



Upcoming Events/Meetings:

2008 Ocean Sciences Meeting
March 2-7
Orlando, FL

USNC Spring Meeting
March 10-11
Washington D.C.

NOAA Science Advisory Board
March 12-13
Washington D.C.

POST & Ocean Leadership
Reception
March 13
Washington D.C.

Capitol Hill Oceans Week
June 3-5
Washington D.C.

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U.S. Census Holds Workshop on Biological Ocean Observing



On January 14-15, the U.S. National Committee held a workshop entitled *Biological Ocean Observing: Exploring components of IOOS from the perspective of Census of Marine Life* in order to demonstrate the importance of incorporating biological data, particularly CoML data, into the Integrated Ocean Observing System (IOOS). This workshop brought together over 75 members of the ocean observing community, including representatives from the NOAA IOOS Program Office, the IOOS Regional Associations, and experts from academia and management agencies. Five major themes emerged from discussions at the workshop, including:

- **Data standards:** there was agreement on necessity of data standards
- **Data accessibility:** the need to change the culture of universal data sharing by improving accessibility of data; providing incentives and protections to encourage sharing of data
- **Data Collecting:** maximizing the use of sampling opportunities by capturing both physical and the more complex biological types of data concurrently
- **Data interoperability:** improving accessibility and interoperability of 5 to 10 datasets across the nation and across agencies
- **Data applications:** developing tools and mechanisms to better interpret the data for ecosystem structure and function.

A special focus on the Census' Ocean Biogeographic Information System (OBIS) during a post-workshop meeting yielded interesting discussions and ideas for incorporating Census information into IOOS. "This workshop really brought to light how many community members are working on the same data issues without interacting with one another. I think the most immediate returns from this have been the new partnerships and collaborations," said Michael Feldman, the Program Office Coordinator for the U.S.

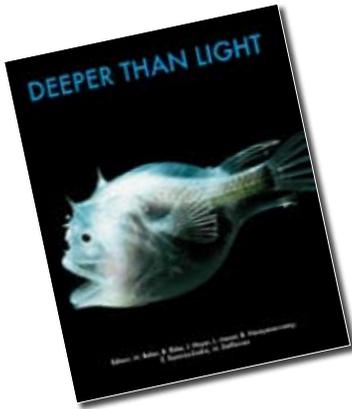
Census of Marine Life. A comprehensive report of recommendations and outcomes from the meeting is expected to be released in the near future. For workshop presentations, meeting participants, background information and future updates, please see our website at http://www.coml.us/Dev2Go.web?Anchor=ocean_observing.





Deeper Than Light

The European Census of Marine Life is happy to announce the publication of the book “Deeper than Light”. The book is a cooperative effort from participants in the deep-water research projects of the Census of Marine Life Program and the European Census of Marine Life. The following is an excerpt from the back of the book:



“The earliest perception of the earth and the sea was that they were flat and if a sailor reached the horizon, he would fall off the edge! The geographical extent of the sea was unknown, its depth unfathomable, and unlikely to be tested as myth proclaimed that the deep waters were inhabited by monsters ready to take the unwary seaman.

The last 170 years of scientific discovery have brought about revolutionary changes in the way in which we understand the deep seas and open ocean. Some of the most beautiful landscapes on Earth lie hidden deeper than light. This book will take us on a journey from relatively shallow waters down to the abyss, discovering exciting deep-sea creatures en route.

Motivated by a passion for life in the deep sea, the authors, all active members of the Census of Marine Life, wanted to share their enthusiasm and convey the unsuspected richness of marine life, its strange animals and unusual ways

of life at the greatest depths. Richly illustrated with photographs and art and introducing state-of-the-art knowledge in deep-sea biology, this book appeals to all curious by nature.”

The book has been written in a style that the authors hope will appeal

to a broad audience and is available in English and German. It will be published later this year in French, Spanish and Norwegian. The book can be purchased worldwide through www.amazon.co.uk. We hope that you enjoy your journey – Deeper than Light. ★

A Word from the Vice-Chair

Marine Biodiversity, New Zealand, and vice? Wow! Who wouldn't want to serve on this committee? After a leaf-changing U.S. National Committee Meeting in New Hampshire in October 2007 with Chair Andy Roseberg, we headed for Kiwiland and the Census of Marine Life All-Program meeting in November in Auckland. It was inspiring and encouraging to see so many scientists and countries engaged in learning about the past, present, and future of marine life in the world's oceans. The end of the first census and a multi-dimensional, grand synthesis of all our work is now in sight in late 2010.



Dr. Wes Tunnell

Along with the Census, its spin-off projects and sister projects, such as the World Register of Marine Species, which lists all marine species (at marinespecies.org), and the Encyclopedia of Life, this 10-year initiative will really have made a significant difference in our knowledge of life in the oceans. What began as a small seed or thought with Fred Grassle and Jesse Ausubel in 1997 is now winning world acclaim. In December 2007 alone, CoML was named one of “The Six Most Important Experiments in the World” by Discover magazine, and the Census made Time magazine's list of the “10 Best Scientific Discoveries.”

As your representative for the USNC, I will speak to the Board of Trustees of the Consortium for Ocean Leadership in Washington, D.C. in late February 2008. This opportunity will allow us to tell a broader coastal and ocean audience of academic and affiliated organizations about the great work of the Census and the opportunities, synergies, and connections of its use as the tool for research in biological ocean observing.

The USNC will meet in Washington D.C. in March with continued discussions on the legacy of the first ten years and the hopeful, indefinite future of the Census.

Best to all. Hope to see you at sea studying ocean life.

Wes Tunnell, USNC Vice-Chair



Education Corner

The National Ocean Sciences Bowl (NOSB®), an academic competition for high school students designed to generate interest and excitement about the marine and ocean sciences, offers a unique opportunity for those interested in promoting ocean education. The competition is intended to increase knowledge of the oceans on the part of high school students, as well as to raise the visibility and public understanding of the national investment in ocean-related research. The NOSB works to cultivate increased stewardship of our ocean, and to foster the next generation of marine scientists, technicians, educators, and industry leaders. Each February, approximately 300 schools and 2,000 students participate and compete at 25 regional NOSB sites. The winners of each regional site go on to compete in the NOSB final competition, which is being hosted in Seward, Alaska this year. NOSB will be soliciting question writers and volunteers over the summer for the 2009 competition to be held in Washington D.C. Please contact CoML@OceanLeadership.org for more information on how you can become involved with NOSB. ★



EDUCATION LINK OF THE QUARTER

Our Census of Marine Life friends at TOPP (Tagging of Pacific Predators) are celebrating “Elephant Seals Homecoming Days”, documenting the migration of female elephant seals from the North Pacific Ocean to the beaches of Año Nuevo State Reserve in Northern California to give birth to their pups. The TOPP website offers information and fun facts about elephant seals, photos of the tagged ‘momma’ seals and their pups, video clips, interviews with the researchers and links to educational materials for teachers. Choose your favorite seals - their names are Myocean, Mukurma, Isabel, Clara, Cheddar, Coya, Annie, Guadalupe, and Flora – and check out their trading cards for details on when they were born, who (or what) they were named after and how many pups they’ve given birth to! Please visit http://www.topp.org/elephant_seal_homecoming_days to learn more about the TOPP, seal migrations and the Año Nuevo State Reserve. ★

Frequently Asked Questions about the Census of Marine Life #1

Q: How many new species has the Census discovered?

A: The Census of Marine Life has discovered more than 5,300 new, undescribed marine animals since 2003. Of these 5,300+, 80 have gone through the rigorous scientific review process required for designation as a new species—a process that can often take years. Collectively, the Census is discovering new species at a much faster rate than the capacity to describe them. While the discovery of a new species is always exciting, the greater contribution to our understanding of marine life is what Census scientists are learning about the diversity and distribution of marine life in the global oceans.

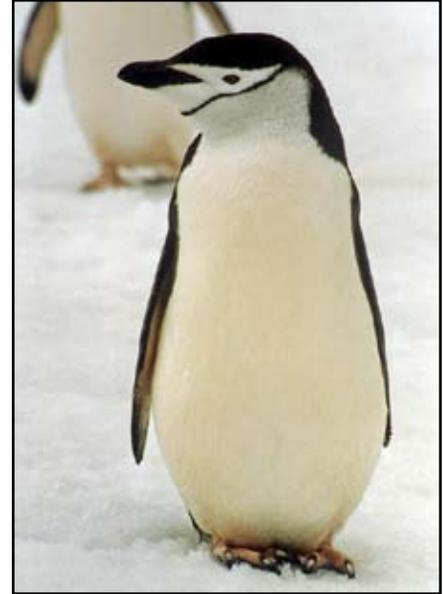


CoML SSC meets in Punta Arenas, Chile and travels together to Antarctica

The Census of Marine Life (CoML) Scientific Steering Committee (SSC) met in Punta Arenas, Chile on February 17-18, 2008. Much of the meeting focused on Census legacies, partnerships and strategies for the 2010 synthesis, including the methods and personnel needed to deliver the numerous synthesis products such as books, summary reports and journal articles. The SSC also contemplated the objectives for the upcoming 1-2 May 2008 CoML Regional Synthesis Planning Workshop in Washington, D.C. where the National and Regional Implementation Committees (NRICs) will discuss their contribution of a regional synthesis volume to the 2010 products. Given the location of the SSC meeting, a portion of the discussion focused on polar activities and presentations were made on CoML project-related Antarctic activities as well as Chilean military activities in the Antarctic. The SSC conferred the CoML polar projects CAML (Census of Antarctic Marine Life) and ArcOD (Arctic Ocean Diversity) should integrate data and determine the similarities, and possibly interesting contrasts, of the Arctic and Antarctic systems as a major Census finding for 2010.

While in Punta Arenas, the SSC members toured the Spanish Antarctic Vessel “Las Palmas” and visited the Otway Sound Penguin Colony, home to thousands of Magellan penguins.

The SSC members were also fortunate enough to travel to King George Island, Antarctica for two days where they were guests at the Chilean Eduardo Frei Montalva Air Base. The SSC also visited the Great Wall Base of the People’s



Chinstrap Penguin, Antarctica

Republic of China, as well as the Russian Bellingshausen and Uruguayan Artigas Antarctic Bases. Guided expeditions took the group to the Chilean Antarctic Institute (INACH), Villa Las Estrellas (home to many of the Chilean military officers and their families) and nearby areas to view Elephant seals and Chinstrap penguins. The trip was a once in a lifetime experience and the SSC members are grateful to all those that played a part in making the trip a success.

The SSC will meet next in Hangzhou, China on 24-25 May 2008. ★



The SSC in Antarctica

Frequently Asked Questions about the Census of Marine Life #2

Q: How can the Census help me in my research?

A: The Census is developing many technologies, however, one of the most universally useful is the Ocean Biogeographic Information System (OBIS). As national, regional, and international projects gather and expand existing or new datasets they are assembled into OBIS, the CoML data management infrastructure. Since 2000, OBIS has grown to 14 million records of 80,000 species from 232 databases. OBIS maps species occurrences over space and time. Check it out at www.iobis.org.

Seven Questions with Paul Snelgrove

As a regular feature of the U.S. CoML Newsletter, we ask a member of the CoML Community seven (or so) questions. This edition features an interview with Paul Snelgrove, Chair of the Canadian Regional Committee and the CoML Synthesis Committee.

Heather Mannix: How did you originally become involved with CoML? Have you always wanted to be a marine researcher?

Paul Snelgrove: I've been interested in marine biodiversity since I was an undergraduate student in Newfoundland. Growing up next to the ocean had an obvious influence on my career choice, and my undergraduate advisor, Richard Haedrich, got me started on biodiversity questions in the deep sea. That interest carried on through my graduate career and continues today. I did a postdoc with Fred Grassle (Chair of the Census Scientific Steering Committee) at Rutgers University, participated in one of the very early Census meetings (around 1995) and have stayed in touch with the Census ever since.

HM: As the Chair of the Canadian NRIC, can you tell us about some of the plans the Canadian NRIC has for the remaining years of the Census?

PS: The Canadian NRIC was assembled as a key output of a workshop Mike Sinclair and organized in 2004. The mandate of this committee was to establish a national research program in marine biodiversity in Canada that would contribute to the Census for each of Canada's three oceans - Atlantic, Pacific, and Arctic. Because of a funding moratorium in Canada, a coordinated initiative was not possible until now. There were isolated Census-related activities

in Canada that the NRIC tried to help coordinate, but we were an unfunded group that struggled to stay involved. However, now we have a Census research network funded, and because it was slow getting out the gate we will be active through 2012 collecting new data.

HM: For the past year, the U.S. NRIC has been considering options for the future of CoML. Are there any Canadian plans for Census-type activities after 2010?

PS: Because the Canadian research network funding will carry through to 2013 we are hopeful that our activities can help to carry forward the momentum from the Census

"Indeed, it is the partnerships between federal government agencies and university scientists that has allowed Canada to develop a true national Census program."

–P. Snelgrove

internationally. Thus, 2010 for us is less of a concern than it is for the International Census, although 2013 will mark the end of the current Canadian network. If we hope to go forward beyond that we will have to reinvent ourselves and depend on additional collaborations and projects that might grow out of our current network.

HM: The National Oceanic and Atmospheric Administration, the



primary ocean agency in the U.S. government, has seen some serious funding cuts in recent years. How is funding for marine science faring in the Canadian government?

PS: Science funding in Canada has been steady through recent years, and indeed has increased in key areas. The trick has been trying to package marine research so that it fits within the national technology and science agenda. We've had some success in doing that, in part because there is so much new technology emerging in marine sciences – some of which is very closely linked to the Census. I should also say that our Department of Fisheries and Oceans – our equivalent of your National Marine Fisheries Service – has had major cuts over the last decade despite an expanding mandate that includes ecosystem-based management. Though this has created tough times for them it has also made it essential for them to partner with universities and other agencies and that need has produced some new opportunities and collaborations. Indeed, it is the partnerships between federal government agencies and university scientists that has allowed Canada to develop a true national Census program.

HM: Switching gears to your more recently acquired role as Synthesis Chair, what do you believe will be the most challenging aspect of the synthesis phase?



Seven Questions with Paul Snelgrove continued...

PS: The greatest challenge with the Synthesis relates to the success of the Census – there is SO much going on! Our own success means there are many people doing exciting things, raising exciting ideas, and addressing so many important issues that bringing it all together will be a real challenge. But it is a challenge that I think the community will enjoy. The science community really recognizes that the Census is much more than the sum of its parts. I guess the other challenge is that 2010 is not very far away!

HM: In preparation for the Synthesis you, along with a committee, did extensive surveys about the perceptions, messages, and outcomes of the Census. What were your most surprising or interesting results?

PS: We talked to a whole variety of groups and I'm not sure there were huge surprises but the discussions were very informative.

Because Darlene Crist was part of that committee, it provided a great interface with Education and Outreach, which helped us in talking to people and will also help in implementing some of the synthesis products for non-

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- P. Snelgrove

scientists. As an example of some of the interesting things we did learn, we found that non scientists tend to be most interested in what’s going in their own back yard (well, perhaps their own back bay!), and there is also a very reassuring interest in conservation issues...people care about what’s happening with fish stocks and species loss – not just scientists. So I think the timing is very good to roll out synthesis

products now – the oceans are a “hot” issue for scientists and the general public.

HM: What drew you to take on the exciting, albeit huge, task of writing and coordinating a Census Synthesis book?

PS: It is tempting to attribute it to a momentary lapse in sanity, but the reality is that I greatly admire what the Census is doing and I have not had active involvement with any of the individual projects. Even though I am working to make the Canadian Census a reality, I wanted to be an active part of the International Census too. I have been enthused about marine biodiversity for 25 years – back then it was not a hot issue at all, and was somewhat on the fringe. It is great to see it in the limelight, and I feel like I do have something to contribute - a broad perspective that could be useful in making the synthesis successful and helping to make the Census of Marine Life achieve the impact that it deserves. ★

NEW US CoML Brochure



The U.S. Census of Marine Life program office is pleased to announce a redesign of the USNC brochure, which will debut at the Ocean Science Conference in Orlando the first week of March. To receive copies of the new brochure, send an email to CoML@OceanLeadership.org.

Check out our Video Clip of the Quarter!

Census of Marine Life on National Geographic's Wild Chronicles

<http://www.coml.org/video/w-c-full.htm>

Although not an official YouTube clip, this quarter's video is a clip that recently aired on National Geographic's Wild Chronicles series. The video features CoML Program Manager, Jesse Ausubel. The Census looks forward to more collaborations with National Geographic as we work towards the 2010 Synthesis.

As seen in our previous YouTube clip of the quarter, the Encyclopedia of Life is now online! Check it out at:

<http://www.eol.org/>

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**For member's biographies visit our website at: www.coml.us/dev2go.web?anchor=CoML_us_leadership*

