



# Spyhopper

## Whales in a Sea of Trouble

by Cheryl McCormick  
ACS Executive Director

On Earth Day, the Chair of the International Whaling Commission (IWC) unveiled a deal with whaling nations that, if accepted by a vote of 88 member nations at the annual IWC meeting in June, will legitimize commercial whaling by Japan, Iceland, and Norway by suspending the moratorium on whaling for a period of ten years. This is by far the most serious threat to eviscerate the moratorium on whaling, a critical international conservation policy instrument, since its adoption by the IWC in 1982.

The origins of the Package date back to the Bush Administration in an effort to end the deadlock between pro- and anti-whaling nations, end abuses of the moratorium through loopholes allowing commercial whaling under reservations and objections to IWC policies, and re-establish organizational integrity

and effectiveness to a polarized and dysfunctional IWC. Spearheading the deal is the IWC Small Working Group (SWG), led by Monica Medina, U.S. Commissioner to the IWC and Principal Deputy Under Secretary for Oceans and Atmosphere, NOAA.

Until recently, many within the conservation community were wondering, *does Obama know?* Surely, the champion of “change we can believe in” isn’t aware of the dubious negotiations afoot in the name of his Administration. Obama doesn’t want his legacy to include “the President who gutted the moratorium on whaling,” does he? Besides, he gave us his word...

*“As President, I will ensure that the U.S. provides leadership in enforcing international wildlife protection agreements, including strengthening the international moratorium on commercial whaling. Allowing Japan to continue commercial whaling is unacceptable.”*

Candidate Barack Obama, March 16, 2008



Whale meat at the Tsukiji fish market. From Wikimedia Commons: <http://www.flickr.com/photos/10031363@N00/2261901068/> Save On Whale] 2008-02-04 - Author: <http://www.flickr.com/people/10031363@N00> Stefan Powell] from Toronto, Canada [P)

Please complete the ACS 2010 Member Survey online or by paper (see enclosure).

## Sea of Trouble, Cont.

*Does Obama know?* Actually, yes, he does. When approached by Phil Radford, Executive Director for Greenpeace USA, who met with Obama on Earth Day and pointedly asked him, “*Will you reverse your administration’s position?*” the President responded, “*Oh come on, don’t lobby me here right now.*” And with that, President Obama gave whales the “Earth Day kiss of death.”

### Lifting the Veil of the IWC

There’s a lot of confusion about the IWC, its purpose, and role in international policy and regulation of whaling. The IWC is mandated to conserve whale stocks and provide a regulatory framework by which to govern the conduct of whaling operations worldwide. In response to decades of overharvesting of some stocks of whales, the IWC adopted a moratorium on whaling in 1982, and for a few years following its implementation, the agreement enjoyed a high level of success. **The moratorium was never intended to last forever** – this is an important (and often misunderstood) point. Rather, it provided a “cease fire” during which whale stocks could be thoroughly assessed and management recommendations and monitoring could be developed.



Everything was fine for a few years, but things began to quickly unravel. Iceland withdrew its IWC membership in 1992, rejoined in 2002 under reservation to the moratorium, and within 48 hours announced that it would conduct “scientific whaling” under a loophole in Article VIII of the International Convention for the Regulation of Whaling (ICRW). The same loophole requires that the animal be utilized once killed. Consequently, the whale meat is sold domestically for consumption. Norway, which filed an objection to the moratorium and abstained from voting for it in 1982, claimed it was never legally bound by the ban and resumed commercial whaling in 1994. Japan also filed an objection to the moratorium in 1982, but retracted it following political pressure from the U.S. It now claims to abide by the terms of the moratorium, but conducts scientific whaling in the Southern Ocean Whale Sanctuary (SOWS). By now, you’re probably getting the impression that the IWC doesn’t effectively regulate any whaling activities, and you’d be correct, with the exception of aboriginal subsistence hunting.

The current state of the IWC can only be described as polarized and dysfunctional, with member nations split into anti- and pro-commercial whaling factions – somewhat akin to the international policy version of *The Jerry Springer Show*. Meetings are contentious, and any progress toward developing agreements to meet the global conservation and management challenges facing whales is hopelessly gridlocked.

In 2007, in an attempt to restore credibility and effectiveness to the organization, the IWC established a Small Working Group (SWG) tasked with developing an alternative to its current structure, to be completed by the 2009 meeting in Madeira, Portugal. That deadline passed without a proposal, and the deadline was extended until the 2010 annual meeting in Agadir, Morocco, where the SWG would present a final proposal.

Which brings us to the current deal. The U.S. is leading the SWG in “good faith negotiations” with ambassadors from the three rogue whaling nations, but this claim should not be taken very seriously. You cannot, on the one hand, claim to want to uphold an international moratorium on whaling activities, and on the other negotiate with whaling nations for conditions and quotas by which to engage in that very activity.

It is noteworthy that conservation, animal welfare and protection, and environmental groups are completely united in their opposition to the Package and vigorously oppose its adoption at the upcoming meeting of the IWC in Agadir.

## Whaling in Southern Ocean Whale Sanctuary

The proposal legitimizes whaling in the SOWS by proposing annual quotas in this area by Japan, with no prospects of whaling in the SOWS being eliminated within an agreed upon time frame. Completely eliminating whaling in the SOWS should be the only acceptable outcome.

Whaling should not, under any circumstances, occur within sanctuaries. Under the terms of the Proposal, the SOWS is proposed for expansion to include the boundaries of the South Atlantic Sanctuary. However, no whaling has ever been conducted in this area, nor has any been proposed.

That there is a quota for fin whales in the SOWS is an inflammatory negotiation point – 10 fin whales annually for the first three years, reduced to five for the remaining seven years. Meat production from fin whales relative to minke is approximately 10:1, which more than compensates for a nominal reduction of minke whale hunting by Japan elsewhere.

## Quotas Informed and Guided By Sound Science

The IWC's Scientific Committee (SC) is an internationally recognized authority on the sustainable management of whale stocks. Comprised of members from both whaling and non-whaling countries, it is the recommendations of this body on which the IWC is mandated to base its decisions. Following the adoption of the moratorium, the SC conducted a major review of the status of whale stocks, and spent over eight years developing rigorous methods for establishing sustainable catch limits for certain stocks where populations were abundant. This method is called the *Revised Management Procedure*, or RMP. The resulting RMP was endorsed by the National Marine Fisheries Service (NMFS) as well as by the IWC itself. Yet the current Proposal contains no agreed upon numbers of whales of each species would be taken based on RMP recommendations.

The Proposal *refers* to the RMP, but not as a tool for establishing sustainable catch limits. Rather, these numbers will be agreed through illicit political negotiation. By dismissing the collective knowledge and experience of the SC, the Proposal misleadingly attempts to merge politics with science to determine quotas, when there should be no catch limits established of any kind, other than those based on verifiable scientific data.

## Closing Loopholes on Trade

The Package offers s a lifeline to a dying market for whale

meat that can only persist with the help of substantial government subsidies. The plan should include a specific, two-pronged approach to preventing the expansion of international trade in whale meat, including eliminating economic incentives for exporting these products, and restricting consumption to domestic markets by inhibiting domestic subsidies.

Iceland has taken a hard line against restrictions in whale meat trade, stating that it's a "matter of principle" and that it "needs the jobs that whaling provides." The Icelandic stated reliance on a socially unpopular, Centuries-old industry to serve as a foundation for a long-term, stable economic policy cannot be given serious attention.

Furthermore, Japan's assertion that whale meat continues to be a unique cultural staple in the Japanese diet is nothing more than political posturing and spin doctoring. While it is certainly true that whale meat was a staple in Japanese school lunch programs until the 1970's, the consumption of whale meat is now viewed as a socially insensitive if not dangerous proposition. At some point, the public constituencies of rogue whaling nations will realize that they've been duped – that their health and safety and that of their children have been manipulated to support the political views of a few. What mother would knowingly feed her children meat known to be 200 times higher in Mercury than Japan's maximum provisional values allow?

## Enforcing Credible and Transparent Monitoring and Regulation

The Proposal fails to clarify specifics with regard to transparent, credible monitoring and surveillance, although it does propose international observers (inspectors from nations other than those conducting the whaling) on every major whaling ship and landing port. In the past, these efforts have failed because whaling countries claimed that monitoring efforts were too much of a hindrance to their operations. Japan has argued that its own vessel registration and monitoring protocols are adequate and therefore it shouldn't have to subject itself to international scrutiny. Norway has circumvented monitoring efforts by claiming that its fishing boats are too small to accommodate international observers and besides, they have Norwegian observers aboard to self-regulate their activities, thank you very much. I challenge you to find a more blatant example of the proverbial fox guarding the hen house.

The Proposal also vaguely alludes to a DNA registry, which in theory could prevent illegal trade and smuggling



## Sea of Trouble, Cont.

by matching the DNA of whale meat sold in markets and restaurants to DNA recorded in a register of all legally caught whales. Not surprisingly, Japan, Norway, and Iceland have all refused to release their DNA registries and make them available for review. A successful monitoring and control program can only operate under conditions of transparency, accessibility, and third party oversight. So far this hasn't happened, and there's no reason to believe that an appeal to rogue whaling nations' sense of fair play will change the situation.

Who will pay for monitoring and regulation? We all will. The Package encumbers all IWC member nations with the cost of regulating whaling operations, not just the whaling nations that benefit from it. As a result of incurring this economic burden, some developing member nations may be forced to withdraw their membership in the IWC altogether. Financing monitoring programs should be the sole burden of whaling nations that directly from these activities.

### Award-Winning Performances

You're going to see a lot of showmanship and award-winning acting from the architects of the deal – about how it “saves thousands of whales” and contains provisions for conservation of whale and their habitats. Don't be fooled. There's a lot at stake here, very little of which actually has to do with whales, per se – whales just happen to be an unfortunate bargaining chip. Negotiations on the Package have reached the highest levels of the State Department, which views the whaling issue as an ‘unfortunate anomaly’ of international policy; a persistent thorn in the side of established relationships between military, political, and economic allies.

In short, the Proposal falls significantly short of being a serious attempt to reform the IWC. Furthermore, it's an egregious step backwards in the movement to protect the world's whales. Few in the NGO community doubt Commissioner Medina's intentions to act with sincere integrity and an honorable moral compass. However, it has become all too apparent that the Obama Administration has been seriously out-negotiated by politicians from whaling nations who are very knowledgeable about historic and contemporary whaling issues, extremely savvy about the science and politics of whales and whaling, and whose cultural norms include a very long-term view on issues – they can, and will, wait for a “better deal.”

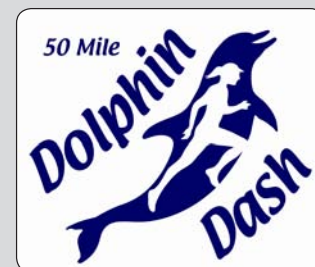
The Obama Administration is very sensitive to public feedback on this very unpopular proposal. Therefore, I urge you speak out on behalf of the whales you care so deeply about. I encourage you to hold our elected officials accountable for the policies they create. I implore you to care and to put your passion into action.

As ACS's representative to the IWC, I'll be attending the 62nd Annual Meeting of the IWC in Agadir, Morocco, from Monday, June 21st through Friday, June 25th to apply pressure to national delegates who may be uncommitted in their vote and receptive to learning why whales matter. I'll be speaking on behalf of you – ACS members – and for the whales that it is our mission to protect. I hope you'll follow events as they occur on my blog, “*IWC: The World is Watching*” at: <http://iwcblogger.wordpress.com>.

What can you do? A lot! Please take a moment to review the enclosed **Action Alert** flyer. You'll find several easy, quick actions that you can take to directly turn the tide in this sea of trouble for whales.

**ACS Executive Director Cheryl McCormick can't run to the IWC Meeting in Morocco, but you can help send her there!**

***On June 17th, Cheryl will run 50 miles to raise funds to attend the 62nd Annual Meeting of the International Whaling Commission (IWC) in Agadir, Morocco. She leaves for Morocco the very next morning, June 18th, to represent ACS and the whales we care so much about during this critical moment in whale conservation.***



***You can help support Cheryl by making a tax-deductible donation to the “50-Mile Dolphin Dash” at:***

***dolphindash.eventbrite.com***  
***Follow Cheryl's training progress, course route, and video footage of the run at:***  
***acsdolphindash.blogspot.com***



# Online Registration Is Open!

ACS 12th International Conference  
November 12-14, 2010  
Embassy Suites Hotel - Monterey Bay  
Seaside, California

[www.acsonline.org](http://www.acsonline.org)

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## ACS Conference Program: Becoming Forward-Thinking About Whale Conservation

**by Mason Weinrich**

**ACS Vice President**

As Program Chair of the upcoming ACS Conference, *Whales 2010: Inspiring a New Decade of Conservation*, I'm really excited about the way in which the conference is set up. I'd like to take a minute to explain what we are covering and why.

Traditionally, whale and other cetacean conservation has been done by species. Certainly, there are many places around the world today where single species continue to remain in trouble, in some cases, perilously close to extinction. Among the big whales, North Pacific and North Atlantic right whales are both on the knife's edge, and no discussion of conservation would be complete without them. On the other hand, some stocks are starting to rebound well, and we must address how we will respond to that. Humpback whales, for instance, are being considered for down-listing under the U.S. Endangered Species Act because of increasing numbers, but there remain some underlying issues. Often ignored, smaller cetaceans are also in real trouble in some cases. We will hear talks about river dolphins around the world (we recently lost one species, the Baiji in China, to extinction; others are

in dire straits), false killer whales in Hawaii (recently designated as Endangered), vaquitas in the Sea of Cortez (one of the world's most endangered cetaceans), and other emergencies that need our immediate attention.

On the second day, however, our focus will change a little bit. Once we have "put out the fires" of the issues we consider on the first day, we will start to look at overarching topics that cross species and oceans in the future of a cetacean's world. Climate change and ocean acidification can affect all of us including whales, perhaps even in catastrophic ways. As the need for goods to move around the world increases, ship noise and ship collisions affect whale habitats, at times making it impossible for whales to find their prey. Entanglements in fishing gear kill over 300,000 marine mammals every year. Whaling is rearing its head as an industry whose demise is not as imminent as we had hoped. Pollution and development in coastal waters affect all marine mammals. We will have a panel of experts, including Monica Medina, Under Secretary of the National Oceanic and Atmospheric Administration (NOAA) and U.S. Commissioner to the International Whaling Commission (IWC), to examine these issues, how they are being dealt with, and what else we might do to help manage these global threats.

# Conference, cont.

Of course, there is time for celebration as well. Dr. Randy Wells, who has been studying bottlenose dolphins off the coast of the Florida for over 40 years, will bring a lifetime of experiences to bear in a longer banquet talk. Dr. Hal Whitehead will share his experiences in 20+ years of time at sea with sperm whales, a species with the largest brains on earth and one of the most complex social systems. Other renowned experts will be able to share and celebrate the unique and special nature of the animals we care so much about.

Finally, no ACS conference would be complete without an ability to send you, as an attendee, home with renewed enthusiasm and vigor. We will end the conference with two very special sessions. The stars and makers of the Academy-Award winning documentary, "The Cove," will present to discuss both the filming of the movie, their follow-up activities, and the impact that one small team of people has had on a covert and shocking dolphin slaughter. Finally, we will consider what you, as an ACS member and whale enthusiast, can do to help secure a great future for whales at what is certainly a critical time.

Please join us at the conference. It's a special time, a special theme, and a special program. It may only last a few days, but you will remember it for a lifetime. We'll see you there.



North Atlantic and North Pacific right whales remain species in crisis, and are a topic of discussion at this year's ACS conference. Photo © The Whale Center of New England taken under authorization of Marine Mammal Research Permit #605-1904.

## Conference Schedule

<b>FRIDAY</b> (whale watch, nature hike, kayaking available)	
6:30-9:30 pm	Welcome Reception, Embassy Suites Ballroom
7:30 pm	In the Eye of the Whale- Bryant Austin, Artist
8:00 pm	The Adventures of a Whale Painter: 50 Years in Pursuit of Cetological Correctness - Richard Ellis, Artist/Writer
<b>SATURDAY</b>	
8:30 am	Welcoming Remarks - Kathy Zagzebski, ACS President
8:35 am	<u>Whales in 2010 – Where We Are</u> Whales of the World – John Calambokidis Small Cetaceans of the World - Tom Jefferson The World's Most Endangered Cetaceans - Bernd Würsig
10:20 am	<u>Large Whale "Hotspots" – 2010-2020</u> Right Whales - Status in N. Atlantic and N. Pacific – TBD Humpbacks - Recovering or Recovered? - Mason Weinrich Sperm Whales - Carrying the Culture of the Oceans – Hal Whitehead
1:00 pm	<u>Dolphins in Distress in 2010</u> False Killer Whales in Hawaii, the Newest Endangered Cetacean – Robin Baird Cook Inlet Belugas – Barbara Mahoney River Dolphins Around the World - Randy Reeves
2:45 pm	<u>Porpoises in Peril</u> Conservation Status of Porpoises - Bob Brownell Vaquita Status and Conservation - Lorenzo Rojas-Bracho Finless Porpoise Fitness and Conservation -John Wang
4:30 pm	Poster session, art show, book signings
7:00 pm	Banquet - Small Cetaceans in a Rapidly Changing World – Randy Wells
<b>SUNDAY</b>	
9:00 am	Announce winners of poster session, photo contest
9:15 am	Keynote Speaker – Monica Medina , Undersecretary, NOAA & U.S. Commissioner to the International Whaling Commission (IWC)
10:30 am	<u>The Next Decade of Cetacean Conservation</u> Climate Change and Cetaceans - Ian Dutton IWC and Politics - Sue Fisher Entanglements as a global problem – Andy Read Ship Strike Issues – Chris Clark
1:30 pm	<u>The Next Decade of Cetacean Conservation. cont'd</u> Marine Spatial Planning and Whale Conservation – Pat Halpin One Health: Conservation Medicine – Rosalind Rolland
2:45 pm	"The Cove" – Screening clips and Q&A with Ric O'Barry
4:15 pm	What Can ACS Do? What Can We Do? – Cheryl McCormick and Kathy Zagzebski



# Contaminants in Marine Mammals

by **Gwen D. Goodmanlowe, Ph.D.**  
 Dept. of Biological Sciences,  
 California State University, Long Beach

Pollution is a growing problem on both land and in the ocean, partly because the world's population has been growing exponentially since the 1940s. There are currently over 6 billion people on Earth. Over 50% of this population lives along coasts and waterways, which means that areas like Southern California have a high population density. In fact, over 10 million people currently live in Los Angeles County alone, making LA more populated than 42 of our 52 states!

All of these people contribute to pollution, which occurs in many forms. Trash is one of the more visible types of pollution, and includes plastics, rubber, paper, and glass. Because this type of pollution is easy to see, it is more easily dealt with in the form of beach clean-ups and anti-trash campaigns. Just as damaging to the environment, however, are the types of pollution that are not visible. These include substances like heavy metals and organochlorines.

Heavy metals fall into two groups: those that are needed by humans and other living organisms (iron, cobalt, copper, manganese, molybdenum, and zinc) and those that aren't (mercury, plutonium, and lead). The metals that are needed by humans are usually required in small quantities and can be toxic if accumulated, while the others have no known function in humans. Mercury, for example, causes severe illness if accumulated in high quantities. It is so pervasive that most people have at least some levels of mercury in their bodies, and the National Resources Defense Council has dedicated a website to help people determine how much mercury they should be ingesting in their diet (<http://www.nrdc.org/health/effects/mercury/protect.asp>). Because mercury and other contaminants are fat-loving, or lipophilic, they stay in the fats of any organism that ingests them, and then bioaccumulate within the food chain. Therefore, organisms that are top-level carnivores, like marine mammals, tuna, marine birds, and humans, accumulate the highest levels in their tissues.

Along with heavy metals, organochlorines are a huge class of contaminants that include the now infamous DDT and PCBs, but that also include things like dioxins and PVC.



*Dr. Goodmanlowe studied northern elephant seals and other pinnipeds in California to determine contaminants in their fatty tissues. Photo © Gwen Goodmanlowe*

Dioxins are produced when waste is burned (both on an industrial level and in backyard incineration cans), during chemical and pesticide production, and when paper is bleached. According to the EPA, there are no levels of dioxin that are considered safe, and yet low levels have been found in most people throughout the world. Dioxin is a known carcinogen, and it has been directly linked to increases in breast cancer. It has also been linked to reproductive problems, birth defects, diabetes, and learning disabilities, just to name a few! Humans mainly ingest dioxins from meat and dairy products (23% from milk and dairy, and 60% from chicken, fish, beef, pork and eggs).

DDT is a pesticide that was first synthesized in 1874; however, its use as an insecticide was not developed until 1939 during WWII. At that time, it was largely used to control malaria and typhus among military personnel. Following WWII, it was produced as an agricultural insecticide and for household use, and it was then that its production increased exponentially. Over a million tons were produced from 1950-1980 in the U.S., in large part by the Montrose Chemical Corporation, which was located in Torrance, CA. Montrose dumped approximately 1,700 tons of DDT off the Palos Verde (PV) Peninsula during this time, and the PV Shelf is now considered a Superfund Site, with approximately 110 tons of DDT remaining. In 1972 the production of DDT was banned in the U.S., largely due to the hard work and dedication of Rachel Carson, who wrote the book 'Silent Spring' about the effects of DDT on fish and other wildlife. Even though it has been banned in the U.S., it is still currently produced, exported, and used in other countries like India that need it to control malaria.

## Contaminants, cont.

Since DDT and its metabolites (DDE and DDD) are lipophilic, they bioaccumulate in the food chain, and are also very hard for the body to excrete. According to a Center for Disease Control (CDC) study published in 2005, at least some DDT was found in every human blood sample tested in the US. In humans, DDT has been linked to endocrine disruption, diabetes, premature birth, developmental neurotoxicity, and cancers of the liver, pancreas, and breast. DDT is also highly toxic to many bird species, which seem to be affected primarily during reproduction. DDT interferes with calcium deposition in eggshells as they are growing, and therefore, the shells become weak and very thin. When the parent bird tries to incubate the egg, it simply collapses under the weight, killing the developing chick. It appears that some birds like bald eagles, brown pelicans, peregrine falcons, and osprey are more affected than others.

PCBs are also organochlorines but are not pesticides; rather they are used in industrial applications that involve electronics, such as transformers, capacitors, and coolants. Since they were produced for their chemical stability and low flammability, they do not degrade easily and therefore, will probably always stay in the environment. They were produced by the Monsanto Corporation in 1929 and were recognized as a health hazard as early as 1937. Their production was banned in the U.S. in 1979; however they continue to leach out of old, rusting equipment left in trash dumps and the environment. Approximately 11 tons of PCBs still remain off the Palos Verdes shelf. PCBs have a wide range of toxic effects in humans and other animals, including causing skin problems, immune and reproductive problems, endocrine disruption, and cancer. Because PCBs are lipophilic, they also bioaccumulate in the food chain and it is estimated that all people have some levels of PCBs in their tissues, even if they live in areas far from industrialized nations.

Because organochlorines are fat loving, an interesting phenomenon occurs and is shown by a difference in levels between young and adult animals, and between females and males. Since female mammals produce and feed fat-rich milk to their young, they readily pass these contaminants to their developing offspring, both through their milk and their placenta. This is called offloading. Therefore, young organisms can begin life with very high levels of these contaminants, while females can have much lower levels once they start reproducing. Females, including humans,



*Female mammals feed fat-rich milk to their young that will readily pass contaminants to their developing offspring.*  
Photo © Michael Ho, <http://michaeldanielho.com>

offload the highest levels of their contaminants to their firstborn, with lower levels offloaded during subsequent births. Unfortunately males continue to accumulate the contaminants throughout their lives, and therefore have increasing levels as they age.

Mary Blasius (a former graduate student at CSULB) and I conducted a study examining the levels of DDT and PCBs in marine mammals from the Southern California Bight. We examined contaminants in the blubber of the three most common pinniped species inhabiting the Bight (Pacific harbor seal, California Sea Lion, and northern elephant seal). Each of these species feeds on different prey and has different residency patterns in the Bight. Harbor seals are full-time residents and mainly feed on plainfin midshipman, octopus, and market squid. California sea lions males and juveniles are part-time residents, going north to feed when it is not the breeding season, while females stay year-round in the Bight. They mainly feed on the northern anchovy, Pacific sardine, and Pacific whiting. Northern elephant seals are only occasional visitors to the Bight. They live, breed, and molt in central California and farther north, and go far offshore and northward to feed mainly on squid with some bottom-dwelling fish and elasmobranchs thrown in. Our study was based on samples collected from seals that had died at the Marine Mammal Care Center at Fort MacArthur in San Pedro and the Pacific Marine Mammal Center in Laguna Beach. Samples were collected from 1994-2006, which also allowed us to see if changes in blubber contaminants changed over time.

Overall, our results were as expected. In all three species of pinnipeds, levels of DDT in the blubber were much higher than levels of PCBs, which is not surprising considering



we are located in a DDT hotspot. This is different from most other areas of the world, where PCB levels are higher than DDT levels in marine mammals that have been studied. California's sea lions and harbor seals had similar levels of both DDT and PCBs, and these were both higher than the contaminants found in elephant seals. Again, since sea lions and harbor seals are much more resident than elephant seals and are feeding most of the year in the Bight, this is not surprising. We also found that California sea lion females had significantly lower levels of contaminants than juveniles and males, showing that they do offload the contaminants to their offspring. In addition, we detected a significant decrease in contaminant levels in California sea lions over the 14 year time period; however, it should be noted that the levels of both DDT and PCBs were still extremely high even by 2006. Finally, levels of DDT found in the blubber of our local pinnipeds were among the highest found in pinnipeds worldwide, indicating that even though production of these chemicals ceased over 35 years ago, there is still a problem, especially in southern California.

In conclusion, we need to work on removing both visible trash and non-visible chemical types of pollution from the environment, while also working on preventing these pollutants from getting into the environment to begin with.

## Responding When Dolphins Strand

by **Kate Sampson, NOAA**

On March 11, 2010, 16 Atlantic white-sided dolphins (*Lagenorhynchus acutus*) stranded in Wellfleet, MA. Wellfleet is a town on Cape Cod, a peninsula in eastern Massachusetts that has been a hot spot for mass cetacean strandings for as long as there are historic records. Several dolphin species and pilot whales have been known to strand here in groups of up to tens or even hundreds at a time. Strandings can be spread out in time and space, or can occur on one beach at one time. It is unknown exactly why Cape Cod experiences so many mass cetacean strandings, but the fact that they are prevalent here and rare to virtually nonexistent on mainland Massachusetts indicates that it is likely due to the nature of the area itself.

Cape Cod's geography, geology and perhaps even location combine to make it a difficult area for cetaceans to navigate. Cape Cod is hook-shaped with the entrance to Cape Cod Bay in only one direction- to the north. Wellfleet harbor is a small hook within the larger hook of the Cape. The substrate of Cape Cod and the surrounding sea floor is made of sand. Toothed cetaceans, like dolphins and pilot whales, navigate using biological sonar, or echolocation. They produce sounds that bounce, or echo, off of objects in their environment and they listen for the return of those sounds to map out land masses, prey and other objects. In a sandy habitat, however, more of the sound may be absorbed by the sand rather than echoed back to the dolphin, which could lead to misnavigation. These factors, in addition to a

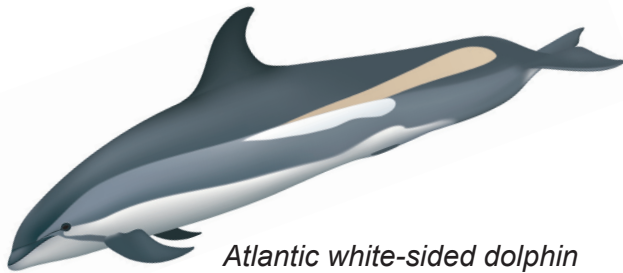


*Responders assess the Atlantic white-sided dolphins stranded in a mudflat in Wellfleet, MA. Note the remote location and the ankle-deep mud surrounding the dolphins. Photo © K. Sampson*

large tidal range, proximity to productive feeding grounds and prevalence of storms especially during the winter may combine to lead cetaceans onto the beaches, marshes and mudflats of Cape Cod.

On the morning of March 11th, the first report of the mass stranding came in to the International Fund for Animal Welfare (IFAW), which responds to all marine mammal strandings on Cape Cod. They immediately sent experienced field volunteers to assess the situation to determine the number and species of animals and the conditions at the stranding site. Once on scene, they determined that there were six Atlantic white-sided dolphins stuck on the mudflat in Wellfleet. It was not long after the first report came in that a second one followed. This time it was ten dolphins in a second location in

# Dolphin Stranding, cont.



Wellfleet. Having two stranding locations immediately makes response more challenging, requiring more staff and equipment resources. IFAW called the New England Aquarium (NEAq), their neighbor to the north, to assist in this challenging situation.

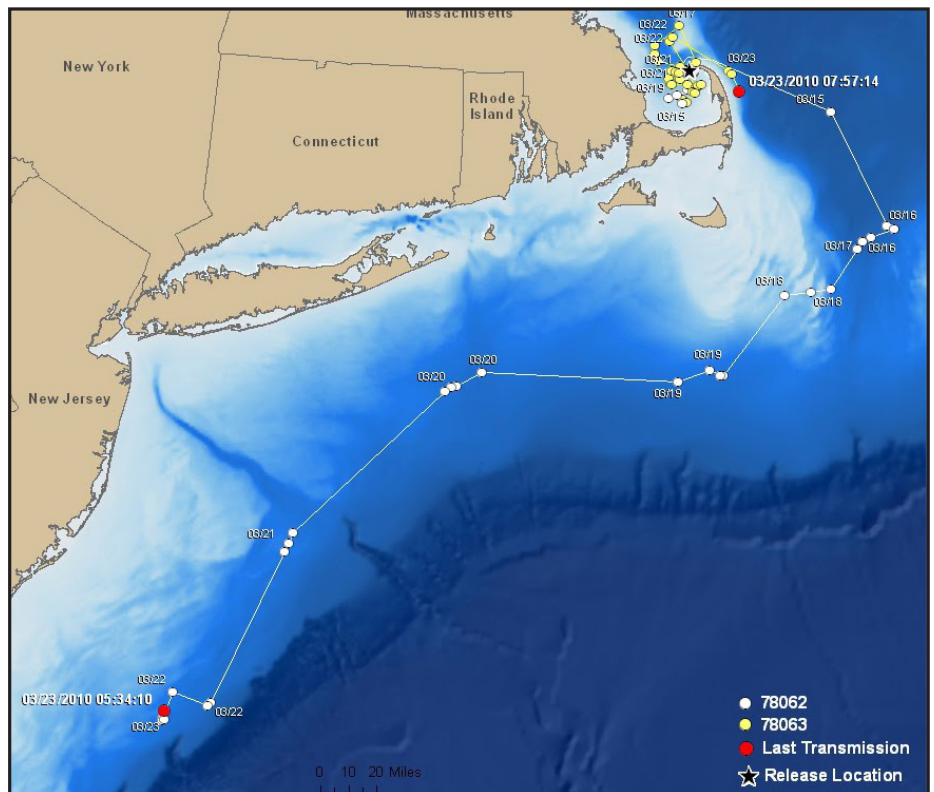
I responded with the NEAq Rescue team and we were deployed to the site with the six dolphins. When we arrived, we found the dolphins stranded on the mud flats about a half mile from the closest road. NEAq and IFAW staff and volunteers trudged through

the marsh grass to reach the mudflats. Once there, our first goal was to approach each animal and assess its condition. This goal turned out to be much more difficult than we had first thought. Responders sank into the mud up to their ankles and fell into the mud as they became stuck. We finally managed to assess the dolphins and found that one was already dead and one was in very poor condition. Determining that the likelihood of survival for this dolphin was poor, we made the difficult decision to end its suffering. We determined that the four other dolphins- one just a small juvenile- were healthy enough to be transported and released back out to sea.

The next challenge was to actually move the dolphins from the mudflats to an appropriate beach where there was open water access for a release. We used specially designed stretchers to move the 300-400 lb. dolphins; the stretchers have eight handles to be able to distribute the dolphin's weight between eight people. In this case, we had to use the stretchers not only to carry the dolphins, but we also lined them up on the mud to make it easier to walk between the dolphins and solid ground.

After a lot of effort, we finally managed to get the dolphins to solid ground. At that point, the dolphins were moved one at a time using IFAW's newly designed dolphin cart. The cart has large wheels and a heavy metal construction to be able to withstand the weight of the dolphin and move over a variety of substrates during response. In this case, it had to carry the dolphins the half mile back to the waiting trucks and trailers. IFAW has two large enclosed trailers that can carry multiple dolphins and responders. The four dolphins from our stranding site went into one of the trailers and we started heading towards the release site.

While we were working at the first site, other IFAW staff and volunteers were working at the second site. There the mud was even more dangerous and difficult to move in. Responders could only reach two of the ten dolphins that were stranded at that site. Human safety must always be first priority and the other eight dolphins were so far out in thick mud that the risk to responders was too great. The two accessible dolphins were loaded into



*The locations of the two satellite tagged dolphins. One dolphin has remained in Massachusetts Bay (upper dots) an area that is highly productive and known to have high dolphin abundance during the spring. The second dolphin moved out of the area, traveling down the east coast.*





*These two Atlantic white-sided dolphins have been moved to solid ground and are awaiting transport to the release site. You can see the sticky mud that covers the dolphins and the stretchers. Photo © K. Sampson*

the second trailer and the two teams met up to head to Provincetown, the last town on Cape Cod and our chosen release site. During the transport, IFAW and NEAq staff and volunteers monitored the condition of the dolphins. They drew blood and used portable blood analyzers to further analyze the health of the dolphins and verify that they had a good chance of survival post-release.

My colleague, Connie Merigo, and I used the transport time to prepare two satellite tags for deployment. These tags, made by Wildlife Computers, can be attached to a dolphin's dorsal fin using three small diameter plastic pins and corrodible nuts. The nuts corrode over time in the marine environment so that the tag will eventually fall off. While it is attached to the dolphin, the tag transmits to passing satellites each time the dolphin breaks the surface. When three satellites receive the signal, they can calculate the tag's location. In addition, the tag records dive information including maximum dive depth and dive duration. All of this information is transmitted via satellite to our computer back at the NEAq, so we can monitor the dolphin's behavior post-release. This information is invaluable in determining whether or not the dolphins survive and return to their normal behavior.

Two dolphins were tagged prior to their release from Provincetown, MA. Both dolphins' tags are still transmitting and they have traveled extensively throughout the Gulf of Maine and beyond (see map left). Although the dive data have not yet been analyzed, the extensive movement of these dolphins indicates that they have survived and are moving in areas typical for this species. The two tagged dolphins separated from each other soon after release. We do not know the nature of the group that stranded; it may have been multiple family groups that were traveling together at the time of stranding. This would explain why the two tagged animals did not stay together. We believe that the success of these two dolphins is a good indication that all released dolphins likely survived.

Due to the challenging conditions of this mass stranding, it took almost 12 hours between the first report of the dolphins and their ultimate release. Responders were covered from head to foot in dark mud and the same sticky mud covered the vehicles and all of our equipment. Exhaustion was clear on the faces of all the dedicated staff and volunteers. However, in spite of the many challenges and the extremely long day, standing on the beach and watching the dolphins swim off into the night definitely made it all worthwhile.



# The Loss of Two Great Inspirations

**Jon Lien - by Mason Weinrich**

We at the American Cetacean Society are saddened to learn of the loss of Jon Lien, a pioneer in whale research and conservationist. This fall, at our conference we will address the topic of marine mammal entanglements world wide. We are aware now of this growing issue. If not for Jon, we might not be. His work with fishermen to disentangle humpback whales from cod traps off the Newfoundland coast starting in the 1970's was landmark.



*Photo courtesy Geoff Meeker.*

Jon's straight-forward, no-nonsense attitude towards what he did made him uniquely suited to bridge the gap between whales and fishermen. He didn't need to worry about permits, consequences, bureaucracies, or any other hindrance to his efforts – he just rolled up his sleeves and did it. He took personal risks that few others would have and, at times, paid the price for it. One time a whale bucked when Jon wasn't expecting, and broke both of his forearms, but that didn't slow down his continued enthusiasm for his efforts. There may be no one who has built a better understanding of whales among fishermen than Jon, a legacy that continues on today.

Jon was always a special friend of ACS. In 1990, we were able to publish a guide to whale photo-identification that Jon co-authored with Steve Katona from the College of the Atlantic. He attended and spoke at numerous ACS conferences, and served on our Scientific Advisory Board for years.

Personally, Jon was a great friend. As a developing scientist in the early 1980s, Jon could have easily brushed me off, but he always had extra time for a smile and a chat. He would encourage you to hit any heights, and not to let apparent obstacles stand in your way. ACS shares that philosophy of encouragement, and Jon provided it to many young scientists. We know that his legacy will last forever.

**Bill Samaras - by Emmanuel Rosales and Corinne Heyning**

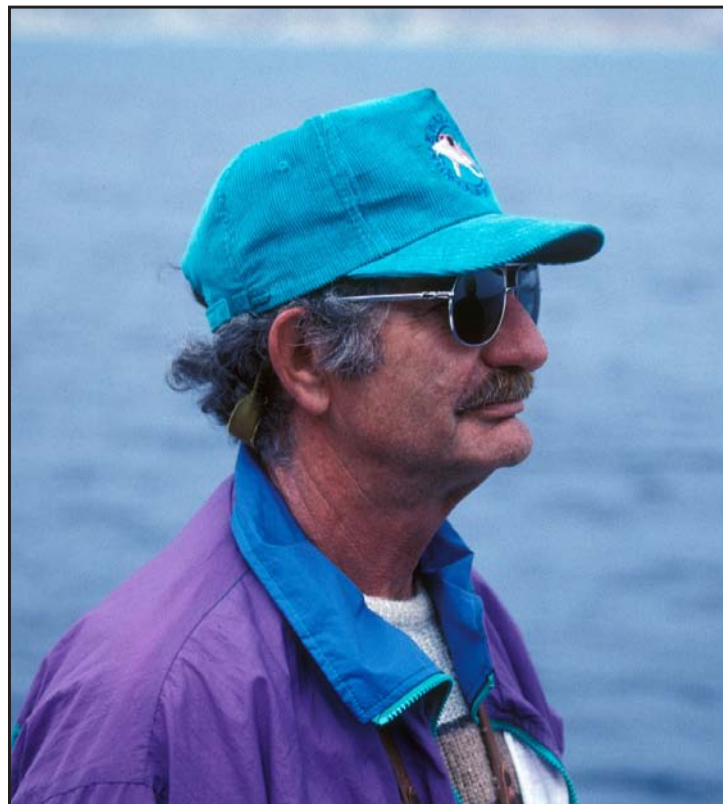
If the great American writer, John Steinbeck, had placed his classic "Cannery Row" in the harbor city of San Pedro, California, the character of "Doc" might well have been Bill Samaras. Part "Pied Piper," part paleontologist, part philosopher, Bill was a larger-than-life character who, during his 30 years as a teacher at Carson High School in the Los Angeles Unified School District, inspired multiple generations of students through his accessible teaching style and love of science. True to his Greek heritage, Bill was a gifted story teller. His particular talent was using a combination of pregnant pauses, body language, and intimation to tell stories that normally would not be appropriate for PG-13 audiences. But, Bill got away with it because adults "filled in the blanks" to better color the stories, and the younger crowd remained fascinated by the speaker and the topic. His influence extended well beyond teaching through his community activism and his long-time collaborations with the Cabrillo Marine Museum (now Cabrillo Marine Aquarium), the American Cetacean Society, and the Los Angeles County Museum of Natural History.

While originally trained as a geologist at Northern Arizona University, Bill gained prominence as a marine mammalogist in the 1970s, ultimately becoming a charter member of the Society of Marine Mammology. That journey to a deeper role in the marine mammal community may have started adjacent to the Harbor Freeway in San Pedro with the excavation that Bill led in 1971 of a gray whale fossil. During the same time period, the Cabrillo Marine Museum began to offer natural history

and historical field trips of various kinds, where Bill often served as naturalist or trip leader; including long-range boat trips to the gray whale calving lagoons in Baja California. His observations on gray whale reproductive behavior led to a 1972 paper on that topic and Bill's presentations about gray whale reproduction became legendary, bringing a whole new meaning to the term "Pink Floyd."

Bill journeyed up and down the California coast while leading or participating in a number of large marine mammal specimen recoveries for the Los Angeles County Museum of Natural History. Those trips created many clumsy and sometimes comically funny interactions with law enforcement, the military, and regular folks, all of whom struggled to understand why anyone in their right mind would not only want to deal with many tons of something dead and decaying, but drag it back with them as well. During one of these collecting trips, "Bill-the-mammalogist" became "Bill-the-parasitologist," when a number of whale lice previously living on the gray whale tried to make Bill their new home. Over the years he not only researched the lice, but gray whale barnacles as well, publishing a paper as late as 2006 on those barnacles.

Bill was a talented woodworker, which led to beautiful hand-carved wood pieces that occasionally went for sale,



*Photo © Alisa Schulman-Janiger*



*Mary Samaras, Bill's beloved wife, receives the folded flag as Bill is honored and remembered by fellow Marines at his memorial on Cabrillo Beach. Photo © C. McCormick*

but more often ended up as precious gifts for family or friends. But his sculpting wasn't limited to wood. For many years, during the annual Whale Fiesta at Cabrillo Beach, Bill was "Chief Sculptor," responsible for orchestrating the construction (and sometimes protection) of giant, sand sculptures that were the hallmark of the Whale Fiestas. He was also an inveterate tinkerer, with multiple boat or car projects going at the same time. One particular MG sports car was both Bill's great pride, and his constant mechanical nemesis.

Bill's greatest gifts were his infectious passion for living, his unselfish sharing of his knowledge and life experiences, and most importantly, the gratitude and humility with which he led his life. As I rethink it, not even a John Steinbeck could adequately capture Bill. He was utterly and singularly unique, and will be deeply missed.



# The Unforgettable Baja Experience

by Patty Geary

ACS National Secretary

This was my fourth trip to San Ignacio Lagoon and the magic and wonder of this unique place never fails to amaze and excite me. The plane ride down the Baja peninsula is a glimpse of the raw beauty the lagoons will provide. We stay not far from the water's edge and can see blows in the setting sun as we arrive and get settled for three full days of venturing out to see the gray whales.

Our first morning was sunny, clear and the whales could be seen in almost every direction. We saw a breaching whale in the distance and adult whales swimming very close to our skiff. It is always a thrill to see the cow/calf pairs and soon we found a playful baby that was visiting another skiff close by. It came up several times and the lucky whale watchers were laughing and singing as they touched and enjoyed the interaction with their visitor. It opened its mouth and we could see its white baleen as hands caressed the top its head. Soon it moved our way and surfaced in front of our skiff. We were so overjoyed and excited as we had our chance to touch and feel close to this animal. This is the thrill of visiting the lagoons and a moment many describe as emotional and moving.

San Ignacio is a wondrous place with a unique landscape and array of wildlife. We saw many more gray whales along with bottlenose dolphin over our three days on the lagoons. The whales would spyhop and fluke and we would enjoy just being out on the water to take it all in. We had the chance to kayak and enjoy the nearby by mangroves and all the amazing bird life there. We saw blue heron, egrets and a passing flock of white pelicans. Seagulls are always entertaining and I watched as one ambitious gull in particular tried to pick up and enjoy a fish that was too big for its beak. Some of its fellow seagull friends decided to help him out with that problem.

Of course the three days went by too quickly. Soon we were back on the plane heading home with exciting memories and new friends who shared our passion for whales and wildlife. As I sat on the plane and looked out over the landscape again, all I could think about was when I would be back again to visit a place so unique and so inspiring that I can never get enough.



ACS sponsors trips to Baja each year (late winter/spring time frame). Information is generally posted on our web site in the early winter months. Photo © P. Geary

*To experience these amazing encounters, we invite you to join one of the ACS-sponsored trips. More information at:*

**<http://www.acsonline.org/whalewatchtrips/baja/index.html>**



# Book Review

by Sky Barnhart, Reprinted with permission from *Maui Weekly*

**Whale watching guide unveils the mysteries of humpbacks.**

*Humpback whale song can be heard anytime, anywhere around Hawaii in winter with a hydrophone, or without one virtually anytime one goes swimming and dives beneath the surface along the shoreline. Near a singer underwater, it is about as loud as a home stereo turned up full-blast. In fact, the song is so loud it can be heard emanating from the ocean on a quiet day.*

*Each winter, Maui residents thrill to the sight of huge black whale tails fanning above the ocean's surface (although we may not appreciate the resulting standstills in traffic). We may even try ducking underwater to listen for whalesong. But how many of us really know what's going on out there?*

*Longtime Maui whale researcher Jim Darling has created a clear picture of the Hawaiian breeding grounds of humpback whales in his book *Hawaii's Humpbacks: Unveiling the Mysteries*. Meant as a guide for novice as well as experienced whale watchers, the book integrates known facts with new studies and findings.*

*Although it's packed with information, thankfully, *Hawaii's Humpbacks* doesn't read like a scientific journal. Rather, it's a user-friendly and relevant guide written from a researcher's perspective—that means asking a lot of questions.*

*The book is as much about what we don't know about whales as what we know. In each chapter, new questions emerge: How do male whales determine a female is ready to mate? Does a female choose specific males over others? How do all singers sing the same version of the ever-changing song? Is predation a significant problem for whale calves? Why do mothers and calves travel so much?*

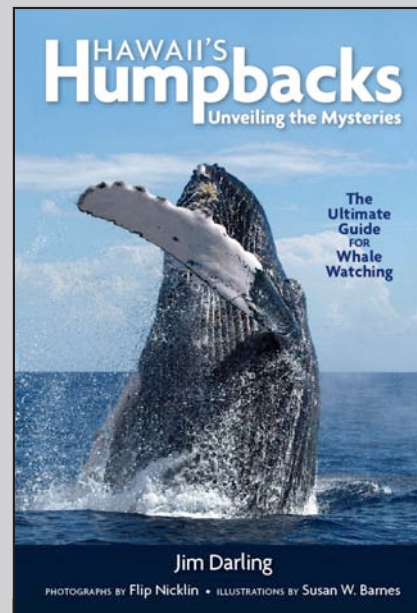
*Research is an ongoing journey, Darling tells us, and therefore "the quality of the answer to any question about whales depends entirely on where the question occurs on the research journey."*

*In an interesting section called "What Are Researchers Doing Out There?" Darling shares photos and descriptions of several of the most common activities of researchers in Hawai'i. For example, if you see a boat drawing parallel to a whale with a person aiming a crossbow, don't panic—the researcher is likely obtaining a tiny skin sample to determine if the whale is male or female.*

*The photographs by Flip Nicklin (who has produced numerous National Geographic photo features on whales and dolphins) are awe-inspiring, especially the underwater depictions of mothers and calves in the "Newborns and Juveniles" chapter. These priceless images are paired with Darling's insightful commentary: "[Calves] are very curious...More than one researcher has been surprised with a calf's nose pressed up against his/her face mask (and wondering just what the mother is thinking at that point!)"*

*The glossy, soft cover book has an eye-catching layout, with plenty of sidebars, charts and "Quick Info" sections adorned with cute illustrations by Susan W. Barnes. Highlights include an extensive discussion of humpback whale singing, which Darling has been specifically researching since 1997; and two chapters devoted to the mating process, around which most whale behavior seems to be centered. The back of the book contains a useful list of "Actions and Postures" with small photos identifying everything from a "tail lob" to "jaw clap," ideal for quick reference while whale watching.*

*All profits from sales of *Hawaii's Humpbacks* support the whale research and education programs of Whale Trust, a Maui-based nonprofit that Darling co-founded in 2001. The organization is dedicated to bridging marine research with environmental education and conservation programs. For more information, and to listen to a whale song recording, visit [www.whaletrust.org](http://www.whaletrust.org).*



**Hawaii's Humpbacks**  
By Jim Darling

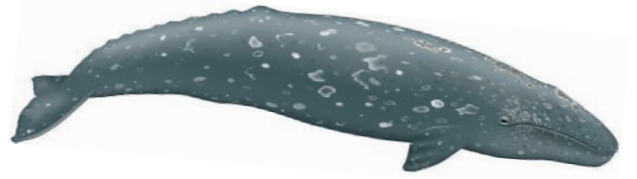
Photographs by Flip Nicklin  
Illustrations by Susan W. Barnes  
Granville Island Publishing, 2009

Jim Darling will be signing book  
copies at our conference in  
Monterey, California this November.

# Chapters In Action

## Notes From ACS Chapters

### Bernardo Alps, Los Angeles



The gray whale migration is almost over off Southern California and the summer whales have started to arrive.

The dedicated volunteer observers of the ACS/LA Gray Whale Census and Behavior Project could not have received a better “thank you” for their efforts than the show put on by a gray whale calf, its mother and a pair of bottlenose dolphins just below Point Vicente during the end-of-season potluck on May 2. The whales found a spot where they could come as close to shore as possible and just hung out for awhile, spyhopping as if looking at the tiny figures high up on the cliff. After about 20 minutes, the whales continued on their migration and the bottlenose went the other way. It has been an interesting season at the census with low numbers of gray whales, but fin whale sightings have been consistent throughout the season as well as many blue whales being seen in December and April.

The Whalewatch season came to a close at the beginning of April with the traditional blowout dinner. In addition to the customary awards and patches, this year all volunteers present at the census potluck and the Whalewatch blowout received a blue marble. To find out more about saving the ocean through random acts of kindness, visit <http://bluemarbles.org/>.

The ACS/LA education table was a big success at a couple of Earth Day events; the Cabrillo Marine Aquarium Earth Day celebration, and the Leo Carrillo State Park Earth Day Whale Fest.

The ACS/LA Ultimate Whale Watch on March 20 once again lived up to its name. We had several gray whales, including a breach along the coast, a couple of humpback whales, a large pod of feeding long-beaked common dolphins, as well as a pod of offshore bottlenose dolphins on the other side of Catalina Island, but the show was stolen by a fin whale. We found this animal in mid channel with clear skies and calm seas. It appeared to be feeding and gave us great views until it decided to come and check us out. It surfaced in the stern of the “Monte Carlo,” not 15 meters away, and slowly swam along the port side, made a sharp turn at the bow and proceeded to come down the starboard side.

We are looking forward to our always exciting Summertime Blues whale watching trip aboard the “Condor Express” in the Santa Barbara Channel on July 24. To sign up for the trip and find out more information about upcoming events, please visit the ACS/LA website, <http://www.acs-la.org/>. You can also sign up for the ACS/LA e-newsletter and access our news archive at our website.



Curious fin whale delights whalewatchers. Photo © Bernardo Alps/  
PHOTOCETUS

### Wellington Rogers, Orange County

ACS/OC welcomed Mike Makofske as Publicity Charman and he is working actively with our board. On April 25 we celebrated Earth Day by having an informational booth at the Muth center in Newport’s Back Bay. Much information was given out.

Our make-up whale watching trip around Catalina has been rescheduled for June 6th. Tom Jefferson will be the May 27th speaker on the vaquita dolphin. Tom Wait will be our June 25th speaker about ocean waste.

## Diane Glim, Monterey Bay

The Monterey Bay Chapter meets monthly at Stanford University's Hopkins Marine Station in Pacific Grove. Program directors Alan Baldrige and Bob Mannix consistently invite extraordinary local speakers to address the membership with varied oceanic topics. Dr. Greg Cailliet, Professor Emeritus from Moss Landing Marine Labs, gave an engaging talk at the February chapter meeting about sharks. The March meeting featured Dr. Guy Oliver and his ongoing work with the northern Elephant seals. Dr. Tom Jefferson brought us an update about the vaquita at our April meeting.

ACS Monterey Bay participated in several environmental events in April, including the Monterey Bay National Marine Sanctuary Symposium at Cal State University, Monterey Bay. 'Viva Vaquita' made its debut at the Sea Otter Classic bicycle competition at Laguna Seca. A life-sized model of a vaquita was exhibited to share information about the world's most-endangered marine mammal. The chapter has been raising funds to help Mexico save the vaquita from extinction. Sculptor Randy Puckett will continue to donate \$400 for every vaquita sculpture sold to the Viva Vaquita fund through 12/31/10. Visit [vivavaquita.org](http://vivavaquita.org) or [whalesofrandypuckett.com](http://whalesofrandypuckett.com) for more information. Become a Facebook Fan of Viva Vaquita, and purchase vaquita shirts at [www.printfection.com/vivavaquita](http://www.printfection.com/vivavaquita).

I served as ACS Chapter Champion at the Annenberg Alchemy Workshop in Los Angeles. Designed to improve the success of non-profit organizations, the Annenberg Foundation invited Cheryl McCormick, Executive Director, Kathy Zagzebski, President, and me as chapter representative to participate.

ACS Monterey Bay will participate in the National Whale Rally on May 23. Dr. Steven Webster of the Monterey Bay Aquarium will address the chapter with a talk entitled, 'Ricketts and the Sea of Cortez' on May 27. Dr. Webster will be honored by ACS/MB with a BBQ in his honor on July 10 for his role in conservation. The Blue Ocean Film Festival will take place in Monterey on Aug 25-29, and the chapter will participate. The annual Blue Whale Fundraising Excursion will take place on August 28 with Monterey Bay Whale Watch. Be sure to register for the phenomenal ACS International Conference taking place in Monterey November 12-14. Visit [ACSONline.org](http://ACSONline.org) for more details and to register online.

## Uko Gorter, Puget Sound

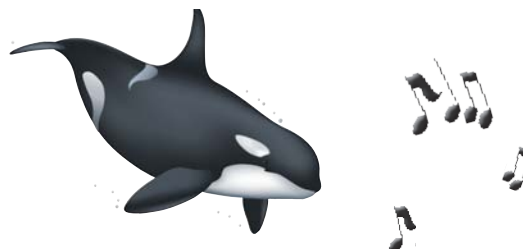
Education is probably one of the most important components of what we do at ACS. As such, we try our hardest to participate in events related to the marine environment. Two of these recent events gave us an opportunity to teach young students about the cetaceans and other marine mammals that inhabit our inland waters.

On April 23 we manned two tables at the Earth Day Environmental Fair at Saltwater State Park in Des Moines, WA. Close to 1000 students were bussed in for the occasion. We used our hands-on displays of baleen, skulls, seal and sea otter pelts, whale lice and other marine mammal artifacts and specimens. The sea otter pelt in particular was extremely popular, so much so that the pelt was hot to the touch when we finished.

More recently, we presented four half-hour classes at the Kitsap Water Festival near Bremerton, WA. Through a Powerpoint presentation and hands-on exhibits, fourth grade students learned about the marine mammals of the Salish Sea.

Our next educational outreach event will be at the annual Penn Cove Water Festival in Coupeville, WA. - a picturesque village bordering the scenic Penn Cove, Whidbey Island. On June 16, we look forward to hearing from Sally Mizroch, biologist/scientist at the National Marine Mammal Laboratory. Sally will probably talk about long-term survival of humpback whales tagged in the 1970s.

Lastly, we are setting up the ever so popular Orca Sing. Now, in its eleventh year, this event will be held on Saturday, May 19, at Lime Kiln Whale Watch Park on San Juan Island, WA. Orca Sing is the brainchild of Fred West, director of the City Cantabile Choir in Seattle. Fred is a past board member of ACS/PS. Mark your calendars - it is an event not to be missed.





# The Blues Cruises

by Bernardo Alps

Memories are still fresh from last year's spectacular blue whale season in the Santa Barbra Channel. Krill production was high and the krill spent much time at the surface. Watching a rorqual whale lunge feeding at the surface is one of the most spectacular sights in nature and we saw plenty of it. At one point during the August 1 ACS/LA Summertime Blues trip, there were 15 humpback whales and three blue whales within 100 yards of our boat, all of them thrusting their bodies out of the water while feeding on krill. You didn't even have to turn your head; there were literally whales in all directions.



Photo © Bernardo Alps/ PHOTOCETUS

It is risky to make predictions, but as of early May the Northwesterly winds that drive the upwelling process are still going strong and the channel is already full of krill. The "Condor Express" has already seen humpback whales lunge feeding at the surface and early blue whales have been spotted off Southern California for the last month. It is looking like this might be another good year to go out in channel.

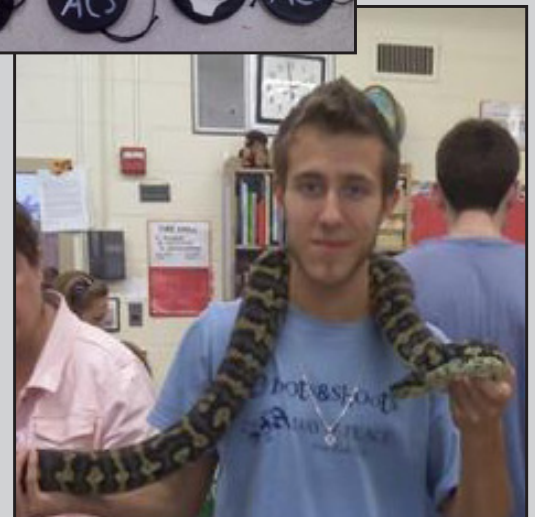
There will be two all-day, researcher-led trips out of Santa Barbara this summer. ACS/LA's Summertime Blues trip is scheduled for Saturday, July 24, <http://www.acs-la.org/seewhales.htm>. And the ACS Blue Whale Trip will take place on Saturday, August 14, <http://www.acsonline.org/whalewatchtrips/bluewhale/index.html>. We hope to see you aboard!

## Kids In Action

ACS thanks and congratulates Roots & Shoots student, David Couto on his successful fundraising event! David donated his proceeds from the event to ACS. Here is David's description of the day:

*On April 17, at Hillside School's annual Forest Fest in Bridgewater, NJ, my Roots & Shoots partner, Sarah, and I did a fundraiser for the American Cetacean Society. I have always been passionate about wildlife. In fact, the animal that I find the most majestic, although all are incredible, is the blue whale. So this was a perfect opportunity to help out. Sarah made beautiful bracelets, and I made clay necklaces with the ACS logo on them. We also handed out fliers, membership forms, and free bookmarks with whale information on them, given to us by the ACS. It took hard work, but it was worth it. In the end, we raised a good chunk of money (especially with this economy!). If we all do our part, much like a bee does its part to keep the hive from falling apart, then we can keep our planet from falling apart. Remember, one raindrop raises the sea.*

Sincerely,  
David Couto

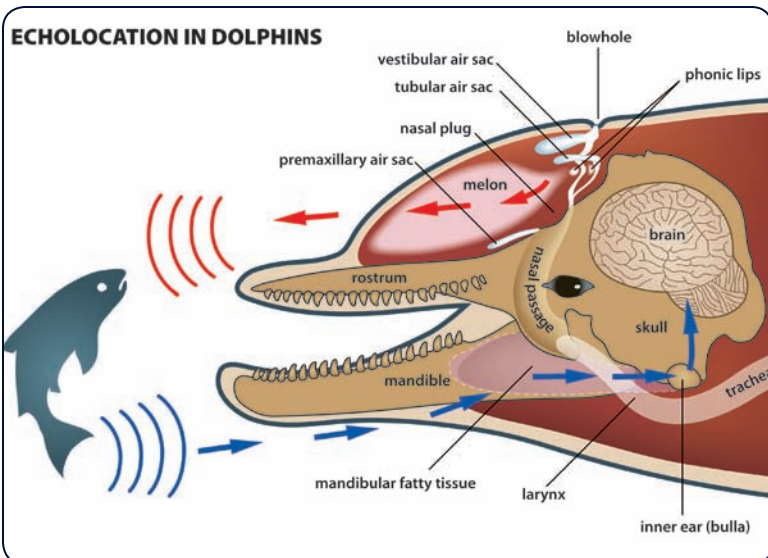


# For Kids Who Love Whales, Dolphins, and Porpoises - Facts About Echolocation

**All toothed whales (Odontocetes) have a unique way of finding prey and navigating in their often dark and murky water world. Like bats, toothed whales (such as orcas, sperm whales, dolphins, porpoises) use echolocation, or SONAR (Sound Navigation And Ranging). They send out clicking sounds, and then they receive back echoes when these sounds bounce off objects. The echoes help deliver an “acoustic message” to the animal’s brain about these objects.**

## HOW DOES ECHOLOCATION WORK?

- **PHONIC LIPS** - The clicking sounds are produced by two sets of “PHONIC LIPS” in a complex system of air sacs and nasal passages below their blowhole. Each set of phonic lips works independently or simultaneously to produce sound.
- **BEAM OF SOUND** - The echolocation sounds are then projected through a fatty tissue in the forehead called the “MELON” which acts like an acoustic lens and focuses the echolocation beam on an object (e.g. fish or obstacle).
- **ECHOES BOUNCE BACK** - The sound waves bounce off the object and are received back as echoes through the area of the throat and tongue (gular region). The sound echoes then travel through a fatty tissue (mandibular fat bodies) inside the hollow pan bone of the lower jaw (mandible).
- **ACOUSTIC MESSAGE** - This fatty tissue is directly connected to the inner ear. Once passed through this inner ear, nerve impulses form an acoustic message in the dolphin’s brain.



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

### ACS Board of Directors:

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**Read more about our chapters and Board members at [www.acsonline.org](http://www.acsonline.org)**

**The American Cetacean Society (ACS) works to protect whales, dolphins, porpoises and their habitats through public education, research grants, and conservation actions.**

**FOR A MEMBERSHIP IN OR DONATION TO THE AMERICAN CETACEAN SOCIETY:**

Go online at [www.acsonline.org](http://www.acsonline.org), or send your check payable to ACS or credit card information with this form to:

**American Cetacean Society National Office, P.O. Box 1391, San Pedro, CA. 90733-1391**

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## *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.



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

Your Name: \_\_\_\_\_ E-mail: \_\_\_\_\_

Street Address: \_\_\_\_\_ Phone: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Please send more information about.....

How IRAs can be used for charitable gifts

Charitable gift annuities

Charitable lead and remainder trusts

Remembering ACS in my will

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.

*The American Cetacean Society welcomes gifts of stocks and securities. To arrange transfers, please contact your personal financial planner.*

**Thank you for supporting ACS and our mission.**

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