

# Soundings



American Cetacean Society- Monterey Bay Chapter

OCTOBER 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, October 25, 2012 Time: 7:30 PM.**

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

**Speaker: Ed Clifton, PhD.**

**Deep water sedimentation, geologist & oceanographer by day  
Natural History Enthusiast, Photographer, Poet ...by Night**

**Subject: Marine Mammal Evolution**

**Trick or treat?: Surprise Movie**

Well its almost Halloween....

Our presentation by Ed Clifton is sure to be a TREAT! Many of you already know Ed especially if you volunteer at the Monterey Bay Aquarium or Point Lobos State Reserve. Ed is a generous seeker of the truth. He undertakes serious investigations of different topics and is willing to share the fruits of his labor most generously. One of his more recent projects involves marine mammal evolution and in particular evolution of some marine mammals that are still today a part of our local fauna.

The second part of the evening is a surprise short movie....

Please join us for an interesting, informative and fun presentation

See you there,

Bob, Chair, ACS MB Programs Committee

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## CALENDAR

**Please Note: The November and December monthly meetings are combined. Our next monthly meeting of 2012 will be Thursday, December 6.**

**Oct. 21, 1pm:** On Wings and over Water: Exploring the Biology and Conservation of Pacific Seabirds. Josh Adams. Seymour Center/Long Marine Lab

**Oct 23-26:** 8th California Islands Symposium Ventura, CA. For more info go to cisymposium@gmail.com

**Nov. 8-11:** Western Society of Naturalists Annual Meeting in Monterey, CA. Meeting will be held at the Embassy Suites Hotel in Seaside, CA

**Nov. 9th-11:** 13th International Conference Of The American Cetacean Society. Whales and Humans: A Conflicted Relationship. San Diego, CA Hyatt Regency, Mission Bay. Register now at Acsonline.org

**Nov. 14:** Sitka Whale Festival- "Cold Oceans to the Sea: Terrestrial Connections to our Northern Oceans"

### Moss Landing Marine Science Series

#### Wednesdays; 4:00-5:00pm OLLI@CSUMB

**Oct. 24;** Tackling Ocean Pollution

Nicole Bobco, Biological Oceanography

**Nov. 7;** California Leatherbacks

Deasy Lontoh, Vertebrate Ecology

An Ocean of Inspiration-The John Olguin Story"

Written by Stefan Herzen, Barbara Brunnick

**Feb 14-18:** AAAS/2013 Annual Meeting in Boston

## MEDIA RECOMMENDATIONS

The Golden Shore: California's Love Affair with the Sea. Written by David Helvarg

Once We Had Gills: Growing up an Evolutionist in

an Evolving World. Written by Rudolph Raff

The California Channel Islands written by Marla Daily

A Guide to Rockfishes, Thornyheads, and Scorpionfishes of the Northeast Pacific. Written by Milton Love, John L. Butler and Tom E. Laidig

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## **GREAT WHITE SHARKS OFF WEST COAST TO BE CONSIDERED FOR ENDANGERED LISTING**

By Juliet Eilperin, Published: September 27

The federal government will examine whether to protect the West Coast population of great white sharks under the Endangered Species Act, the National Oceanic and Atmospheric Administration announced Thursday.

Four environmental groups had filed petitions with the NOAA Fisheries Service this summer to list the West Coast population on the grounds that accidental catches, illegal fishing and the accumulation of contaminants threaten the iconic species. Research studies suggest that as few as 350 great white sharks could be swimming off the coasts of the United States and Mexico.

Craig Wingert, a regional Endangered Species Act policy adviser for NOAA, said the agency will assemble a scientific team to conduct "a comprehensive review" and will issue a final decision by June.

Global trade of great whites is regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora, and it is illegal to kill great whites off U.S. coasts in either the Pacific or Atlantic. An endangered species listing would allow the federal government to designate critical habitat for the West Coast population of great white sharks and possibly impose restrictions on other activities that threaten it.

Whit Sheard, Pacific counsel for the advoca-

cy group Oceana, said, given the pressures West Coast great whites are facing, “an endangered listing might possibly be one of the only ways to keep these species from going extinct.”

The move by the United States came the same day that the government of Western Australia announced it would hunt and kill great whites swimming off its coasts that it considers a threat to humans. Five people have been killed by great white sharks there in the past year.

“We will always put the lives and safety of beachgoers ahead of the shark,” Western Australian state Premier Colin Barnett told reporters.

But Christopher Neff, a doctoral student at the University of Sydney, noted there is no research to support the idea that shark hunting reduces the threat to humans. Western Australia’s move could even undermine shark research, he noted, because “a shark tagged by scientists in South Africa or San Francisco may have their shark culled under the [new] program if it sets off the tracking device.”

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## ALBATROSS POPULATION RISES TO 3,000 ON TORISHIMA: SURVEY

Aug 22, The Yomiuri Shimibun/Asia News Network  
*Torishima is known as the seabirds' largest breeding ground. -Yomiuri Shimibun/ANN*

The population of the endangered short-tailed albatross, a species designated as a special Japanese natural treasure, has recovered to about 3,000 birds on Tokyo's Torishima island, up from less than 200 more than 30 years ago, according to an expert.

Toho University Prof. Hiroshi Hasegawa, who has been involved in protecting the birds on the island

for more than 30 years, said the current number is large enough for their numbers to recover naturally.

Torishima



Photo: Internet

is known as the seabirds' largest breeding ground. The number of birds that left the nest this season rose to 353, a record high since Hasegawa's team started surveys in 1976.

The recovery is believed to have been the result of greatly improved breeding rates, boosted by newly prepared breeding sites on the island.

If the current recovery pace continues, the number of birds is expected to reach 5,000, a benchmark for avoiding the extinction crisis, by about 2018. Some chicks have been transferred to Mukojima island in Tokyo's Ogasawara Islands since 2008 to create another breeding ground, effectively putting eggs in several baskets so to speak, in the event that an eruption should occur on Torishima island. These birds also have left their nests, Hasegawa said.

"The recovery is dreamlike as the number was less than 200 when we started protecting the birds," he said. "It took a long time, but I think our project worked well."

Hasegawa carried out his latest survey in April and May.

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## ORCA MOTHERS CODDLE ADULT SONS, STUDY FINDS

By Sindya N. Bhanoo

Humans, pilot whales and killer whales are the only known species in which females have a prolonged period of menopause — a time of life when they cannot reproduce. Now, a study in the journal *Science* reports the purpose that menopause serves in orcas: for females to care for their sons and make sure their genes are passed on to future generations.

“Females have a really unique life history,” said Emma Foster, a marine biologist at Exeter University in England. “They stop reproducing in their 30s and 40s, but they can live into their 90s.”

Using 36 years of data on orcas in the Pacific Northwest, the researchers found that for males over 30, the death of a mother meant an eightfold increase in the likelihood of death within a year.

Killer whales stick with their mothers their entire lives. Dr. Foster suspects that mothers help sons with foraging or offer protection in encounters with other males. Among female orcas over 30, there was only about a threefold increase in the likelihood of death in the year after a mother's death. "It makes more sense for the mothers to invest more in their sons, because there is no increased burden on the family group," Dr. Foster said. "Children of sons move on to new family groups."

The findings recall what some scientists term the "grandmother hypothesis" in humans — the idea that a long menopause allows women to focus not on their own fertility or on their adult children but on nurturing the next generation.

By "ensuring the success of their grandchildren they improve their reproductive success," Dr. Foster said.

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### **SOLAR-POWERED WAVE GLIDER LATEST STEP IN STANFORD RESEARCH TEAM'S EFFORT TO BUILD A PACIFIC OCEAN WI-FI HOTSPOT NETWORK FOR BIODIVERSITY**

Being scalable and modular is one of the big advantages of employing solar and wind energy technology to produce power. From consumer electronics to utility-scale power plants, solar, wind and other renewable power systems are driving our transition out of the fossil fuel era.

Adding to the environmental, social and economic benefits, scientists are helping drive innovation by employing renewable, clean energy technology in new ways, ways that are helping to measure, monitor and analyze human impacts and the state of the natural environment to a degree never before possible.

Besides being a driving force in determining climate, the world ocean provides habitat for an uncounted number of plant and animal species, as well as nutrition and sustenance for billions of people. Concerns have been growing about our use of the oceans and the sustainability of marine biodiversity and fish stocks in the face of increasingly intense industrial

fishing, marine pollution and changing ocean chemistry due to a changing climate, however.

Marine scientists and volunteers have been working to increase our knowledge and understanding of the complex ocean environment and the state of the world oceans, and they're pushing the limits of new clean technology in doing so. This week, an ocean science research team led by Stanford University Marine Sciences Prof. Barbara Block and team deployed a self-propelled, solar-powered, unmanned Wave Glider near the San Francisco coast.

### **WI-FI HOTSPOTS FOR MARINE SPECIES IN "THE BLUE SERENGETI"**

Equipped with a bevy of custom-designed and -built instruments, launching the Wave Glider is a big step forward toward realizing Prof. Block's dream of our being able to create what amounts to a health monitoring system that spans the world ocean. It's "part of a new network including data receivers on fixed buoys that will pick up signals from acoustic tags on marine animals, such as Great White sharks, passing within 1,000 feet," according to a Stanford University, Hopkins Marine Station press release. The data received will be transmitted to Prof. Block's shore-based research team.

"Deployment of the Wave Glider is the culmination of years of long, hard work. The long-lasting, relatively inexpensive acoustic tags and the local array of both fixed and mobile ocean transmitters will fine-tune 12 years of insights gleaned from satellite-connected tags used to follow thousands of animals throughout their entire Pacific journeys," the press release from Monterey Bay states.

The solar-powered Wave Glider launched off the San Francisco coast is the first of what Prof. Block and her team hope will grow into an interconnected network of "ocean Wi-Fi hotspots" when combined with similar devices installed on stationary, moored buoys. The data gleaned from such new, in-

novative scientific devices is already contributing significantly to our knowledge and understanding of the world ocean and Prof. Block's "Blue Serengeti Initiative."

Dr. Block led the global scientific effort that resulted in the publication of the "International Census of Marine Life (2000-2010)." Following on from the Tagging of Pacific Predators (TOPP) project, the Wave Glider launch builds on these efforts.

"My mission is to protect ocean biodiversity and the open sea," Block, the Charles and Elizabeth Prothro Professor in Marine Sciences, Biology at Stanford, explained. "Our goal is to use revolutionary technology that increases our capacity to observe our oceans and census populations, improve fisheries management models, and monitor animal responses to climate change."

#### BRINGING MARINE LIFE, AND SCIENCE, TO THE BROAD PUBLIC

Scientific research and researchers at times seem divorced from the public and the lives of everyday people. New information and communications technology is helping change that. "Importantly," according to Hopkins Marine's press release, "the public can now follow the tracking of animals in real-time on a smartphone and tablet computer app."

"People realize this is important, but it's hard for them to connect on a visceral, personal level to the incredible biodiversity in their own backyard," Dr. Randall Kochevar, one of the Stanford University developers of the app, said. "Through this app, we're able to put the Blue Serengeti right in their hands. They can follow individual sharks and learn about their lives and feeding habits."

A new Apple mobile iOS app created by Dr. Block and colleagues with developers from TOPP, EarthNC and Gaia GPS is available free of charge at

the Apple app store. It provides users "with a direct, personal connection between the public and wild marine animals to raise public awareness of the ocean wilderness teeming with life just off North America's West Coast."

A collaboration among 75 scientists from five countries, TOPP made use of an array of electronic tags to follow the migrations of more than 4,300 individual marine animals, including sharks, tuna, whales, seals, seabirds, and turtles, Hopkins Marine recounts. The TOPP project and Wave Glider are profiled in a special on the Discovery Channel entitled, "The Great White Highway." Narrated by long-time actor, ocean environmental advocate and Oceana board member Ted Danson, the program aired Thursday night, Aug. 16, on Discovery Channel's "Shark Week."

*Spanning a decade (more than 300,000 days) of tracking and monitoring these marine animals, the TOPP team demonstrated that the West Coast of North America is an important hotspot for animals ranging throughout the Pacific," Hopkins Marine states. Included among the diversity of marine species tracked were "bluefin tuna, white and mako sharks, sooty shearwaters and leatherback sea turtles, elephant seals and blue whales on a seasonal basis that reaches a peak in later summer and early fall."*

#### WEBSITES AND MOBILE APPS FOR THE WORLD OCEAN

Dr. Block and her research team are now busy wiring up their ocean Wi-Fi hotspot network. The effort includes deploying acoustic detection buoys in key locations known to be areas where Great White sharks have been found to congregate during the time they spend close to shore, a region the Hopkins marine research team has dubbed the "White Shark Cafe." The mobile app receives detection data from these buoys and notifies users when a shark passes within 1,000 feet or so of the device.

Customizable, interactive maps enable users to explore Pacific Ocean regions frequented by northern California white sharks in real-time. A media gallery includes photos, videos, historical tracking data, and 3D interactive models.

Dr. Block and team are also working to obtain United Nations World Heritage Site status for regions of Pacific where the California Current flows. She likens the importance of these oceanic regions to “the vast African Serengeti plains because of its vital diversity and abundance of life.” “This place is one of the last wild places left on Earth” she was quoted as saying.

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## WHALES FALL THROUGH THE RESEARCH NET: GLOBAL POPULATIONS OF MARINE MAMMALS OBSERVED FAR TOO LITTLE

ScienceDaily (Sep. 17, 2012) — A world map created by scientists of the universities of Freiburg and St. Andrews, Scotland, reveals that only a fourth of the world ocean surface has been surveyed for whales and dolphins in the past decades. It is only possible to identify detrimental influences and collect basic information for research and environmental protection if data on marine organisms is collected regularly. First and foremost, it will be necessary to observe international waters more closely and develop new analytical methods, conclude the scientists in their study in the journal *PLoS ONE*.

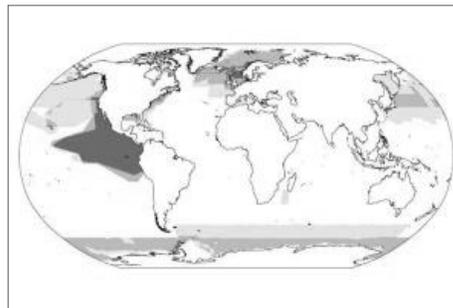
The team combed through more than 400 studies on whales conducted between 1975 and 2005 for their study. The scientists digitalized thousands of maps, and in doing so identified alarming gaps. They determined that most of the extensive observations have taken place in the waters of economically strong nations in the northern hemisphere, particularly those of the USA and Europe. With the exception of the Antarctic waters, where the International Whaling Commission is monitoring the reduction of the Minke Whale population by Japanese whalers, there are enormous areas in the southern hemisphere in which

whale populations have not been surveyed at all in the past decades..

The researchers ascertained that the main reason for observing whales is the market for "dolphin-friendly" tuna,

whose production requires ensuring that no dolphins are killed by incidental capture. "The eastern tropical Pacific has thus been studied more often than all other marine areas put together," says the Freiburg marine biologist Dr. Kristin Kaschner. But even these relatively well researched areas lie on the lower end of the scale with regard to the necessary observation frequency. In order to track temporal changes, Kaschner explains, it is important to observe the populations of marine mammals as regularly as possible. "This is currently only the case for six percent of the surface of all oceans," says Kaschner.

However, a sufficient pool of data on the populations of whales and dolphins is a precondition for successful research and effective protection of marine mammals. They were decimated by whaling in the past and are still threatened today by military sonar systems, bycatch, and water pollution. The scientists argue that international efforts to maintain biodiversity should lead to the development new approaches to data collection. Particularly important is the question as to what effect sound sources like sonar systems or seismic exploration of potential oil or gas reserves have on whales. "Gaps in data have an impact on all aspects of marine biology and planning, from fishery policy to marine protected areas," says Kaschner. "The data we have on sharks, deep-sea creatures, and marine viruses is even patchier."



*There are enormous gaps on the world map of whale observation, especially in international waters. Only the areas shaded dark have been surveyed several times in the past decades. (Credit: Image courtesy of Albert-Ludwigs-Universität Freiburg)*

**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)			
10/16 a.m.	1	Humpback Whale	9/29 a.m.	20	Risso's Dolphins
	40	Pacific White-sided Dolphins		1	Humpback Whale
10/15 a.m.	3	Humpback Whales	9/28 p.m.	100	Risso's Dolphins
	75	Pacific White-sided Dolphins	9/28 a.m.	2	Humpback Whales
	150	Risso's Dolphins	9/27 a.m.	4	Humpback Whales
10/14 p.m.	800+	Risso's Dolphins		2	Killer Whales
10/14 a.m.	2	Humpback Whales	9/26 p.m.	7	Minke Whale
	800+	Risso's Dolphins	9/26 a.m.	1	Humpback Whales
	15	Dall's Porpoise		1	Humpback Whale
10/13 p.m.	5	Humpback Whales	9/25 p.m.	200	Risso's Dolphins
	500	Risso's Dolphins		1	Humpback Whale
10/13 a.m.	4	Humpback Whales	9/25 a.m.	17	Risso's Dolphins
	3	Killer Whales		1	Humpback Whale
	500	Risso's Dolphins	9/24 a.m.	200	Long Beaked Common Dolphins
10/12 a.m.	4	Humpback Whales		1	Humpback Whale
	50	Short-beaked Common Dolphins		100	Risso's Dolphins
	500	Risso's Dolphins	9/23 p.m.	15	Harbor Porpoise
10/11 a.m.	8	Killer Whales	9/23 a.m.	1	Blue Shark
	10	Risso's Dolphins		1	Humpback Whale
	2	Distant Humpback Whales		1	Humpback Whale
10/10 p.m.	1	Killer Whale	9/22 p.m.	40	Risso's Dolphins
10/10 a.m.	30	Pacific White-sided Dolphins	9/22 a.m.	1	Harbor Porpoise
	200	Risso's Dolphins	9/21 p.m.	10	Humpback Whale
10/9 p.m.	5	Killer Whales		1	Risso's Dolphins (tail throwing)
10/9 a.m.	1	Humpback Whale	9/21 a.m.	20	Harbor Porpoise
	1	Mola Mola		1	Humpback Whale
10/8 p.m.	3	Killer Whales	9/19 a.m.	30	Harbor Porpoise
10/8 a.m.	300	Pacific White-sided Dolphins		2	Humpback Whales
	40	Risso's Dolphins	9/18 a.m.	200	Common Dolphins
	1	Elephant Seal		300	Common Dolphins
10/7 p.m.	2	Humpback Whales		40	Risso's Dolphins
10/7 a.m.	2	Humpback Whales	9/17 p.m.	15	Dall's Porpoise
	6	Harbor Porpoise and a fresh swarm of krill!		3	Humpback Whales
10/6 p.m.	2	Humpback Whales	9/17 a.m.	1	Minke Whale
	5	Harbor Porpoise		100	Risso's Dolphins
10/6 a.m.	2	Humpback Whales		3	Humpback Whales
	3	Pacific White-sided Dolphins		300	Risso's Dolphins
	200	Risso's Dolphins	9/16 p.m.	10	Dall's Porpoise
	6	Dall's Porpoise	9/16 a.m.	25	Harbor Porpoise
10/5 p.m.	250	Risso's Dolphins		20	Risso's Dolphins
10/5 a.m.	6	Killer Whales	9/15 p.m.	1	Humpback Whale
	250	Risso's Dolphins		22	Harbor Porpoise
10/4 p.m.	2	Humpback Whales	9/15 a.m.	3	Humpback Whale
	20	Risso's Dolphins		25	Harbor Porpoise
10/4 a.m.	3	Killer Whales	9/14 p.m.	1	Humpback Whale
	6	Dall's Porpoise	9/14 a.m.	45	Harbor Porpoise
10/3 a.m.	200	Risso's Dolphins	9/13 p.m.	20	Harbor Porpoise
10/2 p.m.	5	Killer Whales		12	Harbor Porpoise
10/2 a.m.	14	Killer Whales	9/13 a.m.	1	Humpback Whale
	300	Risso's Dolphins		70	Risso's Dolphins
10/1 a.m.	1	Blue Whale	9/13 a.m.	2	Humpback Whales
	50	Common Dolphins		1	Minke Whale
	30	Risso's Dolphins		30	Pacific White-sided Dolphins
	2	Northern Right Whale Dolphins	9/12 p.m.	500	Risso's Dolphins
	7	Bottlenose Dolphins		1	Humpback Whale
9/30 a.m.	20	Risso's Dolphins	9/12 a.m.	30	Risso's Dolphins
9/29 p.m.	1	Humpback Whale		50	Risso's Dolphins
				30	Harbor Porpoise

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Monterey Bay Chapter  
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