

Appendix E

NOAA Fisheries Stranding Newsletter



California Marine Mammal Stranding Network Newsletter

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This Newsletter is a product of the Marine Mammal Stranding Program at the NMFS Southwest Regional Office in Long Beach, CA. Questions, comments or requests for information can be sent to: Sarah.Wilkin@noaa.gov

2009 Regional Stranding Meeting a Success



Participants at the 2009 California Marine Mammal Stranding Meeting, hosted by the Santa Barbara Museum of Natural History, pose in front of the articulated blue whale skeleton in front of the museum.

Inside this issue:

Mass Stranding of <i>Lissodelphis</i>	2-3
Case Files: Arctic	3
New Face in the Network	4
Renovations and Reopenings	4-5
High numbers of CSL	5
Notable Strandings	6
Recent Publications	7

The 2009 California Marine Mammal Stranding Meeting was held at the Santa Barbara Museum of Natural History March 16-18. The meeting was very successful with over 80 people in attendance throughout the three days representing regional stranding responders, the U.S. Navy and several offices of NOAA. Monday provided a comprehensive view of the accomplishments produced recently by the California network made possible with Prescott funding. It was very encouraging to see how the Prescott grant program has enhanced our network and how it will continue to improve our

responses into the future.

Another exciting development that was presented is the new UC Davis Marine Ecosystem Health Diagnostic and Surveillance Laboratory. Tuesday morning Dr. Tracey Goldstein and Dr. Jonna Mazet presented the capabilities and goals for the lab and how stranding network participants can benefit from this new relationship. We are very fortunate to have this new lab contracted by NOAA. Tuesday afternoon saw us in break-out sessions developing network priorities and assessing our strengths and weaknesses as part of a program review. We developed an

optimistic view of what the ideal situation would be for the future of the CA stranding network.

Wednesday morning was filled with a case study on a stranded leatherback sea turtle with some very interesting findings during the necropsy. Ed Lyman and the large whale disentanglement team closed out the meeting with some interesting discussions on how to best equip and train the California disentanglement network. Hopefully we are not faced with an entangled whale but equipment and trained responders are in place to proceed if one occurs.

By Michelle Berman, SBMNH

Mass Stranding of Northern Right Whale Dolphins



*Michelle Berman, (SBMNH) examines a stranded *Lissodelphis* on Santa Rosa Island. Photo by Sarah Wilkin*

On May 21, 2009 a mass stranding of 5 northern right whale dolphins (*Lissodelphis borealis*) was reported to the stranding network at Bechers Bay, Santa Rosa Island, Channel Islands (approximately 30 miles off the coast of Santa Barbara). This species is not frequently stranded: from 1988-2007 only 34 *Lissodelphis* stranded in California, and no mass strandings have been reported. The dolphins were first observed early in the morning in the surf zone; at least 2 of the animals stranded alive. Attempts by National Park Service personnel to push them back out were unsuccessful. The animals were documented with photo and video. Due to the time of day of the receipt

Liz Wheeler and Frances Gulland (TMMC) and Krista Fahy (SBMNH) position one of the dolphins for a CT scan. Photo by Sarah Wilkin

of the report, no response was possible on the 21st, but early the next morning a response team consisting of personnel from the Santa Barbara Museum of Natural History, National Park Service, and the SWR were transported to Santa Rosa Island courtesy of an Island Packers vessel. Four animals, all dead, were located by the response team, three floating in the kelp beds

and one on the beach above the tide line. All four were males, with two adults (~3 meters long) and two subadults (~2.2 m). The animal on the beach was necropsied in the field due to its decomposition state, with the head saved for further analysis. The other three were brought back to the mainland on the stern of the Island Packers ferry (thank you!). An expert examination and necropsy team was assembled with personnel from The Marine Mammal Center, Channel Islands Marine Wildlife Institute, Santa Barbara Museum of Natural History, and NMFS. The three intact animals and the head of the fourth were taken to a local radiology

(Continued on page 3)



Case Files: “Arctic” from The Marine Mammal Center

On 6/30/2008 TMMC admitted “Arctic,” a newborn 18.5 kg Steller sea lion (*Eumatopias jubatus*) pup from Año Nuevo Island to The Marine Mammal Center in Sausalito. Because Steller sea lions have such a long period of dependency in the wild (1 to 2 years), we tried to minimize Arctic’s exposure to humans during her stay, monitoring her by video and initially feeding her from a bottle attached to her pen wall.

At release, we dye marked her for easy identification from a distance and outfitted her with a Splash tag from Wildlife Computers that records and transmits location information as well as summary data on dive depth and

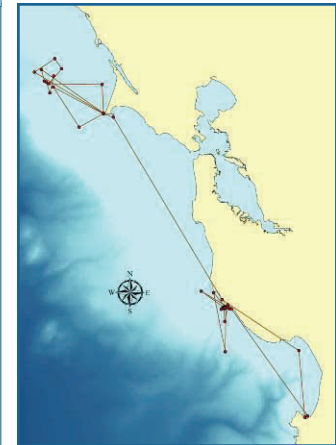


Arctic, a female Steller sea lion at admission in June 2008 (above) weighing 18.5 kg, and at an impressive 91 kg upon release in April 2009 (below). Photos TMMC



Reyes area since 5/22/09 and we hope she will continue to thrive and one day help contribute to an increase in Steller population numbers. *By Denise Greig, TMMC*

duration. She weighed 91.0 kg when she returned to Año Nuevo Island on 4/20/2009. After release, Arctic stayed around Año Nuevo for about four weeks. On 5/15/2009, she was visually re-sighted by UCSC biologist Pat Morris. Pat observed Arctic resting in an area of the island where she normally sees wild Steller sea lions and reported that Arctic was in good body condition. Next, Arctic took a three day trip to Monterey Bay, and then travelled north to Point Reyes National Seashore. She’s been taking trips in and around the Point



Arctic’s movements following her release on 4/20/09. She was released at her stranding site on Año Nuevo Island and has traveled down to Monterey Bay and north to Point Reyes. Map courtesy TMMC

Mass Stranding of Northern Right Whale Dolphins (cont.)

(Continued from page 2)
center where their heads were CT-scanned, following the expanded necropsy protocol for strandings during Naval activities. The scanning was straightforward, once the team maneuvered the 2.2 - 3 meter animals around several corners! Thorough necropsies were conducted on all of the animals the following day. All four animals had

parasites in the nasal sinuses, and all four had mostly empty GI tracts. In the biggest animal, there was a brain lesion that was most likely due to a parasite. Additionally, one of the animals had extensive bruising and subcutaneous hemorrhage, consistent with being in the surf zone for an extended time period. A complete suite of tissues was collected for

histology and other diagnostic tests; these results are still pending.

Aerial support during the event was provided by NMFS-Southwest Fisheries Science Center and Channel Islands National Marine Sanctuary—no additional stranded or milling animals were detected.

Thanks to all who helped out with this complex and rare stranding event!

The Marine Mammal Center Opens Rebuilt Facility



*The newly rebuilt TMMC headquarters in the Marin Headlands.
Photo TMMC*

June 15, 2009 represented a huge milestone for The Marine Mammal Center in the Marin Headlands, as the public reopening was celebrated. The \$32 million renovation began in Fall 2005 and has finally reached its culmination. The new building was built with a great deal of attention to “green” technology in its use of recycled building materials, approach to conserving energy, and the way it maintains harmony between the existing natural landscape while meeting the needs of the marine mammal patients. The shade structures over each pen are made up of 5 solar modules that provide protection from the elements and also reduce energy consumption by about 10%. A modernized water treatment plant

also allows for approximately 80% of the backwashed water to be reclaimed. In addition to being a great space for the animals, significant improvements were also made for our human colleagues, moving them out of shipping containers and into actual buildings! The new on-site lab will greatly assist the animal care staff in diagnosis, treatment and husbandry. An expanded classroom and transparent walls into many of the buildings will greatly enhance the education and outreach potential as well. Congratulations to TMMC on your new space, and hopefully we will all get a chance to visit the Center soon.

Upcoming Meetings and Trainings:

“Management of Animal Carcasses, Tissue and Related Byproducts”

July 21-23, 2009 at Gladys Valley Hall—University of California, Davis

A three-day workshop discussing of emergency response, composting, burial, and rendering! To register or find out more: <http://www.extension.umaine.edu/byproductssymposium09/default.htm>

24-hour HAZWOPER Training

August 12-14, 2009 at LA Oiled Bird Care, San Pedro, CA

For more information or to register contact Nils Warnock at: ndwarnock@ucdavis.edu or (530) 752-5797

National Marine Mammal Stranding Network Conference

April 5-9, 2010 at the National Conservation Training Center, Shepherdstown, WV

Planning is underway—for more information contact steering committee members Shelbi Stoudt, Jim Dines, or Sarah Wilkin



Photo courtesy Monica Hiner

Welcome Monica Hiner to the CA Stranding Network!

Welcome to the new Director of the North-coast Marine Mammal Center, Monica Hiner. Monica got her Bachelor’s degree in Environmental Field Biology at Lewis-Clark State College, and a Master’s in

Fishery Resources at the University of Idaho where her thesis work and studies focused on disease. Her most recent position was with the Yurok Tribe in Klamath, CA, where she was a Fisheries Biologist working on fish dis-

ease projects, including taking a lead role in investigating the 2002 Klamath River fish kill. A northern CA native, Monica previously volunteered at NMMC between 2000-2002 and is excited to be back. Welcome Monica!

New Animal Enclosures at Fort Mac

On April 7th the Marine Mammal Care Center at Fort MacArthur unveiled the opening of new patient housing space at the facility: three isolation enclosures and two critical care enclosures. While enhancements have been made to staffing, lab facilities and other upgrades, this project marks the first time in over twelve years that the Care Center has been able to add to the actual patient housing space. The enclosures are intended to create space for up to 20 additional animals, allow for better quarantine practices, and improve staff and volunteer safety by reducing per-enclosure density. Design innovations in-

clude: improved drainage; temporary divider walls which can be put in place to minimize the potential for cross-contamination;

more info call 310-548-5677).

All of us at the Marine Mammal Care Center would like to express



and the use of sustainable materials such as recycled plastic lumber for use in enclosure fixtures. The Care Center also unveiled the new donor block program: blocks on the enclosures are available for engraving with a name or message (for

our thanks to the community, our funding organization MAR³INE, and the John H. Prescott program for making these additions possible. Please visit when you can!

By David Bard, MMCC/IFM

High numbers of stranded California sea lions

California sea lions have been stranding at a very high rate in central and southern California so far in 2009, especially since May; many facilities have already admitted more animals than in all of 2008 (see table). Most are yearlings, following last year's record number of 59,000 pups. The animals are coming in emaciated and weak, but we don't fully understand what is happening with the abundance and distribution of

the prey of these sea lions. Scientists at the National Weather Service's Climate Prediction Center are also forecasting favorable oceanographic conditions for the development of an El Niño

during this summer, although we would expect to see impacts to the marine mammal community from that event next year (2010). For now there's no good explanation—just lots of sea lions.

Facility	May-June	2009 Total	% of 2008 total
The Marine Mammal Center	328	401	260%
Santa Barbara MMC		226	
Channel Islands MWI (Ventura)	26	26	116%
MMCC at Fort MacArthur (LA)	110	185	87%
Pacific MMC (Orange Co.)	60	144	106%
2009 CSL TOTAL TO DATE: 982			

Notable Strandings—April 2009



Photo by Moss Landing Marine Laboratories

Killer Whale—Carmel

This 3-meter female killer whale was first reported on April 4, 2009 to Moss Landing Marine Laboratories. Initial exam confirmed sex and species, and allowed the collection of a skin sample. Killer whales are a high priority species for NMFS to examine (particularly given the severely endangered status of Southern residents). MLML responders took advantage of a break in heavy seas to conduct a multi-phase recovery effort which included towing the animal behind three different platforms, allowing for a full necropsy and essential sample collection. Thanks for your dedication in examining this relatively rare specimen!

Fin Whale—Los Angeles

On April 10, 2009, the Port of Los Angeles reported that a large whale had been brought in that morning on the bow of a container ship. The LA County Museum of Natural History led the response with assistance from NMFS-SWR. The Port was extremely helpful during the examination by utilizing their heavy equipment and skilled operators to pull the animal, a very fresh 62-foot adult male fin whale, on to land so that we could conduct a partial necropsy. The strike site was examined and multiple bone fragments were observed. Many thanks to the Port and the response team!

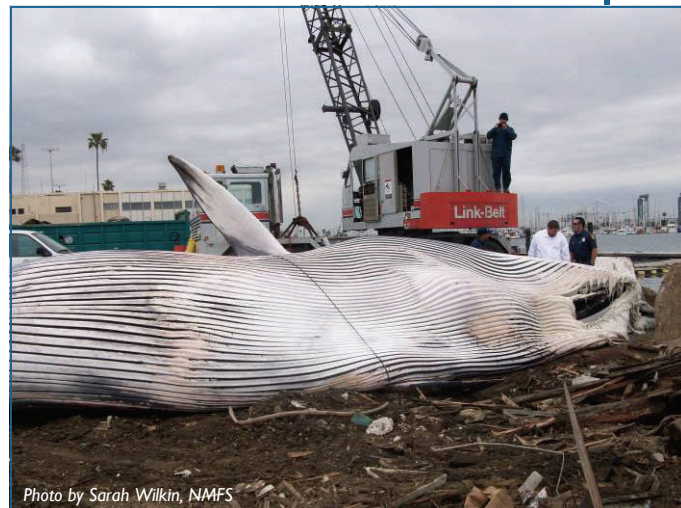


Photo by Sarah Wilkin, NMFS



Photo by Charlie Arneson, Baja Studios

Large Whales—Baja, Mexico

The last week of April 2009 a helicopter pilot flying over remote beaches along the Sonoran (mainland) coast in the Gulf of California observed multiple carcasses of decomposed large whales. Additional animals were reported along the Baja Peninsula, totaling over 25 animals. A team from Mexico investigated the animals in northern Baja, counting a total of 13 carcasses; three animals were identified as Bryde's whales. Samples were taken from the rest to determine sex and species; the animals were too decomposed for any disease sampling. The cause of this mortality is unknown, although there were no concurrent reports of algae blooms, fish kills or dead birds, which would indicate that a Harmful Algal Bloom likely to be the cause.

Recent Publications—Marine Mammal Health and Stranding

- Bearzi, M. et al. 2009. Skin lesions and physical deformities of coastal and offshore common bottlenose dolphins (*Tursiops truncatus*) in Santa Monica Bay and adjacent areas, California. *Ambio*. 38(2):66-71.
- Colegrove, K.M. et al. 2009. Pathological features of amyloidosis in stranded California sea lions (*Zalophus californianus*). *Journal of Comparative Pathology*. 140: 105-112.
- Dau, B.K. 2009. Fishing gear-related injury in California marine wildlife. *Journal of Wildlife Diseases*. 45(2): 355-362.
- Dennison, S.E. et al. 2009. Normal thoracic radiographic anatomy of immature California sea lions (*Zalophus californianus*) and immature northern elephant seals (*Mirounga angustirostris*). *Aquatic Mammals*. 35(1):36-42.
- Fire S.E. et al. 2009. Domoic acid exposure in pygmy and dwarf sperm whales (*Kogia* spp.) from Southeastern and Mid-Atlantic U.S. Waters. *Harmful Algae*. 8:658-664.
- Goldstein, T. et al. 2009. The role of domoic acid in abortion and premature parturition of California sea lions (*Zalophus californianus*) on San Miguel Island, California. *Journal of Wildlife Diseases*. 45(1):91-108.
- Green, J.A., et al. 2009. Trial implantation of heart rate data loggers in pinnipeds. *Journal of Wildlife Management*. 73: 115-121.
- Moore, M.J. et al. 2009. Gas bubbles in seals, dolphins and porpoises entangled and drowned at depth in gillnets. *Veterinary Pathology*. 46:536-547.
- Ng, T. et al. 2009. Novel anellovirus discovered from a mortality event of captive California sea lions. *Journal of General Virology*. 90:1256-1261.
- Philippa, J.D.W. et al. 2009. Neurological signs in juvenile harbour seals (*Phoca vitulina*) with fatal phocine distemper. *Veterinary Record*. 164(11): 327-331.
- St. Leger, J.A. et al. 2009. Comparative pathology of nocardiosis in marine mammals. *Veterinary Pathology*. 46(2):299-308.
- Stoddard, R.A., et al. 2009. The effects of rehabilitation of northern elephant seals (*Mirounga angustirostris*) on antimicrobial resistance of commensal *Escherichia coli*. *Veterinary Microbiology*. 133: 264-271.
- Torres de la Riva, G. et al. 2009. Association of an unusual marine mammal mortality event with *Pseudo-nitzschia* spp. blooms along the southern California coastline. *Journal of Wildlife Diseases*. 45(1): 109-121.
- Zabka, T.S. et al. 2009. Characterization of a degenerative cardiomyopathy associated with domoic acid toxicity in California sea lions (*Zalophus californianus*). *Veterinary Pathology*. 46:105-119.
- Zuerner, R.L and D.P. Alt. 2009. Variable nucleotide tandem-repeat analysis revealing a unique group of *Leptospira interrogans* serovar Pomona isolates associated with California sea lions. *Journal of Clinical Microbiology*. 47(4):1202-1205.
- Zuerner, R.L. et al. 2009. Geographical dissemination of *Leptospira interrogans* serovar Pomona during seasonal migration of California sea lions. *Veterinary Microbiology*. 137(2009):105-110.

Like the Newsletter? Help make it better!

Submit your photos, stories, observations, notes, and recent publications for inclusion in our next issue, ETA Nov 2009!

E-mail them to Sarah at: sarah.wilkin@noaa.gov

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