carl Safina. To find out more about turtle preservation and how you can help conservation efforts visit the following sites:

www.topp.org
www.seaturtles.org
www.leatherback.org

On September 25, 2007, I was aboard the RV *Fulmar* close to the shipping channel near San Francisco observing marine sanctuary staff conduct a survey. The water was dark green and full of jellies. When someone yelled out "leatherback," we stopped the vessel and took a short break from our work to take in the sight.

I fumbled with my camera, then decided that it was more important to get my binoculars up and just look. I watched the leatherback for a few seconds until it dove. That was the last we saw of this amazing marine reptile that journeys all the way across the Pacific Ocean basin to feed in our rich coastal waters. ◆



Volunteer Naturalist Training
January 24 – March 7, 2009

Our naturalist training is an incredible opportunity to learn about the ecology, habitats, and adaptations of life in the tide pools.

> *"I enjoyed learning something new and different because **I** wanted to learn about it, not because I **had to** for school or work."* — Volunteer Naturalist Julie Walters

The goals of the Friends of Fitzgerald Marine Reserve are "the protection and preservation of the marine reserve as a unique intertidal environment and the promotion of educational activities for school children, residents, visitors and researchers, to see and touch many elements of wildlife ecosystems."

> *"I enjoy being able to instill a sense of wonder, excitement and love for the natural world to others, children and adults alike. Even in the tiniest tidepool, there is so much life to discover and share."* — Volunteer Naturalist Darlene Wong

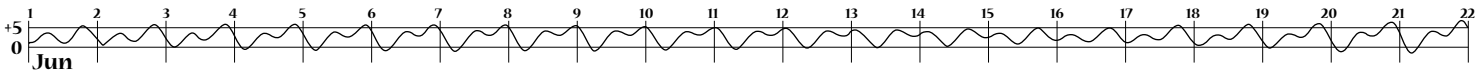
Our naturalists help to promote our goals by sharing their knowledge and passion for the intertidal by talking to FMR visitors on the weekends, during school field trips and tours, in the visitor center and through outreach opportunities at fairs and other environmental gatherings. It is a rewarding experience to share the wonders of the ocean with people eager to know more.

> *"My favorite thing about being a naturalist is sharing that magical, life-changing moment with a child, when you see their eyes light up because they understand the importance of what they just learned, and then go on to realize they really care about it, and want to learn more."* — Volunteer Naturalist Jill Ehring

- Class runs 10 am – 3 pm on Saturdays from January 24 – March 7 (no class Feb 14)
- In addition to class time, you will spend six mentoring hours working with current volunteer naturalists and assist with two tours at the reserve to successfully complete the course.
- Materials fee: $65

To learn more about our program please call Mary DeLong at (650) 728-5917 or email her at: mary@moonpuppy.net.

Feel free to pass on this information to your friends who may be interested!



New Leaf Supports FFMR and Ocean Conservation

The Friends of Fitzgerald Marine Reserve (FFMR) have been stressing the importance of reducing, reusing, and recycling in our educational outreach for years. FFMR board members Linda Ciotti and Mary DeLong point out that New Leaf Community Markets in Half Moon Bay gives reusing a new twist: bring your own bag to the market and you'll get a token at the cash register. You can then drop the token into a container near the front door to make a donation to any of several local nonprofit organizations—including FFMR!

Our 2008 campers decorated reusable shopping bags during Junior Rangers camp.

New Leaf is also making it easier to care for our oceans by taking a lot of the guess work out of finding sustainably harvested seafood. Sustainable fishing takes into account not only how well the target species is managed, but also considers the impact on other species (bycatch) and on habitat. New Leaf no longer even carries seafood that was harvested in an unsustainable manner. They use color-coding to indicate whether a seafood is harvested completely sustainably (green) or whether there are still some concerns about its impact on ocean health (yellow). They even include icons that indicate which harvest method was used!

We'd like to thank New Leaf Community Markets for caring about the environment and supporting FFMR.

Friends of Fitzgerald Marine Reserve

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

Contribution Levels:

❑ $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).

❑ Please contact me about volunteer opportunities.

Name _____

Address _____

City _____ State _____ Zip _____

Email _____

FRIENDS OF FITZGERALD MARINE RESERVE

P.O. Box 669 · Moss Beach, CA 94038

www.fitzgeraldreserve.org

Non-Profit Org.
U.S. Postage
PAID
Permit No. 12
Moss Beach, CA 94038

Naturalist Training Starts January 24th — see page 11