

# COASTWATCH

Provincetown Center for Coastal Studies ■ Massachusetts ■ 2010 ■ Volume 34 Issue 2

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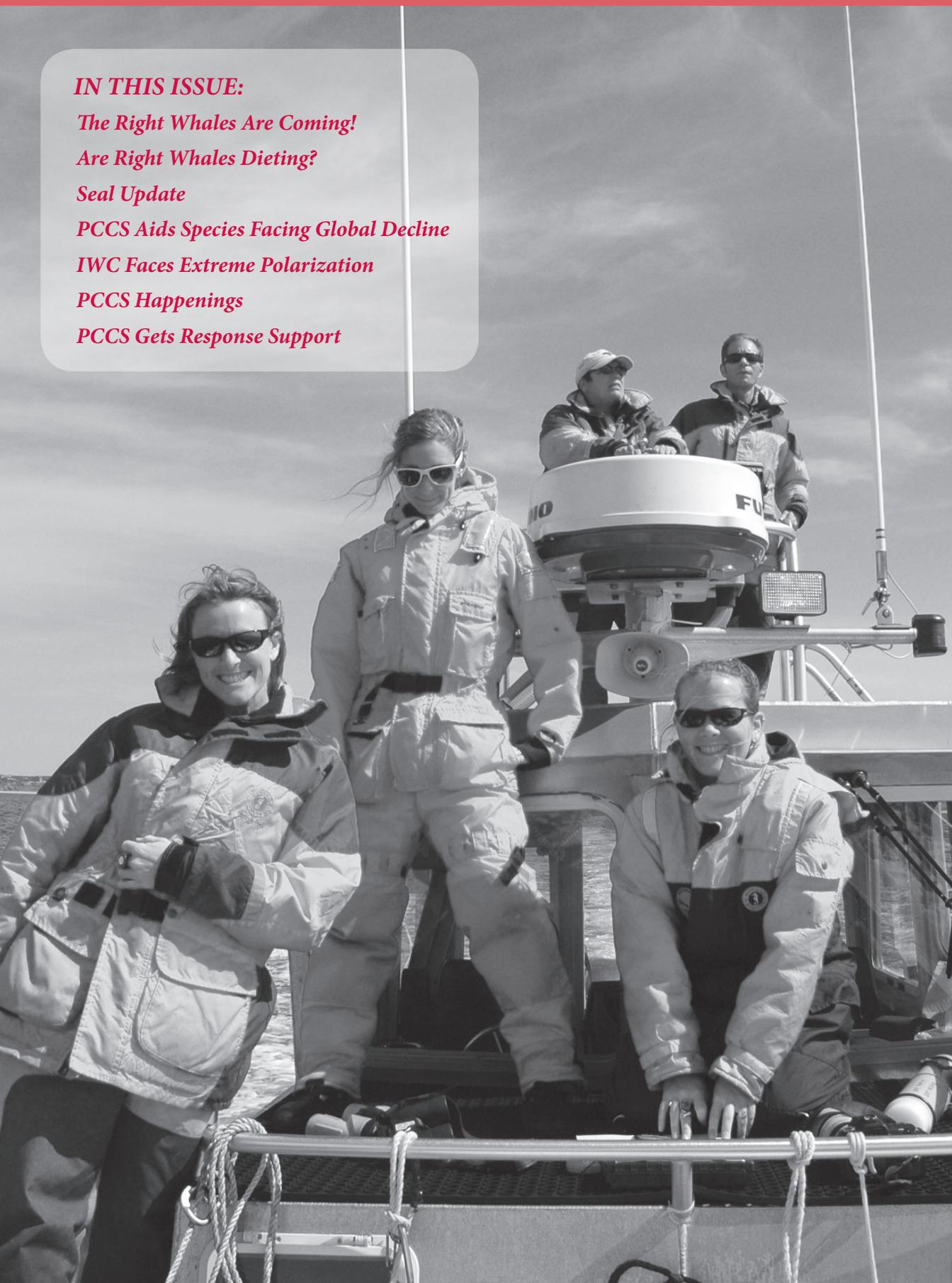
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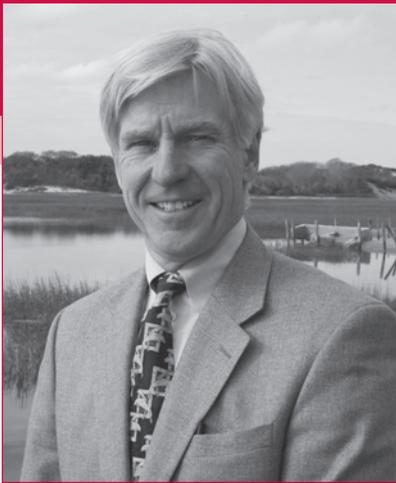
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## LETTER FROM THE PRESIDENT

**T**he Provincetown Center for Coastal Studies has been a valuable member of the Provincetown and wider coastal and ocean communities for over three decades. Wherever PCCS scientists, researchers and staff pursue answers to vital scientific questions, our commitment to education, outreach and high quality science is unwavering; and we were pleased to be able to undertake several new initiatives in 2010. In January, PCCS launched a new education program with the goal of engaging local, regional and national students. With that goal now well underway, we have set

our sights on the international scene, hoping to extend our hands-on educational philosophy abroad to promote stewardship of our global coastal and marine ecosystems.

As you read this issue, PCCS continues its good work striving for “science that matters.” That is precisely why PCCS has ramped up its collaborative efforts with universities, state and federal governments and organizations great and small. We work tirelessly, inspiring one another as we all seek a deeper understanding of the animals and ecosystems that we study: from species on the brink of extinction, like the critically endangered right whale, to gray and harbor seals that feed in our waters. We are challenged by these issues; but inspired by the generous support of our members and the interest of the public, in our work.

This has been true since PCCS was founded in 1976 by three friends motivated by a desire to educate the public about the wonders of Cape Cod’s dynamic coastal and marine ecosystems. The late Dr. Barbara Mayo, and Drs. Charles Mayo and Graham Giese’s shared vision of pursuing science that matters, has guided PCCS’s research, mission, and outreach activities for nearly thirty-five years. Under their guidance and inspiration, PCCS established and maintains one of the longest running data sets on humpback whale populations in the world; created a process known today as whale disentanglement by launching the first ever Atlantic Large Whale Response Network and developing tools specifically to disentangle large whales and sea turtles; and has conducted pioneering investigations of shoreline change to help understand how increases in sea level and intense storms impact coastal communities and economies.

As we prepare to celebrate our 35<sup>th</sup> anniversary in 2011, we are hoping to secure funding to expand and enhance our programs to address new sets of challenges like the growing presence of pharmaceuticals and hydrocarbons in marine waters. We hope that you will consider joining us on this exciting journey into our 35<sup>th</sup> year. If you are an existing member, thank you for your ongoing support. We are still here, thanks to you.

Thank you and Happy Holidays!

Richard Delaney  
President & CEO

## COASTWATCH

is a publication of the  
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Peter Spier

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Cover Photo: PCCS researchers from top left to right, Lisa Sette, Scott Landry, Karen Stamieszkin, Christy McMillan and Jenn Tackaberry brave the cold aboard R/V *Ibis* in search of whales.

*Right whales  
photographed  
from an aerial  
perspective  
during a survey  
of Cape Cod Bay.*



*Image taken under NMFS permit 633-1763, under the authority of the U.S. ESA and MMPA.*

## **The Right Whales Are Coming! The Right Whales Are Coming!**

**The Provincetown Center for Coastal Studies is gearing up for another right whale season.** Preparations are underway for the arrival of one of the most endangered marine mammal in the world, the North Atlantic right whale. With a population estimate of less than 450 remaining animals, this critically endangered species is teetering on the brink of extinction.

PCCS is aiding in the recovery of the species by studying one of the right whales' critical habitats, Cape Cod Bay; analyzing its food source, zooplankton (tiny shrimp-like animals); and photographing the distribution and behaviors of the whales. PCCS scientists and researchers working from aircraft and boats are gaining more understanding of these animals to better inform managers of their arrival and location, in an attempt to mitigate ship-strikes and to identify entanglements. All of this work is invaluable to understanding and protecting these elusive creatures.

PCCS provides data to resource managers charged with enforcing and changing conservation laws. The hope is that data gathered through these research efforts will lead to better protection for this critically endangered species.

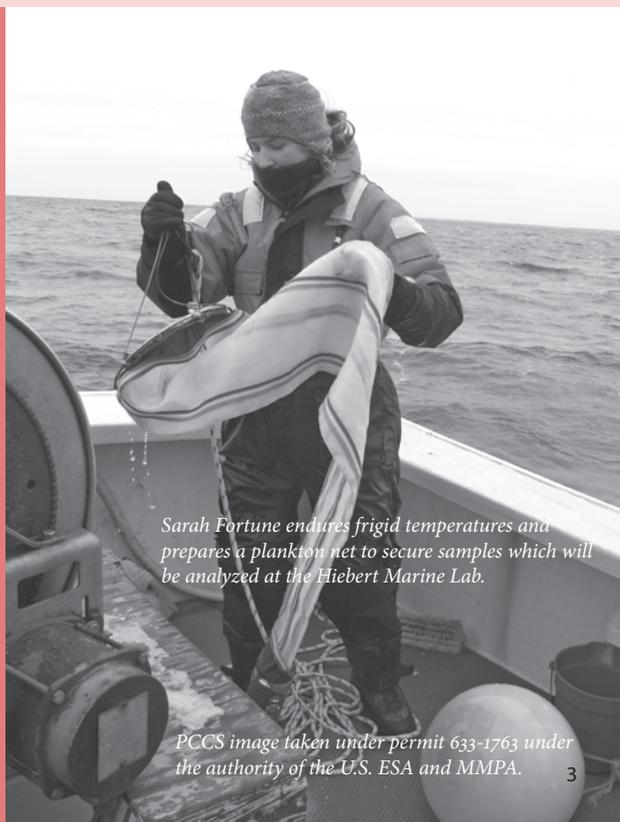
Past field season notes are available on our Website at: <http://www.coastalstudies.org/what-we-do/right-whales/fieldnotesintro.htm>. Once the 2011 research season begins, site visitors will be able to review current notes from the field. Beginning in January, you can also sign up at [www.coastalstudies.org](http://www.coastalstudies.org) to receive field notes by email.

### *Are Right Whales Dieting?*

**S**arah Fortune was a recipient of the Ruth Hiebert Memorial Fellowship in 2009. Most recently, she worked as a Research Assistant for PCCS's Right Whale Habitat Studies where she studied right whale foraging ecology under the direction of Dr. Charles "Stormy" Mayo. Now at the University of British Columbia, she is studying right whale energetics with the Marine Mammal Research Unit for her Master's degree. Sarah is interested in understanding the role nutrition plays in the recovery of the remnant population of this critically endangered species. Ship strikes and entanglements in fishing gear are having a profound effect on right whale mortality rates, but other factors such as nutritional stress may be impacting the recovery of this species.

Past research has shown that right whales experienced periods of pronounced physiological changes from year to year. For example, in the mid-to late 1990s whales appeared thin, or in some extreme cases emaciated, in the Bay of Fundy

*Continued on Page 6*



*Sarah Fortune endures frigid temperatures and prepares a plankton net to secure samples which will be analyzed at the Hiebert Marine Lab.*

*PCCS image taken under permit 633-1763 under the authority of the U.S. ESA and MMPA.*

# Seal Update

## Q&A *with* Lisa Sette

The Provincetown Center for Coastal Studies launched the Seal Studies Program in the fall of 2007. With a photographic seal database established, researchers are able to track individual seals, their movements, and fidelity to various locations. Photograph Identification, or Photo ID is a noninvasive technique, which provides information leading to better understanding of the life histories and movements of whales, seals, and other animals. Photo ID has been used by PCCS researchers for over three decades. I sat down with Lisa Sette, seal biologist at PCCS, to find out more about the increasing seal activity on Cape Cod.

### Matching

#### Gray Seal #0156

Chatham Harbor 08/26/08



Chatham Harbor 12/08/09



Unique markings on the pelage (hair) of gray seals allow researchers to identify individuals and track them over time. Although seals molt (replace their hairs) every year, the dark and light markings on their pelage remain the same.

**Q:** You study haul outs, have you seen any changes since you began your research?

**A:** When PCCS started the seal program back in the fall of 2007, there was a developing haul out at a J bar, a sand bar shaped like the letter J, just north of Head of the Meadow Beach in North Truro. That particular haul out persisted until the late fall of 2009. Because of winter storms, the J bar broke down. This past winter and spring, new bars developed near High Head Beach, and on Memorial Day weekend, gray seals started showing up at that haul out during the low tide cycle. Examining ID photographs from previous years, animals that utilized the haul out at Head of the Meadow are now taking advantage of the new J bar off of High Head.

The work at the Center is focused on localized movements and site fidelity at haul outs around the Cape and Islands. However, last year PCCS started working with biologists from Canada who monitor branded seals from Sable Island. Over the past three years, PCCS has photographed branded animals during our surveys of South Monomoy Island, Chatham Harbor, Head of the Meadow, and this year at High Head. We share data with other researchers to find out if the Sable Island animals that use summer haul outs around the Cape, return for breeding up in Canada. Thus far, we have identified two male

gray seals that have returned to Sable Island for the breeding season. This supports the idea that gray seals are a highly mobile species.

### Chatham Harbor Sighting History for Gray Seal #0156



**Q:** What kind of seals will we see this time of year? Does it vary according to season?

**A:** Gray seal and harbor seal breeding cycles occur at different times of the year and in different areas, so the animals we see from our shores shift with the seasons. During the late spring, most adult harbor seals move north off of northern New Hampshire and the central Maine coast for breeding. In July we start to see harbor seal pups that have been weaned and the return of adult harbor seals at haul outs around the Cape and Islands. Gray seals breed in the winter and spend the summer on their resting and feeding grounds, some of which are right here on our shores. At the haul outs, you will see a mix of adult and juvenile gray seals—it's a great place to practice your pinniped identification skills!

**Q:** Where will we get the best view of seals from shore?

**A:** During the summer, gray seals are the dominant species around the Cape and Islands. If you want to seal watch from the beach, the best place to go is along the ocean side of Cape Cod. This past winter, a series of J bars formed between Head of the Meadow Beach and High Head in North Truro. Gray seals are using these as a place to rest during the spring, summer and fall. Sometimes as many as 300-400 gray seals are hauled out on these sand bars during the low tide cycle.

**Q:** What do seals around the Cape feed on?

**A:** Several studies have been completed on the diet of gray seals and harbor seals around the Cape and Islands. What they eat varies seasonally and depends on what is available. Biologists have identified prey remains from sand lance, flat fish, skate, squid, bass and a whole variety of other fish species.

**Q:** While photographing seals, have you noticed any exhibiting scars from a possible encounter with a shark?

**A:** During our haul out surveys we have documented wounded or scarred animals. We have a few animals that have elliptical scars, or wounds that are consistent with shark interaction.

*Continued on next page*

# PCCS Aids Species Facing Global Decline

When people think of PCCS, their thoughts usually turn to right or humpback whales, but PCCS might just as likely respond to another endangered animal in the waters around Cape Cod, the leatherback sea turtle. Over the last six years PCCS has developed and coordinated the Massachusetts Sea Turtle Disentanglement Network in partnership with, and support of, the Massachusetts Division of Marine Fisheries, National Marine Fisheries Service (NMFS) and PCCS members and friends. The goal of this effort is to help a species that is in global decline by offering rapid, trained response to sea turtle entanglements offshore of Massachusetts. To date, staff from different state, federal, and municipal agencies, as well as other research organizations, received formal training from PCCS. Training sessions teach participants effective disentanglement techniques developed by PCCS, and involve many of the tools designed by PCCS for large whale entanglements, in addition to some developed specifically for cases involving sea turtles.

In a typical year the Massachusetts sea turtle entanglement season extends from June until October with a peak in August, averaging 17 confirmed entanglement reports.

On July 16, 2010, recreational boaters, just outside of the canal in Cape Cod Bay, spotted an entangled sea turtle. PCCS received the report via its hotline and dispatched the nearest trained responders; researchers from the Large Pelagics Research Center. During the disentanglement response, the team noticed small metal tags on each of its rear flippers. They recorded the numbers found on the flipper tags, and the 700-pound leatherback turtle was freed of its entanglement. Back on land, scientists tracked the numbers to a nesting beach

in Parismina, Costa Rica, over 2,500 miles away. Without an entanglement response network, information like this would be difficult to gather from such wide-ranging and highly elusive creatures. In a similar effort, the network also tags leatherback turtles that are disentangled off of Massachusetts. The information gathered from the tags helps to provide insight into the movements of these turtles between their southern nesting beaches and their northern foraging habitats, like Cape Cod Bay.

The majority of sea turtle entanglement reports come from recreational boaters. PCCS encourages mariners through outreach, to report sightings and stay with the entangled animal until a network responder arrives. Without this critical first step these endangered animals face grim prospects.

If you sight an entangled sea turtle or whale offshore of Massachusetts you can call the PCCS hotline directly at 1-800-900-3622, the NMFS hotline at 1-866-755-6622, or hail the US Coast Guard on VHF channel 16. Be prepared to stand by the animal and PCCS will contact you immediately regarding the sighting.



*Sea turtle disentanglement conducted under 50 CFR 222.310, with authority from NOAA Fisheries and the US Endangered Species Act*

## Seal Update Continued

### **Q:** What are the largest threats to seals today?

**A:** Natural predators include large sharks in the water and, when hauled out, they have to watch out for packs of coyotes that monitor the haul outs for small, sick, or injured seals.

People often forget when visiting a haul out that seals need rest. They are one of the few marine mammals that are still tied to the land. When seals haul out during a low tide cycle, it allows them to rest after a long feeding trip or to heal from a wound. If we

disturb them during this period it can be detrimental to the health of the animal.

The public should enjoy these animals without disturbing them. I encourage the public to observe the guidelines for responsible wildlife viewing.

To download a pdf of responsible seal watching guidelines, please visit: <http://www.nmfs.noaa.gov/pr/education/regional.htm#ne>

-Tanya Grady

*The International Whaling Commission endorsed the report of a recent workshop on large whale welfare issues associated with entanglement. Scott Landry and Jooke Robbins were*



*Photo by PCCS, Salt's flukes. Salt has been studied by PCCS since the mid-1970's*

*invited workshop participants, as were former PCCS staff members David Mattila and Ed Lyman. The Commission urged member nations to intensify efforts to assess the magnitude of the entanglement problem, as well as to develop effective mitigation measures.*

## IWC FACES EXTREME POLARIZATION

We live in a world that is widely divided on the issue of whaling. The International Whaling Commission (IWC) established a moratorium on commercial whaling in the 1980s, in light of the over-exploitation that had caused many whale stocks to collapse. However, as some stocks begin to recover, the fundamental question of whaling remains and debate is confounded by philosophical and cultural differences. Some nations view whales as a resource that should be available for harvest, like fish or deer. In other countries, like the US, many believe that whales warrant special consideration, and are concerned that history might repeat itself if whaling were to resume on a significant scale. Under the current regulations, it is legal for indigenous peoples of some countries (including the US) to kill whales. They are also killed by Iceland, Norway, and Japan under special "scientific" permit, or original objection, or reservation to the moratorium. It is this category of legal whaling that has recently spawned the most international debate. This includes disagreements over the activities performed under special permit (including relevance to management), and the fact that catches are set by the nation, not the IWC.

Since 2007, the IWC has had formal discussions of its future as a management body, in light of extreme polarization among its 88 member nations. In April, a proposed "Consensus Decision" was released for consideration at the 2010 IWC annual meeting. Its stated intent was to uphold the current moratorium on commercial whaling, while allowing a period of relative peace during which its members can more effectively resolve their differences. The proposal would have established a ten-year period in which all whaling would come under full IWC control, oversight and regulation. This would have included whaling currently performed under objection and special permit, termed "non-indigenous whaling" under the proposal. Such whaling would have been allowed to continue where it currently exists (including within the IWC's own Southern Ocean Sanctuary). However, it would have been newly held to fixed catch limits set by the IWC. These proposed limits were lower than those set by the nations, although the latter were not guaranteed to occur. No new countries would have been allowed to engage in whaling and enforcement would have been increased. The proposal also provided for greater consideration of non-lethal uses of whales (i.e. whale watching), establishment of a South Atlantic whale sanctuary and further attention to broader conservation issues, such as impacts from fishing by-catch, climate change and other threats.



*Photo by PCCS, Breaching humpback whale*

The IWC held its annual meeting on whales and whaling worldwide in June in Agadir, Morocco. It followed upon a two-week meeting of its Scientific Committee of over 160 scientists (including four present and past PCCS staff). Unfortunately, this particular proposal required significant compromises on both sides and agreement ultimately could not be reached. However, all agree that something needs to change for whale management to be effective on an international scale. The details of the entire proposal can be viewed online here: [http://iwcoffice.org/\\_documents/commission/IWC62docs/62-7rev.pdf](http://iwcoffice.org/_documents/commission/IWC62docs/62-7rev.pdf)

### *Are Right Whales Dieting? Continued from Page 3*

(summer feeding ground). Many whales also had various types of skin lesions on their bodies, indicating that the health of the population was diminishing. Researchers have also noted dramatic oscillations in the number of calves born each year. For example, the number of calves born in any given year has varied from one to 39 individuals. Although individuals show signs of stress, a debate remains about whether right whales are getting enough food.

Current management plans for North Atlantic right whales focus on preventing anthropogenic mortality from

ship strikes and entanglement in fishing gear. If right whales do experience periods of nutritional imbalance, managers must alter the way they evaluate the relative success of conservation efforts. Years of high population abundance may be a function of favorable environment conditions (and thus lots of food) rather than reduced human caused mortality. Sarah's research addresses the applicability of the nutritional stress hypothesis to North Atlantic right whales.

To learn more about Sarah's work, visit [http://www.marinemammal.org/MMRU2/?page\\_id=246](http://www.marinemammal.org/MMRU2/?page_id=246)

# PCCS Happenings

## OYSTERFEST

Nearly 18,000 people (estimate) who attended the Wellfleet OysterFest over two blustery days. PCCS raffled off a print of the Outer Beach, and accepted donations earning a combined total of \$1,000 by participating in the event.



## COASTSWEEP

The Provincetown Center for Coastal Studies led 37 volunteers on September 25th as part of COASTSWEEP, a statewide beach cleanup.



Volunteers collected over 300 pounds of trash, about 2000 individual items from Long Point Beach in Provincetown.

## EDUCATION

PCCS welcomed over a dozen visiting school groups including schools as far away as California and as close as Provincetown, Mass. PCCS took children into the field exploring the wonders of the marine and coastal ecosystems in our own backyard. Pictured here, Jesse Mechling, director of marine education, speaks with a class from California about coastal erosion on Cape Cod from the solar powered wave lab in Truro.



# Upcoming Events

**January 8<sup>th</sup>**  
at 10 a.m.

## Beach Cleanup!

Join PCCS for a beach cleanup. Meet at Herring Cove Beach on the right side of the parking lot. Wear comfortable shoes and dress for the weather. Registration is not necessary.

**December 10<sup>th</sup> through February**  
10 a.m. – 5 p.m.

## Photography Exhibit

Fred Ehrlich has been observing and photographing Newcomb Hollow Beach in every season for over 40 years. Stop by the Hiebert Marine Lab located at 5 Holway Avenue to view his photographs on display.

 **For more details** about the events above, please visit [www.coastalstudies.org](http://www.coastalstudies.org) and check our calendar.

To learn more about upcoming events, call Tanya Grady at 508.487.3623, ext. 113 or Email: [tgrady@coastalstudies.org](mailto:tgrady@coastalstudies.org)



(Left to right) Diane DiCarlo, Napi Van Dereck and Jeanne Leszczynski.

## PCCS Gets Response Support

The Provincetown Center for Coastal Studies is pleased and honored to acknowledge lead gifts for the purchase of two 250-horsepower Yamaha four-stroke engines for the Marine Animal Entanglement Response Program vessel R/V *Ibis* from Jeanne Leszczynski and Diane DiCarlo, and Napi & Helen Van Dereck. Additional major gifts for the purchase were given by Thomas Niles, John & Jean Lippincott, Keith Loring, Anne Knowlton, and Kathryn Head.



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### Wish List

The PCCS wish list includes needs great and small. Costs associated with wish fulfillment range from 250 to 30,000 dollars. PCCS depends on the generosity of members, and now more than ever, PCCS needs your help. Please contact Jan Young at 508.487.3622, ext. 104, to learn more about our wishes.