

Soundings



JULY 2015

American Cetacean Society – Monterey Bay Chapter
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Don't Miss ACSMB's Annual BBQ!

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Saturday, July 25th, 3-6 pm
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Please join us for a fun afternoon with great people, good food
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Questions? Call the Ternullos at 831-373-4281

The BBQ replaces our regular monthly meeting at Hopkins
Boatworks Hall. Join us for the BBQ and then again at
our next meeting on Thursday, August 27.

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*Breaching Risso's Dolphin.
Photo credit Daniel Bianchetta.*

American Cetacean Society
 Monterey Bay Chapter
 Presents

NATIONAL GEOGRAPHIC LIVE!

Plan to attend one of these shows at the Golden State Theatre in downtown Monterey, and a portion of your ticket price will be donated to ACS Monterey Bay.

Tickets can be purchased online at goldenstatetheatre.com or by phone at 831.649.1017. When booking your tickets, indicate ACS in the 'company' line or tell the agent on the phone, and ACS receives a donation on your behalf.

On July 21, National Geographic photographer, Brian Skerry will present his film, entitled **Ocean Soul**. Show time is 7pm.

On August 18, Jodi Cobb introduces her film, **Stranger in a Strange Land**, at 7pm.

More information is available about each live speaker and film online at goldenstatetheatre.com

Please call Diane Glim, 214-1016, with any questions, and enjoy the show! Thank you for your support.

both blue and humpback whales. For more info please contact Diane Alps at 310-597-0449.

Dec. 13-18: 21st Biennial Conference on the Biology of Marine Mammals: Bridging the Past Toward the Future. Hilton San Francisco, Union Square.

BOOK RECOMMENDATIONS

Beyond Words: What Animals Think and Feel, by Dr. Carl Safina. 2015 Henry Holt and Co.

Of Orcas and Men: What Killer Whales Can Teach Us, by David Neiwert. 2015 The Overlook Press.

Whales, Dolphins, and Porpoises: A Natural History and Species Study, by Annalisa Berta. 2015 University of Chicago Press.

BLUE AND FIN WHALE DISTRIBUTION IN WATERS OFF SOUTHERN CALIFORNIA

Jun. 25, 2015 — A new study led by researchers at Scripps Institution of Oceanography at UC San Diego indicates a steady population trend for blue whales and an upward population trend for fin whales in Southern California.

Scripps marine acoustician Ana Širović and her colleagues in the Marine Bioacoustics Lab and Scripps Whale Acoustic Lab intermittently deployed 16 High-frequency Acoustic Recording Packages (HARPs)--devices that sit on the seafloor with a suspended hydrophone (an underwater microphone)--to collect acoustic data on whales off Southern California from 2006-2012.

Blue and fin whales are common inhabitants of the Southern California Bight, the curved region of California coastline with offshore waters extending from San Diego to Point Conception (near Santa Barbara, Calif.), but little is known about their use of the area.

As described in the June 24 issue of the journal *Endangered Species Research*, Širović and her colleagues analyzed seven years of acoustic data (26 instrument-years) to study the call abundance of blue and fin whales in the Southern California Bight. The study, largely supported by the Office of Naval Research, provides the first detailed view into the

CALENDAR

Jul. 19: Whales of Sri Lanka. At 12:30 pm at the Seymour Center in Santa Cruz, Asha de Vos will lecture on the unorthodox blue whales of Sri Lanka and her efforts to save them.

Aug. 29: ACS National and ACS LA host Summertime Blues Whale Watch Fundraiser. This all day whale watch will search the Santa Barbara Channel aboard the *Condor Express* in search of
American Cetacean Society – Monterey Bay

spatial use of Southern California waters by blue and fin whales, the two largest cetacean species in the world. Both are classified as endangered species.

Širović found that blue whale calls were more commonly detected at coastal sites and near the northern Channel Islands, while fin whale calls were detected further off shore, in central and southern areas.

The acoustic data indicate that the blue whale population in Southern California is relatively steady, while the fin whale population is increasing.

"I think it's an interesting difference in trends because both of the species were subject to whaling earlier in the twentieth century, and now they're clearly responding differently," said Širović, assistant researcher in the Marine Physical Laboratory at Scripps.

The acoustic data and overall trends outlined in this study are consistent with another Scripps-led study, but one that used visual data collected from 2012-2013 in the same area as part of the California Cooperative Oceanic Fisheries Investigations (CalCOFI). CalCOFI is a unique partnership led by the California Department of Fish & Wildlife, NOAA Fisheries Service, and Scripps Institution of Oceanography, and it is considered to be one of the world's most valuable marine observation programs.

Published in 2014, the Scripps research conducted through CalCOFI indicated that the blue whale population was relatively steady, while the fin whale population was increasing.

Širović cites the parallel findings between the two studies as evidence that passive acoustics can be used as a powerful tool to monitor population trends for these large marine mammals.

"I think it's very exciting that we see the same trends in the visual and acoustic data, because it indicates the possibility of using acoustics to monitor long-term trends and changes," said Širović.

Presence of a resident fin whale population in Southern California was previously suggested, and the recent study's detection of fin whale calls year-round

further supports this idea.

Researchers also found that blue whale calls in the region were generally detected between June and January, evidence that supports the known seasonal migration pattern of blue whales, which tend to migrate from off the coast Mexico (or even as far down as Costa Rica) to Southern California in the late spring. The whales forage through the fall, and then leave in early winter, but researchers aren't certain where they go next.

Although researchers have studied blue and fin whales for years, Širović notes that both species are particularly mysterious, and scientists still don't know some basic information about them, such as their mating system or breeding grounds.

The Southern California Bight is a highly productive ecological territory for many marine animals due to strong upwellings, but researchers have not found any evidence that blue or fin whales are breeding there.

The productivity of the coastal region also makes it a hotbed for human activity, with large cities onshore and ships, commercial fishing vessels, and other human impacts ever-present in the water. Since fin whales generally live further offshore, Širović posits that they might have a slight advantage over blue whales, which tend to inhabit areas where there is more ship traffic--increasing their chances for ship strikes.

"It seems that for fin whales, things are probably improving," said Širović, noting that more research is needed to determine why the blue whale population is not increasing.

"For blue whales, it's a little bit harder to tell. There is a question right now as to whether their population has grown to its maximum capacity, because there are many lines of evidence showing that their population is not growing currently," said Širović. "So the question remains, is it because that's just what their population size can be maximally, or are there factors that are keeping them from growing further?"

Širović hopes that future studies can help identify why there is this difference in population trends of blue and fin whales. Now that she and her colleagues have taken a first look at the broad trends of the two species, they want to dig deeper and look into environmental drivers and other factors and features that may be causing some of the spatial distribution patterns and long-term changes of the whales.

Coauthors of the study included Ally Rice, Emily Chou, John Hildebrand, and Sean Wiggins of Scripps



A fin whale off Southern California. (Credit: University of California - San Diego; Photo taken under NMFS Permit No. 727-1915)

Institution of Oceanography, and Marie Roch of San Diego State University.

The analysis portion of this study was supported by the Office of Naval Research, with data collection and monitoring funded by Chief of Naval Operations N45 and the U.S. Pacific Fleet.

<http://www.sciencedaily.com/releases/2015/06/150625161438.htm>

DOLPHIN HUNT:

PHOTOGRAPHS SHOW A CALDERON DOLPHIN HUNT TAKING PLACE IN DENMARK.

May 7, 2015 — The photographs displayed below were taken in 2005 and document a drive hunt (commonly known as a "grind") of long-finned pilot whales by residents of the Faroe Islands (which are an autonomous province of Denmark), an activity that has long been a subject of international controversy.

The whale hunt has been a part of the Faroe Island culture for hundreds of years, but in recent decades the practice has increasingly become the subject of international protest and condemnation. Supporters of the hunt maintain that the killing of pilot whales is "an age-old communal, noncommercial hunt aimed at meeting the community's need for whale meat and blubber," that the animals are dealt with so quickly that their pain is brief, and that whale meat accounts for a quarter of the Faroe islanders' annual meat consumption. Conservationists charge that the hunts, which may take hundreds of whales at a time, are barbaric and pointless, that "the practice is outdated, cruel and unnecessary for a place with one of the highest standards of living in Europe," and that most of the whales go to waste (either being left on the beach to rot or thrown back to sea after they are killed).

According to Russell Fielding, a geographer from the University of the South in Sewanee, Tennessee:

The Faroese are opportunistic hunters who launch a grind only when specific conditions are met. The animals must be close to shore, near one of 23 beaches approved as a landing beach. The weather and currents have to be calm enough. And there have to be enough participants to crew the dozen or so powerboats required to drive the animals toward shore.

In some years, such as in 2008, conditions weren't right and no whales were taken. But over the past three centuries, the Faroese have taken an average of 838 pilot whales and 75 dolphins each year, Fielding reported in a 2012 study.

The Faroese usually target long-finned pilot whales, says Fielding, although they will also take bottlenose dolphins, white-sided dolphins, and Risso's

dolphins. Risso's dolphins are sometimes landed even though they aren't on the Faroe government's list of species approved for hunting.

None of the species are considered endangered, although the International Union for Conservation of Nature lists long-finned pilot whales as "data deficient," meaning there isn't enough scientific evidence to judge the status of the North Atlantic population.

A Faroe Islands whaling site page describes such hunts unfolding as follows:

Whale drives only take place when a school of pilot whales is sighted close to land, which is most often from a local fishing boat or ferry, and when sea and weather conditions make it possible. This can take place at any time of the year, but catches are most common in July and August when the days are long and the weather is more stable. Notice of the school is sent to the elected whaling officials and to the district administrator (sýslumaður) responsible for the whale drive, and is spread as widely and quickly as possible in the local community so that enough people and boats can join in the drive. Employers usually make allowances for members of their staff to take time off



A drive hunt (commonly known as a "grind") of long-finned pilot whales by residents of the Faroe Islands. (Credit: <http://www.marcopaoluzzo.com/COULEUR/Faroe%20Islands%2004/index.htm>)

during whale drives.

The boats gather in a wide semicircle behind the whales and slowly and quietly begin to drive them towards the chosen authorised bay. On the whaling foreman's signal, loose stones and stones attached to lines are thrown into the water behind the whales, helping to herd the whales towards the beach where they become stranded. According to the regulations, any group of whales which cannot be beached in this manner must be driven out to sea again.

A crucial factor in ensuring an effective whale drive is the organisation of participants, both in boats and on shore, in addition to prevailing weather and tidal conditions during driving and beaching. The spontaneous nature of a whale drive requires swift mobilisation of manpower to drive and kill a group of large wild animals quickly. Whale drives are only initiated when whales are sighted by chance close to land.

Faroese animal welfare legislation, which also applies to whaling, requires that animals are killed as quickly and with as little suffering as possible. Whales are killed on the shore and in the shallows of bays especially authorised for the purpose. A regulation spinal lance must be used to sever the spinal cord, which also severs the major blood supply to the brain, ensuring both loss of consciousness and death within seconds. This, in addition to the supplementary use of the traditional whaling knife, if necessary, is the most efficient and humane means of killing beached pilot whales safely, with many participants involved at the same time.

In recent years, two new items of equipment have been developed and formally approved and required as standard equipment. The blow-hole hook used to secure the whales causes no injury prior to slaughter and is now widely used. The spinal lance has now also been introduced as the preferred standard equipment for killing pilot whales. It has been shown to reduce killing time to 1-2 seconds while also improving accuracy and safety (see also under Whaling and animal welfare). The Faroes participate actively in the work of the NAMMCO Committee on Hunting Methods, where veterinary experts and experienced hunters from different countries share information and work to develop best practices for the humane killing of marine mammals.

In 1986 the International Whaling Commission (IWC) introduced "zero catch limits for commercial

whaling"; however, the IWC's rules still allow for subsistence hunting in some parts of the world, and the application of their regulations to long-finned pilot whales is somewhat ambiguous since (despite their name) those animals are not whales proper; they are (like dolphins) small cetaceans, and they belong to the same biological family (Delphinidae) as dolphins.

In late 2008, chief medical officers of the Faroe Islands advised that they no longer considered pilot whales to be fit for human consumption because the animals' meat and blubber had been found to contain too much mercury, PCBs and DDT derivatives.

As noted above, the Faroe Islands are an autonomous province of Denmark and not a part of Denmark itself; essentially a self-governing country within the Kingdom of Denmark, with their own prime minister and legislature.

<http://www.snopes.com/photos/hunting/dolphinhunt.asp>

GLOBAL TRENDS SHOW SEABIRD POPULATIONS DROPPED 70 PERCENT SINCE 1950S

Jul. 9, 2015 — UBC research shows world's monitored seabird populations have dropped 70 per cent since the 1950s, a stark indication that marine ecosystems are not doing well.

Michelle Paleczny, a UBC master's student and researcher with the Sea Around Us project, and co-authors compiled information on more than 500 seabird populations from around the world, representing 19 per cent of the global seabird population. They found overall populations had declined by 69.6 per cent, equivalent to a loss of about 230 million birds in 60 years.

"Seabirds are particularly good indicators of the health of marine ecosystems," said Paleczny. "When we see this magnitude of seabird decline, we can see there is something wrong with marine ecosystems. It gives us an idea of the overall impact we're having."

The dramatic decline is caused by a variety of factors including overfishing of the fish seabirds rely on for food, birds getting tangled in fishing gear, plastic and oil pollution, introduction of non-native predators to seabird colonies, destruction and changes to seabird habitat, and environmental and ecological changes caused by climate change.



UBC research shows world's monitored seabird populations have dropped 70 percent since the 1950s, a stark indication that marine ecosystems are not doing well. (Credit: Daniel Donnecke).

Seabirds tend to travel the world's oceans foraging for food over their long lifetimes, and return to the same colonies to breed. Colony population numbers provide information to scientists about the health of the oceans the birds call home.

Albatross, an iconic marine bird that lives for several decades, were part of the study and showed substantial declines. Paleczny says these birds live so long and range so far that they encounter many dangers in their travels. A major threat to albatross is getting caught on longline fishing hooks and drowning, a problem that kills hundreds of thousands of seabirds every year.

"Our work demonstrates the strong need for increased seabird conservation effort internationally," said Paleczny. "Loss of seabirds causes a variety of impacts in coastal and marine ecosystems"

Seabirds play an important role in those ecosystems. They eat and are eaten by a variety of other marine species. They also transport nutrients in their waste back to the coastal ecosystems in which they breed, helping to fertilize entire food webs.

The study, published in *PLOS ONE*, is the first to estimate overall change in available global seabird population data. It is a collaboration between UBC researchers Paleczny, Vasiliki Karpouzi and Daniel Pauly and Edd Hammill, a lecturer at the University of Technology, Sydney in Australia.

<http://www.sciencedaily.com/releases/2015/07/15/0709102850.htm>

EPIC JOURNEY BY BLUE WHALE

Jun. 11, 2015 — Scientists studying blue whales in the waters of Chile through DNA profiling and photo-identification may have solved the mystery of where these huge animals go to breed, as revealed by a single female blue whale named "Isabela,"

according to a recent study by the Chile's Blue Whale Center/Universidad Austral de Chile, NOAA and the Wildlife Conservation Society.

The researchers have discovered that Isabela -- a female animal named after the lead author's daughter and a major Galapagos Island of the same name -- has traveled at least once between Chile's Gulf of Corcovado and the equatorial waters of the Galapagos Islands, a location more than 5,000 kilometers away and now thought to be a possible blue whale breeding ground. The journey represents the largest north-south migratory movement ever recorded for a Southern Hemisphere blue whale.

The study titled "First documented migratory destination for Eastern South Pacific blue whales" appears today in the online version of the journal *Marine Mammal Science*.

"Efforts to protect blue whales and other ocean-going species will always fall short without full knowledge of a species' migratory range. Moreover, with this kind of findings we encourage eastern south Pacific governments to think about the creation of a marine protected areas network for the conservation of this and other migratory species" said lead author Juan Pablo Torres-Florez of the Universidad Austral de Chile and the Blue Whale Center. "Isabela points us in the right direction for further research."

"The discovery emphasizes the benefits of collaboration between scientists and research organizations from different countries," said Paula Olson of Southwest Fisheries Science Center.

"The discovery of Isabela traveling between southern Chile and the waters of Ecuador is important and very timely as we work to promote the recovery of the largest species to ever inhabit the earth," said Dr. Howard Rosenbaum of WCS's Ocean Giants Program. "The movement of this one whale provides important information that will enable us to look further at these important areas for blue whales with goal to ensure their long-term protection."



Isabela's dorsal fin. Image taken in Chile's Gulf of Corcovado in 2006. (Credit: Courtesy of Rodrigo Hucke-Gaete/Blue Whale Center).

It is unknown how old Isabela is, or if she has produced any young, but she is at least 82 feet in length and may weigh up to 100 tons.

Seeking to establish links between populations of blue whales in the Gulf of Corcovado and other regions, the researchers examined DNA collected from the skin of blue whales with biopsy darts fired from crossbows across the eastern South Pacific. The team also used data from recorded sightings and photographs in their attempt to connect individual animals to different locations.

The analysis produced a genetic match between a female whale observed and sampled off the coast of southern Chile in the Austral summer of 2006; it turned out the same whale sampled the waters of the Galapagos eight years earlier by NOAA scientists. The team then found that photographs taken of both whales revealed the same distinctively curved dorsal fin and blotchy blue-gray patterns on the back, confirming that both whales were in fact the same animal.

The authors note that blue whales are frequently observed in equatorial Pacific just west of the Galapagos and that a more detailed study might confirm the location as a wintering and breeding ground for at least some of the blue whales of southern Chile.

Reaching nearly 100 feet in length, the blue whale is thought to be the largest animal that ever existed. Blue whales were nearly hunted to extinction by commercial whaling fleets before receiving international protection in 1966. A blue whale calf can measure between 23 and 27 feet in length at birth and weigh almost 3 metric tons.

<http://www.sciencedaily.com/releases/2015/06/150611161218.htm>

SIGHTINGS

Sightings are compiled by Monterey Bay Whale Watch. For complete listing and updates see www.gowhales.com/sighting.htm

Date	#	Type of Animal(s)
6/30 late pm	7	Humpback Whales
6/30 pm	10	Humpback Whales
6/30 am	7	Humpback Whales
	3	Dall's Porpoise
6/29 am	4	Humpback Whales
	15	Pacific White-sided Dolphins
	5	Risso's Dolphins
6/28 late pm	5	Humpback Whales
	150	Pacific White-sided Dolphins
	1	Harbor Porpoise

6/28 pm	4	Humpback Whales
	50	Pacific White-sided Dolphins
6/28 am	12	Humpback Whales
	80	Pacific White-sided Dolphins
	60	Risso's Dolphins
	3	Dall's Porpoise
6/27 late pm	2	Humpback Whales
6/27 pm	8	Humpback Whales
6/27 am	11	Humpback Whales
	75	Pacific White-sided Dolphins
6/26 late pm	7	Humpback Whales (lunge feeding)
6/26 pm	4	Humpback Whales
	5	Risso's Dolphins
6/26 am	6	Humpback Whales
	12	Risso's Dolphins
	6	Harbor Porpoise (mating)
6/25 late pm	1	Humpback Whale
6/25 pm	6	Humpback Whales
	1	Killer Whale
6/25 am	8	Humpback Whales
	60	Pacific White-sided Dolphins
	30	Risso's Dolphins
6/24 late pm	6	Humpback Whales
6/24 pm	12	Humpback Whales
	5	Harbor Porpoise
6/24 am	8	Humpback Whales
	100	Pacific White-sided Dolphins
	100	Risso's Dolphins
	10	Dall's Porpoise
	15	Harbor Porpoise
6/23 am	6	Humpback Whales
	10	Risso's Dolphins
	1	Elephant Seal
	1	Northern Fur Seal
6/22 am	14	Humpback Whales
	40	Risso's Dolphins
6/21 pm	22	Humpback Whales
6/21 am	29	Humpback Whales
6/20 late pm	23	Humpback Whales
6/20 pm	19	Humpback Whales
6/20 am	15	Humpback Whales
	30	Pacific White-sided Dolphins
	40	Risso's Dolphins
6/19 am	15	Humpback Whales
	1	Elephant Seal
6/18 am	16	Humpback Whales
	1	Minke Whale
	50	Long-beaked Common Dolphins
	10	Risso's Dolphins
6/17 late pm	12	Humpback Whales
6/17 pm	6	Humpback Whales
	5	Dall's Porpoise
6/17 am	13	Humpback Whales
	10	Pacific White-sided Dolphins
	300	Risso's Dolphins
6/16 am	13	Humpback Whales
	1	Minke Whale

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