

The Marine Mammal Center is a nonprofit veterinary hospital, research and educational center. Since 1975, staff and volunteers have rescued thousands of injured, sick and orphaned marine mammals along 600 miles of northern and central California coastline.

release

The Newsletter of The Marine Mammal Center | Summer 2007 | Vol. 27 No. 2



Humpback Whales in Sacramento!

The Marine Mammal Center Leads Rescue Efforts to Guide Gentle Giants Back to Sea

When two injured humpback whales ventured into the Sacramento Delta 75 miles inland from their ocean home, the nation watched in fascination. The whales—a cow and calf pair nicknamed Delta and Dawn—were first spotted on May 9. A week later and with no movement by the whales toward the ocean, the center’s Dr. Frances Gulland arrived on the scene. Time was of the essence. The longer the whales stayed in the fresh water of the Delta—the less likely they would survive.



Left: Humpback calf and windsurfers in Rio Vista. Photo: Sarah Wilkin, NOAA Fisheries **Right:** The center’s Dr. Frances Gulland and Cascadia Research biologist John Calambokidis (L) keep watch on the whales. Photo: Pieter Folkens

Dr. Frances Gulland arrived at the Port of Sacramento on May 16 unsure of exactly what to expect. Never before had a humpback whale traveled so far into the Sacramento Delta, let alone a pair of them. The initial reports about the mother and calf suggested they were either entangled or that the adult had some sort of tag near its dorsal fin. Once on the water, Dr. Gulland discovered something even more disturbing. The adult cow had a straight laceration on her dorsal surface that was estimated to be 2-3 feet long and 6 inches deep, and her calf

had a lateral cut as well. Both whales had been the victim of a vessel strike.

On the same day that Dr. Gulland arrived, Lieutenant Governor John Garamendi planned a rescue of the whales including using a whale audio expert to play sounds to coax the whales back to the ocean. This technique was used in Rio Vista in 1985 to lure another wayward humpback whale named Humphrey out of the Delta. Five days later, it was apparent that what worked for Humphrey was not working for Delta

and Dawn. The Office of Emergency Services, which responds to incidents such as oil spills and earthquakes, was called into action. They designated Dr. Gulland as the rescue leader for the unified command, leading the multi-agency effort to keep the whales safe and move them toward the ocean.

A Close Call

On May 20, the whales were able to avoid a close call with yet another ship. The rescue team watched intently as a 580-foot-long freighter approached the Port of Sacramento. Two tug boats pulled

out to meet the vessel, and for reasons unknown, the whales started to move through the narrow channel and into the path of the oncoming ship. A head-on collision was imminent. Dr. Gulland boarded a U.S. Coast Guard boat that was positioned between the whales, the vessel, and the tugs. Both the vessel and tugs stopped their engines and the vessel dropped its anchor. With barely enough room in the channel for the whales, freighter, and tugs, the whales managed to squeeze by and head out of the Port. **continued on page 2**

MARK YOUR CALENDARS To learn more about these events, go to www.marinemammalcenter.org and click on the Events button.

<p>7/28 5th Annual Marine Mammal Day at AT&T Park</p>	<p>9/24–9/30 Sea Otter Awareness Week</p>	<p>10/6 OceanFest 2007, 11 am-4 pm, Gulf of the Farallones National Marine Sanctuary Visitor Center Grounds, San Francisco</p>	<p>10/14 Discovery Day at Romberg Tiburon Center, 11 am-4 pm. Natural History classes Monterey, 10 am</p>
<p>9/15 Coastal Cleanup Day with the center, 9 am-12 pm; at Rodeo Beach.</p>	<p>10/2 McCormick and Kuleto’s 14th Annual “Shuck and Swallow” Oyster Challenge and Benefit for the center—Ghirardelli Square 6 pm</p>	<p>10/13 Natural History classes San Luis Obispo, 10am</p>	<p>10/17 11th Annual Gala Benefit for the center—tickets available online</p>

Harbor Seal Health



Harbor seals Nigel (left) and Marleau (right) wear hats for science. Photos: The Marine Mammal Center

Tracking Harbor Seal Health

Denise Greig wants you to call her if you see a seal wearing a hat. No, she's not with the animal fashion-police. Greig is a marine biologist at The Marine Mammal Center who is conducting a study of the effects of pollutants and environmental factors on San Francisco Bay Area harbor seals. The current phase of her study involves releasing rehabilitated seals back into the wild with "hat tags", colored hat-shaped tags with numbers that identify each animal. The seals' health and survival in the bay can then be monitored as members of the public call to report sightings or if the animal should need to be rescued by The Marine Mammal Center again.

The harbor seal habitat is influenced by several human-produced factors, including sewage, runoff, chemical pollution, and

watercraft. Not only is it important to protect the seal population from toxic exposure that could threaten its survival, but the seals also serve as good gauges for the safety of the marine environment in relation to human beings. If seals are affected by toxin levels in the ocean's food chain, then it's likely that people will too. Greig's study will attempt to shed some light on the prevalence and health effects of marine contaminants in the San Francisco Bay Area.

A Quest for Data

Greig became interested in studying environmental effects on harbor seals when she started wondering about the stranded harbor seals that were rehabilitated by the center. "Are the diseases we see routinely in stranded harbor seals present in the wild population, and in similar numbers to

the rehabbed seals?" poses Greig. "And do they have an impact on wild seal survival?" With the introduction of the Harbor Seal Health Project, she and the center's volunteers hope to find answers to those questions.

With preliminary studies completed, Greig has now begun the current phase, releasing tagged harbor seals. The first two harbor seals to officially participate in Greig's study, Melissa and Nigel, were rescued as helpless 15-18 pound pups. Blood samples were taken from the animals to test for various pathogens and recorded. After being treated for umbilical infections and fed by staff and volunteers until they were big enough to fend for themselves, Melissa and Nigel were released in April at Fitzgerald Marine Reserve, both outfitted with the hat tags. They had gained around 22 pounds each by that point, thanks to the daily feedings and "fishing lessons" they received at the center. How they and the other seals being released with the hat tags fare in the wild is all part of the data that Greig will collect.

[You can help with the data gathered in the Harbor Seal Health Program. If you spot a seal wearing one of the hat tags, please call 415-289-7325. Taking care not to disturb the animal, try to note the number and color of the tag, the location of the sighting, and the animal's general condition.](#)

Astro Update



Astro reluctantly steps onto a beach during his release. Photo: The Marine Mammal Center

Astro, a baby Steller sea lion, was rescued in June 2006 after having been separated from his mother. He weighed just 39 pounds, but grew bigger at the center. In April 2007, veterinarians believed Astro was ready to return to the wild. He was released April 25 at Año Nuevo State Park, weighing about 185 pounds. A satellite tag was attached to his back to track his travels; however, Astro didn't leave the beach and stayed with some young elephant seals nearby. The center re-rescued him the next day and took him to the Farallone Islands—a place where other Steller sea lions also live.

It's not known exactly why on May 8, Astro swam back to the mainland. The Marine Mammal Center took him back out to the Farallones, but Astro came back to Corte Madera two days later, this time finding his way to an elementary school. Astro was then brought back to The Marine Mammal Center.

Unfortunately, because of his failure to reintegrate into the wild sea lion population, he will not be able to survive in nature. It is uncertain why Astro responded in this way, as he was treated with the same protocols as other rehabilitated Steller sea lions at the center. Veterinarians are now searching for a new home for Astro, either at an aquarium or a zoo.

Kidney Stones Found in Pinnipeds

Published in the Journal of Zoo and Wildlife Medicine Volume 28 Number 1, 2007.

The Marine Mammal Center is able to study marine mammal diseases thanks to its veterinary clinical research program and its collaboration with the National Marine Fisheries Service. During the recent necropsy of an elephant seal and a California sea lion, doctors discovered something highly unusual. Both animals had urate nephrolithiasis—kidney stones. This condition has rarely been reported in marine mammals, and never in pinnipeds. Studying conditions such as this may help provide a better understanding of environmental factors that negatively affect marine mammals. The Center's former veterinary intern Dr. Sophie Dennison authored the report on the discovery. Dr. Frances Gulland and former center medical staff veterinarian Dr. Marty Haulena, were contributors.

[continued from front cover Humpback whales in Sacramento](#)



Calf shows off her tail near the Port of Sacramento. Photo: Pieter Folkens

The whales still had a long way to go. They swam for approximately 25 miles that day and stopped within half-a-mile of the Rio Vista Bridge, more than 20 miles short of the salty waters of the Pacific. Dr. Gulland, marine biologists from the National Oceanic Atmospheric Administration (NOAA), and renowned whale behavior expert John Calambokidis from the Cascadia Research Collective in Washington were very concerned about the whales' health. Delta and Dawn were showing signs of lethargy and their overall skin condition was deteriorating.

Their thick skin serves as a barrier against bacterial infection and with the open lacerations on both whales continuing to be exposed to freshwater, that barrier of protection was severely compromised. It was at this stage that Dr. Gulland and her team realized that more aggressive measures needed to take place if they were ever going to save Delta and Dawn.

Saving the Whales—One Day at a Time

In Rio Vista, the rescue team tried various herding techniques to get the whales to swim under the bridge toward open water. First, they had to eliminate all environmental noises such as bridge traffic and a nearby drilling operation. Next, a flotilla of boats with the rescue team on board began banging on 10-foot-long metal pipes and playing killer whale sounds—all to drive the whales down the channel. Dr. Felicia Nutter and Shelbi Stoudt, along with a few volunteers from the center, joined the rescue team to help in this effort. When the negative noise herding efforts didn't work, the team, working in conjunction with the Vallejo Fire Dept., tried using a fire hose to create an underwater current of bubbles

to encourage the whales to move toward the Pacific. While this did turn them around in the right direction, none of the efforts seemed to be working. Nearly a week passed, and things were looking grim for the whales. In order to keep the mammals healthy, Dr. Gulland and Dr. Nutter and their team did something that has never been done before to humpbacks in the wild—they administered antibiotics. Details about this amazing first can be read on the back page.

Eventually, the whales left Rio Vista around May 28, swimming non-stop under two other bridges. Along the way, the team took a biopsy sample from the calf (a sample from the mother was taken a week earlier) in order to determine the stock population of these now very famous whales. On May 29, twenty days after Delta and Dawn were first spotted in Sacramento, they were suddenly gone. It is surmised that the whales went quietly back to the ocean unnoticed under the cover of darkness.

Run for the Seals Success

More than 700 runners, walkers and baby joggers raised nearly \$26K to support the center during the 24th Annual Run for the Seals event on April 15. John Litzenberg of Glen Ellen was the winner finishing the 4-mile run in just 21 min., 49 sec. Special thanks to all of the volunteers, staff and sponsors who helped bring this popular event back.



SF Giants' mascot Lou Seal hams it up for the cameras at the starting line. Photo: The Marine Mammal Center

First PRC Private Donor Release in San Mateo

On Saturday, May 5, the center released two California sea lions and two Harbor seals at the Fitzgerald Marine Reserve in San Mateo. Members of the Protected Resource Circle (PRC) and their guests marveled as the animals ambled down the rocky shore and returned to their ocean home.



Rehabilitated sea lions are released during PRC donor event in San Mateo. Photo: The Marine Mammal Center

This was the first PRC private donor release event in this location and we look forward to hosting future PRC release events there.

There are two remaining PRC release events this summer—Saturday, August 11 at Chimney Rock and Saturday, August 25 at Rodeo Beach. For more information about renewing or becoming a PRC member, please call the Development Office at (415) 289-7335.

Leave a Lasting Legacy

Would you like to help protect marine mammals for generations to come? You can make a legacy gift to The Marine Mammal Center. The center's planned giving society, the Steller Circle, is a caring group of people like you who included the center in their will or estate plans.

The center honors members of the Steller Circle with special recognition and invitations to special events, such as private donor releases of rehabilitated animals and the annual gala.

A bequest can easily be included in your will or living trust, and may be a gift of a specific sum of money, a piece of property, a designated percentage of your estate, or the residual value of your estate after all other gifts are designated.

For more information, contact the Development Office at (415) 289-7335.

New Leader for the Center

The Marine Mammal Center is proud to announce the hire of Martha Whetstone as the new Executive Director succeeding B.J. Griffin, who retired in May after seven years. Whetstone was most recently Executive Director and General Counsel of the Bar Association of San Francisco. She will head the growth of the center into the next level of operations management to expand its capabilities and increase visibility worldwide.



Martha Whetstone, the new Executive Director of the Marine Mammal Center. Photo: The Marine Mammal Center.

"I'm excited to work with the staff and volunteers to help transform The Center into a truly unique life science center."

Outgoing Executive Director B.J. Griffin was responsible for raising \$22 million in capital funds for the new Marine Mammal Center. Among other achievements, she expanded partnerships with the National Park Service, NOAA, and the U.S. Congress, and championed the center's involvement in the Hawaiian Monk Seal program to assist the nearly extinct species. We wish her well!

Shuck and Swallow

On Tuesday, October 2nd, the 14th annual Shuck & Swallow Oyster Challenge will take place between 6:00 and 8:00 p.m. at McCormick & Kuleto's Seafood Restaurant at Ghirardelli Square 900 North Point in San Francisco. Net proceeds benefit The Marine Mammal Center. For \$25, guests can taste as many oysters and wine samples as they like, while enjoying live music and watching an oyster-eating competition. For more information, call McCormick & Kuleto's at (415) 929-1730 or (415) 929-8374.

Special Thanks

Our sincere thanks go to these generous donors whose contributions of \$500 or more support The Center's work to assist distressed marine mammals, research marine mammal health, and share our knowledge with the general public and the international scientific community. This list recognizes gifts received January 1, 2007 to April 30, 2007 in support of The Center's annual operating fund.

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Gunshot Victim Barbosa

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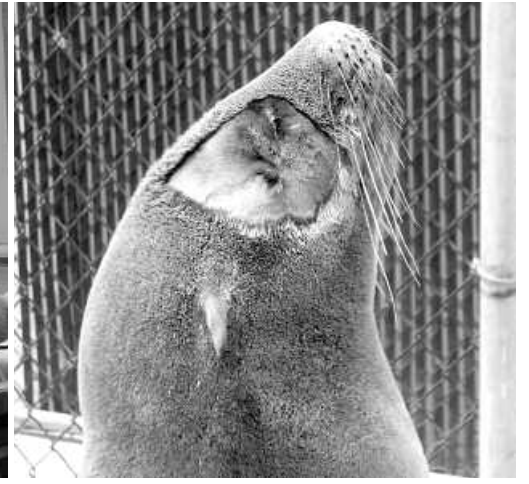
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Left: Delphine Sarran performs surgery to remove gunshot victim's eye. Photo: The Marine Mammal Center **Right:** Barbosa recovers with one less eye, but a new lease on life. Photo: Karla Fernandez

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On May 26, 2007, a young California sea lion that appeared to be ailing was discovered on the Santa Cruz Wharf. He was listless, allowing humans to approach, and had a visible trauma to his right eye.

The Marine Mammal Center was called to respond, and the sea lion, nicknamed “Barbosa”, was brought in for treatment.

Upon admission to the center’s hospital in Sausalito, Barbosa was estimated to be 1 year old. His eye was infected and protruding.

The first step in his care was to feed him, treat him with antibiotics and anti-inflammatory medications, and stabilize him so that veterinarians could assess his condition and decide on the best course of action.

A few days later, Barbosa was anesthetized to examine his eye and take x-rays of his head. The x-rays revealed the presence of gunshot shrapnel in his skull. As with many other firearm victims that the center sees routinely, Barbosa’s gunshot could not be observed from the exterior, as the entry wound had healed while the shrapnel remained inside his head. Barbosa was lucky to survive, and the gunshot seemed to have missed any vital areas in his head. However, his eye was determined to be permanently damaged and was causing him pain, so veterinarians made the decision to operate.

On June 7, The Marine Mammal Center’s Veterinary Intern, Delphine Sarran, performed the surgery, and Barbosa’s right eye was removed. Everything went well, and aside from limited eyesight and a few stitches, Barbosa was as good as new, recovering rapidly. A few hours after the surgery Barbosa was already able to steal fish from his penmates! Sea lions can do well in the wild, even with one eye, and after his stitches were removed, Barbosa was brought out to The Farallone Islands on June 30 to be released back to his natural habitat.

Amazing Firsts Humpback Whales Get Antibiotics

Biopsy results on the two whales revealed some interesting facts:

- Both whales are part of the Eastern North Pacific stock of humpbacks and not lost members from a British Columbia feeding group
- The calf is a female
- Humphrey the humpback was also from this same stock

» Learn more about humpbacks and other marine mammals on our website under “learning”



Left: young humpback whale breaches in the Sacramento Delta. **Right:** Two antibiotic-laden darts protrude from the skin of the injured adult female. Photos: Bob Wilson

In May of 2007, The Marine Mammal Center was center stage in the rescue efforts of two endangered humpback whales that made a wrong turn and swam nearly 75 miles up the Sacramento River. Both animals had wounds likely caused by a vessel propeller. The center’s Director of Veterinary Science, Dr. Frances Gulland, and Staff Veterinarian Felicia Nutter, joined a multi-agency

effort to take unprecedented action as the whales’ wounds worsened and their skin deteriorated. With time running out, they decided to attempt what had never been done before—inject large humpback whales with antibiotics in the wild.

The process required intricate collaboration between various parties, as well as the modification of known techniques to tailor the new medical procedure to a 30-ton free-swimming whale. Dr. Nutter contacted other veterinarians and pharmaceutical companies for advice on how best to do this. SeaWorld, Bayer, and Pfizer all supplied medicines, which were then formulated and concentrated by Bob Wills of Grandpa’s Compounding Pharmacy in Placerville, who worked late into the night creating the antibiotic formula for the whales.

The pharmacy rushed the formula down to Sacramento early the next morning, where it was loaded into a specialized dart projector system supplied by Dr. Michael Moore of the Woods Hole Oceanographic Institution. The system was engineered by a company in New Zealand called Paxarms which specializes in wildlife darting systems. The drug delivery system for the whales used a .22 caliber blank which was shot at the whales. Upon impact, compressed air pushed the antibiotics through special 12 inch needles designed to pierce through the whales’ thick blubber to their muscle. The mother received three injections, and the calf received one.

To find out what happened to the wayward whales, please read the full story on the cover!

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