



Whales Alive!

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Does Obama Know?

Thoughts from the IWC Intersessional Meeting March 2-5, St. Petersburg, FL.

By Jessica Dickens

On behalf of CSI, I attended the Intersessional meeting of the IWC in St. Petersburg, FL in early March. From the onset, the US delegation was very open to meeting with the NGOs, even though it was made clear that the NGOs did not like or support the Small Working Group compromise deal which the US delegation seems to support as a way forward to help end the stalemate between pro-whaling and anti-whaling sides.

This deal is still a work in progress: lacked quotas for whales stocks that would ultimately legitimize commercial whaling, asked member nations, even anti-whaling nations, to pay to support commercial whaling, claims that the moratorium is still in place but legitimized commercial whaling for Japan, Norway and Iceland. These issues among others were repeatedly brought up to the US delegation which seemed to overlook the great concern the NGO community felt that this deal would impact the welfare of whales in a negative way and set back the conservation movement by thirty years.

It was during these meetings that one question loomed in my mind.

Does Obama know?

...that the US delegation is in support of a deal that would ultimately end the moratorium on commercial whaling and allow Japan, Norway and Iceland to legally hunt whales, even though these countries have killed somewhere around 32,000 whales

under the guise of scientific whaling or formal objection despite the moratorium.

Does Obama know?

...that for the first time in many many years, the NGO community stood as a united front against this deal which does not guarantee that there will be a reduction in the number of whales killed and there is no phase down or sunset plan included for scientific or commercial whaling.

Does Obama know?

Australia also presented a proposal that takes into consideration the welfare of whales and focuses on conservation for the future and an ultimate end to commercial whaling. The Small Working Group package is not the only option as a way forward.

Does Obama know?

I guess this question could go on and on about the details within the Small Working Group proposal but more importantly does he know about the agreeable nature of the US delegation to this deal which does not benefit whales or conservation. This coming from the country that stood at the forefront of both for many years. The future is looking pretty grim for whales but since it seems Obama doesn't know, the American people should know and make it known to Obama that any deal that allows for the resumption of commercial whaling goes against the American people and sets the environmental movement back decades.

New Fight Against Commercial Whaling

By Dan Knaub

Recently I was shocked to learn that President Obama was going back on his word about commercial whaling. On March 16, 2008 Candidate Obama said "As President I will ensure that the US provides leadership in enforcing international protection agreements, including strengthening the international moratorium on commercial whaling. Allowing Japan to continue commercial whaling is unacceptable".

The current stance by his administration is that limited commercial whaling is acceptable. This sets back a four-decade battle and in the writer's opinion is a gross violation of our trust. Without prompt action, commercial whaling will be approved at the June meeting of the International Whaling Commission.

I have created YouTube clips with beautiful footage of several species of whales everyone will enjoy. The clips show the special nature of whales and include information on sending an e-letter to the White House.

Spend a few minutes right now letting your voice be heard. We are at a crossroads.

Whales Alive!

A publication of Cetacean Society International
Editor: Brent S. Hall

CSI is an all-volunteer, non-profit, tax-exempt conservation, education, and research organization with contacts in over 25 countries. Our goal is the "optimum utilization of the whale resources," as called for in the 1946 Treaty of the International Whaling Commission, through the protection of viable habitat and the cessation of all killing and captive display of whales, dolphins, and porpoises. We support and promote benign activities such as regulated whale watching, nonlethal and humane research, and widespread educational, environmental and observation programs relating to free-roaming cetaceans internationally. Our ultimate objective is the global acceptance of peaceful coexistence and mutual enrichment for both humans and cetaceans.

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The link to the White House letter is on CSI's website www.csiwhalesalive.org.

To view four clips go to www.youtube.com and search for "President Obama Whales". *Keep Your Promise to the Whales* shares the absolute beauty of three species. *Whales Need Us Salt* (Parts 1-3) tells the story of one humpback (Salt - The Grand Dame of Stellwagen Bank).

What about CITES 2010?

By Vanesa Tossenberger

The 15th Conference of the Parties (CoP15) of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the body that regulates international trade in wildlife, was held from the 13th to the 25th of March, in Doha, Qatar. Foundation Cethus, with CSI's support, was represented by Vanesa Tossenberger as advisor of the Argentinean delegation.



Photo by Vanesa Tossenberger

Delegates attending CoP15 were received by the booming city of Doha, a city highly respectful of its religion. Tradition is felt wherever you go, the smells, custom, and behavior. It is an interesting place to see and experience at least once in your life. During this meeting, cetaceans were present with regards to a decision which reaffirmed that the periodic review of the species of great whales should not be implemented until the International Whaling Commission's (IWC) moratorium ends, decision that had been adopted in the last CoP14 in 2007 in The Hague, Netherlands. For the Doha CoP, the Secretariat proposed the elimination of this decision. This led to a discussion which was very controversial; countries such as Norway, Iceland and others supported the suggestion of the Secretariat. The adoption of this suggestion would have been a problem for the whales because after a periodic review countries could have begun to propose a downlisting of whale species at CITES. Countries such as Argentina, Chile, Brazil from our region, as well as USA, Mexico, and Israel argued strongly for the need of the permanence of this decision.

After a very long debate, and being unable to reach a consensus, a vote was carried out which required for its approval (or deleting of the 2007 decision in this case) the 2/3 of the votes. The result was 24 countries in favor, 46 against and 9 abstentions. So, as it did not get the 2/3 necessary, fortunately meaning that the “**Decision remains**”.

If we analyze the overall meeting, it was not a good one for

the species in general. Even when a lot of effort was made for the listing of species in need of help, such as the polar bear and some sharks, they couldn't win the uplisting. And the sense was that not much was gained this year to help several wild species.

Next CoP will be held in 2013 in Thailand again. The hope now is for it to be a better meeting for the conservation of the species.



Photo by Vanesa Tossenberger



Photo by Vanesa Tossenberger

Legislative Update: Senator Kerry Introduces New Whale Protection Bill

By Dr. Robbins Barstow, CSI Director Emeritus



On March 15, 2010, Senator John Kerry, Democrat, from Massachusetts, introduced in the United States Senate a new bill to renew the United States' commitment to whale conservation. **S.3116** entitled “**International Whale Conservation and Protection Act of 2010**” has as one of its primary purposes “to ensure that the IWC [International Whaling Commission] commercial whaling

ban is not lifted or weakened and that any existing commercial whaling, along with lethal scientific or illegal whaling, is ended.” The bill has been referred to the Senate Committee on Commerce, Science, and Transportation, where an early public hearing on its far-reaching provisions is hoped for.

S.3116 is a slightly revised companion bill to H.R. 2455, “The International Whale Conservation and Protection Act of 2009,” which was introduced in the U.S. House of Representatives by Rep. Eni Faleomavaega, Democrat, from American Samoa, on May 18, 2009, and referred to the House Subcommittee on Insu-

lar Affairs, Oceans and Wildlife. As of March 30, 2010, the House bill had gained 43 co-sponsors.

Both bills assert as a “Finding” of the Congress that: “*The United States has been a world leader in whale conservation and protection, particularly through the International Whaling Commission, and must reassert global leadership in improving and strengthening whale conservation to ensure that commercial, scientific, or any other type of lethal whaling for nonaboriginal subsistence purposes does not occur.*”

As reported elsewhere in this issue of “*Whales Alive!*” a group of countries (including the United States) is currently working to come up with a “deal” that could legalize commercial whale killing for the first time since the IWC moratorium began in 1986. This must not be allowed to happen!

Despite his pre-election promises to protect whales, President Obama's Administration is pushing a proposal that would officially authorize commercial coastal whaling by Japan, at the 2010 Annual Meeting of the IWC this June in Morocco. The IWC is a leaking dam, but it is all we have. Any moratorium suspension would break it. Killing whales for profit, however limited, would become the norm for generations to come and open the flood gates for other nations to resume killing whales for money. America and the world's people don't want whales to be killed.

There are two actions which you can take today to stop the sellout and help save the whales:

(1) Urge your Senator and Representative to sign on as co-sponsors of the Senate (S.3116) and House (H.R. 2455) International Whale Conservation and Protection bills.

(2) Telephone the White House Comment Line: (202-456-1111) and tell a staff member to ask President Obama to step in and reaffirm for the U.S. that any moves at the IWC to suspend any part of the moratorium are “unacceptable.”

Cetacean News

Compiled by William Rossiter

Julio Reyes has written a book about the cetaceans of Peru for all our Spanish readers: *Ballenas, delfines y otros cetáceos de Perú: Una fuente de información* is indeed a font of information, including the beaked whale species Julio helped to discover. CSI will be pleased to send a free copy as a download upon request. You’ll recall that the ACOREMA educational center in Pisco Peru was destroyed by an earthquake two years ago. The city is recovering, and the Areas Costeras y Recursos Marinos continues to reach the people to increase their understanding and respect for the nation’s marine treasures.

Sena Monacu Wazer in January wrote to CSI, saying: “Hi, My Name is Sena. I am 6. I love whales. Which chemicals are hurting the whales? Why can’t they see the nets? Are there boats hitting the whales? Are there many boats making sounds which make the whales go on the shore? Are there many whales close to shore? Thank you, Sena Monacu Wazer.”



Sena’s letter is a true inspiration for us, and we hope for you. She silences the presumption that children are only concerned with trivial things, and amplifies what many parents know: their children are much more aware of what’s happening around them that we are comfortable admitting to. As her mother says: “if we let children speak about important things, their vision is much clearer, and less biased than ours.”

This is not about imposing the world’s woes on children, but to acknowledge that if they are aware they should be allowed to express their concerns, and not made to feel those concerns are more trivial than watching TV. When children today ask “why?” we must at least help them to understand. Her generation will inherit the mess our generations are making. To be blunt, it’s so hard for responsible adults to understand the problems, much less fix them, that many people just change channels in denial. Trying to explain to a child helps us too, and should at least motivate us to try harder for solutions.

Over the phone and with a quiet, determined voice this most impressive little girl told me how she had read of the problems whales face; she wanted to help them. She asked for help to make a pamphlet or display she could use at the markets where her parents sold some of the produce from their Connecticut farm. She had already had plans for her table display. Six years old and she

wants to make a positive difference!

I asked her what caused her to have these concerns. She wrote: “I love whales. I read a story about a whale named Ibis who got trapped in a net and that made me very concerned. Then, I got so upset, and I wanted to help the whales. I like to read about whales, and find out how I can help them. I like to speak to people about whales and ask them to help too. Why would anybody want to hurt the whales? Whales are huge and they are the biggest things on Earth and I really want people to stop hurting them. I feel that whales are connected to people. Thank you for helping me.”

Sena’s parents told me she was home schooled, and had learned that whales become entangled in fishing gear from the 1990 book, *A True Whale Story*, by John Himmelman. Still available on Amazon for \$4.99 and readable online, the book is about Ibis, the young humpback whale that was rescued on Thanksgiving Day, 1984 by the good folks at the Provincetown Center for Coastal Studies, <http://coastalstudies.org/>. This was the beginning of the Center’s magnificent disentanglement team that has since rescued many marine animals, and by example and formal training has spread the very best techniques and equipment around the world. As in 1984 they stand ready to leave the turkeys in the oven and risk whatever it takes to free entangled marine animals.



Photo courtesy of Provincetown Center for Coastal Studies.
Taken under NOAA permit 932-1489.

So, what would you tell a young girl who wanted to convince local people to stop doing things that might eventually harm whales?

Tilikum killed Dawn Brancheau on February 24th. You could have read of the tragedy or seen it on TV almost anywhere in the world. The basic facts are that the 30 year-old orca had a history of human injury and death beginning at least in 1991, the trainer was young, extremely talented and devoted to the whales in her care, and SeaWorld's safety and response protocols didn't prevent her death.

Tilikum was about two when captured off Iceland in 1983. In 1991 he and two other orcas killed a person at Sealand, Victoria, British Columbia. SeaWorld bought Tilikum in 1992 as Sealand failed. He's been on display in Orlando, Florida ever since, with a string of "incidents" that included the death of David Duke, found draped over Tilikum's head as the park opened one morning in 1999. Duke had several lacerations and had drowned, but SeaWorld clung to the story that he had died of hypothermia. That's just one example of the awesome PR and legal response SeaWorld demonstrates whenever there is an "incident" at one of their three parks. SeaWorld depends upon the public perception that every creature they own is happy and controlled. Tilikum hasn't been either. SeaWorld's response has been that the show must go on.

CSI is grateful that Dawn Brancheau's family has requested all video of her death be sealed. But very little remained in public hands anyway, as SeaWorld confiscated all the evidence they could from the public unfortunate enough to have witnessed the after-show attack. SeaWorld suspended all orca shows for two whole days before resuming a modest schedule, with no in-water orca-trainer interactions planned for a while. But they are a big part of SeaWorld's attraction, and the executives feel the pain. What about the trainers? They are the very best among the large numbers of people who want to work with cetaceans. They've earned their right to do the orca shows, they're smart enough to know the dangers, and like fighter pilots they never quite believe they could die today.

When the Cleveland facility closed, the four orcas that usually commuted south for the winter instead were rented in 2006 to Loro Parque, Canary Islands. Loro Parque built a new orca enclosure and hoped to profit greatly, but unfortunately one trainer was seriously injured in 2007 and one was killed at the end of 2009. How many "incidents" have occurred? No one knows. SeaWorld has fought to keep most details they know of out of the public domain, but they don't know how many orcas have tried to cause harm, or let accidents happen, or simply went crazy from stress. No one knows what's on the mind of an intentionally deceptive orca, although the industry's fear of the "red eye" given by a really angry orca is as obvious as the whale can make it. Sometimes they give warning, sometimes not.

Tilikum may still be isolated almost all day from other orcas, with no trainer coming within ten feet (they used poles for any physical contact, like brushing his teeth...why do they have to brush his teeth?). Isolation may be the most severe form of punishment for this dominant, six-ton male, as it has been for others. Does anyone think it reduces his stress? Stress is the generic explanation for most "incidents", but unstressful captivity is an oxymoron.

But Tilikum is still an asset to SeaWorld, despite his rogue behavior. He's fathered 13 calves, each worth \$10 million if they were for sale, and he's good for a few more. SeaWorld has 26 of

the 42 captive orcas currently alive, swimming their shortened lives away in tanks that, to our scale, are closets without doors. No longer capable of a life in the wild, living with others born in captivity or captured from separate oceans, without clans or dialects or culture, they are not "real" orcas. Everything SeaWorld allows us to perceive about them is a facade. All orcas at SeaWorld are called Shamu, part of the facade. But while everyone at SeaWorld knows the ones to watch out for are Kandu, Kasatka, Kianu, Orkid, Orky, Taku, and Tilikum, they should be most concerned for the orcas they don't know are about crack under the stress.

They all are property, the core of SeaWorld's profits, and the key to SeaWorld's survival.

In 2009 Blackstone Group LP bought 10 entertainment parks for \$2.7 billion from Anheuser-Busch InBev NV in one of the largest private-equity deals of 2009. Before that Harcourt and Brace owned SeaWorld. Orcas fueled all sales, headlining acts that drew 12.2 million paying visitors at SeaWorld parks in Orlando, San Diego and San Antonio by 2009.

Believe it or not, this article is not about bashing SeaWorld. Its ultimate purpose is to question why anyone would want to buy tickets to see the show. We know the answers, and they sadden us greatly. You'll find most in the new book *Fear of the Animal Planet*, by Jason Hribal, to be published this fall by AK Press / CounterPunch Books.

The Charles W. Morgan may sail again! The last surviving wooden whaling ship from the great days of sail has been a core exhibit at Connecticut's Mystic Seaport, where the ambitious decision was made in 2008 not to just restore the vessel but to bring her back to full sailing condition for a ceremonial voyage in 2012 or 2013! About half of the estimated \$8 million cost of the restoration has been raised, which leaves the sailing date flexible, but everyone who values history should appreciate the opportunity to be a part of the history-making voyage by contributing to its success.



Photo courtesy of Mystic Seaport.

The Morgan will sail to New London, CT, Newport, R.I., and its original home port of New Bedford, MA, before returning to Mystic, but what gets us most excited is the vision of the Morgan under full sail on Stellwagen Bank, the almost mythic haven for whales and dolphins that seem to like watching whale watchers! Imagine you're on a boat watching from a distance, as many will. We expect you'll hear authentic sea shanties and whaling songs

booming from the Morgan. That will be the unmistakable voice of Don Sineti, CSI ex-president and current expert authority on sea shanties and whaling history at the Mystic Seaport. The symbolism of the ancient whaler and her historic songs moving peacefully amidst the friendly humpbacks is unbeatable, something to look forward to, a truly historic moment.



Photo courtesy of The Day, Mystic.

Between her launching in 1841 out of New Bedford, MA, and retirement in 1921 the Morgan made 37 voyages. Commanded by five captains in her 80 year career her longest whaling voyage was four years and 11 months, while her shortest was eight and

one half months. After 20 years of display at South Dartmouth, MA she was brought to Mystic Seaport in 1941, and began a long career exhibiting the storied days of whaling under sail.

CSI's enthusiastic endorsement of the Morgan's planned voyage symbolizes our recognition of the significance of whaling to the history and development of the United States, echoing one of the reasons our Director Emeritus Dr. Robbins Barstow advocated for and in 1975 got the sperm whale designated as Connecticut's official state animal. We are acutely aware that, during the centuries that ended with the Morgan's retirement, species and populations were nearly wiped out as the sailing whalers cleared the waters of whales near their home ports and reached around continents on extremely long, slow voyages to the limits of endurance and sensibilities.

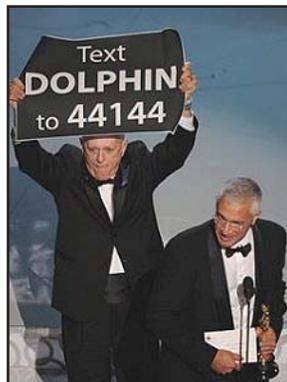
CSI recognizes that each whale killed then and now suffered greatly, and expedient, efficient killing was as close as whaling got, or gets, to humane concern for suffering. We can't change history, but if we don't learn from it we are doomed to repeat it. Of course you've heard that phrase before, perhaps so often its meaning has faded. The Morgan's lesson is that even the primitive technology of the 19th century could wipe out whales, modern technology can do it faster, and our society remains unable to perceive the inevitable and respond in time. Because there is no justification for commercial whale killing today, the Morgan's 21st century voyage symbolizes that modern whaling must "STOP", the last word of Don Sineti's most famous whale song.

The Cove Wins Academy Award

By William Rossiter

THE COVE won the Best Documentary Oscar! Congratulations to activist-director Louie Psihoyos, the entire cast and crew, but most of all to the reluctant star, Ric O'Barry. Ric's purpose from Day One with this project has been to make the people of Japan aware of and question the dolphin slaughters at Taiji. He and a handful of extraordinary people are continuing to do their very best to end Japan's slaughters at Taiji. There are many others working to stop all of Japan's yearly slaughter of around 20,000 whales, dolphins and porpoises, and still more working through CITES to stop Japan's commercial decimation of tuna, sharks, and much else. And then there's the IWC...it's always about Japan. Not the people. Just the government and the killers.

But this was Ric's moment. None of us have ever seen him in a tuxedo, but everyone who knows him well noticed that even climbing to the Oscar stage he didn't smile. He was focused, as always, on the goal. He knew the Oscars attracted a large Japanese TV audience, and that the Oscar producers were paranoid about political statements. He had just a moment, and this is what he did with it:



The billions of people who watched the moment with me on the TV had just a brief glimpse before the camera jerked away from Director Louie Psihoyos just as he was to begin his acceptance speech. Nevertheless, the image of Ric O'Barry holding his cryptic sign went viral on YouTube immediately and the Internet service his sign refers to surged with supportive responses.

Louie Psihoyos wasn't given a chance to express his heartfelt purpose to all those people, so the best we can do is share his words with you:

"We made this film to give the oceans a voice.

"We told the story of *The Cove* because we witnessed a crime. Not just a crime against nature, but a crime against humanity.

"We made this movie because through plundering, pollution and acidification from burning fossil fuels, ALL ocean life is in peril, from the great whales to plankton which, incidentally, is responsible for half the oxygen in this theater.

"Thank you, Black OPS Team for risking your lives in Japan - and thank you Academy for shining the brightest lights in the world on THE COVE...

"Japan, please see this movie! Domo Arigato."

When was the last time you heard so many "we's", especially in so few words? When before has someone accepting an Oscar been more selfless and more dedicated to the bigger picture?

The Cove won amidst a superb field of contenders, each over-

flowing with purpose, but unlikely to be seen by enough people to get their message out. In fact, until *The Cove* spreads to regular theater chains this summer relatively few people will have seen it. Much has been written about *The Cove* in glitzy reviews that parroted each other but missed the movie's essential purpose, which may come true with the limited distribution of the movie in Japan.

It's all about getting this image in the mind of the Japanese public, to cause questions: Don't these dolphins suffer terribly as they become aware they will be killed, and swim for hours through the blood of their families? Why must these dolphins be killed at all? If their meat contains mercury and other contaminants, why should they be forced on school children? If the dolphins are contaminated what about the fish? Why must a small town's demands cause Japan to suffer international condemnation and embarrassment? What is our government doing about this?



Getty Images. James Whitlow Delano/Agentur Focus

The Cove is just a part of the Taiji campaign, which is just a part of what Ric's been about for the 30 years I've known him, to stop dolphin slaughters, captures and trafficking. The shallow media hyped his past with *Flipper*; he's long past achieving redemption. At 70 he continues to be one of the very few to put his life in jeopardy, time and again. Sometimes, when there's some chance at comfort, his incredibly supportive wife, Helene, and their daughter Mai Li travel with him. But too often not, as he rescues dolphins left stranded in a mountainside tank by a corrupt facility in Venezuela, or tries to penetrate the violent veil surrounding the dolphin traders in Solomon Islanders, or helps like-minded organizations and displays in Europe. In between requests to ap-

Screening of *The Cove* in New York

The New York Whale and Dolphin Action League is presenting a screening of the Oscar-winning docu-thriller, *THE COVE*, on April 30, at 6:30 pm at Sarah Lawrence College, Bronxville, NY. Visit <http://www.ny4whales.org/> for more info.

pear at *The Cove* showings have kept him moving for months, whatever the cause asked of him.

Ric's all alone at the top as the very best communicator for the cause. Ric's gift with sound bites is every newsperson's dream. Give him 20 seconds and he'll give you a headline. Here he is with the horde of media that returned to Taiji after *The Cove* release, hoping to report blood in the water. No bottlenose dolphins were slaughtered for those short weeks, but with great secrecy small whales were killed. When the attention died down more dolphins died as well.



Photo from AP

Here Ric is staging his solemn walk through the 58th Plenary Session of the International Whaling Commission in St. Kitts. The chest TV showed a continuous loop of the Taiji slaughter. He's produced "Welcome to Taiji" DVDs and several other resources, and continues as the frontline spokesperson of <http://SaveJapanDolphins.org/>.



Photo courtesy of Deborah Adams, LegaSeas.org

He will work with anyone who will help, with stars or people who wanna be, anywhere he can get to. His life is modest and

directed. He's irreplaceable and unequalled. If you want to help keep dolphins and whales from being slaughtered, support, watch

and learn from the master.

Right Whales and Navy SONAR

By William Rossiter

The second-ever recorded birth of a North Atlantic right whale was documented in March, near the boundaries of the U.S. Navy's Undersea Warfare Training Range (USWTR). Celebrated in its own right as the species grows slowly above 400 surviving individuals, the birth highlighted the vulnerability of marine life to the activity associated with the sonar range, a key argument in the January lawsuit to stop the USWTR, with CSI as one of 14 co-plaintiffs. The lawsuit argues that the Navy approved construction of the range without having determined if it would pose threats to right whales and other rare species. NMFS ignored considerable criticism from scientists, agencies and organizations to authorize the range, and the Navy simply began before all requirements were met.



Over the 15 years CSI has been participating in ocean noise issues the process to approve Navy noise-making applications had become a shadow of the law, truly a rubber stamp operation for NMFS by contracted writers of official documents that were interchangeable but for the names and places. Thoughtful, expert response comments were lumped with simple statements by keywords, then categorized and responded to with generic put-downs, often ignoring specifics pointing out flaws suggesting realistic mitigations. Somewhat similar applications were lumped as "programmatic", one size fits all. We've tried to forget all the hours we've wasted trying to contribute common sense and science to the process, but if memory serves only one flaw was so inescapable it couldn't be ignored or hidden: The first edition USWTR Environmental Impact Statement simply forgot right whales. That EIS vanished, but rose from the ashes four years later as the recent application for the USWTR, still so bad it is being tested in court. Ironically, the recent version repeats several times that no right whales will be as near to the range as where the calf was born, and the birth was only documented because scientists are making more effort to survey those waters because of the USWTR.

By the end of 2009 NMFS had issued permits to allow Navy sonar training along the Atlantic coast, Gulf of Mexico, southern California, and around Hawaii through 2013. The Navy agrees about two million instances of harassment and hearing loss to marine mammals will occur every year from these activities. The rubber stamp seemed alive and well.

But the winds may be changing! As the new administration took office in January 2009, NOAA announced that it would conduct a comprehensive review of measures to reduce sonar's harm to marine mammals. The review would define and assess sensitive habitats or "hotspots" where mid-frequency sonar could endanger cetaceans, and to consider what additional measures might be required to protect marine mammals. Expert panels have agreed that avoidance of important habitat is the most effective means of reducing sonar's impacts on marine mammals. If it meets the goals the review may affect Navy requests for the Pacific Northwest, the Gulf of Alaska, and the Marianas Islands.

The Navy, meanwhile, is clearly empowered by the Supreme Court ruling that allows them anything they label "national security". They concede that sonar harms cetaceans, because the experts say so, but haven't the courage to state clearly that such collateral damage should be acceptable for "national security." The Navy is well served by the lack of hard, dead evidence; there have been precious few cetaceans coming ashore with irrefutable acoustical trauma, and the sea conveniently disposes of whatever damage is done. "Out of sight, out of mind" is a descriptive motto for efforts to monitor impacts from sonar training to marine life almost anywhere. Look at the Marianas Islands with Google Earth; what are the chances some sonar-debilitated dolphin will wash ashore there, and be found by acoustic-trauma response teams within the few hours before the evidence rots away? The Navy is betting there will be no more events like Bahamas in 2000. What will the Navy's response be if another mixed-species, mass stranding occurs in conjunction with some sonar activity, and the investigation concludes that sonars are to blame? They are working on mitigations, but will not be told what to do. The immediate question, however, is whether the Navy will alter any of their plans now that right whales have proved they need the waters they will share with the USWTR.

Overall, human noise in the ocean just keeps growing! Based on hard evidence two trends are clear: First, anthropogenic acoustical impacts can cause harm across whole populations of cetaceans and other marine life, with the potential for economic hardship on human societies; and second, technology remains way ahead of our ability to anticipate much less moderate the harm it can do. Over the past 15 years much more attention is being paid to ocean noise issues, but the din keeps increasing faster than solutions.

Human nature dictates that many people will be tuning out

the din. But because *Whales Alive!* readers are more likely to remain tuned in we're pleased to pass along a major source for just about everything you want to know, or should know, about ocean noise issues.

The 4th annual Acoustic Ecology Institute review of ocean noise science, policy, and legal developments has just been published. With gratitude for the boundless energy and focus of Jim Cummings, AEI's creator, CSI urges you to dig into the AEI news blog post, with embedded version of the report, at: <http://aeinews.org/archives/826>. The AEI report includes coverage of two ongoing issues, seismic surveys and naval active sonars, with particular focus on the Navy's continuing roll-out of Environmental Impact Statements for its offshore training ranges and the environmental concerns over Columbia University's seismic research. This year's report introduces a new feature: AEI Resource Collections on two topics that will be central to ocean acoustics policy

and research in the coming years, shipping noise and autonomous recording platforms.

NASNet, the Underwater Navigation, Positioning and Data Communication System, is an excellent example of noise technology gone amok. Potential profits motivate the effort to fill 100 square kilometer units of ocean with continual noise from 36 transducers, transmitting signals in an 8.5-11.5 kHz band over the four year life of the batteries. Receivers on surface vessels could compute exact positions based on the sources, but GPS serves that purpose, so the apparent marketable advantage is for positioning Remotely Operated Vehicles, Autonomous Underwater Vehicles and positioning of underwater structures. Guess who the marketed users are: seismic and hydrographic surveys, drilling operations, subsea construction operations, pipeline inspection and maintenance ROV and AUV tracking, and data telemetry.

CSI's research funding in action: Brazil

Summarized by Gary Pontelandolfo

Luiz Cláudio Pinto de Sá Alves's work in Brazil is a superb combination of science, conservation, education, communication and career development; an excellent example of the people and projects CSI hopes to support with grants and other assistance, and of the major obstacle facing most new marine mammal scientists today, money. With a time-limited stipend from his government Luiz must complete his Ph.D., but charity must support his required field work. Thankfully, the dollar still goes a long way on the Amazon, but there are only a handful of Non-Governmental Organizations like CSI to respond to requests from an increasing field of young aquatic mammal researchers.

Luiz received his first grant from CSI in 2005. You'll see in our digest, below, the future hoped for by many new marine mammal scientists, to develop a productive "niche" that may sustain one's lifetime career development. Whether or not Luiz is still working to help the boto in 20-30 years he always will be identified with them.

*The following description of his findings is culled from his report "The growth of a new tourism industry based on the Amazon boto (*Inia geoffrensis*) in the Amazonas State, Brazil", co-authored with Artur Andriolo, Mark B. Orams and Alexandre F. Azevedo. In addition to funding received from CSI, this work was also sponsored by Duke University/Oak Foundation and Instituto Aqualie.*

Since 1998, locals have regularly interacted with boto from Restaurante Boto Cor-de-Rosa (Pink Boto Restaurant), a small floating restaurant at Novo Airão. This activity has grown to become an important tourism attraction and probably the most significant economic activity for the small town and its inhabitants. Thus, this tourism activity has been the catalyst for economic development and has helped lift the town and its people from poverty.

The attraction of the provisioning (feeding), swimming and other interaction with the boto has also become the main and most

profitable activity for the restaurant (portions of fish costs around US\$10), which does not serve meals anymore. The sale of alcohol (mainly beer) is the other major income earner for the restaurant owners. In particular, on weekends, groups of friends spend many hours swimming with the boto and drinking beer.



The fish provided to the dolphins is not hygienically handled and has a high risk of carrying increased levels of bacteria and viruses potentially harmful to the dolphins. It is put inside plastic bags to be sold to the tourists, which frequently use it as bait to attract the botos for close proximity, putting the animals in danger, since they sometimes grab the bags and could ingest them. The fish is generally sold still frozen. Some people put the fish on the water for some seconds before giving it to the animals, but in most situations fish is still frozen when it is given to the boto.

Interactions between local residents or visitors from nearby cities and the boto also frequently occur away from the Restaurante Boto Cor-de-Rosa. These incidents take place on the river beach, close to the floating restaurant. The dolphins are attracted by splashing the water with the hands and offering fish. On these occasions, the feeding and interactions are not supervised at all and incidents

resulting in injury to the humans are frequently observed. In particular, many people were observed to be bitten by dolphins while feeding them, with one individual retaliating by punching the dolphin with a closed fist. Local people informed researchers of a case where a person feeding and harassing the dolphins was rammed in the chest by a dolphin and, as a consequence, this person was taken to the hospital in Manaus for treatment.

On Tuesday mornings each week, the interaction activities at the Boto Cor-de-Rosa restaurant are reserved for the patrons of a cruise ship, the Iberostar Grand Amazon. Tourists from the ship are divided into groups of 25 or less and are ferried to the floating restaurant on small motor boats. They are given a brief lecture inside the restaurant, after which the group is directed to the rear of the restaurant in order to feed the dolphins. During all interaction sessions (generally less than 20 minutes in duration), tourists are supervised by a guide who gives instructions regarding how to behave and how to feed the dolphins. The presence of the guide results in a decrease in the number of the undesirable interactions, including bites. Each tourist receives only two or three pieces of fish, and generally only two people feed at the same time. Some tourists are permitted to enter the water with the animals, but always under supervision of the guide. Up to five groups of tourists from the ship visit the restaurant and feed the dolphins each Tuesday morning.



Some education regarding the boto has been undertaken in the Novo Airão area, and these activities may be responsible for helping to change the attitudes of locals towards the dolphins. For example, children from two local schools (6-13 years of age) participated in an interaction session with the boto at the Restaurante Boto Cor-de-Rosa. The children were given a talk by the owner of the restaurant and showed intense interest in the dolphins. Many children expressed fear about the boto; much of this fear appeared related to local myths. Questions such as: “Are the boto evil animals?” and “Do the boto take us to the bottom of the river?” are derived from local mythology and superstitions. After the lesson, children were taken to feed and interact with the animals. Initially the children stayed distant, but after a short period, they started feeding and touching the boto, resulting in the childrens’ expression of great happiness. Interviews conducted with some of the

children and with their teachers after the session revealed the significance of the experience with regard to participants’ attitudes and views toward the boto. One local teacher, when asked about the positive points of this activity, said: “It creates consciousness that the superstitions are lies.” One eight-year-old child commented: “I want the boto to live forever, and don’t want my father to kill them!”

A second program where boto are being provisioned as a tourism attraction occurs at the Bototerapia Ariau Towers, a commercial tourism facility based on a floating structure. It is located near the Negro River, in a small tributary named Ariau, and is approximately 20 minutes away from the Ariau Amazon Towers Hotel accommodation and main facilities.

The development of this interaction with the boto differs in many aspects from the Novo Airão case. Its beginning was not opportunistic as in Novo Airão; rather it was a deliberate attempt to create an opportunity for tourists to interact with boto after the popularity of the Novo Airão case was observed. Many boto already frequented the area before the beginning of these habituation attempts. Today, according to Ariau’s staff, more than 25 individually identifiable dolphins are known to frequent the area and to accept fish hand-outs from staff and resort guests.

Over time, competition amongst the provisioned botos for access to the fish at both the Novo Airão and Ariau locations has resulted in increased aggression, both between dolphins and toward the tourists. Boto pushing and shoving, leaping and biting of both one another and tourists are now commonplace. This kind of escalation of dolphins’ behavior from habituation to increased confidence, assertiveness, “pushiness” and potential eventual aggression have been observed in other studies.

Two other sites where interactions between boto and tourists occur are located on tributaries of the Negro River: at the Acajatuba River, which started its activities in 2006; and at the Tarumã-Mirim River, which started its activities in the beginning of 2009. Both of these are deliberate attempts to create interaction opportunities for tourists with boto after the popularity of the previous cases were observed and, like the previous cases, there is no strict regulation of the activities. These activities now provide the main income for the owners and their families, as in the Novo Airão case.

When comparing the four sites, it is easy to note a substantial alteration of the botos’ behavior within time. Based on preliminary observations, it appears that begging for food, jumping to catch food and loss of precaution for humans (including touching and being touched) are good indicators of behavior alteration due to this kind of activity. Those behaviors are frequently observed all day long at Novo Airão, which started its activities more than 10 years ago, showing the highest degree of alteration when compared to natural populations, and are rarely observed at Tarumã-Mirim, which started its activities only months ago. In the other two places, intermediate stages of behavior alteration can be observed.

It is important to note that while this kind of tourism has significant risks, potential benefits also exist. Humans enjoy interacting with dolphins and whales and can obtain psychological benefits from it. There is evidence from other locations that these kinds of interactions, when carefully managed and combined with effective education, can prompt people to become more environ-

mentally responsible. This new boto-based tourism in the Amazon region is poised at an important threshold. If managed carefully, it could bring important benefits to the local region and reduce risks to an appropriate minimal level. If not, a tragedy is imminent.

In addition to the scientific paper quoted from above and at least two others to come, Luiz's research group has presented data from their study at four international events as well as at universities and in local journals. Their work has involved many students and researchers.

Data acquired during the first field stage study and a second (funded by the Oak Foundation) are being used to work with Ibama (the Brazilian government's environmental agency) to create a complete regulatory protocol that will include the carrying capacity, environmental education activities and codes of conduct for the tourists and staff of the Boto Cor-de-Rosa floating restaurant. These regulations will be permanently applied, and must be adapted and used in all other existing and future cases. This is an essential step in achieving the desired regulation of this growing activity.

The research group is also submitting a project to a Brazilian NGO for a future permanent environmental education presence at the Boto Cor-de-Rosa floating restaurant, with two interns constantly at the site presenting lectures and monitoring all the interactions.

As part of their work, Luiz and his fellow researchers have

interviewed fishermen at Novo Airão about their actions and attitudes toward the boto they encounter. The following report is taken from a presentation made last October at the 18th Biennial Conference on the Biology of Marine Mammals in Quebec City.

Almost all the local fishermen admitted to having conflicts with boto as a consequence of damage they cause to their fishing gear, and many admitted to eating boto meat, but all denied that hunting of boto (which is illegal) occurred in the region. All who indicated that they have accidentally captured boto in their nets stated that they set them free if still alive and do not deliberately try to kill or harm the animals. Most fishermen approve of the presence of tourists in the town, and all felt that boto-based tourism has resulted in important benefits. Despite continued conflict between fishermen and the boto, the fishermen have come to value the boto as a tourism attraction and economic resource for the community.

Luiz is now expanding his work to protect the boto from illegal killings, with plans to embark on a 34-day boat-based study of a 652 km stretch of the Solimões River. The general objective of the study is to describe and evaluate the frequency of river dolphins illegally killed and correlating this to the number of river dolphins in the area and its level of urbanization. CSI has recently received a grant proposal from Luiz for this study, and we look forward to funding it and continuing our fruitful relationship.

Taiwan's Critically Endangered Pink Dolphins in 2010: new short film, international petition and fundraising appeal now online

By Christina MacFarquhar

In the shallow, coastal waters of western Taiwan, a population of pink Indo-Pacific humpback dolphins was discovered by scientists for the first time in 2002. The researchers of FormosaCetus Research and Conservation Group soon found that the population was small, distinct from other nearby populations, and threatened by numerous anthropogenic activities including entanglement in fishing nets, underwater noise, toxic pollution running off the heavily industrialized west coast, land reclamation, and the damming and diversion of freshwater flowing into estuaries. The population has now been listed as critically endangered (<http://www.iucnredlist.org/apps/redlist/details/133710/0>) by the International Union for Conservation of Nature (IUCN).

After connecting with FormosaCetus and finding out about the dolphins in 2006, six Taiwanese non-governmental organizations starting pooling their resources and established the Matsu's Fish Conservation Union (MFCU), adopting the local name for the dolphins, which are linked to the sea goddess Matsu according to folklore. Since then, the groups have built up a substantial long-term campaign, lobbying the government for effective conservation action, holding demonstrations and press conferences, running volunteer interpretation courses and educational activities, and attending environmental impact assessments up and down

the west coast for the numerous industrial projects that are still planned for the area.



photo by: Shih Chu Yang
FormosaCetus Research & Conservation Group

Sousa swimming off the western Taiwan coast.

They have also been linking up with the international community. For example, in 2008 a team of international cetacean scientists formed the Eastern Taiwan Strait Sousa Technical Advi-

sory Working Group (ETSSTAWG), and MFCU has consulted the working group on numerous issues relating to anthropogenic impacts on the dolphins. And in early 2009, Cetacean Society International and other groups and individuals around the world joined MFCU in a successful campaign to prevent the U.S. research vessel Marcus G. Langseth from carrying out a marine seismic survey within the dolphins' narrow, restricted range.

A new short (8.5-minute) film now available online presents a concise overview of the plight of the dolphins and what is being done to improve their situation. This can be accessed at <http://www.youtube.com/watch?v=ZPhrJ8HRZVc>.

MFCU has just launched a new international petition, which

can be read and signed at the Care2 petition website (<http://www.thepetitionsite.com/1/SOS-Taiwan>) or the MFCU English blog (<http://taiwansousa.blogspot.com>). The groups are also appealing for donations to support their lobbying and awareness-raising activities and the Taiwan Pink Dolphin Monitoring Project. Their 2010 fundraising proposals are online and can be accessed here: (http://en.wildatheart.org.tw/archives/donate_to_support_wild_and_our_sister_groups_in_our_sos_save_the_sousa_campaign.html)

The proposals provide details about the dolphins and MFCU's efforts, so they may be worth reading even for those who are not looking to donate.

Shootings, Toxins, and Reduced Prey, Oh My! The Saga of Pseudorca

By Patricia Sullivan

Add protection of the false killer whale *Pseudorca crassidens* to the long list of thorny and tangled species protection and conservation issues in Hawai'i. But first, consider the magnitude of the Pacific's resources and global impacts to humanity and environment. "The Pacific contains the largest and most diverse coral reef ecosystems, produces two-thirds of the world's tuna, extends over almost half of the globe, and has major impacts on the world's climate" (Kitty M. Simonds, 2007, Western Pacific Regional Management Fishery Council).

Pseudorca crassidens, or false killer whales, have the smallest population size of any toothed whale or dolphin in Hawaiian waters. They are open-ocean dolphins who cooperatively hunt, share their prey with each other, and sometimes even share their fish prey with human swimmers and people in boats. They are known to take hooked fish off lines, and this places them in good company with the countless species competing with humans (and other predators) for fish.

In the offshore longline fishery in Hawai'i, *Pseudorca* are killed or seriously injured at rates which the population cannot sustain, and are therefore in peril. They are found in both near- and off-shore Hawaiian waters, and more is known about *Pseudorca* in Hawai'i than anywhere else in the world due to a small group of dedicated scientists and researchers including Cascadia Research's Dr. Robin Baird. *Pseudorca* found near-shore around the main Hawaiian Islands number only about 120 to 160 individuals, are long-term residents, and are genetically isolated from *Pseudorca* elsewhere. There are an estimated 484 in the off-shore population in Hawaiian waters.

In September 2009 the Natural Resources Defense Council (NRDC) petitioned the Obama administration to list the Hawaiian population of false killer whale as an endangered species, and designate critical habitat to ensure recovery under the ESA.

In February 2009, a NMFS PIRO Take Reduction Team (TRT) was assembled to address ways to reduce bycatch. In Robins Baird's presentation at the TRT, he emphasized the gravity of the issues: "All available lines of evidence indicate that there has been a large-scale decline in the abundance of insular false killer whales in Hawai'i since the late 1980s, and new evidence reinforces the need for action to reduce sources of anthropogenic mortality for

this population". The newest evidence reported by Baird is a report of a tour vessel operator/naturalist who ran regular trips from Kaua'i to Ni'ihau from 1997 through 2008 and noted a decline in encounter rates of false killer whales from at least 1-2 times/month in the late 1990s to a few times per year in more recent years. He also noted that false killer whales were encountered more frequently than short-finned pilot whales, which is no longer the case.

Baird's appeal included the request to recognize both the insular and Palmyra stocks. "Given that the Potential Biological Removal (PBR) level for the insular population is less than one individual per year, even low levels of mortality in the longline fishery is likely to lead to a decline in the size of the insular population of false killer whales....inclusion of this population... is both warranted and critically important".

Baird also requested shortline and kaka line fisheries to be included in the scope of the TRT, as both may cause significant bycatch of false killer whales. Both of these fisheries use gear similar to longline fisheries, but lines are restricted to less than one nautical mile in length. Hawai'i deep-set and shallowest longline fisheries are currently included in the scope.

Kaka line or set line is described as gear with a mainline less than one nautical mile in length from which branch lines of baited hooks are attached. Line is set horizontally, similar to longline, on or near the bottom, or in shallow mid-water, with impacts to habitat and bycatch listed as "medium" (between low and high and where medium = overall mortality of incidentally caught species is generally low to moderate).

Baird clarified the significance of and justification for including the shortline and kaka line in the scope: "...multiple lines may be set at one time, thus the number of boats fishing this type of gear is not completely reflective of the amount of gear being used. The amount of shortline and kaka line gear used in Hawaiian waters is also likely underestimated based on currently available data from the State of Hawai'i, since some fishermen use multiple gear types simultaneously and do not declare their fishing to be either shortline or kaka line, even when such gear is being used. As well, current regulations do not prevent longline fishermen from setting longline gear that is less than one mile in length (such as kaka line) inside the longline exclusion zone around the main Hawai-

ian Islands, and this type of fishing effort would not be documented through the observer program or be counted towards longline effort”.

Although there are relatively few fishermen declaring use of kaka line or shortline gear, the interaction rates between false killer whales and these gear types are “likely higher than perceived”. Baird cited research such as Reeves et al. 2009, which indicates the magnitude of the decline in size of the population of false killer whales around the main Hawaiian Islands is so great that “bycatch in the offshore longline fisheries alone cannot be entirely responsible for the decline”.

So, what are the causes for the severe rate of decline in *Pseudorca* numbers? According to Sharon Young in *Comments of The HSUS on 90-day Finding on Petition to List False Killer Whales in Hawaii*, a variety of factors that require special management measures may be contributing to the peril faced by this population. Among them: (1) Potential for prey reductions as a result of heavy fishing effort for yellowfin and bigeye tuna; (2) Entanglement-related interactions with several commercial fisheries in Hawaii; (3) NMFS has not imposed any restrictive management measures to reduce mortality and serious injury resulting from fishery interactions with either longline or shortline fisheries; (4) Competition with fisheries for prey resources is relatively unaddressed; (5) Proposed restrictions in the quota for bigeye tuna will not apply to the shortline or kaka line fisheries; (6) Effort in the longline fishery may be shifted to areas that may pose higher risk to the population, possibly exacerbating false killer whale interactions with non-regulated fisheries; (and if those weren't enough); (7) Likelihood that individuals of this population have been illegally shot by local fishers”.

Are *Pseudorca* really being shot? It would appear so.

Young reports that “...retaliatory shooting of dolphins and other marine mammals seen depredating fisheries catches or target species is documented in a variety of fisheries (Read, 2008). Given the acknowledged depredation (NMFS 2009a), fishers may be retaliating out of the sight of observers and enforcement personnel and illegal killing may be contributing to the decline in false killer whale abundance (Baird, 2009)”.

Shooting of marine animals is all too common. Three Hawaiian monk seals were shot in 2009; two on Kauai, and one off Moloka'i. November 2009: Sacramento - A California sea lion was found shot in the face, but miraculously survived and has been rehabilitated at the Marine Mammal Center. February 2010: Six seals and sea lions were found shot dead on West Seattle, WA beaches. But deliberate shootings are not the final factor jeopardizing *Pseudorca*.

False killer whales mature in their teens, give birth to one calf every six or seven years, and may live into their sixties. Because

they are a long living species that has a limited reproductive capacity, they have many years to accumulate toxins. So, completing the list of threats to false killer whales, Sharon Young adds (8) “Bioaccumulation of persistent organic pollutants found in samples from individuals may also be contributing to their low abundance. Persistent organic pollutants can cause adverse effects on either the health of individuals or reproductive capacity of this population”.

Young cites inadequacies and failure of existing mechanisms to protect the false killer whale population, including “...State statutes that are limited in scope and do not provide for protection...constraints placed on the NMFS take reduction team that will prevent it from addressing several fisheries that interact with false killer whales”. Further, she notes that the TRT “does not have authority to address other anthropogenic impacts...and the Magnusson-Stevens Fishery Conservation and Management Act has not been able to constrain fisheries to an extent that prevents depletion of key forage fish required by false killer whales”.

Young's summary statement concludes that there is documentation that insular population of false killer whales in Hawaii is a distinct population segment, that the abundance estimate is perilously small, that it has declined in the face of poorly managed threats to its survival, and that existing management measures are insufficient to prevent further adverse impacts. “It is apparent that this species will benefit from the clearly warranted protection of the ESA. We strongly support listing the insular population of false killer whales in Hawaii as an endangered species”.

As with so many of our imperiled marine animals, are we considering too few protections, too late? Even if *Pseudorca* are listed as endangered, what practical and realistic safeguards will be provided? Already-listed threatened and endangered species continue toward extinction; *Mother Nature Network* has published an ominous infographic displaying the top 20 countries with the most endangered species. Not only does the US place second on the list with 1,203 endangered species (first place is Ecuador), Hawaii receives special recognition for having 71 extinct bird species since humans first arrived on the islands. According to the graphic, more than 10,000 species worldwide are in danger of becoming extinct, joining the list of about 900 species of plants and animals that have gone extinct in the last 500 years.

Mother Nature Network's infographic: <http://www.mnn.com/earth-matters/wilderness-resources/stories/infographic-top-20-countries-with-most-endangered-species>

Everything you ever wanted to know about *Pseudorca* at Cascadia Research website: <http://www.cascadiaresearch.org/>

Marine Mammal Center's immense rehabilitation efforts at <http://marinemammalcenter.org/>

Whale Watching

By William Rossiter

Are you ready to watch whales? The New England whale watch season opened in early April, as many familiar humpbacks returned to the legendary waters of Stellwagen Bank and Jeffrey's

Ledge, off Massachusetts. CSI's California and Hawaii members may gloat here, but many of CSI's landlocked members look forward to their first whale watch of the season as gardeners look for

hardy flowers and birders look for returning migrants; it's a rite of passage.

We dimly acknowledge other places to see whales; there are many and they are increasing, but there is no other place like Stellwagen Bank National Marine Sanctuary, where well-known humpback whales seem to like watching people. Some excel at motivating boatloads into cheering, foot-stomping exultations as the whales cavort alongside. No, not even Hawaii, Alaska, or California can compete here; Stellwagen's whales do it better.

CSI has never known a better way to experience Stellwagen's magic than the Dolphin Fleet out of Provincetown, Massachusetts; they remain the standard by which other whale watches should be measured. The Dolphin Fleet pioneered the concept of scientists explaining the natural history of local waters and its marine life encountered on whale watches. Other New England whale watches adopted similar links with scientists, all of whom used the daily trips to gather data that sums up to a superb 35 year archive that is so dense with data the future's big picture isn't in focus yet, and everywhere there are mysteries.



The Dolphin Fleet's Research and Education Program is directed by Dr. Carole Carlson, Research Associate at the College of the Atlantic, Adjunct Scientist at the Provincetown Center for Coastal Studies and CSI Scientific Advisor. As a member of the Whale Watch Subcommittee of the International Whaling Commission Dr. Carlson authored "A Review of Whale Watch Guidelines and Regulations around the World," available from the International Whaling Commission's website at: <http://www.iwcoffice.org/conservation/whalewatching.htm>.

She has organized and conducted several international whale watching workshops, and every year New England whale watch naturalists gather in Provincetown for a refresher. Carole loves to show people why she loves whales and the sea. She has a gift for transmitting that love. Her workshops promote responsible whale watching as a viable ecological and economical alternative to whaling, and the importance for local economic development. They stimulate the development of national regulations and guidelines throughout the world, whale watching education and scientific programs, programs for operators and tour guides; and 'floating classrooms' on local whale-watch vessels.

So what might you see on a whale watch?



Believe it or not, this is an inverted minke whale with distended throat, not some weird balloon floating in the water. This is the stuff memorable whalewatches are made of. Photographed by Mia Rossiter in 1979 in Newfoundland, the minke circled, accelerated and lunged, came to an abrupt stop, and rolled inverted. Gravity pulled tons of water through the whale's baleen plates, leaving hundreds of capelin to be swallowed. The rare surface view only hinted at the full maneuver, and what this whale does over and over to get nourishment. In 1979 scientists were only beginning to understand what happens to a whale's jaw during a lunge; they were far from explaining how the whale could survive the forces produced by the maneuver. But now they can, and as often with science, the reality is far more impressive than the fantasy.

Minke, finback and other rorqual whales routinely capture many thousands of relatively minuscule prey on a daily basis. This feeding system must be superb, because it supports the largest creature that has ever lived on Earth, the blue whale. The blue probably has the most powerful predatory attack that has ever existed, near the edge of structural failure.

"The Ultimate Mouthful: Lunge Feeding in Rorqual Whales" has just been published in *American Scientist*, March-April 2010, Volume 98, Number 2, available online at <http://www.americanscientist.org/>. Authored by Dr. J. A. Goldbogen, a Postdoctoral Research Fellow at Scripps Institution of Oceanography, this illuminating article describes the combined efforts of generations of scientists and, most impressively, explains with clear text and illustrations what's happening, for example, as this 50 foot finback lunges at the surface, in a photograph taken just north of Cape Cod in 1983.



Underwater the full-power acceleration and sudden stop would be even more dramatic, as the whale's jaw dropped almost 90 degrees to fill the buccal cavity lined by the now-inverted tongue all the way back to the whale's navel. We could show you some drawings to explain, but the article does it better. It also explains how muscles resist and manipulate the incoming water as the whale slows suddenly, to prevent the cavity from bursting. The cavity now contains 30-60 tons of water, far more than the whale weighs, and the whale resembles a tadpole. Of course this is unbelievable, so here's a photo of a giant blue tadpole as proof.

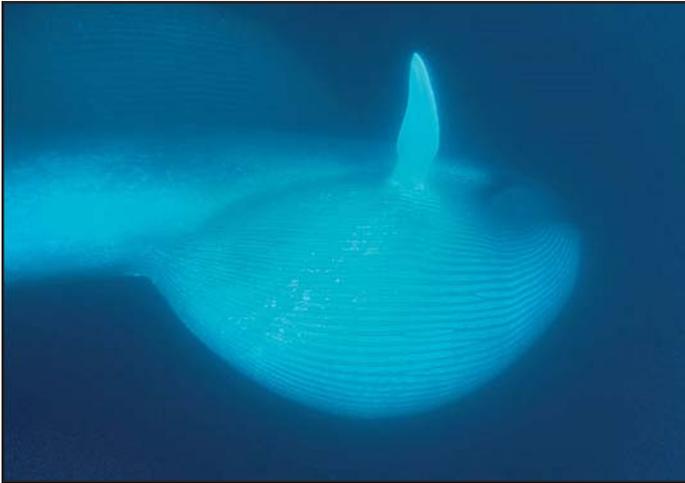


Photo courtesy of American Scientist, Randy Morse, GoldenStateImages.com

The whale now must strain all that water out without hurting anything, but the article leaves you in suspense for its sequel. The smart minke above used gravity and many whalewatches have many photos of the slow forward motion of humpbacks as water streams over their lower lips.

Humpbacks aren't rorquals, but they have lots of throat grooves, routinely lunge feed, and they don't mind showing boatloads of people how it's done. All these whales clear the water out in about a minute, as forward motion pushes against the throat

bulge, which doesn't explain everything that must happen to force so much water out in such a short time. Perhaps Goldbogen's sequel will verify that help comes from contracting muscles and maybe even engorging the inverted tongue with blood.



OK, so how do these whales find the dense patches of fish, crustaceans, or plankton in the utter black a hundred meters down? Perhaps they home in on scent or taste trails, or hear something. Either a 90 foot blue whale can sense its prey far enough away to alter course and accelerate, or maneuver and accelerate in a relatively small space, without scattering everything with massive tail strokes. Their prey is too small to be seen, and the whales are so large they can't even see their own tail, but some prey can see or feel the pressure of them coming, and move quickly, but to where? Many schooling fish react by bunching together, which is why the whole system works. Big whales can't catch individual fish, so why not whole schools at a time? Finback faces are asymmetrically lighter on the right, startlingly brilliant when seen underwater, and until we can ask them, the guess is that they use this to panic the little critters into more dense clouds. What we know is awesome. What we still don't know is more so.

CSI Membership Meeting April 26, 2010

The CSI Board of Directors is calling a meeting of the membership on Monday, April 26, 2010, at 7:00 p.m. at the home of Barbara Kilpatrick, 15 Wood Pond Road, West Hartford, CT. This will be accompanied by the regular monthly meeting of the officers and directors. The purpose of the membership meeting is to consider the election of Cherron Payne and Leesa Sklover-Filgate as Board of Directors Alternates.

Notes

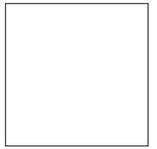
- **Individualized photographic certificates** are now available for new CSI members. If we know their favorite species of whale or dolphin we will use an appropriate and dramatic image as a background. These are particularly suited to gift memberships, so if you know of someone who might enjoy being part of CSI please let us know.

- Current and previous issues of *Whales Alive!* as well as our Photo Gallery and other features can be found on CSI's web site. Check it out at:

csiwhalesalive.org

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