

CoML Cruises underway

There are no cruises underway at this time.

All Program Meeting

We had a great turnout for the 2nd CoML All Program meeting, which was held 4-5 November 2005 in Frankfurt, Germany. The meeting was attended by about 150 participants from OBIS, HMAP, FMAP, all of the field projects, each National and Regional Implementation Committee (NRIC), and guests. SSC chairman Fred Grassle's note summarizes the state of CoML. Clearly, we are achieving our goals of greater synergy among the CoML components, better planning and management, and the development of a synthesis strategy. Some important agreements from the meeting include (1) the need for standard visualization and mapping guidelines across CoML, (2) increased energy on and preliminary strategy for achieving representative global coverage of our field efforts, and (3) the need to articulate our intended societal benefits for 2010. A more detailed summary from the meeting and Fred Grassle's opening remarks and follow-up impressions from the meeting are posted at the Secretariat website: www.comlsecretariat.org (see link in news column).

Materials distributed at the meeting are available from the Secretariat, including an updated CoML overview presentation on CD, the 2005 Highlights Report by the E&O team, and a compendium of abstracts of select publications from all CoML components (now available only on CD). It should be noted that a compendium of the full papers was assembled, but will not be distributed widely.

In addition to the exciting science news conveyed at the meeting, the participants were treated to an amazing display of arts. On Friday evening, François Sarano regaled us with Galatee Films' breathtaking preliminary footage for *Oceans*. We are delighted to report that CoML and Galatee are now formal partners. We hope CoML researchers, if contacted by Jacques Perrin or other members of the Galatee team, will cooperate in providing expertise and access to the oceans for the filmmakers. Many readers may have seen Galatee's great film about birds, *Winged Migration* (<http://www.sonyclassics.com/wingedmigration/home.html>). Thanks to Yvon LeMaho of TOPP for matchmaking between CoML and Galatee. SSC member Ian Poiner and Jesse Ausubel form the CoML liaison team with Galatee.

Many groups took advantage of the Frankfurt opportunity for individual meetings, including EuroCoML, OBIS, NaGISA, CReefs, POST, MAR-ECO, CenSeam, CAML, the SCOR Technology Panel, and the E&O network.

We would like to thank our gracious hosts at the Senckenberg Natural History Museum, who helped to make the meeting such an enjoyable experience. Particular thanks go to Pedro Martinez, Brigitte Hilbig, Michael Türkay, and Petra Friesleber. For pictures from the meeting, visit: <http://www.cedamar.org/coml/pictures/>.

CoML plans to hold its next All Program meeting in 2007.

Scientific Steering Committee (SSC)

The SSC met 26-29 August 2005 in Cape Tribulation, Australia. Discussions at this meeting paved the way for much of the All Program agenda. After the All Program meeting, the SSC met on 6 November with the chairs and representatives of the NRICs. The group followed up on much of the discussion from the prior days and agreed on milestones for the next five years and actions to improve communication and participation in the program.

Future SSC meetings will take place on:

- 23-24 February 2006, Honolulu, HI, in conjunction with the Ocean Sciences Conference (*tentative dates, awaiting posting of Ocean Sciences program*)
- 22-23 June 2006, Iceland, in conjunction with FMAP meetings
- 13-14 October 2006, Nara, Japan, in conjunction with the NaGISA and Techno-Ocean conferences in Kobe, Japan (*Note: this is different than was presented in Frankfurt*)

The SSC welcomes SUN Song of China as its newest member. Dr. Sun is the Deputy Director of the Institute of Oceanology, Chinese Academy of Sciences in Qingdao. He is also the chair of the CoML Chinese National Implementation Committee and participates in OBIS, CMarZ and the SCOR Technology Panel.

On 2 November, SSC Chair Fred Grassle was interviewed for a CoML story by the New Jersey Public Television & Radio. Watch at: <http://www.njn.net/newspublicaffairs/science/index.html>.

Education and Outreach

The 2005 CoML Highlights Report, which includes brief, visual summaries of CoML's discoveries over the past year, is now available. For copies, please contact Sara Hickox at sara@gso.uri.edu.

The CoML Portal (www.coml.org) now has Quick Links to NRIC websites.

CenSeam's Malcolm Clark is currently featured on the portal's (www.coml.org) *Conversations* section. Read past *Conversations* with Eva Ramirez-Llodra (ChEss), Brigitte Hilbig (CeDAMar), and Russ Hopcroft (ArcOD) and get to know some of your CoML colleagues!

CoML and the Arctic field project are featured in the children's book "Strange New Species" by Elin Kelsey, which was recently published by Maple Tree Press (ISBN 1-897066-32-5).

On 18 December, the Discovery Channel (U.S.) will premier "America's Tsunami: Are We Next?" Though the documentary focuses on the geological cause of the 26 December 2004 tsunami that hit Asia, you may see some familiar faces wearing CoML t-shirts. Several CoML scientists, including Paul Tyler, Baban Ingole, Joelle Galeron, and Cindy Lee Van Dover, were associated with this cruise to study the biology at the earthquake site. Five months after the incident, there was no visible recovery of deep sea animals in the disturbed area. A companion documentary called "The Unstoppable Wave," which also features the Census scientists, will air on the same date on BBC-1 in the U.K. and on ProSieben in Germany.

The National Geographic Society has recently launched a new half-hour television program called *Wild Chronicles*. Terry Garcia of the U.S. National Committee opened the door for the USNC and E & O network to propose story ideas. Producer Mark Bauman is already working on segments on TOPP and ArcOD, with the potential for other Census-related stories. The URI team has provided Mark with all video provided by the projects.

Richard Ellis' book, *Singing Whales and Flying Squid*, will be available in January 2006 from Globe/Pequot Press. "In this captivating new book, Richard Ellis takes us on a compelling journey through the World Ocean, a place at once familiar yet the least well known part of our planet. Interestingly, Ellis takes as his muse the Census of Marine Life initiative – a massive

undertaking to document all of marine life. The CoML is every bit as ambitious as the Human Genome Project and is proving to be much, much harder to complete. As this book so powerfully demonstrates, the World Ocean is so vast, so full of life, and yet still so poorly known.”—
Melanie Stiassny, Curator of Fishes, American Museum of Natural History
(http://www.globepequot.com/globepequot/index.cfm?fuseaction=customer.product&product_code=1%2D59228%2D842%2D1&category_code).

Database: Ocean Biogeographic Information System (OBIS)

The OBIS secretariat is pleased to announce the appointment of Dr. Catherine N. Duckett as the new OBIS program manager. Most recently she was a U.S. NSF Advance Fellow at the Smithsonian studying phylogenetics and taxonomy of beetles using molecular and morphological techniques. She was a Fulbright scholar in Venezuela in 1990 and a Japan Society for the Promotion of Science (JSPS) Fellow in Toyama, Japan in 1993. Catherine is fluent in Spanish and conversant in Portuguese.

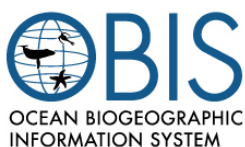
OBIS is proud to announce that it has published more than 8 million records of geographically referenced data for marine species.

The North Pacific Groundfish Observer Program in conjunction with the Alaska Fisheries Science Center and the North Pacific Research Board recently provided OBIS with 422,150 records of fish, invertebrate, and marine mammal observations collected by fishery biologists while deployed on board commercial fishing vessels or at shore side processing plants participating in the Bering Sea and Gulf of Alaska groundfish fisheries. A more detailed description of these data can be found at: www.iobis.org/OBIS/obis_meta?sourceID=67.

Fisheries and Oceans Canada Maritimes Region database for sightings records of cetaceans, other large pelagic animals, and marine mammal survey information added over 11,000 records to OBIS. Metadata can be found at: http://www.iobis.org/obisData1/obis_meta?sourceID=62.

The Pacific Ocean Shelf Tracking (POST) project added over 4000 records to OBIS. This is a major program designed to develop and promote the application of new electronic tagging technology to study the marine life history of Pacific salmon. One of the two major areas of focus in the POST project involves the development of a permanent continental-scale marine telemetry system. POTENT (Pacific Ocean Tracking and Evaluation NeTwork) will sit on the seabed of the continental shelf and slope and be used to monitor fish movements along the shelf and into the open ocean. POTENT array data can then be applied toward the development of fishery management policies aimed at the sustainable harvest of Pacific salmon resources, and the technology can be applied to other species of marine fish as well. The metadata can be found at: http://www.iobis.org/obisData1/obis_meta?sourceID=64

The Ocean Biogeographic Information System - Spatial Ecological Analysis of Megavertabrate Populations (OBIS-SEAMAP) is a spatially referenced database of data related to marine mammals, birds and turtles. OBIS is proud to announce that OBIS-SEAMAP, with the addition of new datasets, has passed the million record mark! OBIS-SEAMAP now contains 161 databases on large marine organisms comprising 1,058,506 records, spanning years 1935 to 2005, and containing 358 species profiles. More data in OBIS-SEAMAP can be accessed at http://www.iobis.org/OBIS/obis_meta?sourceID=13 or directly at <http://seamap.env.duke.edu/>. In addition, OBIS-SEAMAP was awarded the "TOP PICK" for the teacher by Teacher Reviewer of Online Learning (TROLL), a reviewer of webpages in Ocean Science. See <http://www.vims.edu/bridge/main.html>. Congratulations to Pat Halpin and the OBIS-SEAMAP Development team.



OBIS has a new logo. It can be downloaded from Census Partner Resources at: www.coml.org.

Oceans Past: History of Marine Animal Populations (HMAP)

HMAP held its successful *Oceans Past* conference on 24-27 October 2005 in Kolding, Denmark. It was attended by 102 participants from 25 countries, and 75 papers were presented, covering a wide range of disciplines.

One study presented at *Oceans Past* received a lot of media attention. Glenn Jones, a paleo-oceanographer from Texas A&M University at Galveston led a study that used restaurant seafood prices to help plot shifting historical marine harvests. The seafood prices, which were collected from U.S. restaurant menus dating to the 1850s, chart over 150 years of inflation-adjusted seafood prices from menus, primarily from cities such as New York, Boston, San Francisco and Providence. Preliminary findings are already shedding light on shifting supply and demand of popular seafood, such as lobster, swordfish, abalone, oysters, halibut, haddock and sole. To read the full press release, visit: http://www.coml.org/medres/hmap_news_10-24-05.pdf.

Read Jesse Ausubel's opening talk to *Oceans Past* on Future Knowledge of Life in the Oceans Past at: <http://phe.rockefeller.edu/docs/HMAPKoldingAusubel.doc>. The conference program and abstracts are at: <http://www.cmrh.dk/HMAP/WedprogramA4.pdf>.

A workshop on Early Human Impact on Megamollusks (EHIM) was held 26-28 September on Isla de Margarita, Venezuela. HMAP sponsored this workshop, which aimed to assess our current state of knowledge on the interaction between human societies, the environment and marine mega-mollusk populations in different regions of the world during the Holocene. The workshop was organized by Andrzej Antczak (of CoML-Caribbean) and Roberto Cipriani, both of Universidad Simón Bolívar. Visit the workshop website at: <http://www.cmrh.dk/EHIM/>.

The focus of a recent issue of *Update*, the newsletter of International Human Dimensions Programme on Global Environmental Change (IHDP), was Environmental History. Poul Holm, chair of HMAP, is interviewed on pages 12-13. Download the newsletter at: <http://www.ihdp.uni-bonn.de/>.

Oceans Future: Future of Marine Animal Populations (FMAP)

In the 26 August 2005 issue of *Science*, FMAP released its findings from the first global analysis of predator diversity patterns in the open ocean, which revealed rapidly shrinking hotspots for tuna, marlin, and swordfish. The team, led by Boris Worm, reported that predator diversity has declined by up to 50% over 50 years due to fishing. Read the full story at:

<http://as01.ucis.dal.ca/fmap/news.php#15>; read the paper at: http://webdev.ucis.dal.ca/ramweb/papers-total/Worm_etal_2005.pdf.

In the October 2005 issue of *Ecology Letters*, Travis D. Shepherd and Ransom A. Myers published an article on "Direct and indirect fishery effects on small coastal elasmobranchs in the northern Gulf of Mexico". The study showed that shark species play a critical role in structuring coastal food webs in tropical and sub-tropical regions. Read the paper at: http://as01.ucis.dal.ca/ramweb/papers-total/Shepherd_Myers_2005.pdf.

In October, Fortune magazine named FMAP's RAM Myers as one of the world's top ten movers and shakers: people who will change the way the world operates over the next 75 years. The

prominent business magazine predicts that Myers' work on fish population dynamics and the depletion of sharks, tuna and other fish species will foster "new and better ways to husband the wealth beneath the sea." See the story at:

<http://www.fortune.com/fortune/slideshow/0,23288,1100208-3,00.html>.

FMAP has received renewed funding to support its network for an additional three years.

Ocean Realm Field Projects

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

In September, NaGISA held a workshop on the taxonomy of marine decapoda and stomatopoda in Lombok, Indonesia, in conjunction with CoML Indonesia and the Indonesian Institute of Oceanography (LIPI). The workshop was supervised by Dr. Mohammad Kasim Moosa, Indonesian Institute of Science. The workshop included lectures on morphology and taxonomy and hands-on-training, resulting in a practical course for identification and scientific photography.

The Indian Ocean component of NaGISA has a new brochure, which can be downloaded at: <http://www.nagisa.coml.org/Brouchures/NaGISAIObrochure.pdf>. NaGISA IO member Edward Kimani attended the 4th Western Indian Ocean Marine Science Association (WIOMSA) Scientific Symposium in Grand Baie, Mauritius, to discuss the possibilities of NaGISA with WIOMSA delegates and search for willing participants. He promoted the IO Organizational meeting and Protocol workshop that will be held in Mombasa, Kenya in April 2006.

Reefs: Census of Coral Reefs (CReefs)

CReefs is currently seeking a full-time PhD level Project Scientist with an energetic personality and a broad understanding of coral reefs to help grow the project. An ability to communicate through a variety of media to a variety of audiences and to "make things happen" is essential. The position could be based at any of the three CReefs centers – AIMS, NOAA/University Hawaii or Scripps. Contact Nancy Knowlton (nknowlton@ucsd.edu) with any suggestions of candidates.

CReefs is convening a special session on the "Biodiversity of Coral Reef Ecosystems" at the Ocean Sciences Meeting in February 2006, Honolulu, HI. A major goal of this session is to bring together lead coral reef scientists and taxonomists from around the world. Topics of interest will include taxonomic focus in the biodiversity of such understudied groups as sponges, octocorals, mollusks, polychaetes, crustaceans, echinoderms, tunicates, seagrasses, macroalgae (red, brown, and green macroalgae), coralline algae, turf algae, and cyanobacteria, as well as advancement in technology and sampling strategies relative to these foci.



CReefs also has a new logo!

Regional Ecosystems: Gulf of Maine Area Program (GoMA)

The Gulf of Maine project has developed a new technology section for its website. The site describes the wide-range of instruments and techniques used in biological surveys, and complements the E&O technology site at the CoML portal (<http://www.coml.org/edu/index.htm>) and the SCOR Technology website (<http://www.scoml.org/>). View the GoMA technology pages at: <http://www.usm.maine.edu/gulfofmaine-census/Docs/Research/Technology.htm>.

Continental Shelves: Pacific Ocean Shelf Tracking (POST)

POST has a revamped website at www.postcoml.org. At this site, you can download the fantastic animation, which was presented in Frankfurt, that orients the viewer on the technology of and need for POST.

The POST Management Board met 21 November at the Vancouver Aquarium Marine Science Center. Among the topics for discussion were funding issues and a business model for the long-term operation of the POST array.

The OBIS summary of the POST data now available through the OBIS Portal can be found at: <http://www.iobis.org/OBIS/AdvancedSearchServlet?site=null&sbox=null&genus=&species=&north=&nn=N&south=&ss=N&west=&ww=W&east=&ee=W&date1=&date2=&depth1=&depth2=&Pacific+Ocean+Shelf+Tracking+%28OBIS+Canada%29=obisSourceValue>

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

COMARGE is pleased to announce its newest team member, Lenaick Menot, who will serve as the project manager. Lenaick is based at the IFREMER Center in Brest, France.

CoML Senior Scientist, Ron O'Dor, has been invited to participate on the HERMES (Hotspot Ecosystems Research at the Margin of European Seas) Science Implementation Panel. The panel will focus on two issues: (1) what value has HERMES produced to date and (2) on what key areas should HERMES focus future activities and data collection. HERMES is an international research project on Europe's deep seas, funded by the EC's Sixth Framework Programme for Research, and a major component of the COMARGE project.

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

CeDAMar held a workshop and training course on the taxonomy of deep-sea copepods in Wilhelmshaven, Germany on 21-29 November 2005. The workshop consisted of two modules. The first is a 6-day training course in the identification of deep-sea copepods. It is intended for students and scientists involved or interested in the study of deep-sea meiofauna samples, or wanting to acquire basic knowledge for species-level identification of major deep-sea copepod groups. The second module will consist of discussions on how to deal with the great number of undescribed species in the deep sea, how to develop strategies and tools for the intercalibration and quality assurance of identifications of deep-sea copepods, how to deal with "working species", and how to better cooperate and interconnect while running deep-sea programs.

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

The plaque awarded to the Norwegian G.O. Sars at the Frankfurt symposium was passed to the Sars captain and crew by Norway's new Minister of Fisheries, Ms. Helga Pedersen. Ms. Pedersen was onboard the vessel for the first time in Oslo on 23 November.

The Bergen Aquarium has made a "submarine" from videos provided by MAR-ECO. Bergen is the second biggest city in Norway and the Bergen Aquarium is a major tourist attraction, with 200,000 visitors annually. Read the story at http://www.mar-eco.no/mareco_news/2005/dive_with_a_submarine!

A UK MAR-ECO consortium project entitled ECOMAR (Ecosystem of the Mid-Atlantic Ridge at the Sub-Polar Front and Charlie Gibbs Fracture Zone) was recently funded. The Natural Environment Research Council (NERC, UK) awarded 2 million pounds, plus ship time, to the project, led by Monty Priede of Oceanlab, University of Aberdeen. ECOMAR will commence 1

October 2006 and finish 30 September 2010. For a presentation on ECOMAR, visit: <http://www.oceanlab.abdn.ac.uk/research/ecomar.shtml>.

On 12-14 October, MAR-ECO scientists, in Bergen for a workshop of the EU Network of Excellence in Marine Biodiversity (MARBEF), used this opportunity to discuss strategies and methodologies for assessing the state of the biodiversity in open ocean pelagic sites. Experiences from MAR-ECO cruises formed the background of the discussions, and a report is due in March 2006. Participants included Annelies Pierrot-Bults, Uwe Piatkowski, Filipe Porteiro, Tone Falkenhaus, Mikko Heino, Olav Rune Godø, and Odd Aksel Bergstad.

Nicola King, an outreach participant of MAR-ECO and a PhD -student at Oceanlab, University of Aberdeen, was recently awarded the Science Communicator's Award from the Researcher in Residence initiative based at the Centre for Science Education at Sheffield Hallam University, UK. The award is given to a participant of the Researchers in Residence (<http://extra.shu.ac.uk/rinr/site>) school placement program who has contributed significantly to science communication and public outreach.

See more MAR-ECO news at: http://www.mar-eco.no/mareco_news.

Seamounts: Census of Marine Life on Seamounts (CenSeam)

CenSeam will hold its first data analysis workshop on investigating "biodiversity and vulnerability of deep-sea corals on seamounts beyond areas of national jurisdiction," on 6-10 February 2006. The workshop will be hosted by NIWA in Wellington, New Zealand. CenSeam's first research voyages will begin in April 2006.

CenSeam will soon launch its project website at: <http://censeam.niwa.co.nz>

The OASIS project (Oceanic Seamounts: An Integrated Study), a contributing project to CenSeam (as well as to MAR-ECO), held its Final Scientific Workshop on 12-13 -October and 2nd Stakeholders Workshop on 14 October at the University of the Azores, Horta, Azores, Portugal. OASIS researchers and partners presented results from the project and discussed synthesis, and the preliminary results certainly support the hypothesis that seamount systems are very diverse, and that each seamount is unique. The OASIS newsletter released in September, prior to the workshops, suggested that CenSeam could provide a framework to apply to further seamount research. The newsletter also included a brief description of CenSeam on page 6. For more information on OASIS and the workshop outcomes, see: <http://www.rrz.uni-hamburg.de/OASIS>.

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

The ChEss steering committee met 10-11 September at Scripps Institute of Oceanography, La Jolla, USA. The aim of the meeting was to evaluate the first phase of the project - the planning phase (2002-2004) - and to discuss the new projects and tasks being developed for the second phase of ChEss - the implementation phase (2005-2007). For a report of the meeting, see: http://www.noc.soton.ac.uk/chess/ssc_meeting_05.html. The meeting was held in conjunction with the 3rd Vent and Seep Symposium, held 12-16 September.

In September, Eva Ramirez Llodra of ChEss was interviewed by two Spanish radio programs: Radio InterEconomía (Madrid) - Programme "Esto Es Vida" (20 September 2005) and COPE Madrid (23 September 2005). These interviews were prompted by a front page story about ChEss in *El Pais*, which can be viewed at:

http://www.elpais.es/articulo/elpfutpor/20050907elpepifut_3/Tes/E1%20centro%20de%20coordinaci%F3n%20de%20un%20importante%20proyecto%20marino%20se%20instala%20en%20Espa%F1a

In July, a team aboard the *G.O. Sars*, discovered new hydrothermal vents in the Arctic. According to the team scientist, Rolf Pedersen, no science team had yet found any deep vents north of Iceland. This cruise was working the waters along the Arctic Ridges, the northern extreme of the Mid-Atlantic Ridge. InterRidge reports the story at: <http://www.interridge.org/sciencewriteratsea/norway2005/index.html>.

Arctic: Arctic Ocean Diversity (ArcOD)

Four months after the conclusion of its exciting expedition to the Canada Basin, the ArcOD team continues to make headlines. In September, the ArcOD scientists' report about the loss of Arctic ice was covered by the news media in the United States. Interviews with Russ Hopcroft, Bodil Bluhm and Rolf Gradinger aired on National Public Radio and can still be heard at: <http://www.npr.org/templates/story/story.php?storyId=4865870>. ArcOD research was also featured in the November/December issue of *Canadian Geographic* (p. 23) and the French journal *La Recherche* (pp. 66-71). The 30-day Ocean Explorer expedition mounted by the US National Oceanic and Atmospheric Administration aboard the US Coast Guard Ship Healy, included 24 scientists, 11 of them Census of Marine Life researchers. For images from the expedition, see: <http://www.coml.org/medres/iceocean/iceocean.htm>. For the full press release, visit: http://www.coml.org/medres/CoML_Ice_Oceans_Release_Final_7-27-05.pdf.

On 17-21 October, the ArcOD team participated in a Classroom Exploration of Oceans 2005 Online Virtual Teachers Workshop. The workshop focused on "The Hidden Ocean" expedition, which took place in June-July. For more, see: <http://www.coexploration.org/ceo/>.

Antarctic: Census of Antarctic Marine Life (CAML)

CAML has teamed up with the Cousteau Society on education and outreach activities. Tarik Chekchak, who is a wildlife biologist and leader of Cousteau Society's International Polar Year programs, will serve as the main point of contact on E&O issues.

The CAML steering group met in November in Frankfurt. The meeting discussions resulted in strengthened ship commitments for IPY and the international network of Managers of National Antarctic Programs, contacts for possible ROV and submersible observations in Antarctic waters during IPY, and progress toward uniform CAML sampling protocols.

The next CAML Workshop will be held 6-8 June 2006 in Bremerhaven, hosted by steering group member Julian Gutt (Alfred Wegener Institute).

CAML hopes to also hold a session at the SCAR Open Science Conference in Hobart, Australia, 9-14 July 2006, (Note: abstract deadline is 31 December 2005, www.scar2006.org). If accepted, the session will likely focus on mechanisms of colonization and dispersal in Antarctic ecosystems.

Top Predators: Tagging of Pacific Pelagics (TOPP)

The TOPP team reported in the 7 October issue of *Science* that electronic tags broadcasting from the dorsal fins of salmon sharks reveal that these top predators migrate from the glacial waters of Alaska to the warm seas off Hawaii. The study also explains the physiology that allows salmon sharks, as opposed to blue sharks, for example, to occupy such a wide niche in the North Pacific. For the story, and a slide show of the effort, visit:

<http://www.topp census.org/web/FeatureDetails.aspx?id=58&WG=10>. Read the *Science* paper at: <http://www.topp census.org/web/PublicationDetails.aspx?id=15>.

The TOPP turtle team, led by Bryan Wallace, published a paper on “Bioenergetics and diving activity of interesting leatherback turtles *Dermochelys coriacea* at Parque Nacional Marino Las Baulas, Costa Rica” in the 10 October issue of *The Journal of Experimental Biology*. Previous sea turtle metabolism studies have been conducted on land, but the physical demands imposed by the animal's marine habitat and lifestyle were a mystery, which makes this study important. It allows us to better understand the energy demands of leatherback behaviors at sea – foraging, diving and migrating – across a spectrum of temperatures and depths. For more, see: <http://www.topp census.org/web/FeatureDetails.aspx?id=60&WG=8>. Download the paper at: http://www.topp census.org/Upload/Publication_16/Wallace%20etal%20JEB2005.pdf.

Zooplankton: Census of Marine Zooplankton (CMarZ)

Nancy Copley (Woods Hole Oceanographic Institution, USA) has taken on the role of the CMarZ liaison to the Education & Outreach Network. She is responsible for keeping track of CMarZ activities by interfacing with the steering group and making updates to the website as needed. Nancy has been working at the Woods Hole Oceanographic Institution in the field of taxonomy for 27 years, concentrating on calanoid copepods for most of that time. She has been involved with the CMarZ project since its inception, and brings an understanding of the program to her work as Communications Coordinator.

Microbes: International Census of Marine Microbes (ICoMM)

MICROBIS, the information component of the International Census of Marine Microbes (ICoMM), has become interoperable with the OBIS Portal via DiGIR. MICROBIS is a database of images, descriptions, and collections of microbial biota, developed by David Patterson and Phillip Neal (Marine Biological Laboratory, Woods Hole, USA). It is capable of handling information that identifies groups of microbes (whether the information be traditional descriptions or molecular markers), information about location, and chemical and physical characteristics of the habitats from which samples are taken. Legacy data as well as newly emerging information will be incorporated into the marine microbial diversity database that integrates into OBIS. Congratulations to David Patterson, Phillip Neal and the ICoMM team for the major achievement!

On 8 December, the Science Channel (U.S.) will premier “Cracking the Ocean Code.” Tune in to join J Craig Venter on a globe-circling ocean voyage, seeking new life forms and genetic secrets that could help solve the planet’s most urgent energy and climate challenges. You may see some familiar faces in the program, including ICoMM’s Linda Amaral-Zettler and SSC Vice Chair Victor Gallardo. Venter’s expedition is contributing to ICoMM. The show will air throughout December. See:

http://science.discovery.com/tvlistings/episode.jsp?episode=0&cpi=116632&gid=0&channel=SCI&clik=netmain_feat1.

National and Regional Activities

Australia

The Australian Committee has affiliated a research project to CoML. The Great Barrier Reef Seabed Biodiversity project will collect samples and map sea floor habitats and their associated marine life across the length and breadth of the Great Barrier Reef Marine Park in order to better understand the numbers and types of organisms that live in the deeper parts of the world’s largest

marine protected area. Roland Pitcher of CSIRO, and a member of CoML Australia, leads the project. For more information, see: <http://www.reef.crc.org.au/resprogram/programC/seabed/>.

OBIS Australia will be formally launched at a luncheon on 13 December 2005 at CSIRO Marine and Atmospheric Research in Hobart, Tasmania.

The Australian Government involvement in CoML is formally recognized in the 2004-5 annual report of the Department of the Environment and Heritage. See: <http://www.deh.gov.au/about/annual-report/04-05/outcome-1-coasts-oceans.html#oceans-policy>.

The CoML Australia Committee hosted a one day workshop in conjunction with the Australian Marine Sciences Association (AMSA) Conference in Darwin on 13 July 2005. The aim of the workshop was to initiate planning (and participation in) a dedicated biodiversity research cruise to augment Australia's contribution to CoML. Participation was open to anyone. A draft workshop report is available at the CoML Australia website: <http://www.coml.org.au:8080/amsa/CoML%20Workshop%20outcomes.doc>.

Canada

CoML Canada has a new website:

http://www.marinebiodiversity.ca/coml/en/index_3oceans.html.

The Centre for Marine Biodiversity, which hosts CoML Canada, has developed a series of posters on the marine life in Canadian waters. The newest poster is now online (in French <http://www.marinebiodiversity.ca/fr/posters2.html>, and in English <http://www.marinebiodiversity.ca/en/posters2.html>), and describes the Fish from the Gulf of St. Lawrence.

Caribbean

The Caribbean Regional Implementation Committee has been awarded renewal funds to continue to support and strengthen CoML activities in the Caribbean region. These funds will also enable Caribbean contribution to global expansion of – and potential capacity building efforts through – the CoML projects.

CoML Caribbean is planning a NaGISA workshop for 15-20 January 2006. This workshop will join the South America and Caribbean regions in NaGISA activities. Up to now, a total of 12 sites in SA and the Caribbean have made the commitment to carry out the NaGISA protocol. The workshop will help all site coordinators to standardize the methodologies of this protocol. Dr. Juan José Cruz, from Universidad Simón Bolívar, will lead the effort.

In November, Caribbean Chair, Patricia Miloslavich, had a meeting with the Venezuelan branch of the IOC in Caracas to present the CoML in the Caribbean and the GEF initiative to the National Oceanology Commission.

China

The CoML Chinese National Implementation Committee has been awarded renewal funds to continue to support and strengthen CoML activities in China. These funds will also enable Chinese contributions to global expansion of – and potential capacity building efforts through – the CoML projects.

Europe

In partnership with the Senckenberg Research Institute and Natural History Museum, EuroCoML held a public symposium on 3 November in Frankfurt, Germany. The program featured talks by

the ESF Marine Board, EuroCoML, the field projects based in Europe, as well as highlights of the other field projects and EurOBIS. For pictures from the symposium, visit:

<http://www.cedamar.org/coml/pictures/>.

EuroCoML seeks proposals for funds to host a workshop of European Scientists to discuss project proposals outlining potential European contributions to CoML. For more information, see: <http://www.eurocoml.org/documentation/pdf/EuroCoML%20Workshop%20Proforma.pdf>.

EuroCoML will support a meeting of the E&O teams of the CoML deep sea projects, ChEss, CeDAMar, CoMargE and MAR-ECO, which are all headquartered in Europe. The meeting will be held in January at the National Oceanography Centre in Southampton, UK, to discuss ways to share resources and collaborate on education and outreach activities.

Be sure to visit the new EuroCoML website at: <http://www.eurocoml.org/>.

Indian Ocean

Indian Ocean OBIS node leader, Vishwas Chavan, is featured in a 30 November *Nature* article about the push to digitize print literature on the web. Read the article at:

<http://www.nature.com/nature/journal/v438/n7068/full/438550a.html>.

South America

The CoML South American Regional Implementation Committee has been awarded renewal funds to continue to support and strengthen CoML activities in South America. These funds will also enable South American contribution to global expansion of – and potential capacity building efforts through – the CoML projects.

Diego Rodriguez (Universidad Nacional de Mar del Plata, Argentina) is the new chair of CoML South America (census@mdp.edu.ar).

The Brazil subnode of the South American Regional OBIS Node is now available online:

<http://obissa.cria.org.br/>.

USA

The U.S. National Committee (USNC) would like to welcome its two new members – Ms. Penelope Dalton and Dr. Wes Tunnel. Penny Dalton has contributed significantly to the U.S. CoML program in the past through her role as the Vice President of the Consortium for Oceanographic Research and Education (CORE), which houses the U.S. program office. She is now the director of the Washington Sea Grant Program in Seattle. Wes Tunnel is the Associate Director of the Harte Research Institute for Gulf of Mexico Studies, as well as the Director of the Center for Coastal Studies and a Professor of Biology at Texas A&M University-Corpus Christi. He also leads a project entitled The Gulf of Mexico-Past, Present, and Future (GoMx), which is an affiliated project of CoML.

The USNC has a new website: www.coml.us.

Dr. Purnima Ratilal, an Assistant Professor at Northeastern University, has won the Lindsay Award of the Acoustical Society of America, given each year to one person under 35 years of age, who has made outstanding contributions to acoustics. Purnima receives the award for her fundamental contributions to the theory of wave propagation through random media, scattering in a waveguide, and the ocean-acoustic remote sensing of marine life. She completed a doctoral program working with Nicholas Makris, who continues this work through a 2005 Census of Marine Life grant from the National Oceanographic Partnership Program (NOPP). See:

<http://www.nopp.org/Dev2Go.web?id=267257#makris>.

The next meeting of the U.S. National Committee is 20-22 March 2006 in Washington DC.

Crosscutting and Other Related Activities

Reporting Framework

In Frankfurt, CoML participants agreed on a strategy to develop the framework for CoML 2010 report. A working group, chaired by Paul Snelgrove (Chair of CoML Canada), will hold discussions with the CoML projects, as well as various other stakeholder groups, to develop a reporting framework that will synthesize and present the CoML findings in ways useful to anyone who need or are interested in the information.

SCOR Panel on New Technologies

The SCOR Technology Panel met 6-7 November in Frankfurt, Germany. A summary report of that meeting will be available soon.

The next Panel meeting is 18-20 October 2006 in Kobe, Japan. It will be held in conjunction with the NaGISA international conference and Techno-Ocean 2006. The Panel will work with NaGISA to plan a special session on CoML-relevant technologies for the Techno-Ocean meeting, specifically on ROVs/AUVs and electronic tags.

DNA Barcoding

The Fish Barcode of Life Initiative (FISH-BOL) webpage is live at:

<http://www.fishbol.org/index.htm>. FISH-BOL is a global effort to barcode fish to aid in species identification for all users, especially taxonomists. Further information and plans are contained on the FISH-BOL website and in the report of its June 2005 workshop: http://www.fishbol.org/PDF/FISH-BOL_Workshop_Report_August_26th_2005.pdf.

Bob Ward, of FISH-BOL, and colleagues published a paper in *Philosophical Transactions of the Royal Society* (doi:10.1098/rstb.2005.1716 Published online) about the effort to barcode Australia's fish species. See: http://www.fishbol.org/PDF/ward_etal_2005_philtrans.pdf.

CoML is supporting a coordinating workshop for "DNA Barcoding for CoML." The workshop, to be organized by Ann Bucklin (UConn, USA), Paul Hebert (University of Guelph, Canada), and Bob Ward (CSIRO, Australia), will involve representatives from all of the CoML ocean realm field projects, OBIS, HMAP, and FMAP. The primary product of the workshop will be an implementation plan describing in practical terms how to coordinate DNA barcoding of the marine animals and microbes that are the focus of ongoing CoML activities, particularly the ocean realm field projects. The workshop will meet 15-17 May 2006 in Amsterdam, the Netherlands, hosted by Annelies Pierrot-Bults.

General News

New Scientist

The cover story of the 12 November issue of *New Scientist*, entitled "The Deep," was a special feature on the challenges and opportunities of exploring the relatively unexplored deep sea. Census scientists were featured prominently, including Cindy Van Dover, Mike Vecchione, Malcolm Clark, Monty Priede, Craig Young, Paul Tyler, David Billett, Craig Smith, Amy Baco-Taylor, and Senior Scientist Ron O'Dor. For a copy of the cover story, see: http://www.coml.org/medres/newscientist/new_scientist_special_issue_11-12-05.pdf. To read the complete issue, visit <http://www.newscientist.com/contents/issue/2525.html>.

The 5 November issue of *New Scientist* also made brief reference to CoML in an article about marine protected areas. See: <http://www.newscientist.com/channel/earth/mg18825244.900.html>.

DIVERSITAS Open Science Meeting

DIVERSITAS is the sub-program of the Global Change Program concerned with biodiversity. CoML SSC members Carlo Heip and Meryl Williams serve also on the organizing committee of DIVERSITAS. Carlo and Pedro Martinez organized a well-attended session on CoML at the large DIVERSITAS Open Science Conference, held in Oaxaca, Mexico, 9-12 November. Speakers were Angelika Brandt (Biodiversity in polar waters: role of the Antarctic and Arctic for speciation), Mark Costello (Analysis of how many species are described and yet to be discovered in the oceans reveals gaps in biodiversity knowledge), Charles Griffiths (The unexplored marine biodiversity of Africa), Agnes Muthumbi (Marine Nematodes diversity along a depth transect in the Kenyan Coast), Michael Rex (Existential deep-sea ecology: is the abyss a black hole sink?), and Craig Smith (Whale falls).

Ocean Sciences 2006

The 2006 AGU / ASLO / TOS Ocean Sciences Meeting will be held 20-24 February in Honolulu, HI. Several sessions will be convened by CoML participants:

- OS074: Understanding the Role of Biodiversity in Marine Ecosystems (GoMA and SSC convening)
- OS109: Biodiversity of Coral Reef Ecosystems (CReefs convening)
- OS031: The Mesopelagic and Bathypelagic Realms of the Ocean: Microbial Activity and DOM Cycling (includes ICoMM)
- OS062: Deep-Sea Fish Diversity and Ecology in the Benthic Boundary Layer (MAR-ECO participants convening)
- OS036: Detection, Classification, and Enumeration of Fish and Fish Habitat (NOPP-CoML investigators convening)
- OS033: Ocean Sensors, Sensor Networks, and Cyberinfrastructure Communication (NOPP session)

Abstract submission is closed, but you can still register to attend at:

<http://www.agu.org/meetings/os06/>.

Ebbe Nielsen Prize

The Ebbe Nielsen Prize will be awarded for the fifth time in 2006 to a person or small team that is demonstrating excellence in combining biodiversity informatics and biosystematic research. The Science Committee of the GBIF Governing Board seeks nominations for the Prize. Nominating packages are due at the GBIF Secretariat (ENPrize@gbif.org) by 15 December. See full details at: <http://www.gbif.org/News/NEWS1128690216>.

Cephalopod International Advisory Council Symposium

The theme of the CIAC triennial meeting, to be held 6-10 February 2006 in Hobart, Australia, is "Cephalopod lifecycles: biology, conservation and management." CIAC has strong links CoML with Mike Vecchione as its Chair and Ron O'Dor as a member of the Council. In addition to diverse session themes, George Jackson of the POST steering group has organized a satellite workshop on important Southern Ocean cephalopods that will develop the concept of an All-Cephalopod Barcoding project. For more information, see:

http://www.utas.edu.au/docs/aquaculture/CIAC2006/home_page.htm.

Venter Institute

The Venter Institute will hold its 2006 Genomes, Medicine and the Environment Conference 16-19 October 2006 at Hilton Head Island, SC, USA. The three day conference will cover cutting edge topics in Environmental Genomics. For more information, see:

<http://www.venterinstitute.org/gsac>.

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

December

- 9-10** TOPP Project Advisory Committee Meeting
- 13** Launch of OBIS Australia, Hobart, Australia
- 15** Awarding of Grands Prix des Sciences de la Mer 2004 et 2005, Paris, France

January

- 15-20** Caribbean & South American NaGISA standarization protocol workshop, Morrocoy National Park, Venezuela
- 18-20** POGO-7 Meeting, Hyderabad, India

February

- 6-10** CenSeam data analysis workshop: Biodiversity and vulnerability of deep-sea corals on seamounts beyond areas of national jurisdiction, Wellington, New Zealand
- 6-10** Cephalopod International Advisory Council Symposium 2006, Hobart, Australia
- 20-24** Ocean Sciences Meeting, Honolulu, HI, USA
- 23-24** CoML SSC Meeting, Honolulu, HI, USA
- 27** CReefs project “mobilization” workshop, Honolulu, HI, USA

March

- 20-22** CoML U.S. National Committee Meeting, Washington, DC, USA

April

- 19-22** HERMES Science Implementation Panel Meeting, Mallorca, Spain

May

- 15-17** DNA Barcoding Workshop for CoML, Amsterdam, Netherlands
- 22-23** AIBS Annual Meeting on Biodiversity, Washington, DC, USA

June

- 6-8** CAML project workshop, Bremerhaven, Germany
- 22-23** CoML SSC Meeting, Reykjavik, Iceland
- TBD** FMAP meeting, Reykjavik, Iceland

July

- 9-14** 11th Deep Sea Symposium, Southampton, UK
- 9-14** SCAR Open Science Conference, Hobart, Australia