

# Soundings



American Cetacean Society- Monterey Bay Chapter

May 2012

PO Box H E, Pacific Grove, CA 93950

## AMERICAN CETACEAN SOCIETY- MONTEREY BAY CHAPTER

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

**Date: Thursday, May 31, 2012 Time: 7:30 PM.**

**PLEASE JOIN US AT 7:00 FOR REFRESHMENTS**

**Speakers: Jerry Loomis, ACS MB Chapter President &  
Dana Jones, Park Superintendent of the  
North Coast Redwoods**

**Subject: A Journey to Southern Baja**

*Have you ever wanted to see southern Baja?*

*Join us for this amazing journey!*

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Jerry Loomis is our current American Cetacean Society Monterey Bay Chapter President. He has been the President of the ACS MB Chapter for three terms. He is a retired Monterey District Park Ranger. He worked as a naturalist on whale watching trips for 30 years. Jerry has a passion for marine conservation and has been involved in conservation through ACS and the California state parks since 1980.

Dana Jones is currently the Park Superintendent of the North Coast Redwoods in Eureka. Dana was formerly the Park Superintendent of the Monterey District. She also has a strong passion for conservation and nature.

This presentation will take us on a journey across southern Baja to see friendly whales in two calving lagoons and visit ancient cave paintings and missions. We will also be viewing wildlife from boat trips into the Sea of Cortez and view sea birds and foraging dolphins.

Hope to see you there,

Donna Beckett, ACS MB Programs Committee

## CALENDAR

### Hopkins Marine Station Spring Seminars

**May 15:** Callum Roberts: The Ocean of Life: The Fate of Man and the Sea.

**May 18:** Josh Goldman: Paths to Sustainable Aquaculture

**May 25:** Cameron Ainsworth, U. of South Florida: Restoring the Gulf of California: Ecosystem Based Strategy to Save the Vaquita and Preserve Artisanal Fisheries

**June 1:** Jim Estes, University of California Santa Cruz  
Apex Consumers and the Tapestry of Nature

**June 8:** Greg Store, Conservation International  
Saving Pristine Places

**May 21-24:** 63rd Tuna Conference Lake Arrowhead, CA. Natural and Anthropogenic Effects on Highly Migratory Fish Populations. For more info go to [tuna.conference.org](http://tuna.conference.org)

**May 22-June 3:** Marine Mammal and Seabird Behavioral Ecology of New Zealand. Class will be taught in Kaikoura, New Zealand with marine mammalogist Bernd Wursig. 13 days immersion in marine mammal and seabird ecology and behavior. For more info email :[wuersig@sbcglobal.net](mailto:wuersig@sbcglobal.net)

**May 26- May 28:** ACS Memorial Day Wildlife Weekend: Spend 3 days aboard the Searcher in search of Blue Whales, Dolphins, Sea Turtles, Pinnipeds, and Marine Birds. This trip will include a cruise past the Los Coronados Islands. Cost is \$450. For more info please call 619-226-2403 or [ASC.org](http://ASC.org)

### Summer Classes at Moss Landing Marine Lab

1. Techniques and Theories of Animal Training:  
Bio 348 (July 9-15) Tuition \$585

2. Working with Marine Mammals:  
Bio 347 (July 23-29) Tuition \$585

Completion of both courses will earn the student a Certificate of Completion in Beginning Marine Mammalogy. Class instructor will be Dr. Jenifer Zelig. For more info and class registration call 831-582-4500

**Aug. 4:** Monterey Bay Chapter ACS Summer Whale Watch "Search For The Great Blue Whale". Join us aboard the Sea Wolf 2 in search of the largest animal the world has ever known. Monterey Bay is one of the foremost locations in the world to observe blue whales. For more info please call Tony Lorenz at 831-901-7259 (more info to follow) .

**Aug 11:** ACS Nat'l Fundraiser- Blue Whales: Behemoths of the Deep, Santa Barbara. Boat-Condor Express. Cost \$95 includes a Continental Breakfast. For reservations and info please call Kaye Reznick at 310-548-6279

**CAMP SEA LAB: Science, Education and Adventure**  
2012 Sea Camps Include- School of Sharks, Flukes and Flippers, Journey to the Abyss, Girls and Science, Be-

tween the Tides and much more. For more info please call Chris at 831-582-3681

**Sept 24--30:** 2012 Blue Ocean Film Festival & Conservation Summit in Monterey, CA. Blue brings together some of the finest scientist and filmmakers from around the world for 6 days in Monterey to try and find solutions to our oceans most urgent problems

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## Media Recommendations

The Ocean of Life: The Fate of Man and the Sea  
Written by Callum Roberts

Relics: Travels in Natures Time Machine  
Written by Piots Naskrechi

Charles R. Knight: The Artist Who Saw Through Time  
Written by Richard Milner

Cultural Traditions and the evolution of reproductive isolation: Ecological speciation in killer whales. Biological Journal of the Linnean Society

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## **MAHALO MONDAY IN MAY**

*Enjoy Island cuisine and tropical drinks at Hula's Island Grill, 622 Lighthouse Ave, New Monterey, every Monday in May after 4pm, and a portion of the proceeds from the month will be donated to Viva Vaquita! It's a delicious and simple way to help the most endangered cetacean on earth. Last year, Viva Vaquita received over \$1400 from Hula's, thanks to a strong turn-out of vaquita supporters. The littlest porpoise still needs our help!*

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## **DOLPHIN DASH**

ACS Executive Director, Cheryl McCormick, will run 50 miles on 6/28/12 to raise funds to attend the International Whaling Commission (IWC) meeting in Panama in early July. This will be Cheryl's third and final Dolphin Dash for ACS, as she has recently resigned from the ED position, effective upon her return from the IWC on 7/8/12. All donations are welcome. Cheryl's 50-mile course runs from Seaside to Carmel Valley and back.

Please show your support and mail your donations to ACS/MB, PO Box HE, Pacific Grove, CA 93950 or donate at [acsonline.org](http://acsonline.org). Dr. McCormick has developed a strategic plan for the growth of ACS and has updated governance principles, among many other accomplishments during her tenure as Executive Director. She will keep us posted on discussions at the International Whaling Commission with live blog and twitter feeds. Thank you, Cheryl, for your tireless work as Executive Director of ACS and for running the Dolphin Dash. We appreciate you!

## **BILL WOULD KEEP CONTROVERSIAL 'NO-OTTER ZONE' IN PLACE**

*The bill, backed by House Republicans, would retain the zone south of Point Conception until wildlife officials develop a plan ensuring that the threatened marine mammals and endangered abalone recover and that the commercial shellfish harvest stays at current levels.*

By Tony Barboza, LA Times, April 27, 2012

A bill backed by House Republicans would stall plans to let sea otters reclaim their historical range off Southern California because of concerns that the threatened marine mammals would compromise commercial fishing and military training operations.

The Military Readiness and Southern Sea Otter Conservation Act, sponsored by Rep. Elton Gallegly (R-Simi Valley), would keep a controversial "no-otter zone" south of Point Conception in place until wildlife officials develop a plan ensuring that the furry creatures and endangered abalone recover and that the commercial shellfish harvest stays at current levels.

Those provisions drew fire this week from wildlife experts, who believe the sea otters' recovery from the brink of extinction decades ago could be in jeopardy unless they are allowed to extend their range south from the Central Coast into Southern California.

The bill contends the furry critters could undermine training and testing activities at San Nicolas Island, San Clemente Island and Marine Corps Base Camp Pendleton, where the military conducts underwater detonations, live-fire exercises, amphibious warfare training and missile launches. The legislation would establish zones around the military installations where sea otters would be exempt from some protections under the Endangered Species Act and Marine Mammal Protection Act.

Gallegly said in a statement supporting his bill that when sea otters move south they "will be invading prime shellfish fishing grounds and U.S. Naval testing areas. While I support recovery efforts of the southern sea otter, this cannot happen at the expense of our national security, the commercial shellfish fishing industries, and other endangered species."

Critics say lawmakers are using national defense as a cover to benefit the fishing industry, which fears that otters will gobble up the region's shellfish.

Sea otters are such voracious consumers of sea urchins, abalone, mussels and clams that under the bill "there is no way the government could follow the law and let otters extend their range," said Jason Lutterman, program manager with the Carmel, CA.-based advocacy group Friends of the Sea Otter. The group is one of a coalition of conservation groups that oppose the bill as "dangerously counterproductive to the conservation and recovery of the threatened southern sea otter."

The bill stems from the decision last year by the U.S. Fish and Wildlife Service to end a failed 1987 program that barred sea otters from most Southern California



waters and sought to establish a second sea otter population by moving 140 of them from Monterey Bay to San Nicolas Island, 60 miles off the coast, in case a disaster, such as an oil spill, put them at risk of extinction.

But the relocation program failed and the southern colony never took hold. Many sea otters died or swam away, though a population of 50 remains at San Nicolas Island today.

As part of a compromise with fishing groups at the time, the government promised to round up any otters that strayed close to the Southern California mainland. Officials stopped moving otters out of area waters in 1993 after determining the artificial boundary was not helping restore the population.

The U.S. Fish and Wildlife Service opposes key provisions of the bill, saying they would duplicate existing recovery plans for sea otters and black abalone and wouldn't allow for natural interactions between predators and prey.

Some 16,000 sea otters used to populate the California coast until traders nearly hunted them to extinction by the early 1900s. In 1977 they were listed as threatened under the Endangered Species Act. They number about 2,700 today.

In recent years, the much-adored creatures have struggled to mount a comeback, their growth stifled by high mortality from predators, overfishing, polluted runoff and disease. In 2011, an unprecedented number of California sea otters were found dead, sick or injured, in part due to a rise in shark attacks.

Fishermen say their livelihood would be hurt by the unfettered expansion of sea otters into their fishing grounds.

"We need to balance the needs of all species, including human beings," California sea urchin diver Bruce Steele said at a House subcommittee hearing last week..

Sea otters aren't waiting for Congress to act.

In recent years, young males have been making seasonal sojourns into Southern California in search of food.

Adult females with pups have also ventured south of Point Conception, wildlife veterinarian David Jessup

told lawmakers. "Trying to exclude sea otters from areas of the ocean they want to occupy is proven unworkable and now seems a bit foolish," he said.

### ALBINO KILLER WHALE SPOTTED OFF RUSSIA'S EASTERN COAST

A team of Russian scientists have reported what they believe is the first-ever sighting of an all-white, adult killer whale in the wild.

The discovery of the six-foot, pure white fin was made by scientists during a research cruise off the eastern coast of Russia, near the Kamchatka Peninsula and the Commander Islands in the North Pacific.

"It is a breathtakingly beautiful animal," Eric Hoyt, one of the scientists, told the AFP.

Hoyt leads the Far East Russia Orca Project, the group that made the discovery and has been following orca whales in the area, protected as Russia's largest Marine reserve, for the past 12 years. The group says it has sighted and catalogued about 1,500 whales so far, but the discovery of the adult male, which they have nicknamed Iceberg, stands out.

"This is the first time we have ever seen an all-white, mature male orca," Hoyt said.

The orca appears to be healthy and interacting normally with the other nearly one dozen whales in its pod, according to Hoyt.

"We know that these fish-eating orcas stay with their mothers for life, and as far as we can see he's right behind his mother with presumably his brothers next to him," he told the BBC.

The researchers believe Iceberg is at least 16 years old given the "somewhat ragged" nature of his fin. Orca males can live up to the age of 50 or 60 years, although most only live for around 30 years.

"We've seen another two white orcas in Russia but they've been young," Hoyt said.

Hoyt's research team plans to track Iceberg and his pod over the summer months to definitively establish whether Iceberg is albino, a genetic condition that leaves animals unable to produce melanin, a darker pigment.

The team hopes to be able to confirm Iceberg's condition by photographing his eyes instead of the more complex task of taking a biopsy from the mammal.

"If we can get a full close-up of the eyes and they are pink, it would confirm Iceberg is an albino, but we don't know much about albinism in orcas," Hoyt said.

In 1972, a two-year-old white orca named

Chimo died while in captivity in Canada from a genetic condition that was believed to have caused its albinism.

More recent sightings of the elusive, albino version of the animal have included a reported sighting off the Aleutian Islands near Alaska in 2008 and interest in a humpback whale nicknamed Migaloo in Australia, although that animal is not believed to be naturally white, the BBC reports.

### UNDERSTANDING OF HEARING IN BALEEN WHALES AMPLIFIED

ScienceDaily (Apr. 17, 2012) — For decades, scientists have known that dolphins and other toothed whales have specialized fats associated with their jaws, which efficiently convey sound waves from the ocean to their ears. But until now, the hearing systems of their toothless grazing cousins, baleen whales, remained a mystery.

Unlike toothed whales, baleen whales do not have enlarged canals in their jaws where specialized fats sit. While toothed whales use echolocation to find prey, baleen whales generally graze on zooplankton, and so some scientists have speculated that baleen whales may not need such a sophisticated auditory system. But a new study by scientists at Woods Hole Oceanographic Institution (WHOI), published April 10, 2012, in *The Anatomical Record*, has shown that some baleen whales also have fats leading to their ears.

The scientists propose that toothed whales may not be the only whales that use fats to transmit sound in water, as previously believed, and the fats in both types of whales may share a common evolutionary origin.

Little progress had been made on the auditory anatomy of baleen whales because specimens to study are hard to get. Unlike many toothed whales, they are large, not kept in captivity, rarely strand on beaches, and decompose rapidly when they do.

For the new study, lead author Maya Yamato, a graduate student in the MIT/WHOI Joint Program in Oceanography, received seven heads of minke whales that stranded and died, mostly on beaches on



The fats associated with minke whale ears (shown here in yellow), previously seen only in toothed whales, may efficiently transmit sound waves from the external environment to ears inside of the whales' heads (shown here in purple). (Credit: Maya Yamato, Woods Hole Oceanographic Institution)

Cape Cod. She collaborated with the International Fund for Animal Welfare's (IFAW) Marine Mammal Rescue and Research unit in Yarmouth Port, Mass.

The whale heads were scanned using computerized tomography (CT) and magnetic resonance imaging (MRI) at the Computerized Scanning and Imaging (CSI) lab at WHOI and MRI facility at Massachusetts Ear and Eye Infirmary in Boston. Using these biomedical techniques, the researchers generated 3-D visualizations of the whales' internal anatomy, with both bones and soft tissue intact and in their undisturbed natural positions, providing "an unprecedented view of the internal anatomy of these animals," the scientists wrote.

Then the whale heads were dissected in the necropsy facility at the Marine Mammal Center at WHOI. Together, the studies showed that all the minke whales had "a large, well-formed fat body" connecting to the ears, providing a potential transmission pathway guiding sound from the environment to their inner ears.

"This is the first successful study of intact baleen whale head anatomy with these advanced imaging techniques," said WHOI Senior Scientist Darlene Ketten, director of the CSI lab at WHOI and co-author on the paper. "It really is an important addition to our understanding of large whale head and auditory systems."

Also collaborating on the study were Julie Arruda and Scott Cramer at the CSI and Kathleen Moore of IFAW. *This research was funded by a National Science Foundation Graduate Research Fellowship, a WHOI Ocean Life Institute Graduate Fellowship, the Joint Industry Program, the Office of Naval Research, and the U.S. Navy.*

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## **CALIFORNIA ASSEMBLY PASSES LEATHERBACK SEA TURTLE BILL ON BIPARTISAN VOTE**

*AB 1776 Will Designate Leatherback Sea Turtle as Official State Symbol*

Sacramento, CA- The California State Assembly voted unanimously to pass a bill (AB 1776 - Fong) that will designate the endangered Pacific leatherback sea turtle as California's official state marine reptile and declare October 15 every year as Leatherback Conservation Day. AB 1776 is sponsored by SeaTurtles.org (Turtle Island Restoration Network) and is intended to recognize the importance of California state waters to the survival and recovery of this ancient sea turtle species. The bill now goes to the Senate for voting.

"Designating the Pacific leatherback sea turtle as our state marine reptile will help be part of a coordinated worldwide conservation effort to save a species whose population has declined more than 95 percent," said Assembly-member Fong, who introduced the bill. "Naming the leatherback sea turtle as our official state marine reptile will demonstrate California's commitment to protecting leatherback sea turtles, our oceans ecosystem, and recognize the education and awareness this official designation bestows for this revered creature whose migratory pattern includes

California's coast."

The Pacific leatherback swims 6,000 miles across the ocean to feed on jellyfish along the coast.

"Few Californians realize that the rare and ancient leatherback even exists, let alone that it has relied on our coast for millions of years," said Teri Shore, Program Director at SeaTurtles.org (Turtle Island Restoration Network), primary bill sponsor, based in West Marin, California. "Making the leatherback the official marine reptile will help engage people at sea and on shore in conserving this incredible sea turtle for all time."

AB 1776 will help Californians learn about and appreciate the leatherback and recognize the ecological importance of this ancient species by adding it to state law as an official symbol of California's conservation ethic and biodiversity. So far over 30 organizations and thousands of California residents have supported the bill.

"The Assembly's swift bi-partisan support for this legislation shows the timeliness and importance of recognizing this ocean ambassador species," said Geoff Shester, Oceana California Program Director. We hope to see the Senate and Governor take similar action to make this recognition official."

In recognition of new scientific information validating the importance of California waters to the survival of Pacific leatherbacks, the National Marine Fisheries Service recently designated critical habitat off the U.S. west coast, including 16,910 square miles off California's coast. Both SeaTurtles.org and Oceana participated in the 5 year process leading to the final designation.

The Pacific Ocean population of leatherbacks is in critical danger, having declined by 95 percent in the last 25 years, with as few as 2,100 adult female leatherback sea turtles remaining in the Pacific. Every summer and fall, leatherbacks migrate from their nesting grounds in Indonesia to ocean waters off the U.S. West Coast to feed on jellyfish — a 12,000-mile round-trip journey that is the longest known migration of any living reptile. During that journey, leatherbacks face a gauntlet of threats across the Pacific, including capture in commercial fishing gear, ingestion of plastics, poaching, global warming and ocean acidification.

*Turtle Island Restoration Network's (SeaTurtles.org) mission is to protect and restore endangered sea turtles and marine biodiversity worldwide in ways that incorporate the ecological needs of marine species and the economic needs of local communities, both of which share our common marine environment. We accomplish our mission through grassroots and policy-maker education, consumer empowerment, strategic litigation and by promoting sustainable local, national and international marine policies. See [www.seaturtles.org](http://www.seaturtles.org)*

*Oceana is the largest international advocacy group working solely to protect the world's oceans. Oceana wins policy victories for the oceans using science-based campaigns. Since 2001, we have protected over 1.2 million square miles of ocean and innumerable sea turtles, sharks, dolphins and other sea creatures. More than 500,000 supporters have already joined Oceana. Global in scope, Oceana has offices in North, South and*

Central America and Europe. To learn more, please visit [www.oceana.org](http://www.oceana.org).

The following is an excerpt from a blog in the Opinions section of the New York Times. For the complete blog please go to <http://dotearth.blogs.nytimes.com/2012/04/19/dna-study-finds-deeper-antiquity-of-polar-bear-species/>

## DNA STUDY FINDS DEEPER ANTIQUITY OF POLAR BEAR SPECIES

By ANDREW C. REVKIN (April 19)

A fascinating new paper makes a strong case, using new genetic clues, that polar bears have been around a lot longer, and thus endured more climate vagaries, than most previous estimates. The research is described in “Nuclear Genomic Sequences Reveal that Polar Bears Are an Old and Distinct Bear Lineage,” a paper being published on Friday in the journal *Science*.

The journal’s summary of the article makes the prime point: “Polar bears diverged from their closest relatives about 600,000 years ago, according to a new genetic analysis. The findings suggest the cold adapted species is about five times older than previously thought, and may have had more time to adapt to arctic conditions than recently assumed.”

You’ll see various interpretations. Those concerned about global warming (including at least one study author) are stressing that a longer evolutionary timeline implies the bears’ adaptation to climate change in the past was a slow process (meaning the speed of change now poses new threats). Those questioning the vulnerability of this species to warming will point to its successful survival through two previous warm intervals between ice ages as evidence the bear can deal with reduced ice and other big environmental shifts. Finally, there are basic questions about the robustness of the conclusions, which are based on a new line of genetic analysis not previously applied to polar bears. I think this work bolsters the view of scientists who’ve been calling for a conservation strategy for polar bears and other ice-dependent species focused on areas of the Arctic where sea ice is projected to endure well into this greenhouse-heated era.

James Gorman of the science staff at The Times captures this complexity well in his news story:

The report comes to no conclusion about how sensitive the bears are to the current loss of the sea ice that they live on, and the evolutionary tale it presents can be read in different ways.

The findings challenge the idea that the bears adapted very quickly, but confirm that they have made it through warming periods and loss of sea ice before. It may have been touch and go for the bears, however, because the authors find evidence of evolutionary bottlenecks, probably during warm periods, when only small popula-

tions survived, even though warming was occurring much more slowly than it is now

I had a few questions for the authors, and you can read some answers below. I also sought reactions from some polar bear specialists and biologists focused on DNA clues to when the species split from its brown bear kin. Read on for their thoughts, as well.

Here’s my exchange with Frank Hailer, the lead author and a scientist at the Biodiversity and Climate Research Center in Frankfurt:

**Q:** I’m writing to get some input from you on your incredibly valuable new paper on polar bear evolutionary history and genetics. I’d written on the mitochondrial DNA work but your research clearly is an important advance. I have a couple of questions, one being where the paper supports the conclusion in the related news releases about the polar bear’s evolution being a slow process. As in this line is from the *Science* summary, for instance:

*This study suggests that past adaptation to a changing climate may have been a slow process. Consequently, polar bears may not have enough time to adjust to these warmer conditions as they have in the past.* Where does the paper clarify the pace of genetic change as it relates to past (and future) periods of warming?

**A:** Our study looks at the evolutionary history of polar bears. Previous studies had suggested, mainly based on mtDNA results [*using DNA from the mitochondria within cells*], that polar bears should be an example of unusually rapid adaptation to arctic conditions. This was, because mtDNA data suggested that polar bears had evolved within some 150,000 years from a brown bear population that had colonized arctic habitats. Our study now removes the necessity for unusually rapid adaptability in polar bears, providing some 600,000 years of time for evolutionary adaptation. This figure is much more in line with what evolutionary biologists have found in other mammals, with regard to speciation and adaptation.



A polar bear sprawls on Arctic sea ice.

Patrick Kelley, U.S. Coast Guard.

**SIGHTINGS** Compiled by Monterey Bay Whale Watch.  
For Complete listing and updates see [gowhales.com/sighting](http://gowhales.com/sighting)

Date	#	Type of Animal(s)			
			4/19 a.m.	15	Humpback Whales
				10	Killer Whales
				25	Risso's Dolphins
			4/18 a.m.	8	Humpback Whales
5/3 p.m.	17	Humpback Whales (more in the area)	1200		Pacific White-sided Dolphins
	1	Gray Whale (calf carcass)	400		Risso's Dolphins
	10	Killer Whales	4/17 p.m.	2	Humpback Whales
	30	Risso's Dolphins	100		Pacific White-sided Dolphins
5/3 a.m.	60	Humpback Whales (some lunge feeding on krill)	4/17 a.m.	50	Risso's Dolphins
	2	Gray Whales (cow, calf under attack)	1	3	Humpback Whales
	10	Killer Whales	1000		Gray Whale
	1	Minke Whale	100		Pacific White-sided Dolphins
	1	Pacific White-sided Dolphin	4/16 p.m.	7	Risso's Dolphins
	4	Risso's Dolphins	3		Humpback Whales
4/30 a.m.	4	Humpback Whales	10		Gray Whales
	5	Pacific White-sided Dolphins	4/16 a.m.	17	Risso's Dolphins
	25	Risso's Dolphins	6		Humpback Whales
4/29 a.m.	6	Humpback Whales (including cow & calf pair)	400		Gray Whales
	50	Risso's Dolphins	300		Pacific White-sided Dolphins
4/28 a.m.	3	Humpback Whales (feeding on surface krill)	4/15 p.m.	12	Risso's Dolphins
	3	Killer Whales (predation on Gray Whale)	10		Humpback Whales
4/27 a.m.	2	Humpback Whales	4/15 a.m.	12	Killer Whales (transient type, predation on Harbor Seal)
	2	Humpback Whales (calf playful)	10		Humpback Whales
4/26 p.m.	10	Risso's Dolphins	4/13 a.m.	4	Killer Whales (transient type, predation on Minke Whale)
4/26 a.m.	2	Humpback Whales (cow & calf pair)	4/12 pm.	2	Humpback Whales
	25	Risso's Dolphins	4/12 a.m.	6	Gray Whales
4/25 p.m.	1	Humpback Whale (lunge feeding)	100		Humpback Whales
4/25 a.m.	1	Humpback Whale	100		Pacific White-sided Dolphins
	50	Risso's Dolphins	4/11 p.m.	3	Risso's Dolphins
	5	Bottlenose Dolphins	1		Gray Whales
4/24 p.m.	1	Humpback Whale	4/11 a.m.	2	Humpback Whale
	1	Gray Whale	30		Humpback Whales
4/24 a.m.	3	Humpback Whales	4/10 a.m.	3	Risso's Dolphins
	1	Gray Whale	2		Gray Whales
	1500	Pacific White-sided Dolphins	1		Humpback Whales
	1800	Risso's Dolphins	4/9 a.m.	10	Black-footed Albatross
	100	Northern Right Whale Dolphins	500		Gray Whales
4/23 p.m.	4	Humpback Whales	4/8 p.m.	2	Long-beaked Common Dolphins
	20	Pacific White-sided Dolphins	500		Humpback Whales
	25	Risso's Dolphins	800		Pacific White-sided Dolphins
4/23 a.m.	2	Humpback Whales	4/8 a.m.	5	Risso's Dolphins
	1	Gray Whale	2		Gray Whales
	200	Pacific White-sided Dolphins	4/7 p.m.	2	Humpback Whales
	200	Risso's Dolphins	5		Humpback Whales
4/22 p.m.	10	Humpback Whales (breaching, tail slaps, fin slaps)	4/7 a.m.	4	Gray Whales
	150	Risso's Dolphins	4		Humpback Whales
4/22 a.m.	12	Humpback Whales	4/7 early a.m.	300	Humpback Whales
	80	Pacific White-sided Dolphins	400		Pacific White-sided Dolphins
	125	Risso's Dolphins	20		Risso's Dolphins
4/20 p.m.	10	Killer Whales	4/6 a.m.	4	Northern Right Whale Dolphins
	800	Pacific White-sided Dolphins	3		Gray Whales
4/20 a.m.	2	Humpback Whales	4/3 p.m.	3	Gray Whales
	200	Risso's Dolphins	4/3 a.m.	1	Gray Whale
4/19 p.m.	1	Gray Whale	3		Killer Whales
	10	Killer Whales	4/2 p.m.	6	Gray Whales
	250	Long-beaked Common Dolphins	60		Pacific White-sided Dolphins
			4/2 a.m.	3	Gray Whales
			20		Risso's Dolphins

American Cetacean Society  
Monterey Bay Chapter  
P.O. Box H E  
Pacific Grove, CA 93950



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New Membership/Subscription \_\_\_ Gift Membership/Subscription \_\_\_  
Renewal \_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_ Email \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Membership level \_\_\_\_\_

**Membership levels and Annual dues:**

Lifetime \$1000 Patron \$500 Contributing \$250

Supporting \$85 International \$55 Family \$55 Individual \$45

Student \$35 Teacher \$35 Senior (62 plus) \$35

Subscription only \* \$15/11 issues (\*not entitled to membership benefits)

Check \_\_\_ Mastercard \_\_\_ Visa \_\_\_ Expiration date \_\_\_\_\_

Signature \_\_\_\_\_

**Make checks payable to: ACS/Monterey Bay Chapter**

**Return to: Membership Secretary, ACS Monterey Bay Chapter**

**P.O. Box H E Pacific Grove, CA 93950**

**Monterey Bay Chapter  
Officers & Chairs, 2011**

Jerry Loomis, *President*  
Richard Ternullo, *Vice President*  
Randy Puckett, *Past Chapter President*  
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