

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

10 Jun – 18 Aug: ArcOD Cruise aboard R/V Oceana to Svalbard Shelf, Norwegian, Greenland and Barents Seas

9 Jul – 8 Aug: ChEss cruise aboard R/V Revelle to Mid-Atlantic Ridge vents. Information and daily updates at <http://www.deepseavoyage.research.pdx.edu/index.php>

3 – 8 Aug: CMarZ "Let's study the Ocean" outreach cruise for high-school students in Suruga Bay, Japan

Top News!

2010 Designated as the International Year of Biodiversity

The United Nations has passed a resolution designating 2010 as the **International Year of Biodiversity**. The designation offers a unique opportunity, with the release of the first Census of Marine Life scheduled for October 2010, for the CoML community to highlight its findings and explore additional prospects that may exist with other Year of Biodiversity events. The hope is to have CoML thoughtfully integrated into the International Year of Biodiversity celebrations and events.



Jesse Ausubel's Known, Unknown and Unknowable (KUU) essay, entitled "On the Limits to Knowledge of Future Marine Biodiversity" **was recently published in the open access *Electronic Journal of Sustainable Development***. The essay can be found at http://www.ejsd.org/public/journal_letter/2. To learn more about the KUU component to the CoML program, please visit the KUU workshop webpage: <http://www.comlsecretariat.org/Dev2Go.web?id=255125>.

Scientific Steering Committee (SSC)



The CoML international **SSC met in Hangzhou, China on 24-25 May 2008**. During the meeting, Fred Grassle turned the chairmanship of the SSC over to Ian Poiner, who had been acting as Vice Chair. Fred had served as

SSC Chair since the establishment of the Census and will continue to serve as an honored member of the SSC and a contributor to the Census 2010 synthesis and events. A banquet was held in his honor on 24 May at the famous Louwailou Restaurant. As Ian's new role as Chair left a vacancy in one of the Vice Chair positions, Myriam Sibuet agreed to join Victor Gallardo as an SSC Vice Chair. The SSC discussed synthesis activities and products, program management and the creation of an online game utilizing CoML research. The SSC reviewed updated project synthesis plans and endorsed proposals from the Synthesis Group, COMARGE and the SCOR Technology Panel.



Following the Hangzhou meeting, Fred Grassle, Jesse Ausubel, Myriam Sibuet, Patricia Miloslavich and Ian Poiner **met with representatives from the Chinese Academy of Sciences in Beijing** on 27 May. The meeting provided an opportunity to brief the Academy on Census achievements, plans for the future and the important role China plays in the Census. Academy representatives briefed us on their marine science research priorities including new coastal zone initiatives associated with the new Institute of Coastal Zone Sustainable Development in Yantai. The Academy suggested a 2010 Census/Chinese Academy of Sciences workshop to report on the findings of the Census.

The **SSC next meets in Valencia, Spain** on 16-17 November 2008, in conjunction with the World Conference on Marine Biodiversity, which will take place on 11-15 November.

The SSC welcomes **six new ex-officio members**: Pat Halpin, Sara Hickox, Paul Snelgrove, Edward Vanden Berghe, Dan Costa and Enric Sala.

Synthesis

The CoML Synthesis Group **met in Hangzhou, China on 23 May 2008**. The CoML Synthesis Group **meets next in Woods Hole, Massachusetts, USA on 21-22 August 2008**. They also plan to meet on 15 November 2008 in Valencia, Spain.

Please **mark your calendars for the 1-5 February 2009 CoML Synthesis Workshop** aboard the Queen Mary in Long Beach, CA. The Synthesis Workshop will require, in addition to project leaders, the participation of Synthesis leaders from the Census Projects, NRICs and cross-project synthesis teams. A preliminary schedule for the week is in development. The Synthesis Workshop will be a strictly internal (to the Census community) meeting focusing on product development and writing. There will be minimal, but important, plenary included in the week's sessions to cover community-wide messages, progress, E&O/communications efforts and Mapping & Visualization. As in Auckland, each Project will be asked to prepare a report, in presentation format (a template will be provided again), on findings and synthesis to date.

The Secretariat **held an NRIC Synthesis Planning Workshop in Washington DC on 1-2 May 2008**. The NRICs agreed on a mutual outline for contributions to a special issue journal. The NRICs are currently preparing their individual plans for accomplishing their respective papers and other synthesis goals.



The CoML **grand “finale” and release events are scheduled for 4-7 October 2010** in London. Mark your calendars!

Mapping & Visualization

The Mapping and Visualization team will hold the first **CoML Visualization Workshop** on 23-25 October 2008 at Duke University in Durham, North Carolina, USA. A draft agenda has been distributed. **Each project should plan to send an appropriate representative working on visualization issues**. For more information, please contact Pat Halpin (phalpin@duke.edu).



Dr. Patrick Halpin, a leading expert in marine conservation and the Gabel Associate Professor of the Practice of Marine Geospatial Ecology and Director of the Geospatial Analysis Program at Duke University's Nicholas School of the Environment, presented at the World Wildlife Fund (WWF) on 10 July 2008. His presentation entitled **“Protecting the Large Pelagics: New Technologies for Marine Conservation in the Open Ocean”** was part of WWF's Kathryn Fuller Science for Nature Seminar series, which brings prominent scientists from diverse scientific fields to Washington, D.C. to present their important research as it relates to national and international conservation. Dr. Halpin's presentation addressed his research, which focuses on protecting pelagic (open ocean) species, such as whales and sea turtles, from growing global threats including ship strikes, entanglements, fisheries by-catch and sonar interactions. He and his fellow researchers use innovative approaches and technologies (geographic information systems (GIS), marine mammal tagging, remote sensing and forecasting models, for example) and apply them to ecosystem-based management and marine conservation. He stressed that researchers need to spend more time looking “in the box” to understand the processes that make biological hotspots attractive to the pelagic species. So, most importantly, his research aims to link the spatial and temporal patterns in marine ecosystems to environmental and biological processes. To learn more about Dr. Halpin's research, visit Duke's Marine Geospatial Ecology Lab at <http://mgel.env.duke.edu/>.

Education and Outreach

The CoML E&O Team, along with several Census scientist authors, was recently approached by a major publisher regarding the creation of **a popular book on CoML, using an A to Z format**. The idea for the

book is to structure it so that by the time the reader gets through the alphabet, they will have a good sense of the diversity of marine life as well as the concepts, tools, technologies, historical figures and other topics related to CoML. The E&O team has created a simple survey which allows you to send them your suggestions for your favorite words that have a connection to CoML. Please visit http://www.surveymonkey.com/s.aspx?sm=KOYQGLTMynK9isjgmVzG1w_3d_3d. Suggestions from colleagues and students are also welcome.

Rick Morris has officially been named CoML's new videographer. Rick produced the film "Counting Creatures", a six-minute video profiling the work of CoML and an interview with Jesse Ausubel of the Sloan Foundation. "Counting Creatures" will be featured at the San Diego UnderSea Film Exhibition in late August.

The Secretariat recently created a **Census of Marine Life group on Facebook.**

Facebook (www.facebook.com) "is a social utility that connects people with friends and others who work, study and live around them" and anyone can join.

The CoML group is considered an open group, meaning anyone can join. The CoML group site contains video, recent news and links to each of the CoML projects. CoML participants are encouraged to join the group and add news, photos, blogs, etc. Hopefully the group will bring visibility to CoML among a new general public audience. If you are a Facebook member, please join us.



Database: Ocean Biogeographic Information System (OBIS)

The World Register of Marine Species (**WoRMS**) was showcased on a series of **gigantic street posters** (each measuring 75m in length) in Christchurch, NZ in early May. The posters featured the names of over 120,000 marine species formally validated by WoRMS. The immense posters, advertising the Sanyo Xacti CA65 water proof camera, are believed to be a first in the advertising world. It was hoped the advertisements, featuring a million words about the sea and marine organisms, would highlight the incredible numbers of marine species and the benefits of the ability to capture the marine realm. To view an article on the advertisements, please visit <http://www.scoop.co.nz/stories/SC0805/S00020.htm>.



Two data managers have joined the International OBIS team. Alena Hornakova and Jessie Bluvias will be working, in close collaboration with data providers, on quality control of OBIS data. They will also be responsible for connecting new datasets and acting as the main points of contact at the OBIS secretariat for data providers. Welcome Alena and Jessie!

Hassan Moustahfid has joined the OBIS secretariat staff as the new portal manager. Hassan, formerly from the Fisheries Department of the National Oceanic and Atmospheric Administration (NOAA), will be taking over Phoebe Zhang's tasks. Hassan has much experience in data management and analysis, and in ecosystem modeling for fisheries. His skills will make a great addition to the expertise presently available at iOBIS. Welcome Hassan!

OBIS Governing Board met at The Food and Agriculture Organization (FAO) of the United Nations headquarters in Rome in April 2008. This was **the first meeting of the Governing Board** and the main discussion centered on the governance of OBIS, including how to achieve a structure that will make OBIS sustainable beyond 2010.

At the International Oceanographic Commission (IOC) meeting in Paris in June, an **exploration of possible scenarios for collaboration between IOC and OBIS** was approved. OBIS will work with the IOC Data and Information Management Advisory Group to develop a plan outlining various scenarios – concentrating on the possibility of the creation of an IOC OBIS Programme and Programme Office – and the governance and budgetary implications and other consequences for both OBIS and IOC. This plan will be presented to the IOC General Assembly in 2009.

Numerous experts, including individuals from the OBIS Regional Nodes, GBIF Secretariat, San Diego Supercomputer Centre and the Open Plan Project, were invited to the OBIS secretariat at Rutgers University in April for an **OBIS Technology workshop**. The participants agreed to investigate a completely new set of tools, including PostGreSQL, PostGIS, GeoServer, OpenLayers and PHP, in order to evaluate what would be needed to move OBIS towards utilizing such new technology. The meeting was a very successful one as several participants have agreed to commit time to assisting the OBIS secretariat. In May, Chris Condit, of the San Diego Supercomputer Centre (SDSC), spent two weeks at the OBIS Secretariat to pilot some of the technologies that were discussed during the workshop. He was able to port all the data from Oracle to PostGreSQL, and make use of the spatial extensions to perform spatial queries. The data is available through GeoServer on a demonstrator server, which also includes a demo web site. All these developments will be documented on the main web site soon. The end result may be a completely new OBIS web site in the near future!

The Gulf of Mexico affiliated project, stationed at Texas A&M University, has received funding for the **digitization of the Gulf of Mexico marine life database**. This regional dataset will be a valuable contribution to OBIS. Congratulations Wes Tunnel and the entire GoMx team!

Oceans Past: History of Marine Animal Populations (HMAP)

Our colleagues at HMAP recently launched a new website. The site features an overview of HMAP and its work and detailed description pages for each of its field projects. Many of the field projects have video presentations, such as the New Zealand Taking Stock Project. Another key feature is the HMAP data page which gives researchers access to HMAP data sets in downloadable form as well as data visualizations. The page also provides a mechanism for researchers to submit data sets for inclusion in the archives. A publications page gives access to, and information about, an HMAP bibliography, research outputs, and books and volumes. Check out the new site at <http://www.hmapcoml.org/>.



INCOFISH (Integrating Multiple Demands on Coastal Zones with Emphasis on Aquatic Ecosystems and Fisheries) recently thanked the HMAP project, stating that **INCOFISH owes much of their success to HMAP**. INCOFISH has been identified as one of the 40 success stories of the European Union's 6th Framework Program. INCOFISH, which "uses powerful new research tools (large fish databases, interactive maps, and ecosystems modeling, etc) to implement concrete solutions, including the extension of marine protected areas and the promotion of sustainable fish markets and selective fishing activities," has adapted the same approach as HMAP, gathering similar types of historical data. In fact, three of the INCOFISH partners are also HMAP partners, which as led to a great amount of shared knowledge and expertise.

HMAP is **seeking papers and poster submissions for their Oceans Past II: Multidisciplinary Perspectives on the History and Future of Marine Animal Populations** conference, which will be held in Vancouver, BC, Canada from 26-28 May 2009. For additional information, guidelines, or inquiries, please visit <http://hmapcoml.org/oceanspast/>.

Oceans Future: Future of Marine Animal Populations (FMAP)

In September, FMAP will welcome a **new project manager**. Catherine Muir will take over for Zoey Zahorodny, who is getting married and moving with her husband to Ontario. It's been a pleasure having Zoey as a part of the CoML community. We wish Zoey the best of luck and welcome Catherine!

HMAP researcher Boris Worm was quoted in a news story entitled "**In Mediterranean, the Predator Is the Hunted**". Mediterranean shark populations are on an alarming decline, partly due to over-fishing in response to the demand for shark fin soup in Asia. The article discussed how shark populations have plummeted by 97%, in some calculations, and how the ocean's predators are now facing danger themselves. The decline of sharks is affecting the food chain and global marine ecosystems. Worm noted the depleted numbers of sleeper sharks in Prince William Sound, Alaska, USA are having a negative effect on the Pollack populations. "We now understand that both on land and in the sea, large predators play important roles in regulating both the total number and the behavior of their prey," Worm wrote. To

view the article in the Washington Post, please visit <http://www.washingtonpost.com/wp-dyn/content/article/2008/06/29/AR2008062901783.html?sid=ST2008063000392&pos=>.

Ocean Present: Realm Field Projects

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

The NaGISA leadership held a workshop with key synthesis team members in Caracas, Venezuela on 10-12 August. The goal was to finalize the NaGISA synthesis plan and outline specific project outputs for 2010.



NaGISA hosted a **workshop on marine free-living Nematoda** at Kyoto University's Seto Marine Biological Laboratory in Shirahama, Japan from 21-24 March 2008. Twelve participants from 6 countries (Thailand, Vietnam, Indonesia, Philippines, USA, and Japan) learned about the taxonomy of marine free-living nematodes. Participants identified specimens from their own samples under the supervision of Dr. Ashleigh Smithe (Hamilton College, USA) and Prof. Shirayama (NaGISA).

Reefs: Census of Coral Reefs (CReefs)

CReefs Australia researchers investigated coral reefs around Lizard Island on the northern part of the Great Barrier Reef on 2-22 April 2008. **CReefs Australia's first expedition** aimed to sample previously undersampled coral reef species and search for previously unknown species. Over 20 researchers, support staff, photographers, and one BHP Billiton employee systematically surveyed the waters around Lizard Island in search of obscure reef life. Once the researchers return from the field, work will continue in the laboratory describing new species, analyzing taxonomy and barcoding DNA samples. Similar expeditions will be launched later this year to Heron Island on the Great Barrier Reef and Ningaloo Reef in Western Australia. For more information, images, and reports please visit: <http://www.aims.gov.au/creefs/field-program.html>.



Gary Cranitch, a Queensland Museum Photographer, was awarded the 2008 Professional Science, Environment and Nature Photographer of the Year award by the Australian Institute of Professional Photography (AIPP). Gary's images earned one Gold award and three Silver awards, one with distinction. The **images were taken during Gary's recent field trip to Lizard Island as part of the CReefs project**. The images will be included in the AIPP exhibition, which tours nationally, and an AIPP Awards hard cover book. The AIPP received over two and a half thousand entries for the 2008 Awards, making this is an outstanding effort on Gary's part. Congratulations Gary! The photos can be viewed online at: <http://www.aipp.com.au/aipphome.php?ID=316&cat=APPA&A=#>.

Nancy Knowlton, CReefs explorer and Sant Chair at the Smithsonian Institution, was mentioned in an article in the *Los Angeles Times* in early June. The article discussed the **current disappearance of corals and the projections**, made in a December 2007 publication in *Science* magazine, stating that by 2050 the oceans will be far too acidic for coral reefs to grow. The topic of ocean acidification and its effects on corals and shell-forming marine life is gaining importance, especially as 2008 is the International Year of the Reef. The article, 'Reef Madness', can be read on the *Los Angeles Times* website: <http://www.latimes.com/news/opinion/sunday/commentary/la-op-wertheim1-2008jun01.0.2343369.story>.

Regional Ecosystems: Gulf of Maine Area Program (GoMA)

In July, National Geographic's **Wild Chronicles** featured a segment on GoMA's Discovery Corridor expedition. In the U.S., check local television listings to view the program.

In June 2008, GoMA's **Evan Richert**, from the University of Southern Maine, **won the Visionary Award from the Gulf of Maine Council on the Marine Environment** for helping to change the way Maine researchers and decision makers think about marine science and ecosystem-based management in the Gulf of Maine region and at the national level. To read more about Evan and his contributions, please visit: <http://research.usm.maine.edu/gulfofmaine-census/wp-content/docs/Visionary-Award-2008-Evan-Richert-final.pdf>.

Continental Shelves: Pacific Ocean Shelf Tracking (POST)

POST has launched a **new version of its website**. Check it out at www.postcoml.org.

POST held its latest Management Board meeting on 24-25 July at the National Oceanic and Atmospheric Administration's Ted Stevens Marine Research Institute in Juneau, Alaska, USA. POST Management Board members also attended an accompanying workshop on 24 July with 28 guests from the Alaskan research community who participated in an afternoon of discussion on POST and how Alaska might benefit from an expanded POST array in the regional waters off Juneau, Alaska.

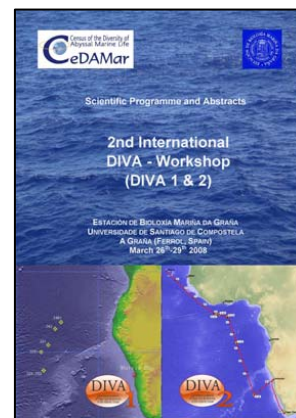
Continental Margins: Continental Margin Ecosystems on a Worldwide Scale (COMARGE)

COMARGE is **organizing a session** titled "Biodiversity of Deep Continental Margins: Local to Global Patterns and Processes" during the World Conference on Marine Biodiversity, 11-15 November, Valencia, Spain.

COMARGE will hold a **synthesis meeting and workshop on habitat heterogeneity** at Scripps Institute of Oceanography on 8-12 September. The SYNDEEP group – including all of the CoML deep sea projects – will hold its **first cross-project synthesis workshop** on 13-15 September, in conjunction with the COMARGE meeting.

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

From 26-29 March, **25 researchers participated in a CeDAMar-hosted workshop** in Ferrol, Spain to present and discuss results from the first two DIVA expeditions to the Southeast Atlantic Ocean. The project name DIVA stands for "Latitudinal gradients of deep-sea biodiversity in the Atlantic Ocean". The presentations covered subjects ranging from new species to distributional patterns to biogeography and taxonomy. Some findings suggested new families be created for several amphipods, many isopod species may have wider distribution than previously expected, and that geographic features may not affect species distribution as was formerly assumed. The workshop also focused its efforts on making plans for two more DIVA expeditions: DIVA-3 to the Argentine Basin and DIVA-4 to the Northern Atlantic Basin. For more information please visit http://www.cedamar.org/index.php?option=com_content&task=view&id=189



CeDAMar **participated in the European Day of the Ocean on 20 May**, along with other projects involved in the German Centre for Marine Biodiversity Research. An exhibit was set up in Wilhelmshaven, catching the attention of the public in the coastal town.

The study of abyssal plains, and specifically CeDAMar, were presented to a broad audience during the 9th Meeting of the **Conference of the Parties to the Convention on Biological Diversity (COP 9)** in June 2008 in Bonn, Germany. Members of the German Centre for Marine Biodiversity Research participated in the meeting.

CeDAMar, in cooperation with the Marine Barcode of Life Initiative (MarBoL), organized an **international workshop to promote molecular barcoding of deep-sea organisms** and enhance cooperation between the CoML and the BoL projects. The workshop was held on 13-18 May 2008 at the German Centre for Marine Biodiversity Research in Wilhelmshaven, Germany. Participants brought their own specimens for training in barcoding and exercises in the BoL database. The workshop was made possible by support from the Alfred Sloan Foundation, CoML and the Consortium for BoL.

The **CeDAMar review paper "Abyssal food limitation, ecosystem structure and climate change"** published by Craig Smith *et al.* is now available online on the *Trends in Ecology and Evolution* webpage: http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6VJ1-4SVBWRW-2&_user=10&_coverDate=06%2F26%2F2008&_rdoc=1&_fmt=&_orig=search&_sort=d&_view=c&_version=1&_urlVersion=0&_userid=10&md5=775d3b81f137297c362c48615eae7624. This paper is a summary of the current knowledge about factors influencing structure and functioning of deep-sea ecosystems. It shows that assessments of environmental impacts of global warming and ocean fertilization cannot be done without considering the response of the abyssal ecosystem.

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

The Deeper Than Light exhibit will be in Valencia, Spain in November for the World Conference on Marine Biodiversity. This will be a **great opportunity for many in the CoML community** attending the conference that have yet to view the exhibit in person.

MAR-ECO data collected on expeditions to the Charlie-Gibbs Fracture Zone played an important role in the recent decision at the June Convention for the Protection of the Marine Environment in the North-East Atlantic (OSPAR) to put forward a proposal for a high seas Marine Protected Area around the CGFZ. If enacted, this Mid-Atlantic Ridge MPA would be the first ever High Seas MPA in the Atlantic Ocean, and the second one to be established globally.

DESEO, the Deep-Sea Education and Outreach group, met in Aberdeen, UK on 6 May. DESEO includes CoML members responsible for education and outreach in the deep-sea projects MAR-ECO, CeDAMar, CenSeam, COMARGE, and ChEss, as well as EuroCoML. The group met to discuss the exhibition 'Deeper than Light', which was initially put together by MAR-ECO. Other DESEO members will augment the exhibition and assisted in plans for its further development, and plans for its new set-up at the CoML finale evens in London in October 2010.



Seamounts: Census of Marine Life on Seamounts (CenSeam)

CenSeam researchers, along with scientists from the Woods Hole Oceanographic Institution and the University of Hawaii, took part in the *R/V Nathaniel B. Palmer* expedition to the Drake Passage and Scotia Sea of Antarctica. Those aboard the US Antarctic Program icebreaker, which departed Punta Arenas, Chile on 18 April 2008 and returned 25 May, **investigated the deep-water corals living on seamounts and ridges**, as well as the climate of the Southern Ocean. More information including background information, ship to shore logs, and images are available on the CenSeam NB Palmer Cruise web page: http://censeam.niwa.co.nz/outreach/nathaniel_b._palmer.



CenSeam explorers marveled at the "Brittlestar City" thriving on a seamount in powerful current swirling around Antarctica. Millions of brittlestars were observed catching passing food in a rattling 4 km/h current by CenSeam researchers aboard the *RV Tanagaroa* on a month-long voyage to survey the Macquarie Ridge. Dubbed "Brittlestar City", its cramped inhabitants, tens of millions living arm tip to arm tip, owe their success to the seamount's shape and to the swirling circumpolar current flowing over and around it at roughly four kilometers per hour. The current allows the mass of brittlestars to capture passing food simply by raising their arms, and it sweeps away fish and other hovering would-be predators. To read the press release or view images and video from the voyage visit <http://www.coml.org/medres/medres77.htm>.

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

ChEss scientists are participating in a cruise aboard the *R/V Revelle* from 9 July to 8 August. The expedition will visit hydrothermal vent sites along the Mid-Atlantic Ridge, including Rainbow (36°13'N 33°54'W), Lucky Strike (37°17'N 32°16'W) and Snake Pit (23°22'N 44°57'W), and a fourth off-axis

site called Lost City (30°10'N 42°08'W). For more information and daily updates, visit the website: <http://www.deepseavoyage.research.pdx.edu/index.php>. **ChEss researchers are participating in a cruise**, from 9 July to 8 August, aboard the *R/V Revelle*, which will set sail from Woods Hole, Massachusetts, USA. The goal of the cruise is to study the geochemistry, geology, biology and microbiology of Mid-Atlantic Ridge (MAR) vent sites. The team will **visit three different sites along the MAR: Rainbow, Lucky Strike, and Snake Pit**, as well as a fourth off-axis site called Lost City. During this research cruise the scientists will be using the remotely operated vehicle (ROV) *Jason II*, to visit the seafloor and collect water, rock and biological samples for analysis. They also plan to deploy numerous on site experiments and geochemical sensors. Daily updates from the cruise can be found at: <http://www.deepseavoyage.research.pdx.edu/dailyupdates.php>.

The ChEss Training Awards for New Investigators (**TAWNI Grants have been awarded**). The awards “support training and mobility of young investigators in research activities related to samples, collections and taxonomy of deepwater chemosynthetic ecosystems”. Congratulations to Andrew Thurber (Ph.D student at Scripps Institution of Oceanography), Robert Jenkins (Research Fellow at Yokohama National University) and Fanny de Busserolles (Research Assistant at Ifremer Research Centre)!

ChEss had an exhibitor’s stand at the 18-22 July **Euroscience Open Forum (ESOF) in Barcelona**. ESOF’s mission is to provide both the European and the international science and business communities with an open platform for debate and communication. It presents and profiles Europe's leading research trends in the sciences, humanities and social sciences, and is an opportunity to discuss and influence the future of research and innovation in Europe by involving all main stakeholders: scientists, business executives and policy-makers. Participants are given the opportunity to discuss and influence the future of research by involving all stakeholders including scientists, business executives and policy-makers. The ChEss stand included an outreach activity entitled “Deep-sea oases: **Exploring the Big, the Small and ALL by 2010**” where participants learned more about hydrothermal vents and submersibles through photos of deep sea vents and seeps, video and a virtual experience of piloting a remote-control submersible. For more information, visit the ESOF08 website at <http://www.esof2008.org/>. Photos and a summary of the activity are posted on the ChEss website (<http://www.noc.soton.ac.uk/chess/index.php>) after the event.



ChEss has **two upcoming workshops**: “Phylogeny and taxonomy of vesicomid and mytilid bivalves” in Roscoff, France on 5-10 September 2008 and “Siboglinidae: a model system for the understanding of evolution, adaptive radiation, microbial symbioses and ecology at extreme environments”, Hawaii, USA on 28-31 October 2008. Please visit the ChEss website (<http://www.noc.soton.ac.uk/chess/index.php>) for more information.

Arctic: Arctic Ocean Diversity (ArcOD)

Another major cruise within the Arctic Marine Biodiversity International Polar Year (IPY) cluster is underway: the Polish *R/V Oceania* is heading north to continue the biodiversity survey in Hornsund Fjord, Svalbard, as part of the IPY project “Arctic and Antarctic Fjord Biodiversity Inventory”. ArcOD scientific steering group member Jan Marcin Weslawski is leading this effort that has broad international collaborations within the EU-funded Network of Excellence MARBEF. Several other ArcOD IPY cruises are currently being prepared. For an overview of ArcOD IPY activities, please visit www.arcodiv.org/IPY_cluster/ArcOD-IPY.html. A list of related cruises is available at www.arcodiv.org/IPY_cruises.html.



The **first species descriptions published by ArcOD researchers during IPY** are those of *Sigambra healyae* (Polychaeta) by Sergey Gagaev from the Zoological Institute in St. Petersburg, Russia and of *Sympagohydra tuuli* (Hydrozoa) by Stefano Piraino (University of Lecce, Italy) and colleagues.

ArcOD researchers are working on a special issue of Canada Basin and Chukchi Sea biodiversity and functioning to be published in the journal *Deep Sea Research II*. ArcOD staff Russ Hopcroft and Bodil

Bluhm, along with NaGISA researcher Katrin Iken, serve as guest editors for this issue. The articles cover faunistic inventories, biological processes, food webs and the physical and chemical environmental settings the biota live in. The review process is ongoing and we are hopeful to have articles published online by the end of the year.

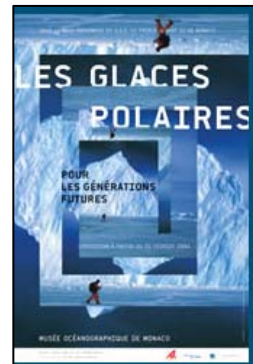


ArcOD researcher **Rolf Gradinger** was interviewed by the Exploratorium, a San Francisco, CA museum of 'science, art and human perception'. Rolf discussed ArcOD's research in the Arctic sea ice communities as part of the Exploratorium's project "Ice Stories: Dispatches from Polar Scientists". The interview, "Searching for Life in the Ice", can be viewed on the Exploratorium's website: http://www.exploratorium.edu/webcasts/archive.php?cmd=browse&presentation_type=all&type=0&content_category=0&project=9&start=10.

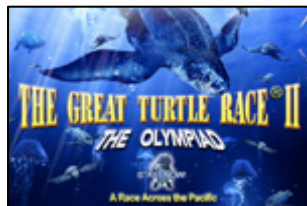
Antarctic: Census of Antarctic Marine Life (CAML)

CAML participated in the biennial meeting of the Scientific Committee on Antarctic Research (SCAR) in St. Petersburg, Russia from 5-11 July. At the meeting, **Angelika Brandt, a member of CAML's steering group, received the 2008 SCAR Medal for Excellence in Antarctic Research**, stating that it is to her credit "that our knowledge about the biodiversity of the Southern Ocean has significantly increased in recent years" (http://www.scar.org/awards/Brandt_Citation_08.pdf). At the symposium, CAML scientists presented on the results of recent biodiversity voyages around Antarctica. David Barnes and Huw Griffiths presented papers on the synthesis of data from SCAR-MarBIN, challenging some long-held ideas on biogeography. A CAML reception was hosted by colleague Dr. Igor Smirnov at the Zoological Institute in St Petersburg. After the symposium, a two-day workshop with ArcOD was held at the Zoological Institute. The focus was on making historical data on brittle stars and chitons available in SCAR-MarBIN, with a concomitant increase in the Register of Antarctic Marine Species. CAML's cooperation with Russian scientists is ongoing, with a further diving expedition planned in December 2009.

The Cooperative East Antarctic Marine Census (**CEAMARC**), which is an arm of CAML, was showcased as part of the Polar Regions exhibit at the Monaco Oceanographic Museum in April. The exhibit, entitled "Polar Ice for Future Generations", allowed visitors to explore the poles through the eyes of both Arctic and Antarctic explorers and researchers. It offered a great deal of information about the biodiversity, environment, evolution, and relative fragility of the polar regions. The exhibit aimed to educate visitors on the beauty, diversity, and dynamic nature of the poles and the role of human stewardship in conserving these unique environments. Images from the museum are available at <http://www.oceano.mc/anglais/sommairenews.htm> and the press materials, in French, can be found at <http://www.oceano.mc/nouveau/sommairenouveau.htm>.



Top Predators: Tagging of Pacific Predators (TOPP)



The Great Turtle Race returned for 2008! From 2-15 June, leatherback turtles tagged in California and Indonesia participated in a trans-Pacific marathon to the International Date Line as they migrated from their breeding grounds to feeding grounds. The Great Turtle Race, co-organized by the CoML's TOPP project (www.topp.org), calls attention to the problems that the critically endangered leatherback turtles face from global warming and other threats. As with The Great Turtle Race I, the public could vote for their favorite champion and follow her progress at <http://www.greatturtleace.org/2008/therace.php>.

On July 15, 2008 the TOPP Sea Turtle Team presented an analysis of the largest multi-year satellite tracking data set for leatherback turtles in the Public Library of Science's (PLoS) Biology journal. Their results suggest that the turtles' migrations are shaped by strong ocean currents, which provides a biological rationale for the development of multi-scale conservation strategies that take into account this current-induced, cross-boundary movement and potential fisheries interactions. This work will provide

current management programs with directions for future efforts. For more information please visit the PLoS Biology website: <http://biology.plosjournals.org/perlserv/?request=index-html&issn=1545-7885>.

TOPP was featured on KQED-TV's QUEST on 20 May. The story focused on TOPP's research and scientists, explaining how they are getting an unprecedented view of the Pacific Ocean through the eyes of thousands of tagged animals. Featured species (and their respective researchers) include tuna, leatherback turtles and the great white shark released by Monterey Bay Aquarium. They also show researchers tagging elephant seals, an albatross, a mako shark, a whale, and a Humboldt squid. To view the 10 minute story, go to the KQED QUEST site: <http://www.kqed.org/quest/television/view/924>. There are also photo and web extras, including an extended video interview with tuna researcher Barbara Block.

Zooplankton: Census of Marine Zooplankton (CMarZ)

CMarZ has a new U.S. Project Manager. The University of Connecticut's Department of Marine Sciences has appointed Leocadio Blanco Bercial as Research Scholar and American Project Manager for CMarZ. Leo's research will focus mainly on the taxonomy and phylogeography of calanoid copepods. Welcome Leo!



CMarZ will be leading an **outreach activity for high-school students entitled "Lets study the Ocean"**, which is co-sponsored by the Japan Science Society. Students will be on board a research vessel in Suruga Bay, Japan in early August, participating in lectures, sample examinations, and even some sample analysis in a laboratory back on land.

CMarZ has a **new version of its website**. Check it out at <http://www.cmarz.org/>.

Microbes: International Census of Marine Microbes (ICoMM)

The ICoMM **Science Advisory Committee met on 26 May in Amsterdam**, The Netherlands to finalize the ICoMM Synthesis Plan. This meeting was followed by an **Akademie Meeting on Assessing marine microbial diversity: problems and solutions** and a **Masterclass on Marine Microbial Diversity: Extent, Analysis and Function** for PhD students and post-docs in the field of microbiology, microbial ecology, biogeochemistry, microbial population genetics and evolution. Through discussions of instruments, methods and protocols, the Masterclass informed the next generation of scientists about the importance of the microbial ocean, its diversity and ways to study it and to enthusiasm and stimulate them to take part in this exciting field of research.

ICoMM has released a final report from their Microbial Eukaryotes Working Group meeting, held on 9-10 July 2007 at the Bigelow Laboratory for Ocean Sciences in West Boothbay Harbor, Maine, USA. The report includes major recommendations on microbial eukaryotic diversity, transfer of data, partnering, taxonomy and other related topics. To view the report, please visit: http://icomm.mbl.edu/working_groups/mewg/mewg_final.pdf.

National and Regional Activities

Australia

Australian Marine Science Association 2008 (AMSA2008), a joint conference with the New Zealand Marine Sciences Society (NZMSS), **took place on 7-10 July 2008 in Christchurch, New Zealand**. The theme was "Human Impacts and Functioning Ecosystems". The conference provided an opportunity for Australian and New Zealand marine scientists, professionals and students to gather and share their work. Each day began with a plenary session by an internationally renowned scientist.

Canada

The **Ocean Tracking Network held its First Annual Ocean Tracking Conference** on 5-6 June in Halifax, NS, Canada. RADM Richard West (U.S. Navy, ret. and Consortium for Ocean Leadership) gave the keynote address and researchers from Bedford Institute of Oceanography and Dalhousie University gave three short technical presentations on data management. To learn more, please visit the OTN website at <http://oceantrackingnetwork.org/>.

Caribbean

Patricia Miloslavich of CoML-Caribbean, and CoML co-Senior Scientist, has published a journal article in the May 2008 (Vol. 56, Suppl. 1, pp 171-181) issue of *Revista de Biología Tropical*. The article, entitled “**The Census of Marine Life in the Caribbean: A Biodiversity Program**” discusses the historical (HMAP), exploratory (NaGISA, ChEss, ICoMM) and integration (OBIS) components of the CoML-Caribbean program and the future partnerships with the Ocean Tracking Network (OTN).

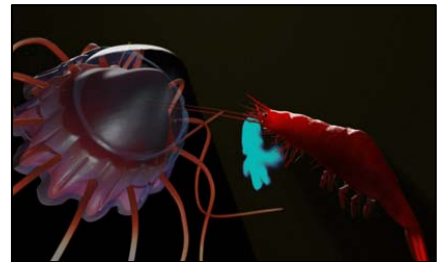
The CoML-Caribbean project **CARICORAL has released a new volume entitled “Marine biodiversity of Costa Rica, Central America”**. The book compiles species lists and information regarding organisms living in Costa Rican waters, making it an important book for both students and researchers. CARICORAL hopes the book will serve as a reference point for future research efforts, supplying information on the current state of knowledge regarding the areas marine biodiversity, as well as identifying where gaps exist. The book is available for pre-publication order from www.Springer.com.

China

In May, **China pledged more than \$25 million** to the University of Guelph for the International Barcode of Life (iBOL). China will act as a ‘Central Node’ in the iBOL project, which when fully activated hopes to involve more than 100 researchers from 25 countries. China is the latest country to commit to iBOL; the United States, Costa Rica, Australia and Argentina have already made commitments. An article on China’s commitment can be found at <http://www.exchangemagazine.com/morningpost/2008/week19/Thursday/0508019.html>.

Europe

‘**The Luminous Deep**’, an amazing animation created by two students from the Duncan of Jordanstone Art College in Dundee, UK, with help from researchers at Aberdeen University’s Oceanlab, **shows the organisms and processes associated with a humpback whale fall**. During the animation, you will learn how the carcass of a dead whale that sinks to the ocean floor nourishes a large interconnected community of scavengers and predators. Many of the creatures attracted to the whale fall are bioluminescent, meaning they produce glowing lights in the dark abyss. Visit ‘The Luminous Deep’ website (<http://www.theluminousdeep.com/>) to view the trailer, meet the crew that produced the animation, and also meet the crew of marine organisms, such as the Bloodbelly comb jelly, featured in the animation. The full animation can be viewed at the Duncan of Jordanstone Animation Degree Show website: <http://imaging.dundee.ac.uk/animation/luminousdeep.html>.



The exhibition ‘**Deeper than Light**’ is currently showcased at the **Maritime Museum in Aberdeen, UK**. The exhibition will remain in Aberdeen, move to Bergen in August, and arrive in Valencia, Spain in November 2008, coinciding with the World Conference on Marine Biodiversity.

EuroCoML’s Spring 2008 newsletter is now available online. Please visit http://www.eurocoml.org/index.php?option=com_content&task=blogcategory&id=59&Itemid=158.

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 at <http://www.woc2009.org/home.php>.

Indian Ocean

The Indian Ocean Barcoding network has **sequenced more than 200 samples of fishes, crustaceans, mollusk and tunicates** and is in the process of uploading these into the Barcode of Life Database.

South America

The **Brazilian project of International the Polar Year** - Sea Life Antarctica: Adjacent biodiversity in Relation to the Ambient Heterogeneity of the region of the Bay of the Admiralty and Areas (MABIREH) - has posted an informational video about the project on YouTube: <http://br.youtube.com/watch?v=MZw4wwE78Bs>. Please note the video is in Portuguese.

USA

The U.S. National Committee (USNC) recently assembled a **new working group for the U.S. node of the Ocean Biogeography Information System (OBIS)**. The group brings together a small group of experts with a high level of technical understanding of data validation, metadata, and other necessary components needed to develop a system that could allow easy search and analysis of biodiversity information to assist decision-makers and program managers. It is the group's collective vision for the U.S. OBIS Node to become a system to support sound management of ocean resources in the U.S.

The **USNC will meet on 22-23 September 2008** at the Monterey Bay Aquarium and Research Institute in Monterey, CA. Topics for discussion include OBIS USA, the transition to a new administration within the U.S. and the current partnership between CoML and the National Ocean Sciences Bowl (NOSB – www.nosb.com). A small working group will also meet on 24 September to discuss the USNC contribution to the NRIC synthesis publication, as well as additional 2010 synthesis products.



The U.S. Program office would like to congratulate longtime, USNC member **Dr. Shirley Pomponi** on her appointment as the **new Chair of the Consortium for Ocean Leadership Board of Trustees**.

USNC member **Sylvia Earle** discussed **CoML's continued contribution to marine biodiversity** on the National Public Radio's (NPR) Talk of the Nation Science Friday. To listen to Sylvia's comments, please visit the NPR website at <http://www.npr.org/templates/story/story.php?storyId=91965221>.

The **U.S. Program Office would like to thank Gregg Schmidt**, Deputy Director of Communications for the Consortium for Ocean Leadership, for all his hard work on the recent CoML U.S. press releases.

For more USNC news, view **the latest newsletter online** at: http://coml.us/?anchor=us_newsletter.

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/>.

August

21-22 Synthesis Group meeting, Woods Hole, MA, USA

September

22-26 ICES Annual Science Conference, Halifax, NS, Canada

22-23 US National Committee meeting, Monterey, CA, USA

October

6-8 Second Symposium on the Ocean in a High-CO₂ World, Monte Carlo, Monaco

16-26 PICES 17th Annual Meeting, Dalian, China

20-21 SCOR 50th Anniversary Symposium, Woods Hole, MA, USA

20-24 5th World Fisheries Congress, Yokohama, Japan

22-24 SCOR General Meeting, Woods Hole, MA, USA

23-25 First CoML Mapping & Visualization Workshop, Durham, NC, USA

November

- 11-15 First World Conference on Marine Biodiversity, Valencia, Spain
- 16-17 CoML SSC Meeting, Valencia, Spain
- 17-22 Underwater Mining Institute Marine Minerals, Oxford, MS, USA