

Ongoing & Upcoming CoML Expeditions: Watch the project websites for news and cruise diaries!

Dec. 2008: CMarZ Cruise aboard *Natsushima/Hyper-Dolphin* to Sagami Bay to study microbial communities at whale falls and the development and dispersal strategy of siboglinids

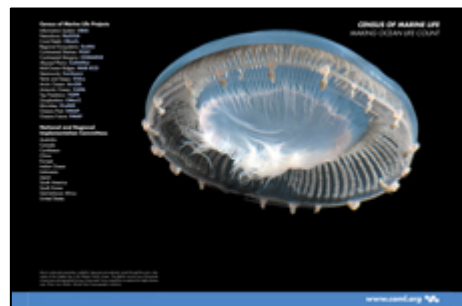
Dec. - Feb. 2009: CAML IPY Cruise aboard *Artigas & SR/V Vanguardia* to South America, sub-Antarctic, Drake Passage, and King George Island

6-27 Feb. 2009: CReefs Expedition 2 to Lizard Island

Top News!

Scientists Report Major Steps Towards 1st Census of Marine Life

The fourth Highlights Report of the Census of Marine Life (CoML), which details major progress towards the first ever marine life census, set for completion in October 2010, was released on 9 November 2008. Among the revelations in the global report are the Antarctic ancestry of many octopus species, behemoth bacteria, colossal sea stars, mammoth mollusks, and more. The news covered in at least 19 languages and 59 nations. To view the press release or full Highlights Report, please visit the [CoML Portal](#).



World Conference on Marine Biodiversity a Success



The World Conference on Marine Biodiversity (WCMB) took place 11-15 November 2008 and was organized by MarBEF (Marine Biodiversity and Ecosystem Functioning program and a European Union Network of Excellence), a partner of CoML in Europe. Nearly 600 scientists from 42 countries gathered at the City of Arts and Sciences in Valencia, Spain to share the results of their research in the field of marine biodiversity. The large turnout and breadth and quality of papers clearly demonstrated the enormous

progress in the field over the last few years. CoML research was well represented at this conference, and CoML was one of more than two dozen supporting organizations for the Conference. In addition to sharing new results through scientific presentations and posters, the participants discussed and agreed upon a [Valencia Declaration for the Protection of Marine Biodiversity](#). The CoML Scientific Steering Committee was pleased to support this declaration.

Scientific Steering Committee (SSC)

The CoML international **SSC met in Valencia, Spain on 16-17 November 2008** after the first World Conference on Marine Biodiversity. The SSC discussed the progress of CoML as a whole, hearing from several guests including Kristina Gjerde of the International Union for the Conservation of Nature (IUCN), Geoff Boxshall of the World Register of Marine Species (WoRMS), Dan Distel of the Ocean Genome Legacy and Eva Ramirez, from the CoML Vents and Seeps project who updated the group on CoML activities in Spain.

The **SSC next meets in Long Beach, CA** on 5 February 2009.

SSC Chair and Australian Institute of Marine Science (AIMS) CEO, **Ian Poiner**, was recently elected as a **Fellow of the Australian Academy of Technological Sciences and Engineering (ATSE)**. ATSE is an independent body of 800 eminent Australian technologists established to promote the application of

scientific and engineering knowledge to practical purposes. Dr. Poiner was honored with a Fellowship “for exemplary leadership of R&D-based government enterprises, particularly in marine science, for the benefit of Australia, and the sustainable development of marine industries.” He was one of 34 new Fellows elected in November 2008.

Synthesis



The CoML **Synthesis Group met on 21-22 August at Woods Hole Oceanographic Institution**. The Synthesis Group, chaired by Paul Snelgrove of Memorial University of Newfoundland, is responsible for the series of publications and other products to integrate and communicate the findings from the first ten years of Census research. The group reviewed the progress of the synthesis efforts to date and heard presentations from the Public Library of Science (PLoS) and the Encyclopedia of Life. They also met on 15 November in Valencia, Spain and reviewed progress on cross-project synthesis efforts.

The CoML National & Regional Committees (NRICs) met on 10 November in Valencia to discuss their **regional synthesis volume**. The NRIC synthesis product, planned for PLoS-ONE, will consist of at least one chapter from each of the NRICs, as well as a chapter on the Antarctic, New Zealand and potentially the Arabian Sea. The NRICs will meet again during the Long Beach Synthesis Workshops.

Please **mark your calendars for the 1-5 February 2009 CoML Synthesis Workshops** aboard the Queen Mary in Long Beach, CA. The Synthesis Workshops will be an opportunity for the CoML community to progress their synthesis through focused writing sessions. There will be minimal, but important, plenary included in the week’s sessions to cover community-wide messages, Synthesis progress, E&O/communications efforts and Mapping & Visualization. Each Project has been asked to prepare a 10-minute presentation on findings and synthesis to date.

The CoML **2010 summit and celebration is scheduled for 4-7 October** in London. Mark your calendars!

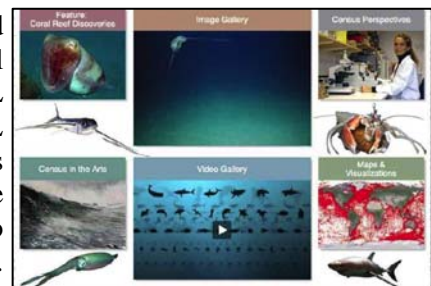
Mapping & Visualization

The Mapping and Visualization team held its first **CoML Visualization Workshop** on 23-25 October 2008 at Duke University in Durham, North Carolina, USA. The workshop was attended by over 30 people representing each CoML project and four NRICs. The M&V team demonstrated a variety of tools and capabilities that they will help the projects meet their visualization needs. For more information about the workshop, including some of the demos, visit the [CoML Maps](#) webpage.

Pat Halpin’s team will host an “**M&V Doctor’s Office**” during the **Long Beach Synthesis Workshops**. Project representatives should email info@comlmaps.org to make appointments for individual or small group tutorials and training sessions.

Education and Outreach

The **new and improved CoML web portal** has been launched and features easier navigation to CoML resources. New and powerful photo and video galleries prominently display the wealth of CoML imagery, while the ‘Census in the Arts’ highlights how CoML research has inspired artistic creativity. Essays, speeches, interviews and conversations that discuss CoML, its history, and its future are also new to the site. The top left “Feature” box gives prominence to major news releases and publications like the Highlights Report. Please visit the new [CoML Portal](#)!



Voice of America News showcased the newly updated CoML Portal as its ‘website of the week’ on 14 November 2008. The radio broadcast featured a description of CoML and its work which is accompanied

by an overview of the website, as well as an interview with Sara Hickox, Census E&O Team Leader. The downloadable radio broadcast is available online at [VoA News](#).



At the Scientific Committee on Antarctic Research (SCAR) Conference in St. Petersburg in July 2008, the CoML E&O Team and CAML, among others, **were recognized for their cooperation and communication** during the November 2006 to February 2007 *Polarstern* expedition to the Larsen Ice Shelf. Cooperation between the two CoML groups, the Alfred Wegener Institute for Polar and Marine Research, the International Polar Foundation, and The Cousteau Society resulted in a high media response, with 31 news agencies reporting the expedition results, 28 contributions to radio and television, 141 articles appearing in newspapers, and more than 360 articles published online in 33 countries and nine languages.

The E&O team will hold a **“messaging and press training Doctor’s Office”** at the Long Beach Synthesis Workshops to help projects prepare for journalist questions as CoML approaches 2010. Please contact Darlene Crist (darlene.crist@cox.net) to schedule an appointment.

Database: Ocean Biogeographic Information System (OBIS)

OBIS has received support to continue through the duration of the first CoML to December 2010, particularly to assist with CoML Synthesis activities. Congratulations to the entire International OBIS team!

In November, OBIS organized a meeting in Oostende, Belgium with staff from the UN Intergovernmental Oceanographic Commission (IOC) International Oceanographic Data and Information Exchange (IODE) to begin preparation of a **‘business plan’ outlining how OBIS might transition under the auspices of the IOC after 2010**. With the help of a consultant, OBIS is developing the document, which will describe the relationship between IOC and OBIS, including governance & financial implications for OBIS, and a work plan for OBIS. This document will be presented to the OBIS Governing Board at its next meeting, planned for April 2009 at Rutgers University, and then to the IODE board in May 2009. The goal is that the plan will be adopted by the IOC General Assembly in Paris, June 2009, giving OBIS an intergovernmental mandate.

New data sets are now available through the OBIS portal. The new records come from the European Seabirds at Sea project, OBIS SEAMAP, the Smithsonian Institution, African OBIS, ArcOD and the first dataset from the Korean Regional OBIS Node. The total number of records in OBIS is now 16 million.

Oceans Past: History of Marine Animal Populations (HMAP)

CoML researchers Brian MacKenzie and Andrew Rosenberg recently published a rather controversial article, entitled **“Impending collapse of bluefin tuna in the northeast Atlantic and Mediterranean”** in *Conservation Letters*. The controversy surrounds their conclusion that Atlantic and Mediterranean bluefin tuna stocks may be heading toward collapse, largely due to illegal landings. Their paper, which was also highlighted in an article in *The Economist*, indicated that current management practices are insufficient to conserve the species and that the population could be reduced by up to 90% within three generations of spawning stock. Please visit [Conservation Letters](#) online to read the article. The *Economist* article, “Managed to Death” can be viewed [online](#) as well.

HMAP was recently featured in an article in *Smithsonian Magazine*.

The story highlighted researchers’ use of photographs and other historical records to bring to light the former abundance of life in the sea, noting “the historical records reveal astonishing declines in most fish stocks.” For example, University of New Hampshire researchers studied 19th-century ships’ logs and determined that 150 years ago there was “25 times as much cod off New England and Nova Scotia as today.” The article in *Smithsonian Magazine* highlighted how humans tend to like things in large packages and have fished with the same philosophy, often removing the



largest commercially profitable marine life first. Unfortunately this leads to fisherman ultimately having to catch smaller fish, including those that have not even reproduced yet, depleting populations of many species (including Snapper off the Florida Keys). It was noted that the protection of endangered species and designation of no-take zones have helped certain over-fished populations make a comeback. To read the article and see the amazing photos of “goliath grouper” caught in the late 1950’s, please visit [Smithsonian Magazine](#).



Congratulations to Poul Holm who began his new position at Trinity College Dublin as the Academic Director of the Trinity Long Room Hub and a Professor of Environmental History in October 2008. The Irish government recently granted 10.7 million Euro in support of developing the Hub as an international research facility for the Arts, Humanities and Social Sciences. Poul has resigned as rector of Roskilde University but will remain the chair of HMAP and continue his work with the World Congress of Environmental History and MarBEF as well.

HMAP researcher Bo Poulsen has published a book entitled "**Dutch Herring, An Environmental History, c. 1600-1860.**" The book is based on his 2006 PhD-thesis for which he was awarded the Dutch Hoogendijk prize. The book launch was hosted by The Royal Netherlands Embassy of Copenhagen on 7 October 2008. More information on the book is available on the [HMAP Publications webpage](#).



HMAP has initiated its own newsletter. To join the mailing list, please go to the [HMAP website](#).

Oceans Future: Future of Marine Animal Populations (FMAP)

The FMAP team is **hard at work on synthesis projects**. In October, FMAP held the third FMAP-HMAP synthesis meeting on trends in diversity. In November, they teamed with TOPP for the first meeting on marine predator movements. In December FMAP will hold a data analysis meeting on “Changing Oceans” and then ring in the New Year with OBIS for the meeting on estimating global species richness.

Ocean Present: Realm Field Projects

Near-Shore: Natural Geography In Shore Areas (NaGISA)

The **Indonesian Institute of Science (LIPI)-NaGISA Western Pacific Conference** was held in Jakarta, Indonesia on October 26-29, 2008. The conference, which covered coral reefs in Malaysia to Seagrass meadows in the Philippines, drew over 80 participants from Japan, Hong Kong, Malaysia, Indonesia, Philippines, Thailand, and Vietnam. Participants were able to meet scientists in neighboring countries, learn about their researches, and discuss future collaborative research.



The **NaGISA program has recently expanded to the shores of West Africa** in partnership with Suffolk University of Boston, Massachusetts, USA and the Atlantic Ocean regional office of the Huntsman Marine Science Centre in St. Andrews, New Brunswick, Canada. After lengthy considerations, including an exploratory trip to the region in March 2008 by Principal Investigator Dr. Gerhard Pohle, the coastline of Senegal was chosen as the representative area for NaGISA. The Senegal coast was a logical choice since Suffolk University is an established partner with the Huntsman Marine Science Center and also has a campus in the Senegalese capital of Dakar, with research facilities and staff ready to begin work. Scientifically, Senegal is located in the most western part of Africa, within the transition zone of tropical and subtropical environments that result in relatively complex biological assemblages compared to other regions.

Reefs: Census of Coral Reefs (CReefs)

While systematically exploring three well-known coral reef sites in Australian waters, **CReefs researchers encountered a treasure trove of new species.** On recent expeditions to Lizard and Heron Islands on the Great Barrier Reef and to Ningaloo Reef in Western Australia, CReefs researchers conducted the first systematic inventory of these sites with the goal of providing a baseline from which to gauge future change in these habitats. The CReefs team also deployed Autonomous Reef Monitoring Structures (ARMS), which will be recovered at a future date, that help scientists understand the patterns and rates of recolonization on these reefs. In addition to the multitude of undescribed species, researchers also encountered many strange and beautiful sea creatures including scores of amphipods, dozens of small crustacean species, parasitic isopods, soft corals and rare jellyfish, among others. The amazing images can be seen at the [CoML Portal](#).



Regional Ecosystems: Gulf of Maine Area Program (GoMA)

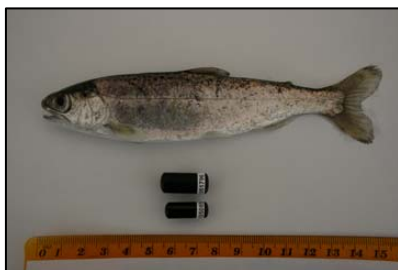
In October, Roland Pitcher, who leads the CoML affiliated project on Great Barrier Reef (GBR) Seabed Biodiversity, visited Peter Lawton and the GoMA team in St. Andrews, New Brunswick to advance their **cross-project synthesis study on bio-physical relationships between seabed species assemblages and their environment.** This synthesis collates and analyzes key quantitative results of analyses of surrogacy and bio-physical relationships already, or currently being, completed within GoMA, GBR, the Gulf of Mexico and other CoML programs to identify and rank globally important physical environment variables and the common biological responses to their gradients.

Purnima Ratilal, a GoMA collaborator with the Nicholas Makris Ocean Acoustic Waveguide Remote Sensing (OAWRS) project, **is a recipient of the Presidential Early Career Award for Scientists and Engineers (PECASE).** Sixty-seven researchers were honored on 19 December in a ceremony presided over by Dr. John H. Marburger III, Science Advisor to the President and Director of the White House Office of Science and Technology Policy. The PECASE Award is the highest honor bestowed by the U.S. government on outstanding scientists and engineers beginning their careers. Each Presidential award winner receives a citation, a plaque and additional funding from their agency for up to five years to advance his or her research. Please visit the White House web site to read the [news release](#).

GoMA now publishes a newsletter. To subscribe, please visit the [‘About Us’](#) section of the GoMA website.

Continental Shelves: Pacific Ocean Shelf Tracking (POST)

In August 2008, **Jim Bolger was named POST’s new Executive Director.** Jim is responsible for the day to day management of the program, including planning, administrative oversight and staff supervision. He will also work closely with the POST Management Board to ensure implementation of the program’s many activities and initiatives. Jim previously worked for the Washington state government, directing the environmental and land use planning programs for Kitsap County. He has also worked as a marine resource specialist with the Washington Sea Grant Program, as Senior Interpreter at the Monterey Bay Aquarium, and as a staff oceanographer at the School of Oceanography. Welcome Jim!



Census researchers from the POST project have proven new **miniature tagging and tracking technologies can follow the travels of juvenile salmon** through vast distances and highly dissimilar waters – from as far as the Rocky Mountain headwaters of USA’s Columbia River through the ocean to the coast of Alaska. Originating at the site of their release in the foothills of the Rocky Mountains, two little smolt were tracked all the way out into the Pacific and North to Alaskan waters, a journey of almost 3,000 km.

Experts say the breakthrough opens the window on a world of opportunities to reveal some of Mother Nature's most closely guarded secrets.

Over the last decade, researchers have used tags to follow larger ocean dwellers such as sharks, sturgeon, tuna and sea turtles, and to follow migrations of mature salmon along marine coasts. Now for the first time they have tagged and directly tracked small juvenile Pacific salmon, from their release in freshwater far upriver to distant ocean destinations, a major step towards understanding the full life experience and decline of this species. POST's results are also challenging the accepted science regarding the affect of hydroelectric dams on juvenile salmon mortality. This research was the subject of a recent paper published by POST scientists in the Public Library of Science (PLoS) online journal *PLoS Biology*. The full press release, video and photos can be found on the POST website: http://www.postcoml.org/page.php?section=community&page=Tracking_salmon_from_Rockies_to_Alaska. Please visit *PLoS Biology* to read the [article](#).

POST was highlighted in an article in the Canadian newspaper *Globe and Mail* on 13 October 2008 regarding their efforts to track some of the estimated 46,000 white sturgeon, America's largest freshwater fish and the world's largest remaining wild population, in the lower Fraser River, British Columbia, Canada. Researchers are trying to understand how the white sturgeon may be affected by the construction of two new bridges. The Kwikwetlem First Nation, indigenous peoples of the Canadian Pacific Northwest Coast, have fished for the white sturgeon and requested the study after learning that the environmental assessments for the construction of the bridges did not include possible impacts on the sturgeon. Sixty-six wild sturgeon were tagged with tracking devices in hopes to learn more about movement and migration (100 will be tagged by April 2009). Results have shown that eight sturgeon have been moving throughout the area between the two bridge sites and are supplying researchers with much needed information on their whereabouts and possible ways to protect them in the future.

POST held a meeting of its Management Board on 11-12 December 2008 at the Vancouver Aquarium, Vancouver, British Columbia, Canada. POST's 2008 field work, including collecting data and maintaining receivers from the backbone array, is coming to close during the month of December.

Trials for tagging herring for the first time with acoustic tags were started in October 2007 in western Washington State, USA, in conjunction with U.S. Geological Survey and the University Alaska Fairbanks. Results will be available soon.

Continental Margins: Continental Margin Ecosystems on a Worldwide Scale (COMARGE)

A recently published 'Catalogue of Squat Lobsters' now lists the 870 known species of squat lobsters. **The catalogue is the result of a COMARGE workshop** in September 2007 where specialists of squat lobsters met in New Zealand and in just one year were able to publish a complete list of the 870 known species of squat lobsters together with distributional and bibliographic data. This catalogue, published in the journal *Zootaxa* and freely available from the journal's website since October 2008, has been accessed more than 3000 times in just 5 weeks. So far this is the most highly accessed *Zootaxa* paper ever. More information can be found on the [COMARGE website](#). The paper is freely available on the [Zootaxa website](#).



In mid October 2008, **COMARGE informed a large audience about the complexity of continental margin ecosystems**, COMARGE and CoML at a conference at the Oceanographic Institute of Paris (IOP). The grand amphitheatre held about 200 audience members who asked many questions regarding the COMARGE network.

Abyssal Plains: Census of the Diversity of Abyssal Marine Life (CeDAMar)

A special volume, "**Bringing light into deep-sea biodiversity**" compiled by CeDAMar was published in *Zootaxa* and is [available online](#). The volume covers different taxonomic groups including Brachiopoda, Nematoda, Mollusca and Porifera, with 23 papers with descriptions of 44 new species and five new genera. Edited by CoML researchers Pedro Martinez Arbizu and Saskia Brix, this issue covers an impressive collection of results from investigations of abyssal regions around the globe.

Mid-Ocean Ridges: Mid-Atlantic Ridge Ecosystem Project (MAR-ECO)

Odd Aksel Bergstad participated in a presentation on behalf of the Research Council of Norway and MAR-ECO at the international Euroscience Open Forum conference in Barcelona from July 18-22, 2008. **The presentation addressed how art can help communicate science** and help scientists reach new target groups. MAR-ECO has demonstrated a number of relationships between art and science, inspiring film, painting, sculpture, photography and jazz music.



In a recent publication in *Marine Pollution Bulletin*, “Persistent pollutants in nine species of deep-sea cephalopods”, CoML researcher **Michael Vecchione described the presence of chemical contaminants** in nine different species of cephalopods (including octopods, squids, cuttlefishes and nautilus) which were collected during a joint investigation of Bear Seamount by GoMA and MAR-ECO researchers. The chemicals found, known as persistent organic pollutants (POPs), were found in specimens collected at a depth of 3,000 feet. These results provide evidence that these pollutants, which bio-accumulate as they flow through tropic webs, are reaching even very remote locations in the open ocean. This article is available online at [Science Direct](#).



Jo Høyer and Morten Steffensen presented on “**Deeper than Light: Communicating an unknown world**” at the International Network on Public Communication of Science and Technology (PCST) conference in Malmö, Sweden in 23-27 June 2008. They summarized their experiences with outreach work for the MAR-ECO project in which they reached their audience through media, the web, art and photography. Specifically, after the main MAR-ECO cruise aboard the *R/V G.O. Sars* in 2004, they utilized the wealth of material to communicate the findings through TV-documentaries, publications, an educational network, exhibitions and more. To learn more about PCST, please visit their [website](#).

The **Deeper Than Light Exhibit is now at L’oceanografic in Valencia, Spain**. The Spanish launch of the exhibit, held on the first day of the World Conference on Marine Biodiversity, was attended by the MAR-ECO team, numerous members of the CoML community and Norwegian diplomats.

Seamounts: Census of Marine Life on Seamounts (CenSeam)

CenSeam, in conjunction with the Monterey Bay Aquarium Research Institute (MBARI), will hold a **workshop on “Classification and identification of marine organisms from images & video”** at MBARI from 29 March - 1 April 2009. With advances in the quality, acquisition, and portability of digital imagery comes significant functional advantages for marine research. The workshop will address how to further a projects ability to accurately and promptly categorize the ever-increasing quantities of visual samples that are becoming critical for successful scientific analysis, collaboration and publication. To submit your interest, or for further information, please contact Nancy Jacobsen (jana@mbari.org) at MBARI. Please see the [MBARI website](#) for further information and regular updates.

Vents & Seeps: Biogeography of Deep-water Chemosynthetic Ecosystems (ChEss)

ChEss scientists Maria Baker and Chris German wrote an article “**Going for Gold! Who will win the race to exploit ores from the deep?**” in *Ocean Challenge* magazine. The article discusses marine mining of seafloor massive sulphides (SMS) which are an extremely viable commodity formed by submarine hydrothermal venting. SMS deposits are masses of metal sulphide, which contain significant concentrations of metals such as cadmium, lead and copper, as well as more precious metals such as platinum, silver and gold. Baker and German note that they believe this is a field where deep ocean scientists “have much opportunity – and a responsibility – to participate, to investigate previously overlooked aspects of deep-sea hydrothermal systems, and to provide national and international regulatory bodies with the best possible advice on how to proceed”. A PDF of the article can be found on the [ChEss website](#).

Chris German, ChEss PI, appears in the video story of Ann Curry's ALVIN dive to the deep sea floor on NBC's Today Show. The *R/V Atlantis* and ALVIN were exploring hydrothermal vents in the Sea

of Cortez. Chris refers to the discovery of hydrothermal vents in 1977 as one of the “top 100 discoveries in science – ever.” To view the video, please visit the [Today Show](#) website.

Ana Hilário, ChEss participant from Portugal’s University of Aveiro, and colleagues **recently found 20 species of “Medusa” worms**, tiny worms called frenulates, in mud volcanoes in the Gulf of Cádiz. Ana has already named one of the new species *Bobmarleya* because the worm’s dreadlocked appearance reminded her of the Jamaican reggae singer. The story was featured in [National Geographic news online](#).

A team of researchers, led by Dr. Jon Copley of the National Oceanography Centre, Southampton, are set to **explore the world's deepest undersea volcanoes** in the Cayman Trough. These yet to be explored volcanoes lie between Jamaica and the Cayman Islands, where the rift in the seafloor plunges to a depth of more than 5000 meters below sea level. To learn more, please visit the [ChEss website](#).

Arctic: Arctic Ocean Diversity (ArcOD)



Throughout the month of October, Fairbanks, Alaska’s Well Street Art Company featured photographs of ArcOD researchers and photographers Kevin Raskoff, Russ Hopcroft, Rolf Gradinger and Bodil Bluhm, and paintings by a Fairbanks painter, Sue Farnham. **Farnham’s paintings were inspired by ArcOD’s photographs**, which she encountered when ArcOD asked her to design their logo. Farnham’s paintings ranged from representational to abstract and show Arctic fauna such as jellyfish, copepods, Arctic cod, sponges, sea urchins and brittle stars as well as sea ice-scapes. The show was

in celebration of the International Polar Year in which ArcOD is the lead project of the ‘Arctic Marine Biodiversity’ cluster. Roughly 400 visitors attended the opening of the show on 3 October 2008. Examples of the paintings and photographs can be seen [here](#) and [here](#).

Photographs by ArcOD researchers Russ Hopcroft, Bodil Bluhm, and Kevin Raskoff are **featured at the new Smithsonian Ocean Hall** in Washington, D.C., USA. The photos from the Hidden Ocean 2005 Cruise in the "Going to Sea" exhibit are part of a display that explores the themes of human exploration, scientific discovery, and oceangoing traditions. The grand opening of the new Sant Ocean Hall was 27 September 2008. For more information about this exhibit visit the [‘Going to Sea’](#) page on the [Sant Ocean Hall](#) website.



ArcOD has added a variety of new content to its website in the past few months, and Russ Hopcroft has succeeded in giving the content a very attractive look and feel. New content includes information on ArcOD minigrants, IPY cluster projects and the first set of species pages. Most recently, ArcOD posted its data and metadata on its own website with maps visualizing in one glance which geographic area the data were collected at. ArcOD data are also harvested through OBIS, GBIF and the Alaska Ocean Observing System. Please visit [ArcOD’s website](#) to view this new content.

ArcOD is one of the **partners of the Polar Barcode of Life Initiative (PolarBOLI)** in which Polar-focused researchers have joined forces for barcoding polar biota, both terrestrial and aquatic. About 40 Arctic zooplankton species, over 80 fish species and close to 100 benthic species have been barcoded so far utilizing this framework. Major contributors to this effort include Russ Hopcroft, Ksenia Kosobokova, Ann Bucklin & colleagues for zooplankton, Christy Carr, Alex Smith, Sarah Mincks and the team from the Guelph barcoding facility for benthos, Kitty Mecklenburg and again the Guelph team for fishes.

Antarctic: Census of Antarctic Marine Life (CAML)

CAML researchers contributed to an Australian Antarctic Territory stamp that commemorates the International Polar Year (IPY) 2007-2008 and celebrates the successful fieldwork phase of the IPY projects on marine biodiversity in Antarctica. The image of the marine snail, or pteropod, species *Limacina helicina* was chosen for the special issue and is highly



appropriate because it is found in both the Southern Ocean around Antarctica and in the Arctic Ocean and IPY has encouraged the comparison of the ecosystems of the oceans in the north and south polar regions.



To analyze and map the distribution of polar marine life, a small group of scientists met at Duke University in Durham, North Carolina, USA from 26 to 28 October 2008. Their goal was to explore mapping tools using a zoom function to visualize distributions at different spatial scales. The group used repositories such as SCAR-MarBIN, OBIS and GBIF to provide geo-referenced species data. By **comparing the list of validated species for Antarctic and Arctic waters**, they extracted 91 species which occur at both poles. Mapping the distribution data onto seafloor bathymetry and onto the temperature of the bottom water showed how the life inhabited different ocean areas. In the Antarctic, the oxygen-rich bottom water extends into lower latitudes; in the Arctic, its extent is limited by the surrounding land masses. Tools such as GeoPhyloBuilder visualized the taxonomic hierarchy across space. The group developed many mapping tools to the proof-of-concept stage, in preparation for more detailed analysis of life in the polar oceans.

CAML's Collaborative East Antarctic Marine Census (CEAMARC) voyage last January was instrumental to the **first Vulnerable Marine Ecosystems (VMEs)** declared by the Conservation of Antarctic Marine Living Resources (CCAMLR). In early November 2008, Australia's proposal for an area of the Southern Ocean to be declared a VME was adopted by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) due in part to evidence from the CAML project. The two accepted areas of the Southern Ocean, each of 400 square kilometers, will now have protection from fishing, pending the introduction of a more permanent system for area protection. To learn more, please visit the [Australian Antarctic Division website](#).

The University of Guelph and CAML are offering CoML participants **the opportunity to sequence Antarctic material** in their high throughput barcoding facility. They can sequence the CO1 gene of up to 2000 samples in total, free of charge for CAML participants. The lab at Guelph where the sequencing will be carried out will not expect co-authorship of any publications, although CAML and Guelph should be mentioned in the acknowledgements. Because of the short time frame, samples need to be received by the end of 2009. Allocation of sequence capacity will be on a first come, first served basis, so interested parties should contact Rachel Grant (CAML barcode coordinator- rachelannegrant@googlemail.com) as soon as possible, giving details of the number of samples and the taxonomic groups included. The minimum number of samples is 96, and the lab can accept tissue, extracted DNA or PCR products. Material should be less than 2 years old and ideally preserved in ethanol. Groups in which CO1 does not give good results should be avoided.



A recent article entitled "Marine, intertidal, freshwater, and terrestrial biodiversity in an isolated polar archipelago" in the *Journal of Biogeography* released the results of the **first comprehensive inventory of life in the Antarctic**, a 2006 British Antarctic Survey expedition associated with CAML. The [article](#) described the South Orkney Islands as having more species than the Galapagos and many other tropical and temperate systems. These findings are in opposition to the prevailing point of view that polar environments support relatively low biodiversity. A 4 December 2008 [editorial](#) from the *New York Times* also discussed this research from the perspective of ecological change; the South Orkney Islands appear to be relatively unchanged over the past century, allowing this inventory to serve as a good baseline against which future change may be measured.

Top Predators: Tagging of Pacific Predators (TOPP)

In October 2008, TOPP scientist Daniel Costa was appointed to the Ida Benson Lynn Endowed Chair in Ocean Health. Dan was recognized because of his important contributions to research in the areas of marine mammals, seabirds, and the impacts of humans on marine environments. He noted that he plans to

use the funds from the endowed chair to support graduate students and to expand his public outreach efforts at the Seymour Marine Discovery Center at the University of California, Santa Cruz's Long Marine Laboratory. The Ida Benson Lynn Endowed Chair in Ocean Health was established in 1998 and is awarded to an “outstanding scholar with research interests in the area of ocean health”. To read more, please visit the [UCSC website](#). Congratulations Dan!

TOPP, northern elephant seals and other pinniped species were **featured in a film on NOVA** on 25 November 2008. The film featured TOPP elephant seal research in addition to segments filmed at The Marine Mammal Center of Sausalito, CA. The film outlined the rehabilitation efforts of The Marine Mammal Center, and a journey to Año Nuevo State Reserve for a close look at a healthy population of elephant seals with the TOPP E Seal Team. To view the video, please visit [PBS Ocean 911](#). TOPP is featured in Chapter 3 of 6.



TOPP and the Tag-A-Giant Foundation **co-hosted the 3rd International Biologging Science Symposium** from September 1-5, 2008 at the Asilomar Conference Grounds in Pacific Grove, California, USA. Over 130 pioneering researchers from 20 different nations presented during symposium sessions that focused on the advancement of biologging technology, animal behavior, monitoring physiology, climate change, habitat preferences and utilization, and new multi-species observatory networks that take a snapshot of the entire ecosystem. Special sessions also focused on how biologging data can be applied to conservation and management of wildlife and ecosystems. To learn more about the Biologging Symposium, please visit the [Biologging blog](#).

TOPP leatherback turtle data contributed to work resulting in an International Union for the Conservation of Nature (IUCN) resolution. The IUCN World Conservation Congress adopted a resolution urging nations to protect the leatherback sea turtle and sharks from the world's industrial fisheries by identifying and creating marine protected areas along the Pacific leatherback's migratory routes. Leatherback sea turtles in the Pacific Ocean have declined by more than 90% over the past three decades as a result of drowning in industrial longline and gillnet fisheries targeting swordfish, sharks, and tunas. Egg harvesting, marine plastic debris and loss of nesting beaches due to global warming-induced sea level rise also threaten the leatherback. If current trends continue, Pacific leatherbacks are predicted to go extinct within the next few decades. You can read more online at [EurekAlert](#).

An article that supported findings from TOPP migration studies was recently published in Science. It addressed the connections between different populations of bluefin tuna in the Atlantic. Studying the chemical composition of otoliths (ear bones), from both juvenile and adult specimens in various locations, researchers were able to detect chemical signatures, which serve as a kind of “birth certificate,” identifying where each fish was born. Their results suggest that Atlantic bluefin tuna populations migrate and mix with other populations during foraging periods but return to home waters to spawn. To read more about this study, please visit [Science online](#).



TOPP researcher, **Barbara Block**, was on **National Public Radio's (NPR) Talk of the Nation Science Friday** broadcast in the U.S. on 5 September 2008. She discussed ‘biologging,’ the use of electronic sensors, implanted or attached to animals, to track and record their movements, behaviors, physical setting and physiological state in the wild. Specifically she addressed whether these electronic tracking methods could help preserve the tuna. To learn more, visit [NPR Science Friday](#).

Randy Kochevar has officially re-joined the TOPP headquarters team and will lead education and outreach efforts. Randy will be based at Hopkins Marine Lab. **Welcome back, Randy!**

Zooplankton: Census of Marine Zooplankton (CMarZ)

CMarZ Steering Group member **Martin Angel** has recently **co-launched two websites on ostracods**. The [Atlas of Southern Ocean Planktonic Ostracods](#) describes the ostracod group with an interactive list of Southern Ocean species, as well as a list of all known species and the depth zones they inhabit. The [Atlas](#)

of [Atlantic Planktonic Ostracods](#), with assistance of the British Natural History Museum, is an extensive guide with descriptions, maps, illustrations and photographs.

Microbes: International Census of Marine Microbes (ICoMM)



ICoMM is sponsoring a session at the ASLO Aquatic Sciences Meeting (25-30 January 2009) in Nice, France. The session entitled “**Determining the structuring effects of the environment on microbial community composition: approaches and strategies**” will offer a platform for presenting and discussing current methods and strategies that best improve our understanding of natural ecosystems, from exploration and explanation of diversity patterns, to predictive

ecological modeling. A specific emphasis will be given to ecological modeling of multi-species distribution in their environmental context and will offer examples of ecological insights obtained from complex datasets.

National and Regional Activities

Africa

The project to establish **AfrOBIS as the Sub-Saharan Node of OBIS has been very successful**, and achieved much more than the initially specified targets. Over 3.2 million data have been entered into the system, relative to only 500,000 that was originally anticipated.

CoML Africa masters student Angela Mead aims to investigate whether there have been long term changes in the intertidal fauna of South Africa since the classic surveys of Stephenson and Day in the 1940's. Angela's research is funded primarily by a grant from the History of the Near Shore collaboration between HMAP and NaGISA, and, in the course of this work, she is **conducting new surveys using the NaGISA protocol at sites all around the South African coast**. Angela presented some initial findings at the World Conference on Marine Biodiversity in November.

Kate Watermeyer has used Ecopath and Ecosim models to recreate trophic flows in the Benguela as they existed before the arrival of western settlers. **This is a contribution to the Benguela HMAP project** and develops on the review of human impacts in the Benguela by Griffiths *et al.* (2004). This student graduated at the end of 2007 and has written two papers from her thesis, both of which have been published by the *African Journal of Marine Science*.

PhD student Louise Lange has commenced on a project to map the benthic biomes off South Africa, based on biogeographic distribution patterns of benthic invertebrates. To date, she has undertaken three extensive research cruises, collecting the invertebrates from circa 150 randomly positioned 30 minute research trawl samples on each cruise and identifying the invertebrates fauna in each (these data will also be a major contribution to AfrOBIS). Louise presented at the World Conference on Marine Biodiversity in November.

Two new commensal species from crinoids – a new shrimp (*Hippolyte*) and the **first record of the enigmatic group Myzostomida** from the region – have been discovered in False Bay, the most sampled site on the African coast! The shrimp has now been described (D'Udekem D'Acoz 2007) and a paper (Lanterberg *et al.* 2008) describing the myzostomid, also a new species, is published in *Hydrobiologia* ([Online First](#)). A third paper on the composition of the commensal fauna of crinoids in the region by 2007 honors student Tessa Hempson was published in the October 2008 issue of *African Zoology* (Hempson *et al.* 2008).

A recent research visit by Professor Jim Carlton has re-examined the known list of marine alien species in South Africa and **increased the number of known introductions from 20 to approximately 100!** A paper describing the new introductions and their possible impacts is in preparation.

Australia

CoML Australia has a new Chair – Nic Bax, who is based at Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO), is the Director of the Marine Biodiversity Hub at the University of Tasmania and Leader of Marine Conservation and Biodiversity Management for CSIRO Wealth from Oceans Flagship. Annabel Ozimec, also based at CSIRO, will assist with Education and Outreach.

There is an extensive Australian network of collaborators in CoML-affiliated initiatives, which ensures in a **high profile for CoML across the Australian marine research community**. The Commonwealth Environment Research Facilities (CERF) [Marine Biodiversity Hub newsletter](#) will feature CoML activities. It has an extensive distribution list within Australia.

Datasets from CSIRO Marine and Atmospheric Research, the Australian Antarctic Division and the West Australian Museum have been added to OBIS. The “C-squares” web mapping services have continued to be provided to the OBIS International portal, with all “base level” international OBIS maps for any species, taxonomic group, or data source currently created on demand on the OBIS Australia server. Tony Rees from OBIS Australia attended the 7th meeting of the Managers Committee at Rutgers University in February 2008, during which a number of future developments of the OBIS system were scoped. He is also pursuing potential synergies between OBIS Australia and the Atlas of Living Australia (ALA) project.

Canada

Several **CHONE (Canadian Healthy Oceans Network) projects began field work during the period of May-October 2008**, including a project on larval population connectivity and larval dispersal in St. Georges Bay, Nova Scotia and Bonne Bay, Newfoundland, a particle drift project in Bonne Bay, NL, and a project to characterize and create a benthic biodiversity baseline for the Canadian Arctic. Work has also begun in the Pacific on deep-water sponge reefs and corals and their associated communities. Several additional projects will begin field work during summer 2009 as the research agreement between all of the participating university and government partners is put in place.

Philippe Archambault of the Université du Québec – Rimouski **will lead Canadian synthesis for CoML**.

Caribbean

CoML Caribbean scientists **Eduardo Klein and Elizabeth Huck from Universidad Simon Bolivar in Caracas were honored by Venezuelan President Hugo Chavez** on 21 August for their participation in Venezuela's first expeditions to Antarctica, in which they carried out biodiversity studies related to the Census of Antarctic Marine Life (CAML) project. They received the Orden Libertador Simon Bolivar, Third Class, the highest recognition for a Venezuelan citizen (non-military).



Please note this correction regarding the book “Marine biodiversity of Costa Rica, Central America” that was mentioned in our last newsletter. To clarify, researchers from CIMAR (Marine Science and Limnology Research Center) of the Universidad de Costa Rica have released a new volume entitled “Marine Biodiversity of Costa Rica, Central America.” This new book from Ingo Wehrmann and Jorge Cortes (who is involved in the CARICORAL project of the Caribbean CoML) compiles species lists and information regarding most taxonomical groups living in Costa Rican waters. The volume also discusses species collections and experts, making this an important work for students and researchers alike. The aim of the text is to serve as a point of reference for future research and management efforts and to identify not only what is known about Central American marine biodiversity, but also where information gaps exist. This text, with over 100 full color illustrations, is available for pre-publication order from [Springer](#). For additional information please contact Jorge Cortes (jcortes@cariari.ucr.ac.cr).

Patricia Miloslavich and Juan Cruz, both from CoML Caribbean, presented on ‘Marine biodiversity associated to rocky shores and seagrasses in South America: a latitudinal comparison using the global Natural Geography in Shore Areas (NaGISA) project’ and ‘**Results of applying the NaGISA protocol in**

Venezuela' at the 5th World Fisheries Congress held in Yokohama, Japan on 20-24 October. They also participated in a Marine Biodiversity symposium, "**Diversity of Marine biology and the role of Census of Marine Life**," at the Japan Agency for Marine-Earth Science and Technology (JAMSTEC) where Patricia discussed the role of the NRICs and CoML post 2010.

China

CoML China collected zooplankton using nets and IKMT from the R/V *Xuelong* in the Pacific-Arctic Ocean during the 3rd **Chinese Arctic Expedition** from July to September 2008. The survey focused on the zooplankton biodiversity in the high latitude sea.

The **Chinese Coastal Open Cruise took place in July and August of 2008** to study the long term change of marine ecosystems in Chinese coastal areas. Marine biodiversity research was an important focus of this cruise.

Other national cruises on the biodiversity and ecology of marine plankton will take place in conjunction with different national projects in the Yellow sea, the East China Sea, and the monthly investigation of marine plankton in Jiaozhou Bay (Yellow Sea). **These studies are all contributing to CMarZ and CoML.**

Europe

Having relocated to the U.S, Professor **Graham Shimmiel officially stepped down as chair of EuroCoML Executive and Steering Committees** in November 2008.

Professor Henn Ojaveer of Estonia and Professor Isabel Sousa-Pinto of Portugal have been appointed the new EuroCoML co-chairs.

EuroCoML expresses their gratitude for Graham's work as chairman and looks forward to his continued involvement. Bhavani Narayanaswamy will remain as the E & O Liaison and Project Coordinator for EuroCoML.



Indonesia

Indonesia is hosting the **World Ocean Conference on 11-15 May 2009** in Manado, North Sulawesi, Indonesia. Conference highlights will include a meeting of Ministers and high-level officials to discuss the role of oceans in climate change, as well as a Global Ocean Policy Day and a Coral Triangle Initiative Summit. To learn more about the conference, please visit the [WOC website](#).

Indian Ocean

In November, IO-CoML hosted a meeting between CBoL members from Guelph, Canada and barcoders from India (primarily those trained at the 2007 workshop organized by IO-CoML). The **goal of the meeting was to coordinate barcoding projects within India** and begin to outline a national project.

IO-OBIS currently serves data on about **42,000 species from the Indian Ocean**.

South America

A Latin American CAML meeting, organized by Lucia Campos, took place on 3 September 2008, in Valparaíso, Chile and **coincided with the Fourth Latin American Symposium on Antarctic Research**. The LA CAML meeting was attended by about 25 people with representatives from all six Latin American countries with Antarctic programs and members of CAML. The Brazilians made tremendous efforts to consolidate a network to ensure future coordination of research by all six countries. Meeting participants discussed LA CAML synthesis documents to be sent to *Deep Sea Research* for a CAML special issue and plans to define and coordinate integrated field activities for the austral summer 2008-2009.

The "**Marine benthic fauna of the Patagonian fjord region**", edited by Verena Haussermann and Gunther Forsterra from the Huinay Scientific Field Station, is now in press. This publication will consist of an illustrated scientific-taxonomic identification field guide for the most common species (about 500

species) of the Patagonian fjord region of South America, with public outreach. The guide will be available both in English and in Spanish.

USA

The U.S. National Committee (USNC) met 22-23 September at the Monterey Bay Aquarium Research Institute.

Meeting discussions focused on developing products and identifying opportunities to better disseminate CoML program results to a variety of audiences within the U.S. These efforts will be a major contribution to overall synthesis activities that the entire CoML is undertaking as the first CoML comes to a close in October 2010. Among other key topics of discussion were the role of CoML within the transition to a new administration, continued interaction with the NOAA's Science Advisory Board, and the potential ethical and regulatory implications of CoML research. On 24 September, the USNC held two simultaneous workshops; one focusing on the continued development and progress of OBIS-USA, while the other met to develop content for a specific synthesis activity, in particular a U.S. regional chapter as part of a global assessment of our knowledge of marine biodiversity.



The USNC will next meet 11-12 March 2009 at the Consortium for Ocean Leadership offices in Washington, D.C.

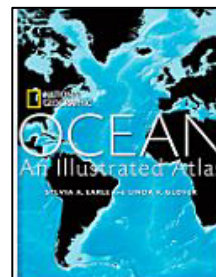


CoML U.S. National Committee member **Sylvia Earle** was recently named as a **2009 TED Prize** because of her life long devotion and advocacy for the oceans and the creatures that inhabit them. Three prize winners, each a leader in their chosen field of work, are chosen for their “unconventional viewpoint and vision to transform the world.” The winners receive \$100,000 plus “One Wish to Change the World - No Restrictions.” Sylvia will receive her award and reveal her ‘one wish’ at the Technology, Entertainment, and Design (TED) 2009 conference on 5 February 2009. Past winner E.O. Wilson’s wish lead to the creation the Encyclopedia of Life so stay tuned to learn

what Sylvia wishes for! To learn more about Sylvia and the other prize winners, please visit the [TED Prize website](#). Congratulations Sylvia!

The results of the 2006 CoML U.S. National Committee workshop entitled “Approaches for Researching the Roles of Marine and Coastal Biodiversity in Maintaining Ecosystem Services” were **recently published in *Frontiers in Ecology and the Environment***. The paper discusses the links between ecosystem biodiversity and the essential functions of the ecosystem as well as how ecosystem health is essential in maintaining such services as fisheries, water quality, shoreline protection and recreation. Results suggest that while biodiversity may not be the only goal of ecosystem management, it can serve as an indicator when evaluating the impacts of human activity on ecosystem function. The paper is now available online through [Frontiers e-View](#), an online publication site where fully edited and formatted papers are published prior to appearing in print in *Frontiers*. For more information about the workshop, please visit the U.S. CoML [workshop webpage](#).

USNC member **Sylvia Earle** also recently co-authored *Ocean: An Illustrated Atlas*, published by National Geographic. Sylvia, often referred to as “Her Deepness,” is an oceanographer and explorer who has led more than 60 expeditions worldwide, spent over 6000 hours underwater in connection with her research and holds the women’s record (3300 feet, 1000 meters) for a solo dive in a deep submersible. Her co-author Linda K. Glover is the Senior Marine Policy Advisor for Conservation International and a leader in ocean science and public outreach. The atlas is a series of 250 timely and relevant maps, photographs and satellite images that reveal the complexity and beauty of the ocean and the life that inhabits it. A fantastic resource for the general public, *Ocean* is both educational and entertaining. It explores our link to the ocean and how it affects our daily lives, as well as how our maintenance of the ocean is critical to the survival of the ocean and the life



within it, as well as our own survival. The book contains an essay on CoML by Fred Grassle and Edward Vanden Berghe and features special maps prepared in collaboration with Pat Halpin and the Mapping & Visualization team. Please visit [National Geographic](#) to learn more:

For more USNC news, **view the latest newsletter [online](#)**.

Barcode of Life

The **Marine Barcode of Life (MBoL)** hosts visiting researchers to barcode specimens. So far, five CoML researchers from ArcOD, CAML and CReefs have been hosted at the Biodiversity Institute of Ontario (BIO) in Guelph and the Smithsonian Institution in Washington, D.C. Further visits by scientists from COMARGE and ChEss are planned. A total of some 4000 specimens representing at least some 500 species have been analyzed during the visits so far. MBoL strongly encourages CoML projects to take advantage of this opportunity. Contact Dirk Steinke (dsteinke@uoguelph.ca) for more information.

There has been **much progress in general toward establishing sequences for all marine species**. To date, over 11,000 named species have been barcoded, but further inspection of the barcodes will likely result in identification of more species.

The Consortium for the Barcode of Life (CBoL), FISH-BoL and CoML were noted in a July/August 2008 article entitled “**A role for barcoding in the study of African fish diversity and conservation**” in the *South African Journal of Science*. The FISH-BOL project in Africa “aims to establish a collaborative Pan-African regional working group to facilitate barcoding of fish across the continent.” It is also hoped that FISH-BOL will provide “previously inaccessible avenues of funding for taxonomic research in Africa”.

Philippe Bouchet, an MBoL team member, has been asked to co-lead the **Marine Bio-Surveillance Working Group** of the International Barcode of Life (iBOL). MarBOL actively helped to assemble proposal documents and work packages for this initiative.

Dirk Steinke has been helping with the development of a proposal for an accelerated **shark and ray barcoding project SharkBOL**. He participated in the first meeting in May 2008 in Los Banos, Philippines and helped develop prospectus, as well as the set-up of a web site for the project.

Encyclopedia of Life

The Encyclopedia of Life will offer a **training session for CoML participants** at the Long Beach Synthesis Workshops. The session is currently scheduled for the evening of February 4th.

The Encyclopedia of Life has released its **latest issue of ‘EOLetter’**, a quarterly newsletter which features a media spotlight, technology news, scientist biographies, and a link to their annual report. You can read the newsletters on the [EoL website](#).



SCOR

Many **CoML participants contributed to a new book** by Island Press entitled “Watersheds, Bays, and Bounded Seas: The Science and Management of Semi-Enclosed Marine Systems”. This book resulted from a workshop in 2007, jointly sponsored by the Scientific Committee on Problems of the Environment (SCOPE), the International Association for the Physical Sciences of the Ocean (IAPSO), and SCOR. Many individuals from SCOR projects and working groups were involved in the workshop and as authors. Island Press also makes it possible for anyone who wishes to use the book for a class to examine it for 90 days for free at [Island Press](#).

SCOR’s 50th Anniversary Symposium was held 19-21 October in Woods Hole, MA, USA – the site of the first SCOR meeting. This open meeting was attended by about 125 scientists from around the world, including several from the CoML community. George Hemmen and Elizabeth Gross, the former SCOR Executive Secretary and Executive Director, respectively, reviewed the history of SCOR, to set the stage for the remainder of the symposium, which focused on future ocean science. Seven SCOR Presidents (past, present, and president-elect) participated in the symposium and all three of the SCOR

Executive Secretaries/Executive Directors also participated. Sadly, one of the former SCOR Presidents, Warren Wooster, was not able to attend and died shortly after the symposium due to a long illness. Elizabeth Gross wrote a [short memorial](#) for SCOR to be presented at a memorial service for Warren.

The **next SCOR Summit of Marine Programs** will be held March 30th-April 1st at the University of Delaware (DE, USA).

Ocean Tracking Network

Ron O'Dor, CoML Senior Scientist and OTN member, was **recently interviewed by Jim Nunn of the Canadian Broadcasting Corporation** (CBC) on 12 December. Nunn, one of Nova Scotia's most respected TV journalists, sat down for one on one interviews with "notable citizens" of the Canadian Maritime community. Ron discussed CoML, the new species discoveries and many of the latest CoML news releases. To view the video, which lasts roughly 20 minutes, please visit the 'Recent Interviews' section of the [Nunn On One website](#).

Ron O'Dor, Mike Stokebury, Peter Amiro and Eddie Halfyard published an article entitled "**The Ocean Tracking Network: Cutting Edge Technology on a Global Scale**" in the *Journal of Ocean Technology*. More information on volume 3, "All the Fishes that Swim - Counting, Catching and Sustaining Stocks" is available at [JOT online](#).

Galatee "Oceans" Film

The French newspaper *Le Monde* recently featured an article and interview about the technical and scientific process of the film "Oceans", by Jacques Perrin and Galatee films. Written by Dominique de Saint Pern, **the article and interview discuss the film-making innovations and new technologies** that have been employed by Galatee's crew in capturing the true essence of the ocean and ocean life. CoML researchers have assisted with this project since its inception, and after five years in production, the projected release date for Perrin's latest creation is Fall 2009. The [English translation of the article](#) is available as a PDF, as is the [English translation of the interview](#).

Funding & Employment Announcements

Information regarding Calls for Proposals and other opportunities (jobs, fellowships, post-docs, etc.) can be found at the CoML Secretariat website: www.comlsecretariat.org, under "**Announcements of Opportunity**."

Calendar of Upcoming Events

This is a snapshot of upcoming events relevant for the Census of Marine Life. For the full calendar, visit: <http://db.coml.org/schedule/>.

January 2009

- 19-23 Alaska Marine Science Symposium, Anchorage, AK, USA
- 25-30 ASLO 2009 Aquatic Sciences Meeting, Nice, France

February

- 1-5 CoML Synthesis Workshops, Long Beach, CA, USA
- 5 CoML SSC Meeting, Long Beach, CA, USA
- 6 CoML Synthesis Group meeting, Long Beach, CA, USA
- 12-16 American Association for the Advancement of Science (AAAS), Chicago, IL, USA

March

- 2-6 Committee of Fisheries of Food and Agriculture Organization of the United Nations, Rome, Italy
- 9-10 National Oceanic and Atmospheric Administration Science Advisory Board Meeting, Silver Spring, MD, USA
- 11-12 CoML U.S. National Committee Meeting, Washington, DC, USA
- 13 CoML U.S. National Committee Synthesis Writing Workshop, Washington, DC, USA

30-1Apr SCOR Summit of Marine Programs 2009, University of Delaware, Newark, DE, USA

April

27-30 ICES Deep-sea Symposium, Horta, Azores, Portugal

May

11-15 World Ocean Conference, Manado, Indonesia

25-28 Second Oceans Past Conference, Vancouver, British Columbia, Canada

June

14 CoML Synthesis Group meeting, Cape Town, South Africa

15-16 CoML SSC Meeting, Cape Town, South Africa

22-26 GLOBEC Third Open Science Conference, Victoria, BC, Canada

July

26-31 Xth SCAR International Biology Symposium, Sapporo, Japan

September

21-25 OceanObs'09- Ocean Information for Society: Sustaining the Benefits, Realizing the Potential,
Venice, Italy

October

4-9 Gulf of Maine Science Symposium, St. Andrews, NB, Canada

11-14 BioMarine 2009, Vancouver, Canada