



Spyhopper

ACS Newsletter
March 2014

The Ice: Beginning to Understand Antarctic Minke Whales



All photos in this article were taken in Wilhelmina Bay, Antarctica by Ari Friedlaender under NMFS permit 14907.

by Ari Friedlaender

In April 1997, I had just finished my undergraduate degree and been given an opportunity to join the Australian Antarctic Division as a marine mammal observer. I packed my bags, moved to Tasmania, and had no idea what was ahead.

My heart was pounding harder than the waves that battered and pushed us through the Southern Ocean on our way South. Wide-eyed and eager for adventure, I had no idea what lay just beyond the horizon. The familiar smells of eucalyptus were gone and replaced by an empty cold that invaded deeper into your body every day. Eventually, despite the winds still whipping and snapping around us, the sea grew calmer, the swell was quelled and the horizon began to glow with the reflection of light from above.

After a week of slogging, we were here at last. I woke early that morning and pressed my face against the round porthole in my cabin. The glass was frigid and my cheeks stung from the cold. As far as I could see, the world was white. Giant floes of ice surrounded us like a massive jigsaw puzzle that was being moved by invisible hands in slow motion. Inky black leads of open water filled the cracks between the ice every so often. I wiped the condensation of my heavy breath away from the glass and held it as long as possible so I could see Antarctica for the first time. No sooner had my eyes trained themselves on a narrow lead, when the surface was broken by a sharp snout and a creamy white chin. A bronze torpedo surfaced quickly, a curt blast from the paired blow holes just above a coppery chevron painted on its slick back that was punctuated eventually by a curved dorsal fin. One more time it surfaced, glided past and then was gone. Barely a ripple remained. Once again the porthole was opaque with breath and I nearly tripped over my own feet trying to

Minke, cont.

get dressed and outside to see this magical world around me. My cabin-mate Paul, perched up on an elbow from the bunk below and with a sweeping wave of his hand, said “Welcome to Antarctica.”

Since that time I have made over 20 trips to Antarctica to study the habits, behavior, and ecology of whales in this unique and changing marine ecosystem. To me, nothing represents Antarctica quite like the minke whale. The smallest of the baleen whales, yet the largest of the ice-obligate creatures of the South, minke whales are so keenly adapted for this environment it is no wonder they are as numerous as they are. Yet despite their success, they remain cryptic and elusive to scientists because their world is so different from ours. The ice is not kind to our ships and the fleeting, almost random, behavior of the whales has allowed us only to study them from afar by observation and inference. What do these whales do underwater? How deep do they dive? Where do they go in the winter? Where do they range in the summer? How do they maneuver among the craggy ice bergs and impenetrable ice floes? How do they interact with each other?

Most of my interactions with minke whales in Antarctica had been brief, largely unfulfilled, and always too quick. In open water, minke whales will porpoise like a geyser, churning through the water at up to 20 knots, passing ships and exploding through the surface every minute or so on their way to somewhere else. In the ice, they are slower but never where you think they are going to be. Boiling foot prints often appear at the surface, the exhaust of the powerful flukes jetting a minke whale just below the surface and away from you. But every once in a while, when cruising in a small boat or drifting with the engine off, you might catch a flash of color and a curious minke whale will appear underneath you, rolling on its side staring back at you through the obsidian water with an active eye. They may circle the boat once, twice if you are lucky, and then they are off as quickly as they arrived.



The world as I knew it changed forever on February 13, 2013. We headed towards Wilhelmina Bay on the Western side of the Antarctic Peninsula, my favorite place on Earth. It is a wide but secluded bay off of the Gerlache Strait, punctuated by a half dozen small snow-capped islands, and cradled by magnificent peaks and scaly glaciers snaking their way towards the water, crumbling down and dusting its surface with a blanket of broken ice like a shattered light bulb. At the head of the bay, a wide swath of fast ice remained joined to the land from the previous winter.

Our mission was to deploy suction cup and satellite tags on humpback whales to glean information on the summer feeding and diving behavior of the whales and to get long-term information on the habitat use and migratory pathways of these whales in winter time. My colleagues and I had worked in this bay several times before, finding unbelievable numbers of whales and krill here in the autumn just before the freezer door shuts for the winter and covers the bay in ice for months. We sat at the mouth of the bay on the bridge of our research ship peering in, looking for the tell-tale signs of the whales before launching our small boats to engage them. The sky was overcast, clouds hovering low above the dark water but completely still. The resident ice bergs still somehow glow and shine bluer than blue from the light in the sky even when grey is omnipresent. They radiate beyond what you can believe is possible. I wonder if they have their own energy inside.

Far away, deep in the bay, seemingly right against and below the towering ice cliffs, the horizon was smudged briefly. Then again, and again, the unmistakable breaths of a whale. Still several miles away, they were low, and evaporated quickly but they were there. Three, four, five, maybe more? We loaded up our boat, layered



up in clothes, charged up our batteries and made our way towards the whales. We glided easily over the flat water and weaved our way between and around the lazy floes and past crystalline ice bergs. A raft of gentoo penguins moved in concert, their orange bills and white-tufted heads swinging back and forth in unison as they squawked and cavorted. We built a pulpit on our small boat, a metal platform that extends out over the bow, where you can stand and work from to deploy tags or take photos or hover like a bird just above whatever may come and ride along in our bow wave. The drone from the engine behind me almost gone, leaning out over the railing, looking down at my reflection on the water below, silhouetted by the roof of clouds I imagine what is below the surface.

The blows appear again, six, seven, eight, almost in unison and in a line less than a mile ahead of us right along the edge of the fast ice. Nine, ten, eleven, twelve... something felt different. We typically see humpbacks in small groups, not like this. Could it be a pod of killer whales stalking seals along the ice edge? We slowed to an idle speed and crept closer, now only a large pool of open water surrounding a small ice floe the size of a baseball field was between us and the ice edge. We cut the motor and let the friction of water on our bow slow and eventually stop us. Everything was still and time slowed. And then they appeared. En masse. Nearly 40 minke whales began to surface in front of us and cruise past, chuffing and blowing, pitching and rolling. Their breaths were quick and punctuated the still air, and their perfectly fusiform bodies split the skin of the ocean easily and without so much as a wake. They were at the surface for a few minutes, each whale taking a dozen breaths.

They were leisurely and social, acting more like a group of dolphins than the dogmatic singular whales that I had known.

They did not appear to be going anywhere, more focused on each other than anything else, and making a wide arc around the ice floe. They then lined up, organized themselves in a broad phalanx, and dove in unison under the ice floe, arching their backs high before plunging down.

After a barrage of holy this and what the whats, we slowly moseyed to the other side of the ice floe hoping the whales would appear there shortly. And they did. We organized ourselves, matching their speed and tried as best as we could to join the herd and become one of them. They obliged, and we were treated to several hours of the most magical and unique interaction I have ever been a part of. Surrounded in every direction by minke whales, cameras snapped continuously, and data were collected. From my perch above the water I could easily see down and watch the whales glide effortlessly around us. At times a handful of them would appear from underneath the boat and silently pass directly under me a few feet away. Every detail, dent, ding, scar, and color was clear and vivid. Some were smooth and light with white bellies and caramel backs, while some were dark and painted with ochre patches of diatoms. These differences led us to believe that some whales have been in Antarctica for a long time while others were just arriving. The diatoms that foul their skin cannot withstand warm water and it is thought that the whales lose this film when they leave Antarctic waters and begin to slough and shed their skin. The lighter animals also had healing scars from cookie-cutter sharks, another sign that these whales had recently been in warmer waters to the north.

Before lunchtime, we had deployed eight satellite tags and one suction cup tag and were following one individual, collecting information on its behavior, proximity to the ice, and the number of other animals it was interacting with. Eventually, the large group became fractured and small groups of whales began to break off and disappear. Returning to their normal activities



Minke, cont.

out of sight. We stayed with a group of 10 for the rest of the day, completely mesmerized by their grace, beauty, speed, and effortless movement. Several times a whale would glide directly underneath the bow, inches below my feet, roll on its side, and match our speed with powerful metronomic sweeps of its massive tail. Then it would roll, right itself and veer off a few meters paralleling the boat and surface just next to us, so close that the breath would cover our glasses. One by one these elusive animals dissolved back into the dark ocean and we were finally left with an empty sea around us, save for the occasional blow and there. Tinny chirps came through the VHF radio receiver every few minutes so we knew the whales carrying tags were still around us, but had moved on, out of sight.



The tags we deployed that day have quite literally broken the ice for our understanding of the underwater behavior and long-term movement patterns of Antarctic minke whales. We are feverishly working to write up our results into digestible papers to present to our colleagues, peers, friends, and interested public. We will use this information to guide our research, enrich our knowledge, and augment our ability to do more to understand these animals and the fragile environment of which they are such an integral and sentinel part. I never dreamed that a day like February 13th could have existed, but now my appetite to find these whales again is insatiable. I feel like the luckiest person in the world for having been able to experience minke whales like that and hope that these words and images will convey a small amount of what I feel. Perhaps in some small way someone will be inspired to brave the Southern Ocean, remove themselves from the comforts of what they know and travel to Antarctica so see this place. I was changed from the moment I peered out of my porthole that first morning so many years ago and the more I see and learn the more I want to learn and see.

Dr. Ari S. Friedlaender is an Associate Professor at Oregon State University's Marine Mammal Institute. Since 1997, Ari has made over 20 trips to Antarctica to study whales. Ari received his B.A. from Bates College in Maine, his B.S. in Marine Biology from UNC Wilmington, and his Ph.D. in Ecology from Duke University where he was formerly a Research Scientist. Ari's research uses a variety of traditional and novel tools to study the movement patterns and behavior of whales in Antarctic waters. Ari and his colleagues were the first scientists to successfully study the underwater feeding behavior of humpback and minke whales in Antarctica, furthering our understanding of how these ocean giants survive, and also how the looming threats of climate change may affect them. Using a combination of tagging and visualization technology, Ari and his colleagues have developed new ways to see below the surface and describe the underwater acrobatics of these top predators. Ari currently has active research programs on a variety of marine mammal species from blue whales to beaked whales in Alaska, California, the Canadian Arctic, Massachusetts, Sri Lanka, and New Zealand. As part of a long-term ecological research program lead by Ari, he and Dr. Dave Johnston collect a critical suite of data on their trips. They collect information on the location of all whale sightings to learn about what features of the environment are suitable habitat; photographs of individual whales to develop a catalog that will be compared with similar photos of whales at different breeding grounds to better understand their migration pathways, skin and blubber biopsy samples to determine the sex, population, and body condition of individual whales. Together, this information is critical to understand the structure and health of the population of whales feeding around the Antarctic Peninsula.

Ari will be on the Antarctic Peninsula trip co-sponsored by ACS in 2016. See page 17 for more information!

Mystery Solved! Venice Beach “Dolphin” Stranding Was Very Rare Perrin’s Beaked Whale!



Adult female Perrin's beaked whale: Venice Beach, CA. Many cookie-cutter shark bite scars adorn her body. © Alisa Schulman-Janiger

by Alisa Schulman-Janiger

Beaked whales are very unusual cetaceans. Each has just one blowhole, like all toothed whales. They have two ventral throat grooves, unlike the dolphin that they closely resemble. In most species, only the males have erupted teeth – typically just two, located in the lower jaw. The exact position of these teeth in the jaw helps to identify the specific species. These very deep diving squid specialists can submerge for well over an hour, and are therefore difficult to study. There are twenty-two species of beaked whales, ranging from 3.7 m.-12.8 m. (12 ft - 42 ft.) in length. Many species are known from only a few specimens. In recent years, scientists have learned quite a bit about some beaked whales. They are very sensitive to the mid-range sonar utilized by the Navy, which can lead to mass strandings; consequently, a lot of money has been invested into equipment such as satellite tags in order to learn more about them. The American Cetacean Society devoted an entire issue of its journal the *Whalewatcher* to the Beaked Whale Issue (2009, Vol. 38, Number 1), dedicated to the late Dr. John Heyning, who was one of the world's leading beaked whale specialists.

On October 14, 2013, a very rare, 4.25 m. (13.9 ft.) female Perrin's beaked whale (*Mesoplodon perrini*) live-stranded on Venice Beach in southern California – only the SIXTH stranding record for this species IN THE WORLD – all in California – and a first for Los Angeles County! This finding is especially important: this is only the second confirmed female for the Perrin's beaked whale, and is by far in the best condition of all six specimens. The other Perrin's beaked whale strandings included four from San Diego: two in May 1975 (a juvenile male and an adult female, likely its mother), and two in Sept. 1978 (an adult male and one of unknown sex). An immature male also stranded in Monterey in Sept. 1997; it was initially identified as a Cuvier's beaked whale. Since all six stranding records are from California, these whales are likely limited to the North Pacific Ocean. They closely resemble Hector's beaked whales (Southern Hemisphere); the two species were thought to be the same until genetic data from the five stranded whales were analyzed and found to differ significantly from the Hector's beaked whale. Perrin's beaked whale was officially recognized as a separate species in 2002; it was named for cetologist Dr. William Perrin, who collected the first two specimens.

Beaked Whale, cont.

Solving the mystery of the identity of the Venice Beach stranded whale requiring a lot of sleuthing. On the evening of October 14, 2013, my husband, Dave Janiger, a curatorial assistant with the Natural History Museum of Los Angeles County (NHM) and head of the local Stranding Response Network, received an e-mail from Peter Wallerstein (Marine Mammal Rescue) about a large “dolphin” that had reportedly live stranded on Venice Beach earlier that evening. We opened the e-mail around 10 pm, with the attached image showing two grooves under the lower jaw, and knew that this was no dolphin - it was a BEAKED WHALE! No teeth were visible. We could not identify the species, but knew that a “fresh” beaked whale is an extraordinarily rare find. Dave immediately called the lifeguards to ask them to secure the whale so that it would not wash out with the tides; we told them that we would arrive on that beach early the next day to examine it, and to make sure that beach maintenance did NOT bury it!



Fluke: the ventral side of her fluke displays the extremely distinctive starburst pigment pattern that is only known in Perrin's and Stejneger's beaked whales. © Alisa Schulman-Janiger



Ready for transport: Dave Janiger, from the Natural History Museum of Los Angeles County, gets ready to transport this rare whale back to the Whale warehouse. © Alisa Schulman-Janiger

Early the next morning, Dave headed to the NHM to pick up the “Whale Truck,” a Ford 4-wheel-drive tilt-bed that was specially modified to pick up and transport whales and dolphins; it has a heavy-duty winch strong enough to pull the beaked whale off of the beach. I headed directly to Venice Beach – determined to make sure that no one had taken the whale away for disposal, and to obtain as many images as possible before the whale’s natural coloration faded in the sun. When I arrived, I saw that the lifeguards had moved the whale to their parking lot, away from the water, and had covered it with a tarp. I lifted the tarp and saw that the whale’s carcass was in excellent condition – much better than we typically encounter! I could see that it was a female; as expected, she did not have erupted teeth, so it would be very difficult to identify the species. I took lots of photos from every angle, and asked the lifeguards for a ladder to get other perspectives. Like many beaked whales, this one was covered in variously pigmented oval-shaped scars, caused by sneak attacks by cookie-cutter sharks; this small bioluminescent shark charges up to the whale and clamps its circular jaws down on the whale

and twists, tearing away a mouthful of flesh before quickly fleeing. One very interesting feature that I immediately noticed was a strikingly beautiful coloration pattern on the underside of the whale’s flukes: distinctive starburst pattern of white striations and brown streaks! I had witnessed that coloration pattern once before, in a juvenile female Stejneger’s beaked whale that had live stranded near Malibu in 1999 - the southernmost (and seventh California) record for this species, which is typically encountered in cold Arctic waters. I had walked that whale around a rehabilitation pool in the Marine Mammal Care Center in San Pedro, periodically assessing her respirations and heart rate, eventually losing hope that she might survive.

I had brought a few marine mammal field guides with me to the beach to assist in identifying the Venice Beach whale. My 2002 book, published just before Perrin’s beaked whale was confirmed as a separate new species, did not include that whale; however, it did include an excellent illustration (by Pieter Folkens) of that unusual fluke pattern that is found in female Stejneger’s beaked whales. Based on the head shape, mouth line arch, short beak length, location and position of the dorsal fin, and the very unusual ventral fluke pigment pattern, I concluded that this whale most closely resembled a Stejneger’s beaked whale. However, it is notoriously difficult to conclusively identify beaked whales in the field. For species verification, we would need to wait for two sets of results. First, Dave’s necropsy findings would reveal the position and shape of any unerupted teeth in the lower jaw, and thus narrow down the probable ID. Finally, genetic analysis of its tissue samples would unequivocally confirm the ID, since the DNA from each whale species is unique to that species.

When Dave arrived, we measured the whale at 4.25 m. (13.9 ft.) long. Adult female Stejneger’s beaked whales can reach at least 5.5.m. (18 ft.) in length, so this female’s size did not rule out our tentative ID. Intrigued bystanders asked me what

kind of dolphin or whale this was; I told them that it was a beaked whale – possibly a Stejneger’s beaked whale – but that we could not yet confirm species ID. Dave pulled the whale up onto the Whale Truck with the winch, then he headed to the Museum’s warehouse: a facility based in Vernon that houses the remains of both marine and terrestrial mammals. His slow progress from Venice to Vernon did not go unnoticed by many transfixed gape-mouthed pedestrians and motorists, astonished at seeing a whale parade down their streets!

I sent my photos to beaked whale experts (including Dr. James Mead and Dr. William Perrin), as well as whale anatomy specialists like artists Pieter Folkens and Uko Gorter, to get their opinion on the probable species identification; they named Ginkgo-toothed beaked whale, Stejneger’s beaked whale, and Perrin’s beaked whale as possible candidates. Back at the Whale Warehouse, Dave did a multi-day necropsy. Our whale weighed 894 kilos (1,971 pounds). The only stomach contents were a small blue ball of monofilament and a bit of red unidentified debris. Her large ovaries bore scars revealing that

she was a sexually mature female that was small for an adult female Stejneger’s beaked whale, but was close to the expected size for an adult female Perrin’s beaked whale; the other adult female Perrin’s was 4.4 m (14.7 ft). Dave meticulously worked on her skull, carefully rendering it down to expose two embedded triangular teeth that were located about one third of the way back from the tip of the lower jaw. The shape and location of those teeth ruled out both Stejneger’s beaked whale and Ginkgo-toothed beaked whale. These necropsy results provided clues that backed the hypothesis of this whale as a Perrin’s beaked whale; if not, it must be a newly discovered beaked whale species – which was extremely unlikely! We agreed that our find must be a Perrin’s beaked whale, but the official announcement had to wait until genetic results confirmed this conjecture. Because this specimen was both very rare and in unusually good condition, Dr. Chuck Rennie (Santa Barbara Natural History Museum) took the head to a private lab so that it could undergo a CAT/CT scan, which uses X-rays to make detailed images of structures inside the head; the data disc from this procedure will be archived at the NHM. Jim Dines, Collections Manager for Mammalogy, hand-delivered tissue samples from our beaked whale to a genetics lab for ID confirmation. Weeks later, the genetic results came in: our mystery whale was indeed an extraordinarily rare Perrin’s beaked whale! Although there are no confirmed live sightings, four “Hector’s beaked whales” encountered in pairs off central California in 1976 and 1978 may have been Perrin’s beaked whales; one may also have been sighted off of Baja California. Keep those cameras ready: one day good photos will capture and confirm this species at sea, and will help us learn about the natural history of this small enigmatic beaked whale that apparently resides in our own backyard.



Close-up of this beaked whale's head shows her curved mouth line, small melon, two grooves under her lower jaw, and white cookie cutter shark bite scar. © Alisa Schulman-Janiger

*Key Reference: Dalebout, M. L., J. G. Mead, C. S. Baker, A. N. Baker, and A. L. Van Helden. 2002. A new species of beaked whale *Mesoplodon perrini* sp. n. (Cetacea) discovered through phylogenetic analyses of mitochondrial DNA sequences. *Marine Mammal Science* 18:577-608.*

Alisa Schulman-Janiger has been the director and coordinator of the shore-based ACS/LA Gray Whale Census and Behavior Project since 1984, which is based at Point Vicente and staffed by trained volunteers. She has served on ACS/LA’s Board of Directors since 1983. She is one of the instructors for the Cabrillo Whalewatch program. Alisa has been photo-identifying California killer whales, archiving their sightings, and studying their distribution, natural history, and behavior for over 30 years, which evolved into the California Killer Whale Project. She is a co-author of the 1997 NOAA Technical Memorandum called “Killer Whales of California and Western Mexico: A Catalog of Photo-Identified Individuals”, and is currently updating this catalog. She is an onboard naturalist in both southern California and Monterey Bay; and has also worked as on-board naturalist in Baja California and Alaska, naturalist and staff scientist while researching humpback whales in Massachusetts, and field researcher on harbor porpoise, humpback whales, and killer whales with the National Marine Mammal Lab in Alaska. Alisa taught marine biology in San Pedro High School’s Marine Science Magnet for 21 years, and on boats for the 10 previous years. She has a Bachelor’s of Science degree from California State University, Long Beach in Zoology, and a Life and General Science teaching credential from California State University, Dominguez Hills. Alisa has authored and co-authored many papers on killer whales, gray whales, and humpback whales. Her work with killer whales and gray whales has been featured on *National Geographic Explorer* and PBS. She has given presentations and posters to the following organizations: the Society for Marine Mammalogy, the American Cetacean Society, the Southern California Marine Mammal Workshop, and the International Orca Symposium and Workshop.

Book Review

by Uko Gorter

Are Dolphins Really Smart? The Mammal Behind the Myth

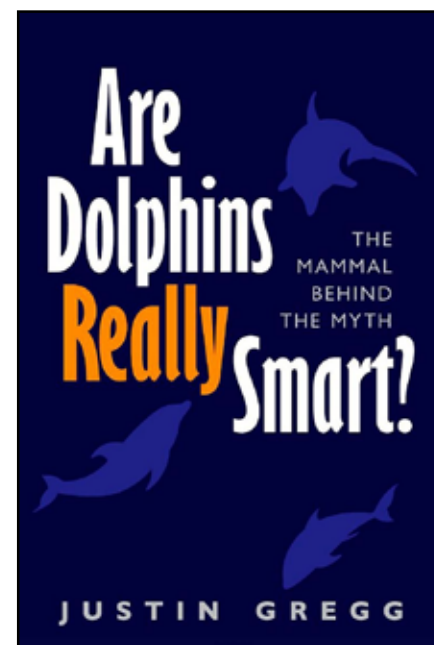
Justin Gregg

Oxford University Press

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Publication date: September 2013

It is no secret that dolphins have and continue to hold a unique and special place in our collective conscience. They featured prominently in mythology and art during the classical antiquities. However, it wasn't until about 50 years ago when the dolphin was instantly propelled in to popular culture and dramatically re-imagined through the controversial research and writings of John C. Lilly, who suggested that dolphin intelligence was equal to man, and dolphins were even capable of learning human language. Lilly's ideas and work reverberated long after and through a cult-like following was able to perpetuate the image of a super smart "mind in the water" to this very day.



More recently, however, new studies on dolphin cognition and behavior that showed an animal that is self-aware, lives social complex lives, and displays signs of empathy, spurred a movement advocating to bestow some kind of personhood to these toothed cetaceans and even giving them their own bill-of-rights.

But does current science back up the extraordinary claims made about the abilities of dolphins? Is the dolphin truly exceptional? Are there other animal species that can match the dolphin's cognitive and behavioral abilities? Armed with these questions, Justin Gregg, a doctor in Psychology and Research Associate with the Dolphin Communication Project, set out to investigate and take a closer critical look. In his book, *Are Dolphin Really Smart? The Mammal Behind the Myth*, Gregg thoroughly dissects some of these popular myths and believes and breaks it down to five main themes and chapters:

- What Big Brains You Have: The notion that the dolphin's brain is exceptionally large and complex.
- Cogito Ergo Delphinus Sum: A belief that the dolphin's mind is unusually complex when dealing with self-awareness, consciousness, and emotions.
- The Proof of the Pudding is in the Behaving: The idea that dolphins display unusually sophisticated behavior, both in the wild and in captive experimental settings.
- Dolphinese: The idea that dolphins use a communication system that is as complex as human language.
- A Most Gentle Animal: The belief that dolphins live in peaceful harmony with each other and in their environment.

Point by point, Gregg is able to work his way through the questions in a keeping-them-honest sort of way. He gently takes the dolphin off its pedestal and examines the claims, while pointing at how other animals (e.g., chimpanzees, chickens, crows, bees, and even earwigs) are at times equally capable of some of the dolphin's feats, or perform better in a few cases.

It is especially in the chapter about dolphin language, titled Dolphinese, where Gregg most strongly and convincingly argues that dolphin communication, while being quite sophisticated, does not come anywhere close to human language, which is able to discuss every kind of abstract or concrete idea. Gregg suggests that we should not label it as such, but instead stick to calling it a (animal) communication system. When it comes to intelligence one passage is of note here:

"I am very sympathetic to the argument for tossing out intelligence out the window as an indefinable, unquantifiable, and unjustifiable construct that brings with it a kind of worth/value judgment that has no place in science. But when it comes to the myth of dolphin intelligence, simply dismissing the idea as a scientific non starter seems a bit like taking the easy way out."

Gregg instead prefers to use the term “cognition,” and suggests that we are doing ourselves disservice by maintaining some kind of hierarchal list where animals are grouped in a “more-intelligent-than” ladder.

What emerges from this well-researched, and at times humorous, work is a somewhat deconstructed dolphin; an animal that is not at all “dumb,” but perhaps not be quite as “exceptional” as has been promulgated. However, Justin Gregg conclusions and opinions are far more muted and markedly different as compared to those from Prof. Paul Manger, Professor of Johannesburg’s University of the Witwatersrand. Dr. Manger hypothesized in his 2006 paper that the large brains size in cetaceans could be explained in that they evolved as a means to regulate temperature (thermogenesis) and not for information processing. Not surprising, Manger’s comments and view of a dim-witted dolphin set off a storm of criticism.

Gregg argues that our current scientific knowledge about dolphin behavior and cognition may not support labeling dolphins as “special,” and that science cannot really make that judgment. Gregg goes on to say, “Arguing either for or against dolphin specialness is an exercise in philosophy and politics, but not science.”

In the end Gregg leaves us with a marvelous, wondrous, and charismatic animal with its own set of phenomenal abilities. However, we may want to open our minds to many other deserving species that live equally fascinating and special lives. No doubt, Gregg’s work will (and already has) elicit its own set of criticism. But, it is, in my view, a welcome addition to a worthwhile debate.

Note: The views expressed in this review are not necessarily those of the American Cetacean Society.

Message From The President



Diane Glim, ACS National Board President

Support the American Cetacean Society

Welcome to the first Spyhopper quarterly newsletter of 2014, a benefit of membership in ACS. Whether we are fielding calls about pilot whale strandings, helping high school students obtain information about whales or being asked about hot button issues like captivity and Taiji drive fisheries, ACS is there as a bridge between the public and science.

As the world’s first whale conservation organization, ACS needs your membership now more than ever. Driven by an all-volunteer national board of directors and part time office staff, we rely on your membership dollars and generous contributions to continue our work. If you are unsure whether your annual membership has expired, call or write the national headquarters at acsoffice@acsonline.org or 310-548-6279.

ACS participates as a non-governmental organization (NGO) at the International Whaling Commission meeting. This year, it will be held in Slovenia, September 11-14, 2014. Funding is needed to send an ACS representative, and your philanthropic gift can be used specifically for this important purpose. Plan to attend the ACS 14th Biennial International Conference at the Hyatt Regency Newport Beach from Nov. 7-9, 2014 for exciting updates on cetacean science and the opportunity to mingle and learn with others who possess a passion for whales, dolphins and porpoises.

Thanks for your support!

Diane Glim

Chapters in Action

Lynette Koffinow, San Francisco Bay

Our final presentations for 2013 were fabulous. On October 29 David McGuire, MPH, Director and Founder of Shark Stewards, “Shark movements and their impacts on conservation” gave a fascinating presentation about not only the shark movements but migrations of various marine mammals around the world and our human impact upon their migrations/feeding.

On November 12 Michael Stocker, bioacoustician and founder of Ocean Research Conservation org, gave a wonderful presentation “Unusual sounds of cetaceans. What could they be saying?” and shared the release of his new book “Hear Where We Are.”

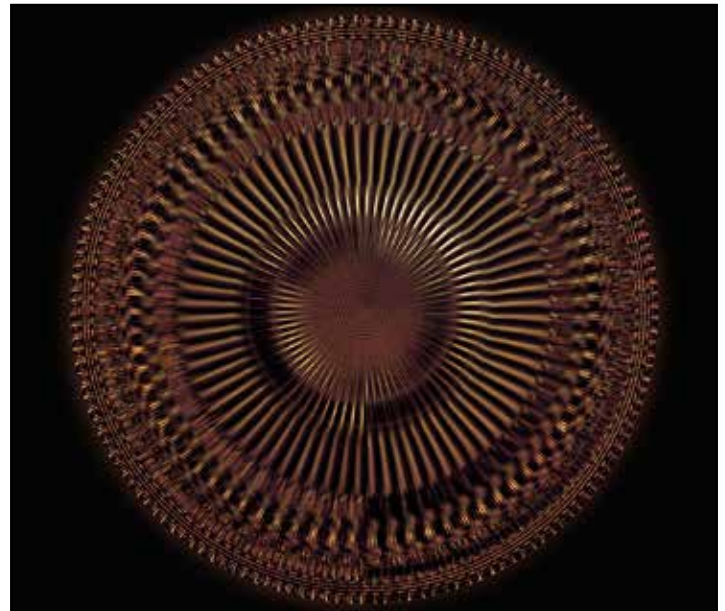
We had an amazing day being one of the educational exhibitors at Discovery Days at AT&T Park in San Francisco November 2. Discovery days brought the fun and excitement of science to a huge crowd of 30,000! There were over 150 activities and exhibits along with numerous stage performances.



Discovery Days, AT&T Park, San Francisco.

We ended 2013 with a festive SF Bay ACS Holiday party in which members were able to meet, make new friends, and enjoy one another’s company.

We began our 2014 presentation series with Mark Fischer, Aguasonic Acoustics, interesting talk on his work with the sounds of birds, whales, and dolphins, and the difference between the ways we normally see those sounds represented {spectrograms}, and this other way of seeing the same sounds {wavelets}... and why those differences could matter to studies that concern the sounds of birds, whales, and dolphins. It was fascinating to see how he could take his wavelets and wrap them to create gorgeous artwork (<http://aguasonic.com/portfolio/>).



Acoustic wavelet art.

Our 2014 Speaker presentation series Line-up will be fabulous. Sign up to be on our e-mail e-list to receive updates on all presentations/events or view all on our website. If you are in the area please join us.

February 25: Kathi Koontz : “Whale Disentanglement in Northern California”

March 6: Ari Friedlaender: “Seeing below the surface: using tag technology and visualization tools to understand the underwater behavior of whales”

March 20: Special Event in partnership with Aquarium of the Bay/Bay Institute – Stephen Palumbi: “The Extreme Life of the Sea”

April 29: Pamela S. Turner: “Everyone knows bottlenose dolphins are smart. But why are they smart?”

May 20: David Helvarg: “The Golden Shore - California’s Love Affair with the Sea”

June 24: Laura Duffy: “Physical-Biological Interactions of Harbor Porpoise Habitat in San Francisco Bay”

July 29: Angela Szesciorcka: “The Role of Dive and Foraging Behaviors in Ship Strikes”

August 26: Todd Steiner: Cocos Island National Park, Costa Rica: An Underwater Serengetti

September / October TBA

Divya Sivaraman, our Research and Conservation Board Member, has just created a curriculum/apprenticeship for Citizen Schools, which is a 10 week semester with a WOW! (think “science fair”) at the end (week 11) so the students can show off what they’ve learned to family, friends, community, and Citizen Schools employees/volunteers. We are very excited to be collaborating and working with the school.

If you are a teacher or student that would like to partner with us on educational projects or creating a SF Bay ACS Ocean Club please notify us. We would love to work with you!

We will kick off our educational outreach events Saturday, March 22 and Sunday, March 23 at Cal Academy’s Brilliant!Science: Incredible Ocean which is in preparation for their new Rocky Reefs exhibit. As part of the event, the Academy is organizing a Family Festival in which the event takes a closer look at oceans as a source of food for both humans and for the creatures that make them their home, and focuses specifically on the waters along California’s coast. We will present a relevant activity, demonstrations, and information about SF Bay ACS for our visitors. If you are in the area be sure to join us!

We began our Harbor porpoise volunteer research project in December, conducted in collaboration with San Francisco State University and Golden Gate Cetacean Research. We are looking for volunteers to participate in this exciting Harbor Porpoise research study. For further information please contact: Divya Sivaraman, Research and Conservation Board Member: divyadipti@gmail.com.

We are putting a call out for board members, volunteers, and interns to join our active chapter! You have an opportunity to become a board member, volunteer, or intern with us. We have a variety of positions available that require as little as two hours of your time a month. To find out more about becoming a board member or volunteering, please contact Lynette R. Kofinow @ acs.sfbay@gmail.com. Look forward to working with you!

For our inspiring monthly presentations, events, SF Bay ACS Student Chapters and school projects, and updates on issues please visit our website: www.acs-sfbay.org and be sure to follow us on Facebook at [facebook.com/sfacs](https://www.facebook.com/sfacs).



NOTHIN' LIKE A NICE PIECE O'KELP. Cute sea lion picture by ACS-OC Naturalist Irene Gilgoff, taken January 11 on a trip with Davey's Locker out of Newport Beach.

Mike Makofske, Orange County

November and December tend to be slow months for ACS-OC, other than our Naturalist graduation ceremony in early December – but this year the ceremony was made more exciting by the announcement of the Newport Beach Hyatt Regency as the venue for the 14th International ACS Conference, coming up November 7-9, 2014!

Attendees are going to love this location. The hotel is a serene low-rise just across from the famous Fashion Island Shopping center and a short hop to Balboa Island and Newport’s beautiful Back Bay. And the conference facilities couldn’t be better if they’d been custom-designed for us.

The hotel is about five miles from John Wayne Airport (SNA), from which the hotel has a free airport shuttle. There’s also a Hertz Rental counter at the hotel, with rates lower than the airport location. And if you do have a car, parking will be free for overnight guests attending the conference, or \$5 all-day for day visitors.

Members of the Orange County chapter have been coming forward to offer their help with the conference, and all are excited, happy, and looking forward to seeing everyone!

Chapters, cont.

In other news, we graduated our largest class of ACS-OC Naturalists this year (about 30 students), swelling our membership ranks to 143 in the December report – a greater than 100% increase from three years ago. Credit goes to our Naturalist Instructor, Desi Green, for her excellent and tireless work putting together and running the classes.

Also in December, we received a generous gift from the nicest bunch of first- and second-graders anywhere – the “Eagles” of Sequoia Elementary School in Westminster. As a thank-you to ACS-OC Board Member Linna Bernhard for coming to their school and teaching them about gray whales, the kids sold “Pod Pens” and “Pod Pops” and presented us with a \$176 check from their efforts. Our thanks to the kids, their principal Shay Reardon, and their teachers, especially Summer Hall, who contacted us and coordinated the effort. We loved meeting you, and we will put your contribution to good use!

Upcoming meetings:

February 27: We will feature guest speaker Meredith Rivin of the John D. Cooper Archaeological and Paleontological Center in Fullerton. The Cooper Center is famous for its large collection of whale fossils and other specimens, some of them collected from freeway digs in Orange County.

March 27: Bernardo and Diane Alps from ACS-LA, with a report on the recent Society for Marine Mammalogy conference in New Zealand, and a selection of photos they took while visiting that amazing country.

Jerry Loomis, Monterey Bay

Whale Fest 2014, a full weekend of whale-related activities and education, was a smashing success for the community of Monterey and for all of the participating organizations. ACS Monterey Bay’s display was set up all day Saturday and Sunday to share information, distribute Anita the Vaquita coloring books and interact with hundreds of men, women and children.

ACS National President Diane Glim, Richard and Debbie Ternullo, Jennifer Loomis, Art Haseltine, Katy Castagna, Tim Thomas, and Jerry Loomis all pitched in to staff the booth. One hundred passengers accompanied ACS-MB on the annual Gray Whale fundraising trip during the weekend. Passengers included forty 4th graders and teachers from Salinas who were hosted by the chapter.

Benji Shake, owner of Princess Monterey Whalewatching, has generously donated boats and crew for 33 successive years to ACS Monterey Bay, and in so doing has enabled the funding of at least 33 research grants to graduate students studying marine science.

Captain Leon Oliver, AJ Young and crew donated their time to take the chapter out to view over 30 gray whales on their annual migration south.

Richard Ternullo was elected Monterey Bay Chapter President and Tony Lorenz was elected Monterey Bay Chapter Vice President. Past President Jerry Loomis was thanked at the January 2014 meeting for his years of dedicated service. Katy Castagna continues as Chapter Treasurer, Jennifer Loomis as Chapter



ACS-MB display at Whale Fest 2014 near Old Fisherman's Wharf.

Secretary, and Sally Eastham as Membership Chair. Carol Maehr serves as Conservation Chair, Tim Thomas as Historian, and Dave Zaches, Art Haseltine, Randy Puckett, Rene Rodriguez and Thom Akeman as at-large Board members

The monthly ACS-MB program for January 2014 was given by Dr. James Harvey, Director of Moss Landing Marine Labs, to a full house. In his presentation, Dr. Harvey compared the challenges of Advocacy vs. Science by marine scientists. Lively discussion and debate followed his talk.

The February 2014 program featured Dr. Carol Reeb, fishery geneticist and research associate at Hopkins Marine Station, about the ocean impacts of seawater desalination and the destructiveness of brine.

Diane Alps, Los Angeles

We have had a great winter whale season so far, here in sunny Southern California! Our Gray Whale Census and Behavior Project had a record-breaking month in December, documenting 364 southbound gray whales. As of this writing (2/9/14), we now have the third highest southbound count in all 31 seasons of the project at 1,055 whales! According to our Census Director, Alisa Schulman-Janiger, the only higher southbound counts were 1,230 (1997-98), and 1,301 (1986-87). There's still time – perhaps we'll break those records, too!

And we're not just seeing gray whales! A wide variety of other species have been seen from our shore-based vantage point: sperm, humpback, fin, minke and killer whales; Risso's, common, bottlenose and Pacific-white sided dolphins; a thresher shark and Steller sea lion make this a well-rounded list!

A big congratulations to the 110 Cabrillo Whalewatch Naturalists that have passed their exams and are now out having just as much fun on the water, as the Census volunteers are having from shore! Thirty-one of those 110 are brand new "rookies" that have joined the team this year. On the other end of the spectrum, we will be honoring six volunteers for 20 years of service this Spring.

Remarkable weather conditions and sightings have made this a banner year for whale watching in Southern California! This makes us especially excited for our Ultimate Whale Watch, an all-day whale watching adventure, scheduled for March 29. Previous sightings have included gray whale cow/calf pairs, breaching humpbacks and curious fin whales. You just never know what you might see when you get offshore! Sign up on our website: www.acs-la.org.



2013-2014 Cabrillo Whalewatch Naturalists after a successful and fun Annual Training Trip and Season Kickoff to the gray whale watch season. Photo by Greg Hachigian via Bernardo Alps' camera.

AMERICAN CETACEAN SOCIETY		OTHER SIGHTINGS THIS SEASON	
TODAY'S GRAY WHALES 2-9-14		WHALES	
Southbound	22	Fins:	2-9-14
Northbound	2	Blues:	
TOTAL WHALES TODAY	24	Orcas:	1-1-14
SEASON GRAY WHALE TOTALS		Sperms:	1-1-13 (1-1-14)
Southbound	1055	Humpbacks:	2-8-14
Northbound	29	Minke:	1-1-14
Southbound Cow/Calf Pairs	12	DOLPHINS	
Northbound Cow/Calf Pairs	0	Risso's:	1-8-14
Total Whales Since 12/01/	1084	Common:	2-9-14
		Bottlenose:	2-9-14
		Pacific White Sided:	2-3-14
		OTHER OBSERVATIONS	
		Thresher Shark: 1-12-14	
		Stellar Sea Lion: 2-1-14	
		WWW.ACS-LA.ORG	

February 9, 2014 ACS/LA Census and Behavior Project board displaying the incredible numbers and sightings for the 2013-2014 season. Photo by Cynthia Woo.

Our Monthly Speaker Series continues to enthrall attendees with the latest in whale research and conservation. :

January 28: Bernardo Alps, Society for Ecological and Coastal Research (Vancouver Island Whale Research)

February 25: Diane Alps, Cabrillo Marine Aquarium (An Overview of the 20th Biennial Conference on the Biology of Marine Mammals)

March 25: Jim Dines, Natural History Museum of Los Angeles County (Cetacean Pelvic Bones Evolve in Response to Sexual Selection)

April 29: John Calambokidis, Cascadia Research (Mysticete Behavioral Response Studies in Southern California)

May 27: Michelle Berman, Santa Barbara Museum of Natural History (The Life History of a Blue Whale Discovered in its Ear Wax)



Offshore bottlenose dolphins seen near Catalina Island on the 2012 Ultimate Whale Watch. Photo by Diane Alps.

Chapters, cont.

Uko Gorter, Puget Sound

As of this writing, Seattle and the Puget Sound region are still basking in the glow of the Seahawks' Super Bowl win. In the meantime, after a December holiday "time-out" our ACS-Puget Sound Chapter continues our own monthly "huddle," a.k.a. Speaker Series meetings.

Held every third Wednesday, we started out the new year with Robin Baird, who presented a talk on "Hawaii's resident and not so resident Blackfish: recent studies of false killer whales and killer whales in Hawaii." In the upcoming month's we hope to welcome Donna Sandstrom of the Whale Trail, Casey McLean of the newly-proposed Soundside Marinelife Rescue Center, and Tony Orr, research biologist with NOAA Fisheries/NMML. Please check our website for up to date information: www.acs-pugetsound.org/speakers

ACS-PS participated and attended this year's Ways of Whales workshop hosted by Orca Network (orcانetwork.org). This wonderful event, which focused on orcas as well as salmon, was well attended and truly successful. We manned a table with plenty of marine mammal artifacts and giveaways, and sold posters and ACS *Whalewatcher* journals. We hope to line up more educational outreach events for the next few months.

Make sure to "Like" us on Facebook:
www.facebook.com/ACSpugetsound



Whalewatching fun with the San Diego chapter.

Sandy Rosenberg, San Diego

The last couple of months have been filled with fun for the San Diego chapter. We had great monthly meetings, an exciting whale watch, and a highly successful tabling event.

In the spirit of the holidays, we held a Member Media Potluck. A dozen members shared their photos and videos with an

appreciative audience. The feedback was so positive that we are going to make this an annual event.

Our January speaker was Dr. John Hildebrand whose topic was Marine Mammals and Sound. Dr. Hildebrand spoke on the history of our understanding of whale vocalizations and his own research on the subject.

In partnership with Hornblower Cruises, we had a fun whale watch in January with sightings of several migrating gray whales along with surface-active dolphins. In addition to a good time for our members, the activity provided another opportunity to educate the community about ACS and its mission.

At the end of January, we participated in San Diego's Big Bay Whale Festival. This tabling event allowed us to introduce many members of the public about ACS and share information about gray whales and vaquitas.

 AMERICAN CETACEAN SOCIETY



Tuned In
to Whales
Conservation, Research & Education

14th International Conference
Newport Beach, California - November 7-9, 2014
Hyatt Regency Newport Beach

Save the Date! This is one you won't want to miss!
Watch the ACS website for more information:
www.acsonline.org

Joy Primrose, Oregon

We have a very exciting year planned for the American Cetacean Society Oregon Chapter.

We had a special opportunity for ACS Oregon Chapter members only on Saturday, January 25, 2014. Our tour of the NOAA research vessel Fairweather and the NOAA Marine Center-Pacific were fantastic. The Newport warehouse facility serves the entire west coast from California to Alaska. The Fairweather is one of the most modern survey vessels in the world, and can conduct fisheries and oceanographic research as well. Its homeport is Ketchikan, Alaska. The last project was mapping the Port of Long Beach; they will be heading out in April to map off the coast of Alaska.

Our speaker for February 8, 2014 was Bridget Watts, field biologist, presenting “Offshore Chukchi Sea environmental studies in advance of oil and gas extraction: a marine mammal perspective.” Bridget has been involved in this multidisciplinary study for the past six years.

March 1, 2014 Michelle Fournet, Oregon State University graduate student will present on whale and dolphin communication, including her research on Humpback Whale communication.

On April 5, 2014 Courtney Hann, Oregon State University graduate student will share research on Humpback Whales in Alaska, including feeding strategies. She will also share a citizen science tool for collecting marine mammal data in Southeast Alaska.

These speaker series meetings are free and open to the public, so please join us and bring a friend or two! Meetings are held at the Newport Public Library, 35 NW Nye Street at 1:00 PM.

On May 10, 2014 the ACS Oregon Chapter will host a stop on The Orca Tour in Newport, OR. Erich Hoyt will be the featured speaker along with other activities and events. Watch for further information.

June 7, 2014 we will have a table providing information and activities on cetaceans at the Oregon Coast Aquarium for World Oceans Day.

We have additional activities planned throughout the year, keep reading the *Spyhopper* to see what is coming up or contact Joy Primrose, Oregon Chapter president.



Chapters, cont.

Sabena Siddiqui

The ACS Student Coalition has been busy at work, advocating for healthy oceans and the wellbeing of whales. On the Indiana University campus, we have continued to hand out Seafood Watch Cards from Monterey Bay Aquarium, promoting smarter, more sustainable seafood consumption.

Our members attended the opening night of the recent documentary “Blackfish.” Additionally, several of our members have been actively speaking around campus, reaching out to other student groups and sharing information on topics such as cetaceans in captivity. The Indiana University group will also be going forward with testing the water quality of the local Jordan River, highlighting that what we do to our local watersheds eventually leads to and impacts the health of the oceans. The Indiana University group has a fresh semester ahead as the leadership has changed. Danielle Hunt, sophomore majoring in environmental management, is the new president of the group. Grace Cain, biology major, is the treasurer, and Hannah Runge, psychology major, is the secretary. The ACSSC-IU leaders are excited to continue existing campaigns and start with new projects.

The ACS-SC Student Coalition is also pleased to announce the introduction of new student groups into our fold! Student Coalition groups are starting up across the country, including a new chapter in Hawaii, led by Brijonnay Madrigal, marine biology major. If you are interested in joining or supporting these burgeoning student efforts, checkout our new website, at acssnational.wordpress.com. If you or a youth you know are interested in starting a Coalition at your high school or university, contact our President, Sabena Siddiqui at siddiqis@indiana.edu, or click the “Lead your own coalition” link on our website.



The ACS National Board gathered for their annual meeting in San Pedro, California this January. Read more about the board members at www.acsonline.org. Front Row. L-R: Patty Hager, Office Manager; Diane Glim, President; Barbara Bennett, Secretary; Diane Alps, Vice-President

Back Row: Richard Ternullo, Monterey Bay Chapter President; Debbie Ternullo, Treasurer; Sabena Siddiqui, Student Coalition President; Sandy Rosenberg, San Diego Chapter President; Mike Makofske, Information Technology; Jerry Loomis, At-Large; Joy Primrose, Oregon Chapter President; Bert Vogler, Orange County Vice-President; Lynette Kofinow, San Francisco Chapter President.

Missing: Uko Gorter, Puget Sound Chapter President



Whale Watching With the Whale Experts

In March of 2016, long-time pioneer of Antarctic expeditions Cheesemans' Ecology Safaris will collaborate with the American Cetacean Society to offer an in-depth exploration of the marine mammals of the Antarctic Peninsula. Expedition leader Ted Cheeseman and whale biologist Ari Friedlander together conceived this expedition as an exciting opportunity to share science, education and exploration of one of the most whale rich stretches of water in the world, at peak whale watching season.

At the feet of the stunning mountains of the Antarctic Peninsula, krill congregate in uncountable numbers, drawing great congregations of whales into seasonal feeding binges on a scale found few other places on the planet. This expedition provides opportunities to travel alongside marine biologists including ACS scientists, to whale watch from ship and from zodiacs, to learn photographic techniques from professional photographers, and to land at wildlife-rich and historically significant sites on the Antarctic continent and outlying islands.

Ted and Ari designed the itinerary to maximize marine mammal encounters, diverging from the norm of Antarctic cruises in keeping with the Cheesemans' Ecology philosophy of offering the most in-depth expeditions possible. Travel dates are March 8 to 26, 2016, and costs range from \$9,995 for a berth in a quadruple cabin to \$16,995 for a berth in a suite. A portion of the proceeds benefits the American Cetacean Society. Full itinerary details will be coming soon: <http://www.cheesemans.com/antarctica>



Photos by Doug and Ted Cheeseman

A Legacy of Conservation

The legacy of ACS will be the pivotal role it has played for over 40 years in protecting the world's "ambassadors of the seas." Part of your legacy can be in the support you provide toward this cause. You don't need to be wealthy to make a gift that will have an impact on the future of whales, dolphins, and porpoises and their habitats. A charitable bequest to ACS in your will or living trust will serve as a powerful testimony to your conviction that this work is important to the health and biodiversity of our marine ecosystem.

I hope you'll join me in including ACS in your estate planning. I can't think of a better gift for our children and grandchildren.

Diane Glim

All information about charitable bequests is held in the strictest confidence.

Your Name: _____ E-mail: _____

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Please send more information about....

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securities. To arrange transfers,
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Please indicate if you have already made bequest arrangements to ACS:

I have established a charitable bequest to the American Cetacean Society. Please add my (our) name(s) to the Legacy of Conservation Display at ACS Headquarters and in the Spyhopper publications.

Thank you for supporting ACS and our mission.

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AMERICAN CETACEAN SOCIETY 

On Behalf of Whales, Dolphins, and Porpoises...

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Membership in ACS Puts You in Good Company



Photo ©Michael Ho, <http://MichaelDanielHo.com>

The American Cetacean Society (ACS) protects whales, dolphins, porpoises, and their habitats through public education, research grants, and conservation actions. Founded in 1967, ACS was the first whale conservation organization in the world.

ACS is a 501(c)(3) non-profit organization with national headquarters based in San Pedro, California. We have active chapters in Los Angeles, San Diego, Orange County, Monterey, San Francisco, Puget Sound, and Oregon, and a Student Coalition based in Bloomington, IN. We also have new chapters forming in New England and Florida. Members live throughout the United States and in more than a dozen countries.

Join us in our mission, and help us spread the word! You will find many opportunities for education and involvement as an ACS member. **You can join/renew or make a donation** by using the form below, or go to www.acsonline.org and enroll or donate using PayPal. We hope to see you on the active rolls, and would love to have you share in our upcoming *Whalewatcher* journals and online *Spyhopper* newsletters.

Thank you,
Your friends at ACS



Please join, renew, and/or donate!

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Do you have particular areas of interest in cetacean education, research, and conservation? _____

If you have questions, please call our national office at 310-548-6279 or e-mail acsoffice@acsonline.org

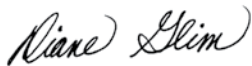


AMERICAN CETACEAN SOCIETY

We Can't Do it Without You!

The American Cetacean Society continues to grow and make an increasingly meaningful impact on awareness, education, and protection of whales, dolphins, and porpoises and their habitats. This is due in large part to your support, personal dedication, and willingness to carry our message out to your own contacts and communities.

We hope that you will consider making a donation during this important fundraiser for ACS - our Annual Appeal to members and supporters. Thank you so much for your dedication to the American Cetacean Society - together, we can make a difference!



Diane Glim
ACS Board President

*Help ACS protect whales, dolphins, porpoises
and their habitats through public education, research
grants, and conservation actions.*

Your Name: _____ E-mail: _____

Street Address: _____ Phone: _____

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I would like to make a tax-deductible donation to the American Cetacean Society in
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