

# Soundings



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

NOVEMBER / DECEMBER 2018

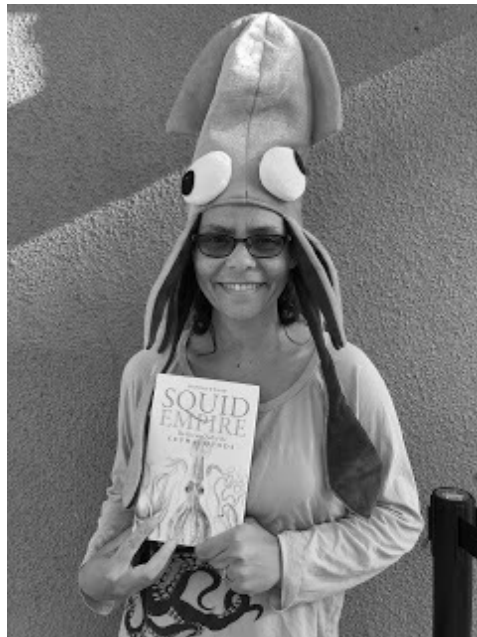
**MONTHLY MEETING**  
**- PLEASE NOTE TEMPORARY LOCATION -**  
**SALLY GRIFFIN ACTIVE LEARNING CENTER**  
**(700 JEWELL AVE IN PACIFIC GROVE)**  
**MEETING IS OPEN TO THE PUBLIC**

**Thursday, December 6, 2018**

**Time: 7:30 PM**

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

**Speaker: Dr. Danna Staaf**



Danna Staff is a freelance writer and science communicator with special expertise in cephalopods, which she has been interested in since childhood. Her writing has appeared in Science, KQED, and Earther, and her first book, *Squid Empire: The Rise and Fall of Cephalopods*, was named one of the best science books of 2017 by NPR. *Squid Empire* tells the true story of the ancient sea monsters that evolved into modern-day squid.

Danna holds a B.A. in Biology from the College of Creative Studies of the University of California, Santa Barbara. For her Ph.D. in biology from William Gilly's lab at Stanford University, she studied the reproduction and early life of Humboldt squid at Hopkins Marine Station. Danna has spoken at dozens of venues, including The Denver Museum of Nature and Science, the main Google campus in Mountain View, public libraries, universities and schools at

every grade level. She lives in San Jose with her husband and an unruly collection of kids, cats, and plants.

**Please join us** for refreshments before the program begins. More information is available on our website, [www.acsmb.org](http://www.acsmb.org).

**Next month:** We will return to our regular monthly meeting schedule and location in January, meeting at Hopkins Marine Station Boatworks Hall on the last Thursday of the month, January 31. Our speaker will be Brooke Bessenes, author of *Vaquita: Science, Politics, and Crime in the Sea of Cortez*. Her talk is titled "Entangled: A Deep Dive into the Vaquita Crisis." Please save the date and join us!

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**ACS Monterey Bay chapter  
needs you!**

**Please consider volunteering to  
serve on the ACS Board of  
Directors. Current openings  
include Membership Chair  
and Publicity Chair.**

**If you enjoy learning about  
whales and sharing your  
passion with others, we'd like  
to speak with you. Please  
contact any board member for  
more information.**

## BOOK RECOMMENDATIONS

The New Chimpanzee: A Twenty- First Century Portrait Of Our Closest Kin, by Craig Stanford. 2018 Harvard University Press.

Europe's Sea Mammals: A Field Guide to Whales, Dolphins, Porpoises, and Seals (including the Azores, Madeira, the Canary Islands and Cape Verde), by Robert Still, Hugh Harrop, and Tim Stenton. 2019 Princeton University Press.

### ACSMB

#### Winter Whale Watch Fundraiser



Join us in one of the best places along the West Coast to observe the southbound migration of the Pacific Gray Whale. Monterey Bay is a migratory corridor for southbound gray whales and our whale watch fleet is only a few miles from a major gray whale migratory highway! In addition to gray whales we will be on the lookout for Killer Whales and numerous species of delphinids that frequent Monterey Bay. Local gray whale experts will be on board to answer any questions.

**Date:** Sunday, January 27, 2019

**Time:** 8am-10am

**Boat:** Princess Monterey

**Cost:** \$25

*All proceeds benefit research, conservation and education programs funded by ACS.*

**For reservations:**

Please call Katlyn Taylor at 971-322-8425 or by email at [katlyn.taylor.oc@gmail.com](mailto:katlyn.taylor.oc@gmail.com)

## CALENDAR

**Now through March 17, 2019:** Exhibit at the Oakland Museum of California: "Cruisin' the Fossil Coastline: The Art of Ray Troll and the Paleontology of Kirk Johnson"

**Now through Nov. 22, 2019:** Albatross Exhibit at the Seymour Center at Long Marine Lab: "A Perfect Day for an Albatross." Features Caren Lobel-Fried's book and artwork. The exhibit also features videos, albatross facts and hands-on activities about this remarkable seabird.

**Nov. 29:** Moss Landing Marine Labs Seminar by Susan Blackwell of Greeneridge Sciences: First insights into narwhal communication using acoustic tags in Greenland." 4 PM in the MLML Seminar Room.

**Dec. 7:** Hopkins Marine Station Friday Seminar by Emily A. Kane of Georgia Southern University: "Small Fish, Big Questions: What tiny, boring fish tell us about how animals work." 12 – 1 PM.

**Jan. 26-27, 2019:** Whalefest Monterey 2019 on Monterey's Old Fisherman's Wharf. This event celebrates the migration of the gray whales, and benefits the many local and national marine organizations that build awareness about the Monterey Bay National Marine Sanctuary. 10 AM – 5 PM both days.

**Feb. 1-2, 2019:** Southern California Marine Mammal Workshop in Newport Beach, CA. The Southern California Marine Mammal Workshop is organized for and by marine mammal researchers to foster discussion and collaboration within the Southern California research community.

**Feb. 16 – Mar. 5, 2019:** Antarctic Peninsula Whales and Landscape Expedition, in partnership with ACS. Itinerary, ship details and how to signup at [cheesemans.com/Ant-Whales-Feb2019](http://cheesemans.com/Ant-Whales-Feb2019).

**Feb. 27 – Mar. 2, 2019:** Pacific Seabird Group 46<sup>th</sup> Annual Meeting in Kauai, Hawaii at the Aqua Kauai Beach Resort. For more information please go to [www.pacificseabirdgroup.org](http://www.pacificseabirdgroup.org)

**Mar. 2-3, 2019:** Mendocino Whale Festival. Wildlife art exhibits, coastal whale watching, wine and beer tasting, chowder tasting.

**Mar. 7-10, 2019:** 16<sup>th</sup> Annual San Francisco International Ocean Film Festival.

## SEABIRDS AT RISK FROM FISHING ROUND THE GLOBE

By Alison Ballance

Sep. 27, 2018 — Thousands of seabirds die in New Zealand fisheries every year.

Many more deaths are caused by fishing boats off the coast of South America, and others working the high seas in the Pacific.

The global toll of seabirds dying as a result of fisheries by-catch is estimated to be nearly three-quarters of a million birds.

To try and stop the deaths of seabirds such as petrels and albatrosses, New Zealand is working with fishers, the fishing industry and with international collaborators to find effective ways to prevent birds getting caught on hooks and drowned in nets.

New Zealand is a seabird hotspot. More than a quarter of the world's 360 seabird species breed here, and a third of these are found only here.

A third of the seabirds that breed in New Zealand are considered threatened with extinction.

The most recent State of the Marine Environment report for New Zealand, from 2016, is a stock-take of how well we are doing at looking after our oceans.

It says that a key threat for seabirds comes from the fishing industry: "for 2006–07 to 2012–13, five species of seabirds threatened with extinction and six species of seabirds at risk of extinction had a high or very high risk of fishing-related deaths."

The report says that in 2003 an estimated 9000 plus seabirds died in New Zealand fisheries. In 2014, just over 5000 seabirds were estimated to have died.

The most commonly caught birds include albatrosses and petrels, some of which are highly threatened.

Antipodean albatross numbers, for example, have declined dramatically in the past decade. There are now only a quarter of the number of breeding females there were in 2004.

Albatross researchers Kath Walker and Graeme Elliott report that "since 2005 most females when not breeding have been regularly visiting the coast off Chile, waters which they rarely visited in the past. Considering the absence of land-based threats, the main cause of high female mortality appears to be fisheries bycatch north of New Zealand and in the central and eastern Pacific between 20-30 degrees south. If this steep and rapid decline continues at the current rate there will be fewer than 500 breeding pairs in 20 years."

In New Zealand waters, most seabird deaths occur in the southern bluefin tuna longline fishery, the ling bottom longline fishery and the squid trawl fishery.

New Zealand has put in place mitigation measures to stop the accidental bycatch of seabirds within its Exclusive Economic Zone,

Mitigation measures to reduce the accidental bycatch of seabirds include the use oftori or bird scaring lines to keep birds away from hooks and dangerous cables, weighted lines to make the bait quickly sink below bird reach, and setting lines at night, when birds are less active.

Forest and Bird seabird conservation advocate Karen Baird says that the problem of seabird bycatch is a global one.

Karen is also Pacific Regional Coordinator for BirdLife International's Marine Programme, and she says that many New Zealand seabirds leave here after the breeding season.

"They fly off to other parts of the Pacific to overwinter and often to moult. In particular, many of our albatrosses and petrels fly straight across towards South America."

Karen says that threatened species such as Antipodean albatrosses and black petrels feed in the cold, rich Humboldt Current, which flows up the western side of the continent.

"As they move out of New Zealand, where we know they are at risk from our own fisheries ... they start to come into contact with other fishing fleets."

### **Saving seabirds in Chile**

Chilean Cristián Suazo works for Albatross Task Force, an international team working with fishers in South America and southern Africa to mitigate, or minimize, seabird deaths.

He is in New Zealand collaborating with seabird experts from Forest and Bird and Te Papa, to update a seabird identification guide. The guide is available in



Seabirds feeding on small fish off the coast of Chile fly around the back of purse seine trawlers targeting the same fish, where they risk getting entangled and drowning. (Credit: ATF / BirdLife International).

a number of languages. It is made freely available to fishers and fishery observers to improve seabird identification, with the aim of collecting more accurate data about which seabirds are being killed.

Cristián says that Albatross Task Force Chile has helped to develop some effective mitigation measures for South American fisheries. He says they recently received recognition for their work with the purse seine fishery.

Purse seine fishers catch large schools of fish, such as anchovies, by surrounding them with a net and closing it up like a purse. If the net is too baggy and lies on the sea surface, it can accidentally trap seabirds, such as shearwaters, which are feeding on the same fish.

But some simple changes to the net mean that not only are fewer seabirds now being caught, but the fishers' job has become faster and easier. Cristián says he is pleased about this win-win solution.

<https://www.radionz.co.nz/national/programmes/ourchangingworld/audio/2018664031/seabirds-at-risk-from-fishing-round-the-globe>

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## WONDERING ABOUT THE ECONOMIC IMPACT OF ECOTOURISM ON MARINE MAMMALS? READ HERE...

By Maddalena Bearzi

Jan. 10, 2018 — Marine tourism is now considered a “new frontier of late-capitalist transformation”, producing more revenue than aquaculture and fisheries put together. For many coastal communities, this industry is becoming the most significant economic activity.

Marine tourism spans from simple operations run by one or few people (charter fishing boat operators, sea kayak tour guides, scuba diving instructors, etc.) to medium-size operations (marine-nature-watching boats, charter-yacht companies, etc.) and large operations (e.g., cruise ship companies).

As part of this large industry, marine mammal-based ecotourism, especially whale-watching (while not all cetaceans are whales, cetacean-watching trips are often referred to as “whale-watching”) has risen as a novel form of commercial and non-consumptive (nonlethal) wildlife activity. Other forms of this kind of “green” tourism involving marine mammals comprise, among others, swim-with-wild-dolphin programs (occasionally combined with whale-watching tours), dolphin provisional feeding programs, watching polar bears, or visiting pinniped rookeries.

The rapid growth of this business is linked to the broad appeal that these charismatic and large animals have on many people and to coastal habitats that make some of them readily accessible. Nearly half of the human population on our planet lives near water and uses the oceans as recreational playgrounds on a regular basis.

Whale-watching, the pillar of marine mammal-based ecotourism and currently the greatest economic activity reliant upon cetaceans, is not a new thing, as it has been ongoing as a commercial endeavor for more than 60 years. Its origin seems to coincide with a whale-watching trip that took place off California back in 1955. Here, a solo entrepreneur charged \$1 a person for a ride on his fishing boat to observe migratory gray whales (*Eschrichtius robustus*).

Based on the definition of the International Whaling Commission, whale-watching represents “any commercial enterprise which provides for the public to see cetaceans in their natural habitat.” Whale-watching, although mostly conducted aboard boats, also includes land-based or even aerial observations. In 2005, the IWC corrected the definition to include not only commercial businesses but also the public going to sea with their own vessels to observe cetaceans and/or research trips with paying guests.

In the last two decades, this marine tourism has increased substantially, becoming a worldwide profitable industry and affecting many nearshore populations of cetaceans. Since the 1990s, the number of people participating in boat-based whale-watching worldwide has expanded considerably, from 4 million in 31 countries in 1991 to 13 million in 119 countries in 2008.

The International Fund for Animal Welfare estimated the value of this business at \$2.1 billion back in 2008. Recently, the development of this eco-business has been increasing exponentially in Europe, Asia, the Caribbean, and South America.

Swim-with-wild-dolphin programs, considered a subset of the whale-watching industry, are also operated in different parts of the world, becoming exceptionally popular in the Caribbean. These types of programs are considered *active* or *passive*, depending on whether humans are interacting with cetaceans (usually dolphins) or cetaceans are allowed to approach swimmers of their own will. Another subset of whale-watching includes marine mammal “provisioning” activities, which usually involve feeding wild dolphins in shallow waters. Monkey Mia, in Australia, is one of the most popular spots for this type of tourism.

Cetaceans are not the only marine mammals affected by tourism. Weighing up to 1,200 pounds, manatees (*Trichechus* sp.) have been the focus of ecotourism and swim-with programs for several decades. The Crystal River Refuge in Florida, for instance, is a drawcard for people looking to swim with or kayak near these animals, hosting more than 327,000 visitors in 2014.

Pinnipeds also appeal to tourists due to their behavioral traits that make them easily accessible by boat and/or on foot. Often, whale-watching trips include some type of “pinniped viewing” in their on-the-water tours. Watching seals, sea lions, and other pinnipeds has become more popular in the last couple of decades, involving a wide range of species in various locations worldwide.

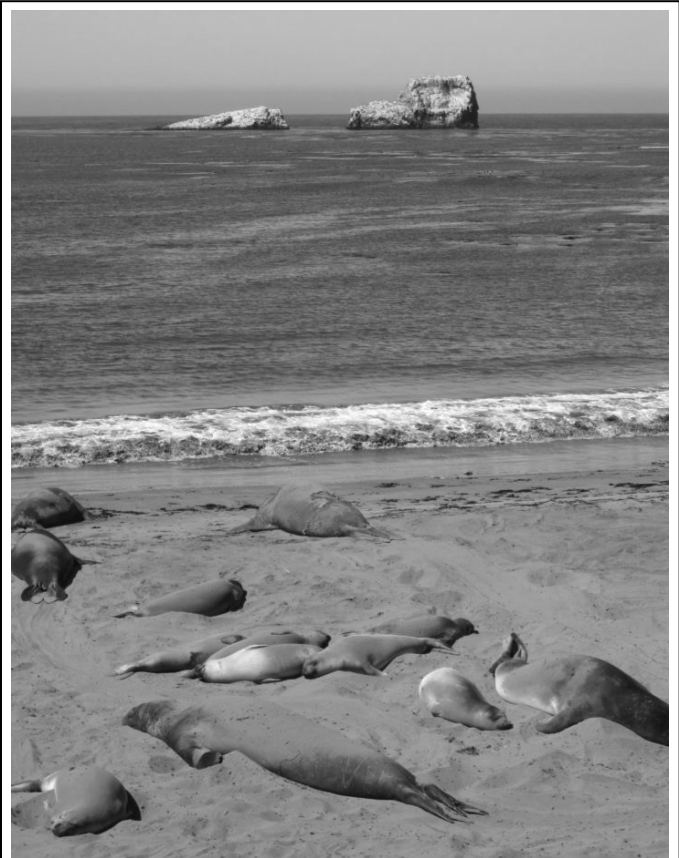
A study conducted by Kirkwood and other authors reported approximately 80 pinniped tourism sites in the Southern Hemisphere alone, with an economic value of around U.S. \$12 million; the Australian component included 53 operators visiting 23 sites and involving around 400,000 tourists. Pinnipeds also attract tourism in several locations in North America, the Galápagos Islands, and Europe.

An important breeding site in North America is located on San Miguel Island, in the Channel Islands National Park and Marine Sanctuary, California. Here, there are approximately 70,000 California sea lions (*Zalophus californianus*), 50,000 northern elephant seals (*Mirounga angustirostris*), 5,000 northern fur seals (*Callorhinus ursinus*), and 1,000 harbor seals (*Phoca vitulina*). In 2012, about 265,000 tourists visited these islands. Usually, seals and sea lions are observed at their breeding colonies and/or at the haul-out sites, but some pinnipeds—such as sea lions—can also be observed near urban centers.

Even the cold polar regions are not immune to the masses brought by marine mammal-based tourism. Visitors in the Arctic now exceed the host population at several destinations, and local communities are increasingly dependent on the jobs, income, and business revenues generated by this type of tourism.

On the opposite pole, things are not much different. Tourism in Antarctica has expanded greatly in the last decades, with shipborne tourists increasing by 430% in 14 years and land-based tourists by 757% in 10 years.

Going out to sea to observe dolphins, whales, and other marine mammals has gained even more momentum in the last few years, due to the crisis in the captivity industry. Anti-captivity campaigns and documentaries such as *The Cove* and *Blackfish* have helped to raise public awareness about the status of



“Pinniped viewing” is quite popular because species such as elephant seals and sea lions are easily accessible by boat and/or on foot. (Credit: Maddalena Bearzi / Ocean Conservation Society).

dolphins and whales kept in tanks. Inside academic circles, scientists have begun to recognize these animals as cognitive beings with personalities and emotions. As a result of this deepening “animal-human bond,” the number of people feeling empathy and compassion toward these and other animals is growing and so has the interest in experiencing wildlife away from bars or glass. Whale-watching, either boat-based from land or atop a paddleboard, seems the obvious and right alternative to visiting animals in captivity.

The benefits of marine mammal-based ecotourism span from a better appreciation of the marine environment to bolstering local economies, particularly in developing countries in which ecotourism represents an alternative way of “using” natural resources.

For animal lovers, whale-watching and other types of marine mammal viewing in natural habitats are an incredible and often once-in-a-lifetime experience. For conservationists, it’s a chance of educating the public, raising awareness and interest in conservation issues facing cetaceans and other marine mammals,

finding sustainable alternatives to fishing, and ending captivity in marine parks. For instance, in places like Japan, where the whaling industry still seems unstoppable, whale-watching could represent a lucrative alternative to the hunting of cetaceans and a response to the country's recent cultural shifts.

Marine mammal-based tourism, if conducted properly and on a sustainable basis (for information about mitigating negative impacts on marine mammals read chapter 6 of *Ecotourism's Promise and Peril: A Biological Evaluation*), is a "benign" industry. Ecotourism done right cannot only work, but it can work well. Marine mammals' welfare should, however, remain the main objective of this industry because, without these animals, there will be no ecotourism at all.

<https://blog.nationalgeographic.org/2018/01/10/wondering-about-the-economic-impact-of-ecotourism-on-marine-mammals-read-here/>

## **POLAR BEARS GORGED ON WHALES TO SURVIVE PAST WARM PERIODS; WON'T SUFFICE AS CLIMATE WARMS**

Oct. 9, 2018 — Polar bears likely survived past warm periods in the Arctic, when sea ice cover was low, by scavenging on the carcasses of stranded large whales. This food source sustained the bears when they were largely restricted to land, unable to roam the ice in search of seals to hunt.

A new study led by the University of Washington found that although dead whales are still valuable sources of fat and protein for some polar bears, this resource will likely not be enough to sustain most bear populations in the future when the Arctic becomes ice-free in summers, which is likely to occur by 2040 due to climate change. The results were published online Oct. 9 in the journal *Frontiers in Ecology and the Environment*.

"If the rate of sea ice loss and warming continues unmitigated, what is going to happen to polar bear habitat will exceed anything documented over the last million years. The extremely rapid pace of this change makes it almost impossible for us to use history to predict the future," said lead author Kristin Laidre, a marine biologist at the UW's Polar Science Center and associate professor in the School of Aquatic and Fishery Sciences.

Polar bears need sea ice to survive because it is an essential platform for hunting seals, their main food source. They travel over the ice, searching for breathing holes or seal birth dens. When the ice breaks up in late spring, polar bears in some populations will

fast on land, waiting for the ice to re-form so they can resume hunting.

Still, polar bears are opportunistic feeders and have been observed in multiple locations eating the carcasses of whales that died at sea and washed ashore. The bears can quickly consume and store large amounts of fat, which works in their favor. In some cases, between 40 and 60 different polar bears have been observed feeding on large bowhead and gray whale carcasses and, in 2017, more than 180 bears were seen scavenging on a single dead bowhead whale. Individual bears frequently return to the same carcass over multiple years.

The authors drew upon years of observations in the field to assess the potential importance of whale carcasses and how they might help polar bears survive an ice-free Arctic. It is clear that polar bears persisted through low-ice interglacial periods in the past that resulted from naturally occurring climate cycles. The researchers hypothesized that, to a significant degree, the bears likely survived by scavenging on whale carcasses, storing large amounts of fats when hunting seals was not an option.

"I think this is likely one of the most probable explanations for how polar bears made it through previous warm interglacial periods," said co-author Ian Stirling, former research scientist with the Canadian Department of Environment and an adjunct professor at the University of Alberta, who has studied polar bears for 45 years.

"But when we look at the situation now, ecologically, with respect to food sources, it's a very different picture," Stirling added. "The potential of whale carcasses to bail bears out may still be important in a few areas but, quite simply, their overall availability is going to be substantially less than before humans invaded the Arctic."

The researchers wanted to determine whether enough large whales dying and washing ashore each



Polar bears are shown scavenging on the carcass of a dead bowhead whale that washed ashore on Wrangel Island, Russia. (Credit: Chris Collins/Heritage Expeditions).

year could replace seals as a food source for polar bears in some areas. They first calculated how much blubber and meat an average population of 1,000 polar bears would need as a food source each year.

Then, they looked at the abundance of gray and bowhead whale populations -- focusing on the coasts of Chukotka and Alaska -- and estimated the number of potential strandings, factoring in that about 10 percent of whales that die will float to the surface, and only some of those end up on land that is accessible to bears.

Their analysis found that during ice-free summer months, a hypothetical population of 1,000 polar bears would need to eat about eight whales, and during the springtime feast when bears eat more, about 20 whales would be needed to satisfy the same 1,000 bears. In the Chukchi Sea, long-term data collected in Russia indicate that enough whales die and float to shore each year to potentially meet this need, the authors found.

But feeding on dead whales, while possibly critical in historical times, seems unlikely to help most polar bear populations survive a rapidly warming Arctic. The Arctic is home to 19 subpopulations of polar bears, but not every region sees large whales strand and die as regularly as the Chukchi Sea. Additionally, though whale carcasses likely helped polar bears survive in past low-ice periods, the Arctic landscape has changed drastically since then. Present-day whale populations are much smaller due to past human exploitation, and recent human activity in the region such as shipping, coastal communities and offshore industrial activity can further impact polar bears, whales, and the ability of bears to make use of whale carcasses.

"Scavenging on large whale carcasses is probably important for bears in some areas and may buffer them from sea ice loss," Laidre said. "However, carcasses of large whales are not expected to replace seals as nutritional resources as we move towards an ice-free Arctic. In most regions, the environmental changes are too large and the whale carcasses are too few."

<https://www.sciencedaily.com/releases/2018/10/181009175639.htm>

## 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)
10/31 9 am	16	Humpback Whales (breaching)

10/30 9 am	4 8	Humpback Whales Harbor Porpoise
10/29 9 am	8 30	Humpback Whales (breaching and lunge feeding) Harbor Porpoise
10/28 9 am	12 300 50	Humpback Whales (spy hopping and lunge feeding) Risso's Dolphins Harbor Porpoise
10/27 8 am 8 hour All Day	38 100 800	Humpback Whales (dolphin and sea lion snout-riding on whale) Pacific White-sided Dolphins Risso's Dolphins
10/26 8 am 8 hour All Day	25 2 50 2	Humpback Whales (lunging, breaching, tail slaps) Pacific White-sided Dolphins Risso's Dolphins Harbor Porpoise
10/25 9 am	11 20	Humpback Whales (breaching and tail lobbing) Risso's Dolphins
10/24 9 am	5 30	Humpback Whales Risso's Dolphins
10/23 9 am	16	Humpback Whales (lunging, breaching, feeding with California Sea Lions)
10/22 9 am	11	Humpback Whales (lunge feeding)
10/21 9 am	10 750 50	Humpback Whales (lunge feeding) Risso's Dolphins Northern Right Whale Dolphins
10/20 8 am	18 100 1200 100	Humpback Whales Pacific White-sided Dolphins Risso's Dolphins Northern Right Whale Dolphins
10/19 7:30 am 12-hr Full Day	25 30	Humpback Whales (lunging, breaching) Risso's Dolphins
10/18 9 am	7 1	Humpback Whales (spouting and fluking) Fin Whale
10/17 9 am	3 2 5	Humpback Whales Blue Whales Harbor Porpoise
10/16 9 am	15 5	Humpback Whales (kelping) Harbor Porpoise
10/15 8 am	21 75	Humpback Whales (lunge feeding, breaching, and tail throws) Risso's Dolphins
10/13 7:30 am 12-hr Full Day	49 1 40	Humpback Whales Fin Whale Risso's Dolphins
10/12 8 am 8 hour All Day	38 1	Humpback Whales (breaching, tail throws, feeding with Sea Lions) Mola Mola
10/10 9 am	14 10 12 220 40 30	Humpback Whales Pacific White-sided Dolphins Bottlenose Dolphins Risso's Dolphins Northern Right Whale Dolphins Harbor Porpoise

American Cetacean Society  
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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)

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