

Soundings



American Cetacean Society- Monterey Bay Chapter

JUNE 2013

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, June 27, 2013 Time: 7:30 PM.

PLEASE JOIN US AT 7:00 FOR REFRESHMENTS

Speaker: Tim Thomas

**Subject: Dancing on the belly of the shark:
Whale tales from long ago on Monterey Bay**

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Tim Thomas, well-known fisheries historian and Monterey Bay waterfront tour guide, will talk about one of Monterey's more unique and least understood fisheries – whaling -- when he talks to the Monterey Bay Chapter of the American Cetacean Society on Thursday, June 27. He will use historic photos, film and oral histories to discuss the local industry that helped decimate whale populations in the 19th and 20th centuries.

Tim has been researching Monterey Bay fisheries for 25 years and has written two books on the subject and is now working on a third about “Pop” Ernest Doelter, the “abalone king” who found cooking methods that turned the bait-fish mollusks into dining delicacies. He'll talk about “Pop” and other little known history, including a basking shark fishery and how a wealthy sport fisherman introduced catch ideas that revolutionized the fishing industry and made Monterey world famous.

Tim was the historian/curator at the Monterey Maritime Museum for 16 years and is known for his lectures, programs and tours on the Monterey waterfront. He has also lectured extensively on the Monterey Japanese community both here and in Japan and is on the board of the Monterey Japanese American Citizens League. For more information, see www.acsmb.org, or www.montereywaterfrontcanneryrowtours.com.

Also in June: Saturday the 29th, 8:45 a.m. to 1 p.m., annual blue whale fundraising trip from Monterey Bay Whale Watch, \$49; reservations 419-1051.

Next month: Saturday, July 27, 3 to 7 p.m., annual BBQ in Veterans Memorial Park in Monterey, \$20, honoring Katy Castagna for years of dedication to cetaceans and ACS.
Reservations by checks to Box HE, Pacific Grove, CA 93950.

CALENDAR

**PLEASE JOIN US FOR THE
AMERICAN CETACEAN SOCIETY
MONTEREY BAY CHAPTER**

ANNUAL BLUE WHALE WATCHING TRIP

And dolphins, seabirds, sea lions, seals and who knows?

WHEN: JUNE 29, 2013

WHERE: Monterey Bay Whale Watch Center

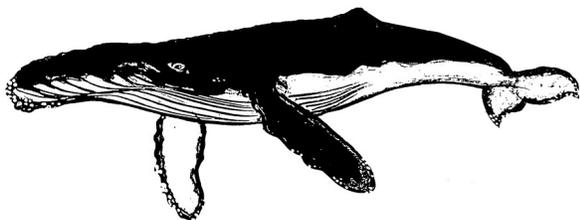
84 FISHERMAN'S WHARF #1

MONTEREY, CA 93940 TEL 831-372-0599

COST: \$49.00 4-5 hours

SEND PAYMENT TO: ACS, P.O. BOX HE, PACIFIC GROVE, CA93950 (CHECKS ONLY)

QUESTIONS? CALL JERRY LOOMIS AT 831-419-1051 OR 831-372-0599



**AMERICAN CETACEAN SOCIETY
MONTEREY BAY CHAPTER
ANNUAL BARBEQUE!**

*****HONORING KATY CASTAGNA*****

When: July 27, 2013

Where: Veteran's Memorial Park, Monterey

Drive due west on Jefferson St. (up the hill) from the heart of Monterey, our area is on the left. Or take Highway 68 west from Highway 1 to Skyline Forest. Turn right there, go to Skyline Drive and turn left. Skyline Drive will lead you right into the Park. Our area is on the right if coming on Skyline.

What: Tri-tip, chicken, veggie burgers, salad, beans, soft drinks, water. Good friends. Fun raffle, so bring some bills.

Cost: \$20, under 12= ½ price.

Please bring your own table service and byob.

Send payment to reserve your dinners to: ACS, P.O. Box HE, Pacific Grove, CA 93950(checks to ACS)

Questions: call Sally Eastman 372-6919 or

Jerry Loomis 419-1051

UCSC Summer Ocean Sciences Classes
At Long Marine Lab

July 29 to August 30 Summer Session 2
Biology of Marine Mammals; Bio 129-01
5 units Maresh
Biology of Marine Mammals: Laboratory
2 Units Maresh

June 22: Catalina Above and Below with the Cabrillo Marine Aquarium. Observe Marine Mammals, Bait for Sharks and learn techniques to capture marine animals. For info call Larry Fukuhara at 310-548-7562

BOOK RECOMMENDATIONS

Primates of the World: An Illustrated Guide by Jean-Jacques Petter and Francois Desbordes
Princeton University Press

After the Grizzly: Endangered Species and the Politics of Place in California by Peter S. Alagona
2013 UC Press

Amphibians and Reptiles of Baja California, Including Its Pacific Islands and the Islands in the Sea of Cortes by L. Lee Grismer UC Press

**American Cetacean Society
Monterey Bay Chapter**

Chapter awards 3 student grants for whale research

The Monterey Bay Chapter of the American Cetacean Society has awarded its 2013 research grants to two graduate students at Moss Landing Marine Laboratories in Moss Landing, and one student at the National Polytechnic Institute in La Paz, Mexico.

The grants, for \$1,500 each, were awarded to: Moss Landing graduate student Angela Szescioraka to study the behavior of humpback whales when they encounter ships between San Francisco and Los Angeles.

Jacqueline Schwartzstein, also a graduate student at Moss Landing, to study the group of gray whales that spends summers feeding off Washington state rather than continuing on to the Arctic with the rest of the migrating population.

Jorge Alberto Mares Mayagoitia, a student in the Marine Mammals Ecology Laboratory in La Paz, to study the feeding habits of male sperm whales that visit the Gulf of California during the summer breeding seasons.

FIRST GREY WHALE SPOTTED SOUTH OF THE EQUATOR

Namibia sighting suggests much-hunted whales are regaining ancient migratory routes, or may be down to climate disruption

Astonishing news from Walvis Bay, Namibia, where scientists from the Namibian Dolphin project on Tuesday confirmed the sighting of a grey whale. Not only has this north Pacific species been extinct in the Atlantic since the 18th century, it has never been seen south of the equator.

The significance of this sighting is creating excitement among marine biologists. It may suggest good news – that the great whales are recovering from the disastrous hunts of the 20th century. Or it may indicate that the changing climate is disrupting their feeding habits – with unknown consequences.

A unique sighting of a grey whale in the Mediterranean in May 2010 – the animal got as far as Israel – has overturned many preconceptions, with some scientists speculating that this much-hunted great whale – reduced to near extinction in the 20th century – is regaining ancient migratory routes.

John Paterson, of the Walvis Bay Strandings Network, says the whale was first sighted by tour boats on dolphin watch on 4 May. The "strange whale" was confirmed as a grey, and photographed, by a member of his team on 12 May.

"The question is now, what is origin of this whale?" says Paterson. The photographs prove this is not the same individual that turned up in the Mediterranean, he says. "Is it another individual that has traverse the North-west Passage, or perhaps travelled around the southern tip of South America and across the Atlantic? Unfortunately, we'll never know the route it followed to get here."

Known as "devil fish" for the ferocity with which they fought the whalers (usually because the hunters targeted the calves, which the mothers fiercely defended), grey whales now permit themselves to be petted by tourists from whalewatch boats off Baja California. Their historic range included the Atlantic, with convincing historical evidence that Icelandic people hunted them. The whales may have migrated south to the Mediterranean to calve in the warmer waters of the Mediterranean, where they would also be relatively free from attack by orca, their only natural predators.

As shore-hugging, bottom-feeders, grey whales may have also been once common off British shores. A vertebra in the collection of the Royal Cornwall Museum, Truro, found in Cornwall, has been identified as belonging to a grey whale. The last records of grey whales in the Atlantic appear to coincide with the start of modern whaling off the coast of New England in the early 18th century, with the appearance of "scrag whales" off the island of Nantucket.

The southern African grey whale joins other whales where they should not be. In Cape Cod Bay off New England last year, an aerial reconnaissance team from the Provincetown Centre for Coastal Studies surveying the north Atlantic right whales feeding in the bay were amazed to find a bowhead whale – a strictly Arctic cetacean – among their number. Climate change and shifting ice have been attributed to its surprise appearance – with the same conditions possibly accounting for the Mediterranean grey whale, which may have crossed from the north Pacific to the Atlantic via the opened-up North-west Passage.

In his forthcoming book, *Feral*, George Monbiot cites a contemporary proposal to reintroduce grey whales to the Irish Sea by airlifting 50 animals there from California. Today's news from southern Africa (Walvis Bay translates as Whale Bay) indicates that the whales may be about to achieve their own reintroduction without the need of air-power.

WORST-EVER RIGHT WHALE DIE-OFF CONTINUES TO PUZZLE

By Megan Gannon, News Editor, LiveScience. Com, May 10

Scientists still don't know why hundreds of baby southern right whales are turning up dead around Patagonia, a decade after observers first saw signs of the worst die-off on record for the species, according to the Wildlife Conservation Society (WCS).

With no evidence of infectious diseases or deadly toxins in whale tissue samples, scientists are scrambling to determine a cause of death. Some are even pointing a finger at blubber-eating birds.

The whales come to the peaceful Atlantic bays around Peninsula Valdes along Argentina's Patagonian Coast to give birth and raise their young. At least 605 dead right whales have been counted in the region since 2003, WCS officials say. Of those, 538 were newborn calves. Last year, the mortality event was especially severe, with a record-breaking 116 whale deaths, 113 of them calves.

"In 2012 we lost nearly one-third of all calves born at the Peninsula," said Mariano Sironi, Scientific Director of the Instituto de Conservacion de Ballenas in Argentina. "Southern right whales have their first calf when they are nine years old on average. This means that it won't be until a decade from now that we will see a significant reduction in the number of calves born, as all of the female calves that died will not be contributing any new offspring to the population," Sironi, who is also an advisor to the Southern Right Whale Health Monitoring Program, added in a statement.

Sironi and colleague Vicky Rowntree, who is co-director of the monitoring program, have studied a strange phenomena that could be stressing southern right whales. They say kelp gulls at Peninsula Valdes land on the backs of the cetaceans to eat their skin and blubber.

"The attacks are very painful and cause large, deep

lesions, particularly on the backs of young 2-6 week-old calves," the researchers said in a statement from WCS. "This harassment can last for hours at a time. As a result, right whale mothers and their calves are expending much precious energy during a time of year when mothers are fasting and at a site where little to no food is available to replenish fat reserves."

The situation is discouraging for a species that had made a significant comeback since its population was depleted by the whaling industry.

"The southern right whale population is still only a small fraction of its original size, and now we have reason to worry about its recovery," Rowntree said.

Though the southern right whale is not listed as endangered, conservationists warn that the species' sister populations could go extinct if hit with a mysterious die-off on this scale. For instance, there are thought to be just about 500 North Atlantic right whales remaining.

THE WORLD'S LARGEST 'WASTE DUMP' IS FOUND IN THE PACIFIC OCEAN

By: Darren Lloyd, May 06, 2013

If you were to travel from the United States of America to Japan, you would most likely encounter what could be described as the world's largest waste dump: a 100,000 tonne expanse of debris floating around a large region of the Pacific Ocean. The total area of this phenomenon has been said to equal the size of continental U.S., but the truth about its true size remains unknown.

Captain Charles Moore first discovered the 'Pacific garbage patch' in 1997. The area in which rubbish gets caught up is known as a gyre, which can be described as a large-scale circular feature made up of ocean currents that ultimately traps waste and moves it around the region.

Plastics constitute 90 percent of all trash in the world's oceans with 20 percent of this waste being dumped from ships and oil platforms. The rest comes from land.

Plastic is of course, a very useful product; durable and stable, yet it is these very properties that deem it troublesome in marine environments.

"The polypropylene and the polyethylene that make up the majority of floater plastics and consumer plastics are just a little bit lighter than water. So if it's rough they get pushed down under. When it's really calm, all these bits and pieces can float to the surface," Charles Moore told the Earth Island Journal.

To Moore, it is clearly a land-based problem and he believes that what drives the market and what subsequently runs off the streets into our oceans is all part of the same problem.

A one-liter plastic bottle, when in seawater, can reduce to so many small pieces that it is possible a single fragment could be found on every beach in the world. The entire marine food-web is suffering as a result. The breakdown of plastics into small pieces allows them to mimic the

prey of all marine animals, from zooplankton to whales. When plastic is so prevalent that it fills up a creature's stomach, it turns off the desire to feed. If an organism doesn't put on fat stores for reproduction and migration, its population will crash. Floating plastic will even act as transport for some organisms, introducing them to areas where they could be problematic to resident species.

Seventy percent of the plastic waste sinks to the ocean floor and this mass of waste causes considerable damage to bed-dwelling organisms. In the worst case scenario—suffocation.

Plastics are also very good sponges, as such they are often used in oil clean-ups. But Moore explains that "petroleum-derivative toxins are sticking to these plastics, delivering these toxicants to marine creatures from the very base of the food-web to the top, in addition to killing millions by entanglement".

According to the UN Environment Program (UNEP), over one million seabirds and one hundred thousand marine mammals and turtles are killed as a result of plastic ingestion or entanglement.

Marcus Eriksen, a research director at the US-based Algalita Marine Research Foundation, also highlighted the threat plastic waste poses to human life. He told the Telegraph in 2008 that "such pollutants can attract man-made chemicals such as hydrocarbons and the pesticide DDT," adding that "what goes into the ocean goes into these animals and onto your dinner plate. It's that simple".

Solutions to this problem are not immediately clear. A cleaning strategy would cost vast amounts of money due to the immense area in question and the unpredictability of the highest concentrations of waste. Of course, the reduction of waste on land is really where strides can be made and recycling will go a long way to suppress the situation.

ICELAND TO KILL MORE THAN 180 ENDANGERED FIN WHALES THIS YEAR

280 Fin whales have been killed since 2006.

7 Fin whales were killed in Iceland's waters in 2006, 125 in 2009 and 148 in 2010.

Call for U.S. action as Iceland violates international whaling law

May 2013. A coalition of international animal welfare and conservation groups is calling on the Obama Administration to impose economic sanctions against Iceland after Icelandic whaling company Hvalur hf announced it will hunt and sell the meat of up to 184 endangered Fin whales this summer after a two year hiatus. Iceland is one of three countries that refuse to abide by international whaling laws banning the killing and trading of whales for commercial gain. The groups have sent a letter to the US Secretaries of State, Commerce and Interior calling for stronger measures by the Obama Administration.

"President Obama has said that the US opposes

resumed commercial whaling by Iceland" said Susan Millward, Executive Director of the Animal Welfare Institute (AWI). "It is now time to act. Certification by the Secretary of Interior is long overdue and should be concluded urgently. There is no obstacle preventing President Obama from imposing trade sanctions against Iceland now under the Pelly Amendment."

Iceland has flouted international laws since 2003; killing 496 Minke whales and 280 endangered Fin whales and exporting over 2,800 metric tons of whale products to Japan. Despite international pressure to discontinue this barbaric practice, Iceland recently announced plans to resume Fin whaling this season after a two year pause, beginning in June.

"Endangered whales do not belong on a chopping block or dinner table," said Taryn Kiekow, staff attorney with the Natural Resources Defense Council. "The United States can play a pivotal role in ending the slaughter of whales by imposing economic sanctions that send a clear message-whaling is no longer tolerated."

On September 15, 2011, President Obama adopted the Secretary of Commerce's July 2011 "certification" under the Pelly Amendment that Iceland's commercial whaling is undermining the effectiveness of the International Convention for the Regulation of Whaling (ICRW) which has prohibited commercial whaling since 1986. "Iceland's actions threaten the conservation status of an endangered species and undermine multilateral efforts to ensure greater worldwide protection for whales," said President Obama. He directed Cabinet Secretaries to use diplomatic efforts to dissuade Iceland from continuing whaling.

"In the 21st century, for a government to support an industry built from the trade in flesh and other products from slow-to-reproduce marine mammals who can live up to 90 years of age, is reckless and irresponsible," said Kitty Block, vice president of Humane Society International. *'Pelly Sanctions'*

"Iceland's actions meet the conditions for Pelly sanctions, and we've provided the U.S. government with the information necessary to target those sanctions at the Hvalur Group, which owns Iceland's Fin whaling industry, and its associated companies, including HB Grandi, Iceland's biggest fishing company," said Millward.

"Iceland has crossed a line by exporting more than 2,800 tons of Fin whale meat and blubber to Japan since 2008, repeatedly defying the international protection for this endangered species afforded by its listing on Appendix I of CITES," said Allan Thornton, president of the Environmental Investigation Agency.

"President Obama, the time for talking about saving whales is past; it's now time for action," said Phil Kline, Oceans Campaigner at Greenpeace, adding "as you said 'commercial whaling has to end'; imposing economic sanctions now will help that happen."

"Iceland's decision to resume international trade in the meat of endangered Fin whales presents the perfect op-

portunity for the U.S. to put real teeth behind its commitment to treat illegal wildlife trade as a foreign policy priority," said Leigh Henry, Senior Policy Advisor at the World Wildlife Fund. "If the U.S. government is willing to ask others to take action - then they should do the same."

In December 2010, 19 global conservation and animal welfare groups filed a petition to the U.S. Commerce and Interior Secretaries calling for action against Iceland under the Pelly Amendment. The filing identified specific Icelandic companies as potential targets for economic sanctions; including major seafood industry players tied to Iceland's whaling industry. At the centre is the Icelandic Fin whaling company Hvalur hf.

A LEADING MARINE BIOLOGIST WORKS TO CREATE A 'WIRED OCEAN'

Stanford University scientist Barbara Block heads a program that has placed satellite tags on thousands of sharks, bluefin tuna, and other marine predators to better understand their life cycles. Now, using data available on mobile devices, she hopes to enlist public support for protecting these threatened creatures.

by Ben Goldfarb

Even as populations of sharks, bluefin tuna, and other large fish are being severely over-exploited, scientists still know surprisingly little about when and where the ocean's biggest predators congregate to feed and spawn, making it difficult to protect biological hot spots. Stanford University marine biologist Barbara Block is seeking to narrow that knowledge gap by deploying an armada of satellite tags on the backs of ocean creatures. Block envisions a wired ocean, a blue fount of data in which tags, smart buoys, and mobile robots reveal the secrets of marine life. She and her colleagues have been involved in the Tagging of Pacific Predators project, a long-running study that has affixed more than 4,000 tags to 23 different species and revealed that the eastern Pacific is a veritable "blue Serengeti," rich with life and traversed by regular migration routes.

In an interview with *Yale Environment 360* contributor Ben Goldfarb, Block — the architect of Shark Net, an app for iPads and iPhones that allows subscribers to track great white sharks off the coast of California — discusses the wealth of data gathered by the latest electronic tags and explains why it's important to put the fruits of this research into the public's hands. "What we need is environmental interest and awareness that connects humans to the world," says Block, "or else we're going to end up with the same problem that we had on the continents, where the large mammals are gone."

Yale Environment 360: I gather you've done a lot of the tag design yourself? How do you create a tag that then stays in these creatures for five years?

Barbara Block: Well, you first have to dream big. And you have to say, "What is it I want to know?" Back in the

mid-90s, we were at the table at big fisheries commission meetings, where we really didn't know where big fish went. And so we asked the question, "How could we study something underneath the sea, that breathes through the gill?" You can't use radio waves because sound has to travel through air primarily to get anywhere... So we used a technique that was first talked about many years ago, in which we took light from the sun and measure photons, so we can actually put together sunrise and sunset data. We have an accurate clock on the tags. It's what mariners have done for all of time — we're using light and time to calculate our position from Greenwich... We try to use the same chips that are in your computer, the same devices that allow you to talk to satellites and cell phones, and we package them in small devices, put them on big animals like white sharks and tunas, and we follow them across the globe. What we're trying to do is figure out how do big animals live in the ocean ecosystem, and where they are. And we've done this through huge tagging campaigns. One was in the Atlantic called "Tag a Giant" that focused on giant bluefin tuna, fish that are up to 1,500 pounds that carry these computer tags, sometimes up to four or five years. And we have a campaign in the Pacific we call "Tagging of Pacific Predators." Over 5,000 animals have been tagged, 80 scientists working together, five nations, trying to figure out how the largest ocean on Earth works.

e360: I imagine that it's incredibly hard to tag something like a blue whale or a white shark.

Block: For every animal it's a different problem. For us, when we come face-to-face with a large shark, the goal is basically to get the tag on the animal with the least amount of challenges for the animal — great white sharks are sometimes as large as 5,000 to 7,000 pounds.

e360: How many of these tags do you have deployed at any given time?

Block: We have a data logger, or an archival tag. But with that archival tag, you have to get it back when humans intercept the fish. You can only put that into an animal that has a huge fishery, like a bluefin tuna. And we've put over 1,500 of those tags in tunas in the Atlantic and the Pacific Ocean. We get about 22 percent back in the Atlantic, 50 percent back in the Pacific, and when they come back, we download the information and find out where the animal's been. But we got tired of waiting for people to turn tags back in. So we worked with engineers and packaged [the tags] into a tube. It's got a little float on the top, and it rides on the tuna, takes the data, rides on the shark, takes the data, pops off a small piece of steel that corrodes away, comes to the surface, and then sends the data back to Earth-orbiting satellites. And then we get data back without any human interception. Then finally, there are tags you can put on the dorsal fin of sharks, and they use radio waves and talk to Earth-orbiting satellites every day. I looked up this morning the location of a salmon shark that came from Alaska to Monterey Bay in the last six months.

e360: One of the cool things that you've done is you've

American Cetacean Society—Monterey Bay Chapter

put a lot of this data in the hands of the public. Can you talk a little bit about your efforts to make this stuff publicly available?

Block: We want to engage the public because we've got some of Earth's greatest critters out there, the big sharks and the tunas, and most people look at the ocean and can't even see anything. So it's hard to imagine how we're going to save animals, or build conservation strategies, when you can't even see the animals. So lately what we're trying to do is transmit the data in ways that become browser-friendly on your internet site or iPhone. "Shark Net" is our app. It's free, and it allows you to keep track of great white sharks on the west coast of North America, and hopefully soon we'll bring some other sharks into that.

e360: You've also pioneered a lot of robotic technology, including something called a "wave glider."

Block: The wave glider is built by Liquid Robotics. It's a brand new technology, a green robot, and it's a surfboard that is attached with a unique tether to a sub, or a glider. And it captures the motion of waves, and it is completely powered by the kinetic energy of waves. It then uses solar power to power the instruments on board. And right now we're gliding off the coast of North Carolina and we're seeing things like sand bar sharks, sturgeon, animals that are freely swimming in the sea that use acoustic tags that send sound waves to the underwater glider, which then is transmitted to us in real time through iridium uplinks from the glider.

e360: How many of these gliders do you have out there right now?

Block: Well, the company, Liquid Robotics, might have as many as 150 gliders that are plowing through the ocean looking for everything from natural gas, or oil, to helping us do our biological oceanography. We envision a day when our coastlines can be protected by devices that are telling us what ships are there, telling us in real time how the ocean is today. And then also finding out where these congregations of animals are — the hot spots — so that we might then put a marine protected area around them.

e360: Your Pacific Predator tagging study suggested that marine animals tend to use the same migratory corridors over and over. How do you go about protecting corridors once you've identified them?

Block: Well, we are still just identifying them, but we're dreaming now of how to protect them. Think of a continent as large as Africa, and then imagine that we're working in a geography that's at least ten-fold larger. If you looked at Africa, you might say, where's the Serengeti? Where's the watering hole where you'd see zebras, gazelles, elephants? Well, we're looking for that watering hole in the ocean.

For the complete interview go to :

http://e360.yale.edu/feature/a_leading_marine_biologist_works_to_create_a_wired_ocean/2630/

SIGHTINGS Compiled by Monterey Bay Whale Watch.

For Complete listing and updates see

<http://gowhales.com/sighting.htm>

Date	#	Type of Animal(s)			
6/1 a.m.	2	Humpback Whales	5/8 p.m.	2	Pacific White-sided Dolphins
	60	Risso's Dolphins		10	Risso's Dolphins
5/31 a.m.	150	Risso's Dolphins	5/8 a.m.	7	Humpback Whales
5/29 a.m.	17	Humpback Whales		1	Harbor Porpoise
	15	White-sided Dolphins	5/7 p.m.	10	Humpback Whales
	100	Risso's Dolphins		2	Humpback Whales
	100	Northern Right-whale Dolphins		50	Pacific White-sided Dolphins
5/28 a.m.	18	Humpback Whales	5/7 a.m.	200	Risso's Dolphins
	40	Pacific White-sided Dolphins		15	Humpback Whales
	30	Risso's Dolphins		2	Gray Whales (mom and calf snorkeling)
	10	Dall's Porpoise		20	Pacific White-sided Dolphins
5/27 p.m.	2	Humpback Whales	5/6 a.m.	150	Risso's Dolphins
	75	Risso's Dolphins		4	Humpback Whales (2 "friendlies")
5/27 a.m.	4	Humpback Whales (including mom & calf)	5/5 a.m.	100	Pacific White-sided Dolphins
	1	Killer Whale (Stubby)		4	Killer Whales
	85	Risso's Dolphins	5/4 a.m.	200	Risso's Dolphins
5/26 p.m.	4	Killer Whales		19	Humpback Whales
5/26 a.m.	4	Humpback Whales		50	Pacific White-sided Dolphins
	80	Pacific White-sided Dolphins	5/3 p.m.	700	Risso's Dolphins
	400	Risso's Dolphins		8	Humpback Whales
5/25 p.m.	2	Humpback Whales	5/3 a.m.	100	Risso's Dolphins
5/25 a.m.	4	Humpback Whales (2 double-breaching)		11	Humpback Whales
	400	Pacific White-sided Dolphins		4	Killer Whales
	50	Risso's Dolphins	5/2 p.m.	100	Risso's Dolphins
5/19 a.m.	11	Humpback Whales		10	Humpback Whales
	600	Pacific White-sided Dolphins	5/2 a.m.	60	Risso's Dolphins
	300	Risso's Dolphins		16	Humpback Whales
5/18 a.m.	7	Humpback Whales	5/1 p.m.	1000	Risso's Dolphins
	1200	Pacific White-sided Dolphins		14	Humpback Whales
	150	Risso's Dolphins		1	Gray Whale
5/17 p.m.	6	Humpback Whales (3 "friendlies" breaching)	5/1 a.m.	20	Risso's Dolphins
5/17 a.m.	10	Humpback Whales		20	Humpback Whales
	80	Risso's Dolphins		4	Killer Whales
5/16 p.m.	1	Blue Whale		30	Pacific White-sided Dolphins
	160	Risso's Dolphins		100	Risso's Dolphins
5/16 a.m.	32	Humpback Whales	4/30 a.m.	10	Harbor Porpoise
5/15 a.m.	8	Humpback Whales		1	Humpback Whale
	1	Blue Whale	4/29 a.m.	50	Risso's Dolphins
	75	Risso's Dolphins		28	Humpback Whales
5/14 a.m.	3	Humpback Whales		14	Killer Whales
	1	Blue Whale		200	Pacific White-sided Dolphins
5/13 a.m.	2	Humpback Whales		100	Risso's Dolphins
	1	Blue Whale	4/28 p.m.	1	Northern Sea Lion eating a skate
	9	Killer Whales		5	Humpback Whales
5/12 p.m.	2	Humpback Whales (mother & calf breaching)	4/28 a.m.	2	Gray Whales
5/12 a.m.	5	Humpback Whales	4/27 a.m.	9	Humpback Whales
	80	Risso's Dolphins		1	Humpback Whale
5/11 p.m.	9	Humpback Whales	4/26 a.m.	8	Killer Whales
	50	Pacific White-sided Dolphins		5	Humpback Whales
5/11 a.m.	80	Risso's Dolphins		30	Pacific White-sided Dolphins
5/10 a.m.	8	Humpback Whales		500	Risso's Dolphins
	60	Risso's Dolphins	4/25 p.m.	5	Northern Right Whale Dolphins
5/9 a.m.	1	Humpback Whale		7	Humpback Whales
	1	Blue Whale	4/25 a.m.	20	Risso's Dolphins
				5	Humpback Whales

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



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Membership levels and Annual dues:

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

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Officers & Chairs, 2013**

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