



# Spyhopper

## Navy Sonar A Change is Needed

by Taryn Kiekow

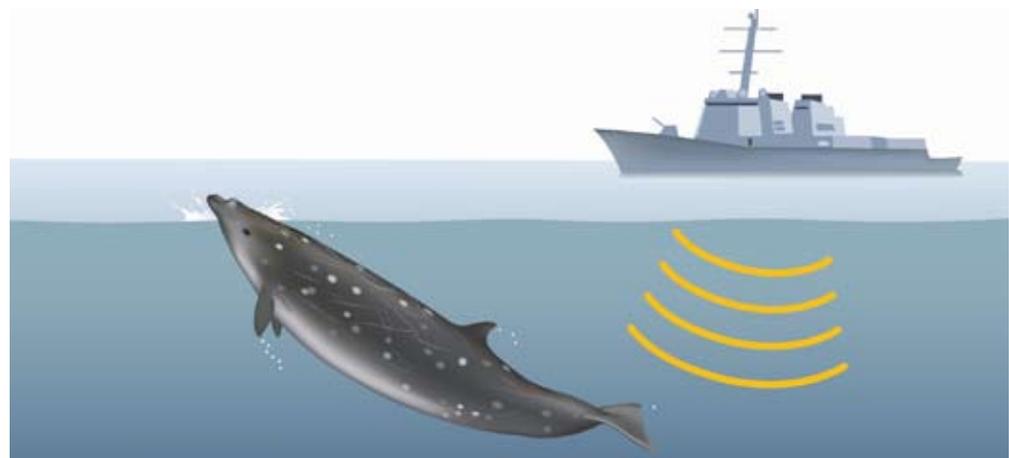
**Staff Attorney, Natural Resources  
Defense Council (NRDC)**

As Americans are taking stock of the State of the Union, the National Oceanic and Atmospheric Administration (NOAA) is doing the same for U.S. Navy mid-frequency sonar, the dangerous technology that can be lethal to marine mammals. One week before President Obama's State of the Union address, NOAA announced a new initiative to potentially mitigate harm from mid-frequency Navy sonar as well as from other sources of ocean noise. The announcement, which came in a letter from Dr. Lubchenco (NOAA Administrator) to Nancy Sutley (Chair of the White House Council on Environmental Quality), is a step forward for the United States. Hopefully, it may even signal a change in Bush-era sonar policies, which authorized over 10 million marine mammal "takes" – broadly defined to include harassment, disorientation, hearing loss, permanent

injury and even death – resulting from Navy sonar training through 2013.

In the announcement, NOAA specified that the Navy's ongoing efforts to mitigate sonar impacts "must do more" to address uncertainties and protect marine mammals. The announcement also specified that NOAA will conduct a series of workshops:

- (1) to learn more about important marine mammal habitat, or "hotspots," particularly through available predictive habitat models;
- (2) to develop a plan for assessing the cumulative environmental impacts of sonar, oil exploration, and other sources of intense ocean noise; and
- (3) to improve marine mammal monitoring on the Navy's training ranges. Based on the results of these workshops, NOAA will consider additional measures to reduce harm from sonar when it issues future rulemakings and authorizations under the Marine Mammal Protection Act.



*Scientists believe that the mid-frequency sonar blasts may drive certain whales to change their dive patterns in ways their bodies cannot handle, causing debilitating and even fatal injuries. All illustrations in this issue are by Uko Gorter.*

## Sonar, cont.



*Beaked whale that was a part of a mass stranding in the Canary islands in 2002. Photo courtesy University of Las Palmas.*

The announcement affirmed the long-standing consensus among the scientific community that “[p]rotecting marine mammal habitat is generally recognized to be the most effective mitigation measure currently available” to reduce the harmful impacts of mid-frequency sonar on marine mammals. NOAA’s affirmation, combined with its pledge to conduct workshops to learn more about hotspots, is an important first step to protect marine mammals not only from the harmful impacts of sonar but also from other sources of underwater noise such as seismic surveys. But the country requires more than just pledges of change. We need action.

Unfortunately, recent Navy action is the antithesis of change.

The Navy is constructing an undersea warfare training range in waters off the coast of northeastern Florida and southeastern Georgia, located dangerously close to the last remaining calving ground for the critically endangered North Atlantic right whale. Hunted nearly to extinction, North Atlantic right whales are one of the world’s most endangered species, with only about 300-400 remaining. The North Atlantic right whale remains extremely vulnerable to the continuing threats posed by ship strikes,

entanglement and ocean noise – a triple threat the Navy will exacerbate by building a permanent sonar training range over 500 square nautical miles in size right next to the only place where right whale mothers give birth and nurture their young.

The Navy is proceeding with construction without adequately assessing the environmental impacts, considering a full range of alternatives, or completing the most basic surveys to determine the presence of marine wildlife in the proposed training range. Not only does this violate federal law – which requires federal agencies to fully analyze these impacts before a decision to proceed is made – but it could also threaten the very survival of the North Atlantic right whale. NOAA has found that the loss of even a single North Atlantic right whale could threaten the survival of the entire species.

To stem this potential disaster, a coalition of conservation groups – including the Natural Resources Defense Council (NRDC), Southern Environmental Law Center, Defenders of Wildlife, The Humane Society of the United States, and Earthjustice – recently filed a lawsuit challenging the Navy’s decision.

Both the Navy and the National Marine Fisheries Service (NMFS), which must approve the Navy’s plan under the Marine Mammal Protection Act and the Endangered Species Act, admit that they must conduct “additional environmental analyses” before operating the range. In fact, the Navy only started surveying the area in February 2009. None of this survey data was included in either the Navy or NMFS’s decision making, and none of the surveys will be completed before the Navy begins construction of the range. Until the Navy obtains sufficient information about impacts on the marine mammals in its proposed range, federal law prohibits it from proceeding with construction. Federal law also prohibits the “irreversible and irretrievable commitment of resources” that would allow for another, more protective alternative. Constructing a \$100 million range without considering the operational impacts on right whales and other marine mammals is exactly the type of irreversible commitment of resources the law is designed to prevent.

Unfortunately, the Navy’s plans don’t end there. It recently issued a draft Environmental Impact Statement for training activities in the Gulf of Alaska. The Navy’s plan for the Gulf of Alaska suffers from the same fundamental defects

as its plan in Florida: it has not (and in fact cannot) fully analyze the environmental impacts of its planned training activities on marine mammals because it hasn't yet completed the necessary scientific surveys.

While it conducted a single 10-day survey in 2009 that yielded data for two species of marine mammals, the Navy's training will harass, permanently injure and perhaps even kill marine mammals from over twenty different species. The Navy cannot reasonably calculate the impacts on those species without first estimating the density of marine mammals in the area. Valid density estimates require more than just a single 10-day survey hampered by inclement weather and missing equipment. And like its selected venue in Florida, the Navy plans to train right next to critical habitat for another highly endangered cetacean:

the North Pacific right whale, which could number less than 100.

On one hand, the Navy's recent decisions toting the status quo for mid-frequency sonar reiterate the urgent need for change. On the other hand, NOAA's announcement regarding sonar mitigation – and the importance of protecting marine mammal “hotspots” – is an encouraging first step toward change. Given the Navy's continuing intransigence, change will depend on NOAA. It absolutely must follow through by identifying and affirmatively protecting marine mammal hotspots from the use of Navy mid-frequency sonar, as well as requiring the Navy to conduct the necessary surveys to fully analyze – and mitigate – the harmful impacts its sonar training will have on marine mammals.

### **How Sonar Harms Whales - Reproduced With Permission from the NRDC Web Site:** <http://www.nrdc.org/issues/wildlife/marine/sonar.asp>

*If you've ever seen a submarine movie, you probably came away with a basic understanding of how sonar works. Active sonar systems produce intense sound waves that sweep the ocean like a floodlight, revealing objects in their path.*

*Some systems operate at more than 235 decibels, producing sound waves that can travel across tens or even hundreds of miles of ocean. During testing off the California coast, noise from the Navy's main low-frequency sonar system was detected across the breadth of the northern Pacific Ocean.*

*By the Navy's own estimates, even 300 miles from the source, these sonic waves can retain an intensity of 140 decibels -- a hundred times more intense than the level known to alter the behavior of large whales.*

*The Navy's most widely used sonar systems operate in the mid-frequency range. Evidence of the danger caused by these systems surfaced dramatically in 2000, when whales of four different species stranded themselves on beaches in the Bahamas. Although the Navy initially denied responsibility, the government's investigation established that mid-frequency sonar caused the strandings.*

*After the incident, the area's population of Cuvier's beaked whales nearly disappeared, leading researchers to conclude that they either abandoned their habitat or died at sea. Similar mass strandings have occurred in the Canary Islands, Greece, Madeira, the U.S. Virgin Islands, Hawaii and other sites around the globe.*

*Many of these beached whales have suffered physical trauma, including bleeding around the brain, ears and other tissues and large bubbles in their organs.*

*These symptoms are akin to a severe case of "the bends" -- the illness that can kill scuba divers who surface quickly from deep water. Scientists believe that the mid-frequency sonar blasts may drive certain whales to change their dive patterns in ways their bodies cannot handle, causing debilitating and even fatal injuries.*

*Stranded whales are only the most visible symptom of a problem affecting much larger numbers of marine life. Naval sonar has been shown to disrupt feeding and other vital behavior and to cause a wide range of species to panic and flee. Scientists are concerned about the cumulative effect of all of these impacts on marine animals.*

# Save the Seals!

## Whales Act Instinctively to Save Seals

by Robert L. Pitman and John W. Durban

Last January (2009) we sailed from the tip of South America to the Antarctic Peninsula on the sixty-five-foot yacht Golden Fleece, in search of killer whales. The kind we were looking for—which potentially constitute a new species—prey on seals that live on and around the sea ice. We hoped to document one of their remarkable hunting techniques: sometimes as many as seven whales swim side by side to make a wave that washes a seal off an ice floe. The journey brought some surprises.

Early one morning, we located a pod of ten killer whales that we had previously tagged for satellite tracking, and found they had a pair of agitated, adult-size humpback whales in their midst. The humpbacks were bellowing loudly through their blowholes and slapping the water with their tails and fifteen-foot flippers. At first we thought that the humpbacks were under attack, but we saw no overt signs of aggression, so we concluded that they were probably just being harassed. Killer whales often test larger whales, perhaps to check for weaknesses that they might be able to exploit. We ducked below deck to quickly review some video footage of the event, however, and noticed a Weddell seal between the humpbacks—perhaps that's what the killer whales were after.

The killer whales moved on, and fifteen minutes later they spotted a crabeater seal on an ice floe. They created a wave that broke up the floe and left the distraught seal on a piece of ice not much bigger than it was. Just when it seemed the killers were about to have their way, the same pair of humpbacks charged in, swimming around the floe, bellowing and thrashing the water. The killer whales seemed annoyed and finally left the seal alone, still safe on the floe. We concluded that perhaps this deliberate intrusion by the humpbacks was some jumbo-size form of mobbing

behavior, comparable to the way songbirds pester birds of prey to drive them off.

A week later we witnessed a similar event that suggested a somewhat different interpretation. Another group of killer whales was attacking a Weddell seal on an ice floe, and a different pair of large humpbacks had inserted themselves into the fray. At one point, the predators succeeded in washing the seal off the floe. Exposed to lethal attack in the open water, the seal swam frantically toward the humpbacks, seeming to seek shelter, perhaps not even aware that they were living animals. (We have known fur seals in the North Pacific to use our vessel as a refuge against attacking killer whales.)

Just as the seal got to the closest humpback, the huge animal rolled over on its back—and the 400-pound seal was swept up onto the humpback's chest between its massive flippers. Then, as the killer whales moved in closer, the humpback arched its chest, lifting the seal out of the water. The water rushing off that safe platform started to wash the seal back into the sea, but then the humpback gave the seal a gentle nudge with its flipper, back to the middle of its chest [see photograph]. Moments later the seal scrambled off and swam to the safety of a nearby ice floe.

It occurred to us that in all three of these encounters, the menacing behavior of the killer whales may have triggered a protective maternal response in the humpback whales. Even though they did not have calves that were at risk, they acted immediately and instinctively to counter the threat posed to a smaller animal.

When an animal provides maternal care to another that is not its own offspring, it is termed allomaternal care [see "Meet the Alloparents," *Natural History*, April 2009]. Maternal behavior may even cross species boundaries. Perhaps the most common example of that is when humans raise pets, but there are plenty of cases of domestic cats and dogs adopting orphaned animals. Such behavior has been

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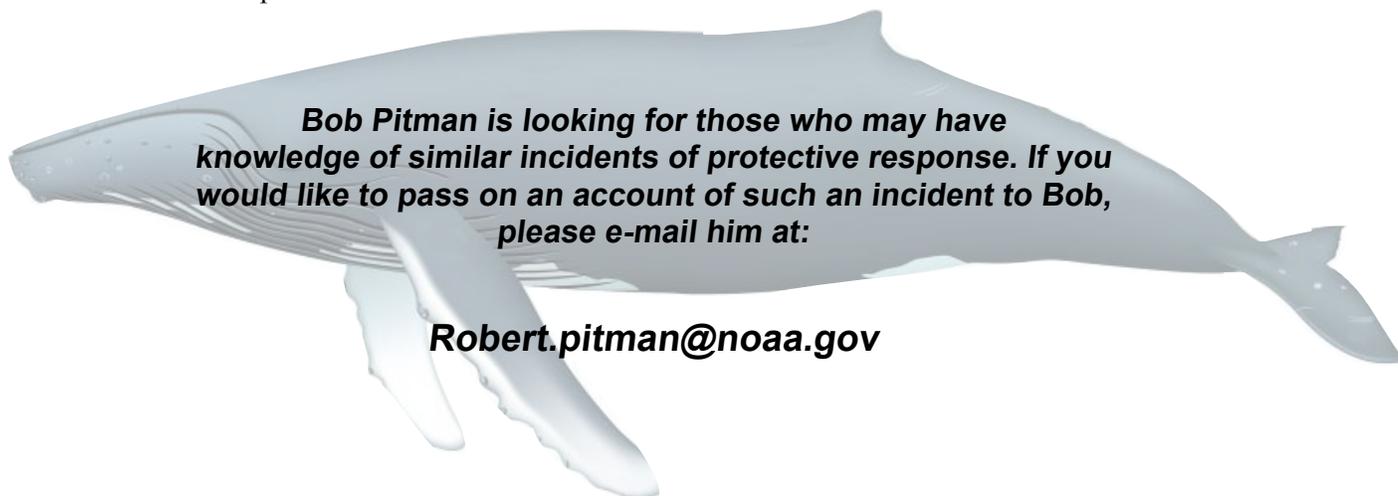
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*This photo by Robert Pitman shows the seal on the humpback's chest between the flippers, just after the whale had given the seal a gentle nudge back to the middle to keep it from washing off into the sea. Photo © Robert L. Pitman*

documented less frequently in undomesticated animals - though in 1996 a mother gorilla at the Brookfield Zoo near Chicago made headlines when she gently picked up a three-year-old boy who had fallen into the gorillas' enclosure and carried him to the zookeepers' door.

When a human protects an imperiled individual of another species, we call it compassion. If a humpback whale does so, we call it instinct. But sometimes the distinction isn't all that clear.



**Bob Pitman is looking for those who may have knowledge of similar incidents of protective response. If you would like to pass on an account of such an incident to Bob, please e-mail him at:**

**[Robert.pitman@noaa.gov](mailto:Robert.pitman@noaa.gov)**

# Ric O'Barry To Speak

Ric O'Barry was pivotal in the creation of the recent Oscar-nominated documentary, "The Cove," which has brought world-wide attention to a violently cruel and formerly well-hidden practice in Japan. His film exposes the dolphin hunt that has long taken place in the isolated cove of Taiji, where tens of thousands of dolphins are corralled and either cruelly captured or violently slaughtered.

O'Barry trained the female dolphins who played the "Flipper" role in the television series. His activism began with heartbreak when one day "Flipper" dolphin, Kathy, swam into his arms, gave him an anguished final gaze, then sunk to the bottom of the tank to end her own life.

O'Barry has dedicated his life to a passionate quest to save and free dolphins since that day, putting his own life and safety in jeopardy many times in the process. "The Cove" is an amazing testimony to this quest that has touched the world and exposed a dark, hidden pocket of human cruelty.

At the ACS 12th International Conference in Monterey, November 12-14, Ric O'Barry will be a speaker, bringing pre-selected cuts from "The Cove" and adding his fascinating narration as they are shown. Participants will have an opportunity for Q&A at the end of the session.

Please watch the ACS web site for online conference registration. We are currently preparing the registration page as many fascinating speakers and event plans are confirmed. Don't miss this special conference!



## Online Registration Opens Soon

**ACS 12th International Conference  
November 12-14, 2010  
Monterey, California**

In 2010, the American Cetacean Society will once again bring together people from all over the world with prominent cetacean scientists, conservationists, and educators. Over two full days, our world-renowned speaker panel will share up-to-date information on a broad range of issues concerning whales, dolphins, and porpoises, their health, safety and habitats. Over two dozen speakers will present a variety of conference topics around:

- **Whales in 2010 - Where We Are**
- **Large Whales - Habitat "Hotspots"**
- **The Next Decade of Cetacean Conservation**
- **Porpoises in Peril/Dolphins in Distress**

Speakers confirmed so far include Ric O'Barry, Phil Clapham, Ph.D., John Calambokidis, Thomas Jefferson, Ph.D., Mason Weinrich, Bryant Austin, and Pat Halpin, Ph.D.. The conference also includes whale watching, a photo contest, art displays, and a Saturday night banquet where participants can meet and discuss issues with leaders in the field. Watch the ACS web site starting in late March for the online link to event registration.

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

# ACS Director's Daring Dolphin Dash

Some conservationists show their dedication by enduring days or weeks at sea or attending marathon meetings. ACS Executive Director Cheryl McCormick will do her part by running 50 miles (in a single day!) to raise funds for an awareness of critical conservation threats facing cetaceans at home and around the world.

Cheryl can't run all the way to Morocco to represent ACS at this year's meeting of the International Whaling Commission (IWC) in June, but you can help get her there by supporting her effort to complete a 50-mile run to raise funds for conservation programs that help protect whales, dolphins, and porpoises.

On Thursday, June 17th, at 5:30 a.m., Cheryl will begin her run from ACS Headquarters in San Pedro, CA, regardless of weather! Her support crew will provide video and updates during the run, so you can follow her progress!

As if that's not grueling enough, she departs the very next day for Agadir, Morocco to represent ACS at this international forum, along with other non-government organizations, in condemning "scientific whaling." Cheryl will report directly back to you through a blog detailing IWC activities.



***How can you make a difference?  
Support Cheryl's efforts by making a  
tax-deductible contribution to the  
"50-Mile Dolphin Dash."  
Visit the ACS website:  
[www.acsonline.org](http://www.acsonline.org)***



***Follow her training and progress at her  
running blog:  
<http://acsdolphindash.blogspot.com/>***

# Chapters In Action

## Notes From ACS Chapters



¡Viva Vaquita!

### Diane Glim, Monterey Bay

The Monterey Bay Chapter looks forward to welcoming attendees to the 12th American Cetacean Society International Conference on Nov. 12-14, 2010! Don't miss the outstanding program and stunning venue on Monterey Bay, the home range of a rich variety of whales, dolphins and other marine animals.

On January 16, 2010, the Chapter held its annual Gray Whale Cruise to view migrating whales on their way down the coast. The event was a membership fundraiser, as well as an educational field trip for over 40 5th graders and chaperones from inland Salinas. Our member, Susan Rautine, has shared a bit of this whalewatching experience with you in the article below.

Chapter meetings are held monthly at Hopkins Marine Station in Pacific Grove. Topics so far this year have included "Harbor Seals" and "Sharks & Rays." Alan Baldridge and Bob Mannix skillfully draw speakers from the local marine science community for programs.

Chapter focus has been on ¡Viva Vaquita! - a movement to save one of the world's most endangered cetaceans. The web site, [www.vivavaquita.org](http://www.vivavaquita.org), has been set up to introduce the vaquita's precarious situation to the public. Sculptor Randy Puckett, a charter member of ACS Monterey Bay and current vice-president, has designed a bronze vaquita sculpture to help raise funds for vaquita conservation. For information about obtaining this sculpture and donating a portion of the cost to the vaquita effort, contact Randy at [randypuckett@worldnet.att.net](mailto:randypuckett@worldnet.att.net) or (831) 663-4494. Several chapter members will volunteer at the Sea Otter Classic bicycle event in Monterey in April to raise awareness about the vaquita.



ACS National Secretary, Patty, Geary took this photo of a very young gray whale calf - now hopefully part of the migration. Photo © Patty Geary.

### Watching for Spouts - Susan Rautine Shares Her Experience

Saturday, January 16, 2010

*A few things about going out on a 100-foot boat to look for whales occurred to me before and after the excursion last Saturday—besides realizing the whales just might not be in the area to see. That happened six years ago when my husband and I joined the Cetacean Society's Valentine's Day cruise (the first time in 25 years, they had said).*

*Mainly I thought about the size of the oceans, that they take up about 70 percent of the area of the planet, but are mostly flown over than ridden on—so that leaves out a huge chunk of a possibility for people experiencing the lives under the water—especially whales and dolphins like those we were so fortunate to see on Saturday when they came up to take a breath.*

*Lucky, too, for the school kids from Salinas, some who hadn't been in a boat, and for all of us, gray whales surrounded us—in groups of six or more at times, on every side of the boat. Just to get a short look at a spout, a back, a fluke, excited us to say "oooh!" or to stand silent, with tears filling our eyes. There's something about their presence, even at a distance, that can connect us—as strong as we are connected to our cats, our dogs. The connection feels like there are cords or bones running through it, rather than just the feeling. Again, I came to feel myself as a part in the universe when the gray whales came up and the Risso's dolphins came alongside greeting us, and when I looked down at the swirling of jellyfish shined on by the morning sun.*



*Uko Gorter, Puget Sound chapter president, reaching out to students near Seattle. Photo © Craig Marais.*

## Uko Gorter, Puget Sound

At 28 feet, “Stinky Bill” is a mere youngster. Nevertheless, the skeleton of this gray whale juvenile barely fit in the library of the Evergreen Middle School in Everett, WA. It’s unfortunate moniker was given to him during the arduous and smelly task of cleaning the carcass after it stranded in 1995.

The Whale Museum of Friday Harbor graciously brought in this skeleton for the school’s Gray Whale Project. ACS/PS was invited by Kendall Berry, Evergreen Middle School’s counselor (and former whale watch naturalist), to talk

about gray whales and help with interpreting the skeleton. Volunteer educator, Pam Martin and ACS/PS president, Uko Gorter, gave two all-day presentations on December 8 and 10 to a total of 760 students.

We talked about the gray whale’s natural history and ecology, as well as the threats it faces along its migratory route. We brought in additional marine mammal artifacts for the students to examine. Pam and I were truly impressed with the student’s knowledge and keen interest in whales and the marine environment in general. We would like to thank Kendall Berry and the Evergreen Middle School for the opportunity to present our talks.

**ACS would like to send a special thank-you to WestCoast Litho in Gardena, California for the printing of this *Spyhopper* issue.**  
[www.westcoastlitho.com](http://www.westcoastlitho.com)



## Chapter News, cont.

### Bernardo Alps, Los Angeles

Cetacean sightings continue to be spectacular off the Southern California coast. The southbound gray whale migration picked up momentum after a slow start and the northbound migration began early, creating a long overlap period. Blue whales were seen into January, fin whales have put in an appearance almost every single day, and now it looks as if the humpbacks are arriving early. The dedicated volunteers of the ACS/LA Gray Whale Census and Behavior Study are putting in long hours on the cliffs at the Point Vicente Interpretive Center. A daily report of their observations can be found at the ACS/LA website, or by becoming a fan of ACS/LA Gray Whale Census on Facebook, or by following ACSLAcensus on Twitter.

The 103 volunteer naturalists in the Whalewatch program are busy conducting pre-trip lectures at schools in the region and narrating trips and answering questions on boats from several local landings.

Several University of Redlands undergraduate students of Assistant Professor Lei Lani Stelle, Ph. D., are conducting studies into gray whale energy expenditure during migration. They are making their observations from the boats involved in the Whalewatch program, as well as from the census patio at Point Vicente.

ACS/LA kicked off the 2010 lecture series with two great presentations. In January, Gwen Goodmanlowe, Ph. D., of Cal State Long Beach spoke on “Deadly Ocean: Contaminants in Marine Mammals,” and in February Susan Chivers, Ph.D., of NMFS presented “Quest for Two Dolphins: Results of the 2009 Delpinus Cruise.” Our March speaker will be Cassie Johnston of SDSU on “Suction Feeding in Cetaceans.” In April we welcome Alyson Fleming of the Scripps Institution of Oceanography who will answer the question “Should Humpback Whales Still be Considered Globally Endangered?” followed in May by Ted Cranford, Ph.D., of SDSU who will be speaking about “Knocking on the Door of the Inner Ear in Cuvier’s Beaked Whales.”

On Saturday, March 20, the annual ACS/LA Ultimate Whale Watch will head towards the West end of Catalina Island aboard the “Monte Carlo” out of 22nd Street Landing. Last year’s trip was spectacular. We spent a lot of time with a humpback whale that put on a tremendous show, including multiple breaches, got very close to four feeding fin whales, and saw two migrating gray whales as well as a large pod of long-beaked common dolphins. If the sightings in the channel are any indication, this year’s trip should be at least as good. For more information about the trip and all ACS/LA programs, please visit our website at [www.acs-la.org](http://www.acs-la.org) or call 310-847-0516.



*Participants in the annual Whale Fiesta look at the carcass of a Risso’s dolphin at the Cabrillo Marine Aquarium on Sunday, January 24, 2010. Photo © Bernardo Alps/PHOTOCETUS.*

# For Kids Who Love Whales, Dolphins, and Porpoises

*How many baleen whales can you name?*

*Baleen whales (Mysticetes) don't have teeth. Instead, they have baleen plates that hang down in two rows from the upper jaw. Baleen plates have hairy bristles facing the inside of the mouth.*

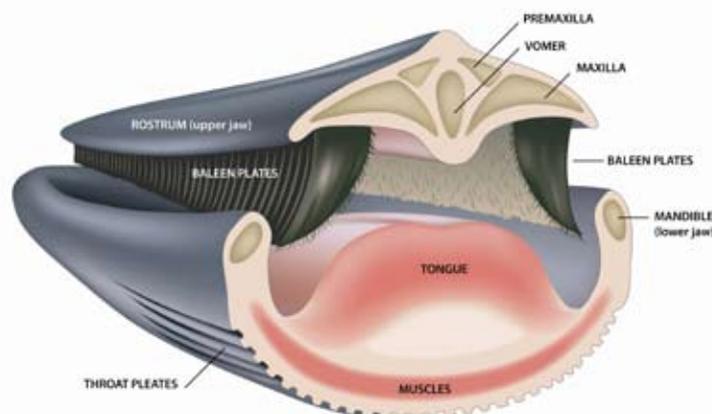
## What is baleen made of?

Although often called "whalebone" by early whalers, baleen is not made out of bone. It is made of a protein called keratin, like your hair and fingernails and like the horns of other animals.

## How do whales use it?

Baleen whales eat very small ocean animals (such as zooplankton). They scoop up mouthfuls in the ocean, strain out the water, and capture their food.

CROSS SECTION OF A BALEEN WHALE'S MOUTH



- Answer:**
- Blue Whale
  - Fin Whale
  - Sei Whale
  - Bryde's Whale
  - Omura's Whale
  - Common Minke Whale
  - Antarctic Minke Whale
  - Humpback Whale
  - Gray Whale
  - Bowhead Whale
  - North Pacific, North Atlantic, & Southern Right Whale
  - Pygmy Right Whale

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

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

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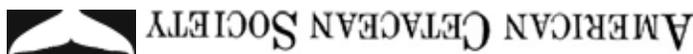


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