

Soundings



SEPTEMBER 2015

American Cetacean Society – Monterey Bay Chapter
PO Box H E, Pacific Grove, CA 93950

**MONTHLY MEETING AT HOPKINS MARINE STATION,
LECTURE HALL BOAT WORKS BUILDING
(ACROSS FROM THE AMERICAN TIN CANNERY OUTLET STORES)
MEETING IS OPEN TO THE PUBLIC**

MEETING DATE:

Thursday, September 24, 2015

Time: 7:30 PM

PLEASE JOIN US AT 7:00 FOR REFRESHMENTS

Speaker: Greg McCormack, Monterey Bay Whale Watch



Our September speaker will be Greg McCormack. He will talk to us about the marine life of the high latitudes from Alaska and Siberia to Antarctica. He will share with us his thoughts on aboriginal whaling and interpret an amazing predation event video he witnessed of the Pack Ice Killer Whale.

He has thirty years' experience in developing interpretive programs for the California State Parks and National Park Systems, The Nature Conservancy, Audubon, Catalina Island Marine Institute, NatureBridge and an environmental educator

in the Peruvian Amazon. Greg has worked as the Big Sur District park interpretive specialist, an Alaskan river guide, kayak expedition leader in Glacier Bay and along the "Orca Highway" in the Salish Sea. He is a PADI Divemaster, leading divers on underwater tours in dozens of island archipelagos in the South Pacific from Indonesia to Micronesia, New Guinea to Palau, Guam to Vanuatu and Hawai'i to Easter Island.

Greg has been a naturalist in a dozen parks, including: Mount Rainier, Everglades, Grand Canyon, Hawaii Volcanoes, Point Reyes National Seashore and Denali National Park and Preserve, among others. He has served as expedition leader, cruise director, lecturer and Zodiac driver onboard adventure-travel expedition ships, guiding people to the most remote regions of the world.

Before coming to Monterey Bay Whale Watch, Greg did a five-year stint as an education specialist for the NOAA's Olympic Coast National Marine Sanctuary. An endurance athlete, Greg has bicycled the entire length of the Americas - 18,500 rugged, adventurous miles through 20 countries - from Prudhoe Bay, Alaska to Ushuaia, Argentina.

Please join us for refreshments before the program begins. More information is available on our website, www.acsmb.org.

Next month: Our next program will be on Thursday, October 29, at Hopkins Boatworks Hall at 7 PM

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CALENDAR

Sep. 12: Channel Islands Adventure: Santa Rosa Island. Cetaceans including Blue Whales are often encountered on this trip. 8 AM to 6 PM. For information please call 310-548-7562.

Sep. 19: California Coastal Cleanup Day.

Sept. 20: Science Sunday. Evolution in the Anthropocene; How Human Activity is Changing the Shape of Life. Talk by Eric P. Palkovacs, Assistant Professor, Department of Ecology and Evolutionary Biology, UCSC. 1 PM at the Seymour Marine Discovery Center in Santa Cruz.

Sept. 29: Dead Whales Do Tell Tales: What We Learn from Post-mortem Examinations and Museum Specimens. Presented by the San Francisco Chapter of ACS. Lecture to be presented by Moe Flannery, Mammalogy and Ornithology Collector, California Academy of Sciences. 7 PM – 9 PM at the Bay Model Visitor Center.

Nov. 5-8: Western Society of Naturalists, 96th Annual Meeting in Sacramento, CA.

Dec. 13-18: 21st Biennial Conference on the Biology of Marine Mammals: Bridging the Past Toward the Future. Hilton San Francisco, Union Square. San Francisco, and the greater central California coast region, is home to one of the greatest diversity of marine mammals in the world, with over 30 species having been observed. It also hosts one of the greatest assemblages of marine mammal scientists and marine science institutions in the world. Upwards of 3,000 scientists from more than 30 countries are expected to attend.

BOOK RECOMMENDATIONS

Marine Mammals of the World: A Comprehensive Guide to Their Identification, 2nd Edition, by Robert L. Pitman, Thomas A. Jefferson, and Marc A. Webber, with illustrations by Uko Gorter. 2015 Academic Press.

A Pocket Guide to Sharks of the World, by David A. Ebert, Sarah Fowler and Marc Dando. 2015 Princeton University Press.

California's Wild Edge: The Coast in Prints, Poetry, and History, by Tom Killion and Gary Snyder. 2015 Heyday.

CHAPTER AWARDS DOLPHIN BEQUEST

The Monterey Bay Chapter of the American Cetacean Society has awarded a special \$20,000 bequest for dolphin research in Monterey Bay to Dr. Birgitte McDonald and Dr. Alison Stimpert at Moss Landing Marine Labs.

The money is from the estate of Dr. Deane Oberste-Lehn, who specified that it be used for dolphin research in Monterey Bay. She died in 2009 at the age of 75, leaving most of her estate to dolphin research and marine mammal rescue organizations, including the \$20,000 bequest to our chapter. Dr. Oberste-Lehn, a member of the Monterey Bay Chapter, earned her doctorate from Stanford University and worked as a consulting geological engineer with a firm based in Marina Del Rey.

Dr. McDonald is the new assistant professor at Moss Landing who presented our dynamic May program on diving physiology of marine mammals. Dr. Stimpert, a full time researcher on the faculty, is returning soon from maternity leave.

They will lead research on the social behavior and site fidelity of Risso's dolphins in Monterey Bay, utilizing interns and graduate students at the school. They hope to identify resident and transient groups of Risso's dolphins in Monterey Bay, examine the stability of the social structures, investigate the effect of vessel traffic (both commercial and recreational), and work on a photo identification library.

PLASTIC IN 99 PERCENT OF SEABIRDS BY 2050

Aug. 31, 2015 — Researchers from CSIRO and Imperial College London have assessed how widespread the threat of plastic is for the world's seabirds, including albatrosses, shearwaters and penguins, and found the majority of seabird species have plastic in their gut.

The study, led by Dr. Chris Wilcox with co-authors Dr. Denise Hardesty and Dr. Erik van Sebille and published today in the journal PNAS, found that

nearly 60 per cent of all seabird species have plastic in their gut.

Based on analysis of published studies since the early 1960s, the researchers found that plastic is increasingly common in seabird's stomachs.

In 1960, plastic was found in the stomach of less than 5 per cent of individual seabirds, rising to 80 per cent by 2010.

The researchers predict that plastic ingestion will affect 99 per cent of the world's seabird species by 2050, based on current trends.

The scientists estimate that 90 per cent of all seabirds alive today have eaten plastic of some kind.

This includes bags, bottle caps, and plastic fibres from synthetic clothes, which have washed out into the ocean from urban rivers, sewers and waste deposits.

Birds mistake the brightly coloured items for food, or swallow them by accident, and this causes gut impaction, weight loss and sometimes even death.

"For the first time, we have a global prediction of how wide-reaching plastic impacts may be on marine species -- and the results are striking," senior research scientist at CSIRO Oceans and Atmosphere Dr. Wilcox said.

"We predict, using historical observations, that 90 per cent of individual seabirds have eaten plastic. This is a huge amount and really points to the ubiquity of plastic pollution."

Dr. Denise Hardesty from CSIRO Oceans and Atmosphere said seabirds were excellent indicators of ecosystem health.

"Finding such widespread estimates of plastic in seabirds is borne out by some of the fieldwork we've carried out where I've found nearly 200 pieces of plastic in a single seabird," Dr. Hardesty said.



This is a red-footed booby on Christmas Island. (Credit: CSIRO).

The researchers found plastics will have the greatest impact on wildlife where they gather in the Southern Ocean, in a band around the southern edges of Australia, South Africa and South America.

Dr. van Sebille, from the Grantham Institute at Imperial College London, said the plastics had the most devastating impact in the areas where there was the greatest diversity of species.

"We are very concerned about species such as penguins and giant albatrosses, which live in these areas," Erik van Sebille said.

"While the infamous garbage patches in the middle of the oceans have strikingly high densities of plastic, very few animals live here."

Dr. Hardesty said there was still the opportunity to change the impact plastic had on seabirds.

"Improving waste management can reduce the threat plastic is posing to marine wildlife," she said.

"Even simple measures can make a difference. Efforts to reduce plastics losses into the environment in Europe resulted in measureable changes in plastic in seabird stomachs with less than a decade, which suggests that improvements in basic waste management can reduce plastic in the environment in a really short time."

Chief Scientist at the US-based Ocean Conservancy Dr. George H. Leonard said the study was highly important and demonstrated how pervasive plastics were in oceans.

"Hundreds of thousands of volunteers around the world come face-to-face with this problem during annual Coastal Cleanup events," Dr. Leonard said.

"Scientists, the private sector and global citizens working together against the growing onslaught of plastic pollution can reduce plastic inputs to help protect marine biodiversity."

The work was carried out as part of a national marine debris project supported by CSIRO and Shell's Social investment program as well as the marine debris working group at the National Center for Ecological Analysis and Synthesis, University of California, Santa Barbara, with support from Ocean Conservancy.

<http://www.sciencedaily.com/releases/2015/08/15/0831163739.htm>

COULD VANCOUVER BE HOME TO THE FIRST SEA SANCTUARY FOR CETACEANS

by Cheryl Rossi

Aug. 19, 2015 — Vancouver could be the site of the world's first sea pen sanctuary for cetaceans, says an internationally prominent animal advocate.

Dr. Lori Marino raised the idea during her visit to the city last month, and Whale Lab researcher from the University of Victoria, Dave Duffus, agrees.

“Vancouver is ideal in a lot of ways,” Duffus, an associate geography professor, told *Vancouver Observer*. “I think Vancouver Aquarium had the first killer whale [in captivity] and it would be an opportunity to really step out of the captivity mold and say, ‘We’re interested in doing something better’ or undoing something poorly thought out. [Its] time has come.”

Establishing a sanctuary in Canada would demonstrate what Canadians are about, said Duffus. “We’re forward-looking and compassionate people,” he said.

Marino, the Utah-based executive director of the Kimmela Center for Animal Advocacy, says a sanctuary site should be chosen not only for its geographical location but for the local public’s attitude.

“Do they buy into it? Are they supportive? Are they willing to have something like this in their backyard?”

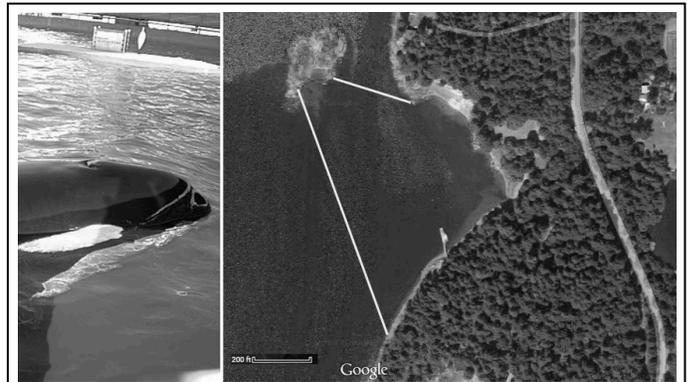
Marino spoke about an orca sanctuary in Vancouver at the Compassionate Conservation Conference in July.

She wants to see marine mammal scientists, veterinarians, trainers, lawyers, policy-makers, business people and engineers collaborate to determine the best location and model for a sea pen sanctuary for whales and dolphins. She notes there are sanctuaries for elephants, chimpanzees, large cats and bears, but nowhere for sea mammals to go if they are released from marine parks and unable to survive in the wild. But she wants to make sure the first sanctuary that’s established is done right.

Marino and Dr. Naomi Rose, marine mammal scientist at the Animal Welfare Institute in Washington, D.C., are hosting a workshop on sea pen sanctuaries at the Society for Marine Mammology’s biennial conference in San Francisco in December. A group in Italy is working to establish a sea pen sanctuary and a marine mammal scientist from the Italian group will attend the December event. Marino says she’s also been talking to representatives from the zoo and aquarium industry.

Howard Garrett, co-founder, director and president of the board of the non-profit Orca Network, has registered for the December workshop.

Garrett has been working to see the orca called Lolita returned to Puget Sound by the Miami Seaquarium for decades. He wants to see Lolita spend her last days in the area where she spent her first four



From left: Lolita in captivity (Credit: Erika Price); a sea pen proposal for the San Juan Islands (Credit: Google).

years until she was captured and sent to the Miami Seaquarium in 1970.

Concerns about a sea pen in Puget Sound apply to a Vancouver location.

The Free Lolita campaign originally envisioned a sea pen for Lolita (and only her) on the west side of San Juan Island, but organizers have changed the designated site to a horseshoe-shaped inlet on the east side of Orcas Island, which is more protected from the weather.

The inlet could accommodate a 600-foot-by-400-foot (183 metres by 122 metres) net. A gradual incline to the beach would allow Lolita to be eased out of the water and on a rubber tarp, to which she is accustomed, for medical examinations. Garrett said the adjacent landowner is enthusiastic about having a sanctuary off his shore.

Dr. Phillip Clapham, leader of the cetacean assessment and ecology program at the National Marine Mammal Laboratory in Alaska, wonders how well a sea pen could accommodate orcas that swim “vast distances” in the wild.

“Certainly any improvement in the size or the area in which a killer whale is kept can presumably only be good for the mental welfare of the animal,” he said. “Whether this is really enough is another question.”

Orcas are social, family-oriented animals so placing a mammal that has lived alone in an aquarium alone in a sea pen may not be ideal, Clapham notes, and reintroducing them to their family members could be an “interesting experiment.”

There are also concerns that formerly captive animals could introduce disease to wild populations.

Trainers would help Lolita improve her cardiovascular strength, her fishing skills and she would eventually be provided access to her family, said Garrett, adding that vets would thoroughly examine Lolita for pathogens.

Garrett believes a remote site is preferable to urban setting, but Duffus disagrees.

“You want to use pens to really raise public consciousness and maybe to expand the idea of sea pens,” he said. “What we found out in the conservation area is that the public has to be exposed to participate.”

Vancouver, a tourist destination and “nerve centre,” would make a great site, he said. But it’s up to the public to convince aquariums to support sanctuaries.

Several attempts to speak to a representative of the Vancouver Aquarium about the concept were unsuccessful.

“The aquariums are there because the public accepts them,” Duffus said. “Killer whales and belugas and dolphins are in captivity because the public allows it, so we have to work through to the public and then back to the aquarium.”

<http://www.vancouverobserver.com/news/could-vancouver-be-home-first-sea-sanctuary-cetaceans>

FOSSIL SPECIMEN REVEALS A NEW SPECIES OF ANCIENT RIVER DOLPHIN

Sep. 1, 2015 — The careful examination of fossil fragments from Panama has led Smithsonian scientists and colleagues to the discovery of a new genus and species of river dolphin that has been long extinct. The team named it *Isthminia panamensis*. The specimen not only revealed a new species to science, but also shed new light onto the evolution of today’s freshwater river dolphin species. The team’s research was published Sept. 1 in the scientific journal *PeerJ*.

The fossil, which dates from 5.8-6.1 million years ago, was found on the Caribbean coast near the town of Piña, Panama. It consists of half a skull, lower jaw with an almost entire set of conical teeth, right shoulder blade and two small bones from the dolphin’s flipper. In comparison with other river dolphins—both fossil and living—the shape and size of these parts suggests that the full specimen may have been more than 9 feet in length.

Today there are only four species of river dolphins -- all living in freshwater or coastal ecosystems and all endangered, including the Chinese river dolphin, which is likely now extinct. Each of the modern river dolphin species show a common solution to the problem of adapting away from marine to freshwater habitats by converging upon a body plan that includes broad, paddle-like flippers, flexible necks and heads with particularly long, narrow snouts—

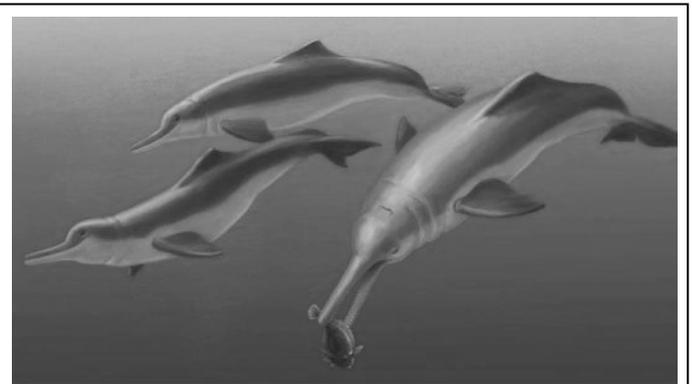
—all the better to navigate and hunt in winding, silty rivers.

But fossil evidence suggests that river dolphins’ ancestors were widespread around the globe. *I. panamensis* was clearly one of them, and its fossil remains have helped the team understand something less clear: When in their evolutionary tract did river dolphins transition from the saltwater of the ocean to the freshwater of rivers?

“We discovered this new fossil in marine rocks, and many of the features of its skull and jaws point to it having been a marine inhabitant, like modern oceanic dolphins,” said the study’s lead author Nicholas D. Pyenson, curator of fossil marine mammals at the Smithsonian’s National Museum of Natural History. “Many other iconic freshwater species in the Amazon, such as manatees, turtles and stingrays have marine ancestors, but until now, the fossil record of river dolphins in this basin has not revealed much about their marine ancestry. *Isthminia* now gives us a clear boundary in geologic time for understanding when this lineage invaded Amazonia.”

Other fossilized animals found at the same site as *I. panamensis* were marine species, indicating that unlike river dolphins living today, *I. panamensis* lived in the salty waters of a food-rich Caribbean Sea, before the full closure of the Panama Isthmus.

“*Isthminia* is actually the closest relative of the living Amazon river dolphin,” said study co-author Aaron O’Dea, staff scientist at the Smithsonian Tropical Research Institute in Panama. “While whales and dolphins long ago evolved from terrestrial



This is an artistic reconstruction of *Isthminia panamensis*, a new fossil dolphin from Panama, feeding on a flatfish. Many features of this new species appear similar to today’s ocean dolphins, yet the new fossil species is more closely related to the living Amazon River dolphin. The fossils of *Isthminia panamensis* were collected from marine rocks that date to a time (around 6 million years ago) before the Isthmus of Panama formed and a productive Central American Seaway connected the Atlantic and Pacific oceans. (Credit: Julia Molnar / Smithsonian Institution).

ancestors to fully marine mammals, river dolphins represent a reverse movement by returning inland to freshwater ecosystems. As such, fossil specimens may tell stories not just of the evolution these aquatic animals, but also of the changing geographies and ecosystems of the past."

The Smithsonian's Digitization Program Office collaborated with the scientific team to create a high resolution 3-D scan of the fossil, allowing the scientists to create 3-D prints of the delicate specimen, whose bones are too fragile to be molded and casted by traditional approaches. A 3-D print of the fossil is on permanent display at Panama's BioMuseo--the original specimen will remain in the Smithsonian's collection at the National Museum of Natural History.

The name of the new genus, *Isthminia*, recognizes both the Panama Isthmus and the fossil specimen's living relative, the Amazon river dolphin, *Inia geoffrensis*. The study's authors chose the species name, *panamensis*, to recognize "the Republic of Panama, its people, and the many generations of scientists who have studied its geological and biological histories."

<http://www.sciencedaily.com/releases/2015/09/15/0901095511.htm>

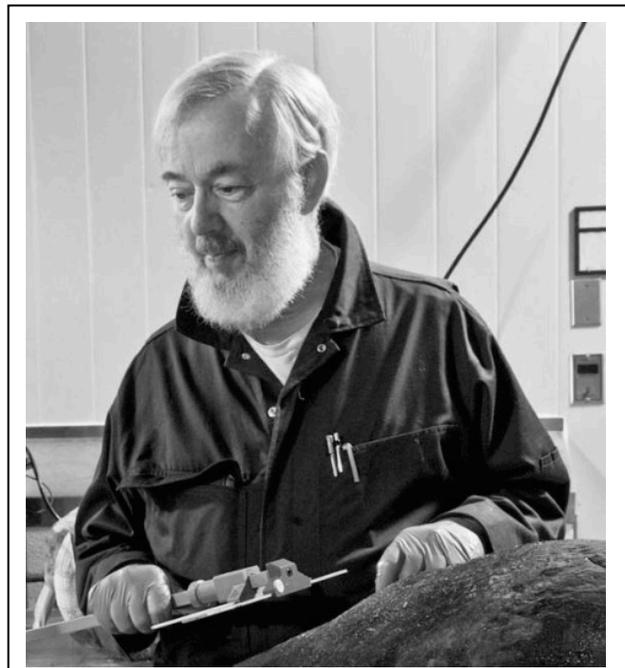
DR. JAMES MEAD – 2015 NORRIS AWARD WINNER

by Nick Gales

Sep. 3, 2015 — I am delighted to announce that the winner the 2015 Norris Award is James Mead. Jim is a truly worthy recipient of an award which was established in the name of the society's founding president to acknowledge his exemplary lifetime contribution to science and society through research, teaching, and service in marine mammalogy.

Jim is *Curator Emeritus* at the Smithsonian, a title bestowed upon him on his retirement in 2009. Jim was appointed curator of marine mammals at the Natural History Museum, Smithsonian Institution, in 1972 and it is from his work here, particularly on anatomy and ziphiids, that he is best known. Jim has published widely in science on cetacean biology, usually specimen – informed, as well as books for a more general audience, such as "Whales in Question". His greatest work is the lexicon on the dolphin skull, which took some 15 years of research and writing.

Jim first discovered an interest in natural history during his childhood in and around the Olympic Peninsula, Washington State, USA. As a school kid, he helped his dad to log trees, learned to drive a bulldozer and drove truckloads of logs to the mill.



Dr. James Mead

This early foray into logging convinced him to take up a different career and he subsequently won a place at Yale University, Connecticut, USA, with the intention of becoming a botanist. Jim, in fact, drifted into vertebrate paleontology and while conducting fieldwork in Kenya came across a fossil in an ancient river strata, which catalyzed his career long discourse in ziphiid anatomy. After Yale, Jim moved to Austin, Texas, to study for a Masters on fossils where he also developed a proficiency with human anatomy. More significantly, Jim bought his Land Rover, which still survives in Jim's possession today! And, perhaps more importantly, he gained a roommate, his future wife, Becky Maglidt.

Following his masters, it was off to the University of Chicago, Illinois, to study for his PhD. By chance, Jim had an opportunity to dissect a dolphin and it was this event that set him on the path to his career in cetology. His PhD led to a major monograph on the anatomy of the dolphin head and he established the anatomical basis for echolocation. After his PhD, Jim worked in the Canadian Province of Newfoundland where he gained experience with large cetaceans. Jim was appointed as curator of marine mammals at the Smithsonian in 1972, at about the same time as Charley Potter who became long-term collection manager. Jim and Charley developed an active recovery program for cetaceans from USA eastern shores. Jim went so far as to learn to fly while working in Cape Hatteras, North Carolina, to increase their ability to spot strandings. The recovered

specimens were prepared in a necropsy lab located in the centre of one of the Museum’s courtyards. A pungent procedure that ensured all the staff knew when THAT work was under way! Jim and Charley worked hard to fill the gaps in the Smithsonian marine mammal collection, which has resulted in the collection being the largest and most important in the world today.

Jim was not only an excellent and dedicated researcher, he also encouraged pre- and post-docs to visit and work with the Marine Mammal Program and thus he launched many young cetologists on their careers. His office was a clearing-house for cetology, a place to meet colleagues and to admire Jim’s library. Visits to Jim’s office were excellent social occasions and provided the motivation to eat out at a new place or look at a new exhibition. Likewise, Jim’s house in Arlington, commonly known as the “the Happiness Hotel”, has been a meeting place and both short and long-term home for interns, fellowship students and diverse cetological vagrants.

As a recipient of the Norris Award, Jim has been invited to give a plenary lecture at the Society for Marine Mammalogy Biennial Conference between December 13-18, 2015 and to write an associated paper for *Marine Mammal Science*.

<https://www.marinemammalscience.org/smm-news/dr-james-mead-2015-norris-award-winner/>

SIGHTINGS

Sightings are compiled by Monterey Bay Whale Watch. For complete listing and updates see <http://www.montereybaywhalewatch.com/slstcurr.htm>

Date	#	Type of Animal(s)
8/31 am	32	Humpback Whales
	1	Blue Whale
	260	Long-beaked Common Dolphins
	12	Risso’s Dolphins
	2	Northern Fur Seals
8/30 pm	8	Black-footed Albatross
	1	Mola Mola (Ocean Sunfish)
8/30 am	3	Humpback Whales (1 at the fuel dock)
8/30 am	50	Humpback Whales
	1	Blue Whale
	400	Long-beaked Common Dolphins
	40	Risso’s Dolphins
8/29 late pm	1	Mola Mola (Ocean Sunfish)
	45	Humpback Whales (lunge feeding and breaching)
8/29 pm	280	Long-beaked Common Dolphins
	25	Humpback Whales
8/29 am	350	Long-beaked Common Dolphins
	25	Humpback Whales

8/28 late pm	1	Killer Whale (Fat Fin)
	250	Long-beaked Common Dolphins
8/28 pm	1	Mola Mola (Ocean Sunfish)
	25	Humpback Whales
8/28 am	20	Humpback Whales
	250	Long-beaked Common Dolphins
	35	Humpback Whales
8/27 am	4	Killer Whales
	150	Long-beaked Common Dolphins
	27	Humpback Whales (lunge feeding)
8/26 pm	500	Long-beaked Common Dolphins
	500	Risso’s Dolphins
	25	Humpback Whales
8/26 am	400	Long-beaked Common Dolphins
	19	Humpback Whales
	500	Long-beaked Common Dolphins
8/25 pm	10	Risso’s Dolphins
	20	Humpback Whales
8/25 am	32	Humpback Whales
8/24 pm	25	Humpback Whales
	350	Long-beaked Common Dolphins
	1	Mola Mola (Ocean Sunfish)
8/24 am	60	Humpback Whales
	1,200	Long-beaked Common Dolphins
	3	Harbor Porpoise
8/23 late pm	40	Humpback Whales (breached 20+ times)
8/23 pm	40	Humpback Whales
	4	Killer Whales (hunted and killed a harbor seal)
	350	Long-beaked Common Dolphins
8/23 am	18	Humpback Whales
	2	Blue Whales
	2	Fin Whales
	400	Long-beaked Common Dolphins
	60	Risso’s Dolphins
	6	Dall’s Porpoise
8/22 late pm	28	Humpback Whales
	80	Long-beaked Common Dolphins
8/22 pm	40	Humpback Whales
	200	Long-beaked Common Dolphins
8/22 am	24	Humpback Whales
	2	Blue Whales
	400	Long-beaked Common Dolphins
	120	Risso’s Dolphins
	4	Harbor Porpoise
8/21 late pm	5	Mola Mola (Ocean Sunfish)
	35	Humpback Whales
	250	Long-beaked Common Dolphins
8/21 pm	40	Humpback Whales
	1,500	Long-beaked Common Dolphins
	20	Harbor Porpoise
	15	Dall’s Porpoise
8/21 am	50	Humpback Whales
	800	Long-beaked Common Dolphins
	300	Risso’s Dolphins
	100	Harbor Porpoise
	1	Large Shark (possibly a white shark)

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Monterey Bay Chapter
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Membership Levels and Annual Dues

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