

What's New with CoML?  
September-November 2003

- **Ocean Life Symposium and Baseline Report.** This has been an exciting few months, and at the top of the list are the events in Washington. On October 23rd, the Census of Marine Life held its first public symposium, "Ocean Life: the Known, Unknown and Unknowable." The event focused around the release of the Census' baseline report on the status of our knowledge of marine biodiversity, *The Unknown Ocean*, which was publicized through a morning press conference. The symposium featured two interesting panels (Ocean Mysteries and New Ways to Observe Ocean Life) and footage from the MAR-ECO dives in the MIR submersibles to the deep waters of the Charlie Gibbs Fracture Zone (Mid-Atlantic Ridge). The event took place at the Smithsonian National Museum of Natural History and was attended by over 250 people, representing 25 countries and a wide range of interests (universities, museums, industry, environmental organizations, foundations, foreign embassies, government agencies and the general public). We would like to thank all of the speakers and moderators who participated in the event, particularly our gracious host and 'toastmasters' – David Evans (Smithsonian Institution), Paul Sandifer (U.S. National Committee and Commission on Ocean Policy), Sylvia Earle (U.S. National Committee, National Geographic Society and Conservation International) and Conrad Lautenbacher (National Oceanic and Atmospheric Administration).

The event was a huge success and exceeded any of our expectations. News of the baseline report and the Census of Marine Life appeared in over 200 newspapers, websites, and television and radio news programs around the world and continues to spread. We have been flooded with requests for information and offers from volunteers. We would like to thank our press team – Terry Collins and Tricom Associates – for orchestrating the press aspects of the event. And, though the event itself may have triggered this jump in visibility and recognition of the Census, there would be nothing to showcase or to write stories about if not for all of the indispensable Census scientists uncovering new information about ocean life everyday.

The *Unknown Ocean* (baseline report) is available on the web at <http://www.coml.org/baseline>

- **All-Program Meeting.** With so many of our international scientists in town for the Ocean Life symposium, a special meeting was held on October 24th to bring the Census research community together for the first time since the program's official commencement in 2000. This event provided the Census with an opportunity to build more direct communication between projects and national and regional components and to begin to think synergistically about the overall program and the final report in 2010. Because of the success and recognized potential of a gathering of this sort, the Census community has indicated that it hopes to see All Program meetings of this sort every 2-3 years. The Secretariat

will be soliciting suggestions for dates and locations from project leaders and the regional and national committees.

- **Research Plan.** A draft research plan for the international program was distributed for comment at this meeting. The draft document is open to revision and can be found at [www.coml.org/baseline](http://www.coml.org/baseline). Comments should be sent to Ron O'Dor ([rodor@coreocean.org](mailto:rodor@coreocean.org)) by November 30, 2003. A revised plan will be submitted to the Scientific Steering Committee in February.
- **Scientific Steering Committee (SSC).** The SSC and Secretariat would like to express its gratitude for two members who have rotated off the committee in 2003 – Olav Rune Godø and Andrew Solow. Both Olav and Andy were valuable shapers of the current program and will remain active in the Census. Olav will increase his role in the MAR-ECO project and Andy will work with RAM Myers on the modeling (FMAP) component of the program. The SSC also enthusiastically welcomes two new members: D. James Baker (President, The Academy of Natural Sciences, Philadelphia, USA) and Meryl Williams (Director General, WorldFish Center, Penang, Malaysia). The next SSC meeting will be 11-13 February 2004 in Penang, Malaysia, hosted by WorldFish.
- **CoML Website.** Following the October launch, the CoML portal (<http://www.coml.org/>) experienced a drastic increase in hits. The report from the outreach network is as follows: Before the event, the October average daily web traffic resulted in 3,800 hits per day. The day of the event, October 23, there were 279,000 hits and the following day 307,000 hits. A week later, we were sustaining a high number of daily hits at 18,000 hits, more than 4 times the pre-launch average. Most of the visitors were from the U.S., but at least 20% of the traffic is international (81 different countries were logged as visitors to [www.coml.org](http://www.coml.org)). After the U.S., the most visitors came from (in this order) Canada, the United Kingdom, Brazil, Australia, The Netherlands, Denmark, Italy, France, Germany and Japan.

Reports from some of the projects indicate that all the CoML component sites received a big boost in traffic from Oct 24 to Oct 27. For example, OBIS went from 200 visits/day to more than 700 visits/day, TOPP saw 5-6,000 hits versus an average of 500, POST went from 84 average hits/day to 489 hits/day and MAR-Eco had 6,000 hits/day Oct. 24 vs. 1,100 hits/day average in September.

The overall picture is of a huge response to the press conference. Some people were directed to the site by the online news outlets. The increased interest was also seen at all the project sites that reported web traffic. Based on the detailed information provided by MAR-ECO, [www.coml.org](http://www.coml.org) was the top outside referrer to the MAR-ECO pages, followed by Google. Early indications report to continuing elevated traffic levels at [www.coml.org](http://www.coml.org) and the project web pages. Traffic over the next month will give us a good insight into the long-term impact on the usage of the portal page.

Both the Secretariat and the Outreach Network will work to improve both the portal and Secretariat website (content, presentation, navigability, etc.) over the next couple of months. Suggestions are welcome.

- **Education and Outreach.** The Outreach Network at the University of Rhode Island has been funded for an additional 18 months to carry out education and outreach activities on behalf of the overall CoML program, as well as to facilitate such activities for the individual projects. The Secretariat would like to express its thanks to the outreach network for their efforts leading up to the October launch and looks continuing to work with them.

As the outreach network develops its plans for the next phase – building on the success and momentum of the launch – they are asking all projects to develop an Education and Outreach (E&O) Mission Statement and identify three E&O goals (specific activities) that they plan to accomplish over the next 24 months. Please provide your statements and goals to the outreach network by 20 January 2004.

- **Ocean Biogeographic Information System (OBIS).** The OBIS International Committee met 22-23 October in Washington DC in conjunction with the outreach event and All-Program meeting. The concept of “regional nodes” for OBIS has been evolving fast in recent months. OBIS would like to organize 4-6 regional nodes, with priority on underrepresented regions and acquisition of key data sets.

Rainer Froese (OBIS/FishBase) has been awarded a Pew Marine Conservation Fellowships for 2003. He will use this fellowship to it plan and build an international partnership for developing a prototype of the first comprehensive online marine atlas (OBIS). These fellowships are the world’s most esteemed awards focusing on the world’s oceans, so we congratulate Rainer for receiving such recognition for his work and an excellent opportunity to continue it.

- **History of Marine Animal Populations (HMAP).** HMAP is sponsoring a workshop on “Ecological history of the Wadden Sea: 2000 years of human-induced change in a unique coastal ecosystem,” which will be held 23 January 2004 at List/Island of Sylk, Germany. For more information, go to <http://www.cmrh.dk/Workshop-announcement.PDF>.

HMAP is also planning a workshop on modeling for students who have participated in the last two summer schools and currently working on relevant research topics. The workshop will be held in [northern hemisphere] spring at Southern Denmark University, Esbjerg; special invitations will be made.

The 2004 HMAP workshop and summer school will also be held at SDU, Esbjerg in August, and a major “Open Science” Conference is being planned for November 2005 in Denmark.

- **Future of Marine Animal Populations (FMAP).** There is no FMAP news at this time.

## Field Projects

- **Gulf of Maine: GoM.** The Gulf of Maine Census has published “Prototype Biophysical Maps of the Gulf of Maine.” These maps are intended to serve as a “mock-up” as the program moves toward a Dynamic Atlas of the Gulf of Maine. Compiling them was a test to demonstrate the ability and the barriers to joining together, in composite form, independent biological and physical databases from the Gulf of Maine. A hard copy of the 32-page volume is available from Evan Richert, Program Director, Gulf of Maine Census, [erichert@usm.maine.edu](mailto:erichert@usm.maine.edu). It will be on the program’s website in the near future.
- **Mid-Atlantic Ridge: MAR-ECO.** Well-known Norwegian painter Ørnulf Opdahl has contributed four ocean-themed paintings to MAR-ECO, which were exhibited in Washington at the CoML Ocean Life symposium in October. Electronic images of these paintings can also be viewed at the news section of the MAR-ECO website (<http://www.mar-eco.no/>).

The MAR-ECO teachers network had their first face-to-face meeting in early November in Bergen. During their weeklong meeting, this group, which includes about 10 teachers from 6 countries met scientists, MAR-ECO investigator Odd Aksel Bergstad, staff at the Bergen museum and even had a tour of the new research vessel. All were very enthusiastic and are exploring a number of multi-disciplinary themes relating to MAR-ECO / deep sea, including increased motivation and stimulation for language, ethics, history, etc.

The MAR-ECO outreach group produces its own very nice newsletter. For the latest issue, go to: <http://mareco.imr.no/news/documents/Mar-Eco2.pdf>

- **Chemosynthetic Ecosystems: ChEss.** The report of the June workshop on chemosynthetic ecosystems held at Southampton Oceanography Centre is available online at: <http://www.soc.soton.ac.uk/chess/workshop.html>. The major result from the workshop was a reworking of the ChEss science plan, focusing on three main field components: the Equatorial Belt (Atlantic), the SE Pacific, and the New Zealand region. Descriptions of the work to be performed at each of these sites is available on the ChEss website ([www.soc.soton.ac.uk/chess/](http://www.soc.soton.ac.uk/chess/)). A meeting on the SE Pacific component will be held 22-23 January 2004 in La Jolla, CA, USA.
- **Tagging of Pacific Pelagics: TOPP.** There is no TOPP news at this time.
- **Salmon/Coastal Tracking: POST.** As it moves into Phase II (the field phase), the POST project has changed its name to more effectively convey the scope of the project and the broad nature of the coastal array. The new name is Pacific Ocean Shelf Tracking (acronym remains the same).

- **Latitudinal/Longitudinal Gradients in Near-Shore Biodiversity: NaGISA.** Even prior to the launch event in Washington, an article regarding NaGISA was published in Yomiuri News Paper in Japan. This is the largest (more than 6.7 million copies per day) newspaper in Japan.

The first NaGISA taxonomy training workshop was held in Phuket Marine Biological Center, in Thailand from 27 to 29 September. It was a joint workshop with JSPS and focused on polychaetes and fishes.

Three localities on the Russian coast have been sampled using NaGISA quadrats. They have started analyzing the samples and the data will be available on the NaGISA server soon.

In outreach news... The NaGISA website went through a major overhaul for the October event, and a worldwide database of distribution will soon be available there. Visit it at <http://www.nagisa.coml.org/>. Also, a Florida high school group will be collaborating with NaGISA to sample in the Gulf of Mexico.

- **Abyssal Sediments: CeDAMar.** At the 21-24 August workshop on Deep-Sea sediments, the community determined that the effort was best approached as two separate pieces: abyssal sediments and continental margins. As an abyssal project already underway, the CeDAMar group has agreed to lead the core organization of the abyssal sediments, with the primary charge to globalize the effort.

Concurrently with the October events, at the other end of the globe, several CeDAMar representatives participated in the IBMANT/ANDEEP Symposium & Workshop in Ushuaia, Argentina, organized jointly by the Alfred Wegener Institute for Polar and Marine Research (AWI, Bremerhaven, Germany), the Centro Austral de Investigaciones Científicas (CADIC, Ushuaia, Argentina) and the Zoological Institute and Museum of the University of Hamburg (ZIM/HH, Hamburg, Germany). The objective of this meeting was to explore connections between the marine ecosystems of Antarctica and the surrounding Subantarctic environment, especially South America, to compare present-day biogeographic patterns, and to elucidate pathways of faunal and floral exchange in the past. It combined continental shelf and slope approaches (IBMANT) with recent deep-sea research in the Weddell Sea and Scotia Arc (ANDEEP). Angelika Brandt of the CeDAMar (ANDEEP) project presented an oral overview as well as a poster on behalf of the Census of Marine Life, both of which she stated were very well received. A total of 117 scientists from 13 countries participated in the meeting, and presentations were offered from 17 countries. For more, visit the conference website at <http://www.tierradelfuego.org.ar/cadic/ibmant/>

## **National and Regional Activities**

- **Caribbean.** Patricia Miroslovich (Caracas), working with Eduardo Klein, is now very close to a proposal that would include a regional workshop in late June.

- **Europe.** The ad-hoc Euro-CoML committee held a workshop on 9-10 October to formalize a larger committee and solicit community input. Ulf Lie is the chairman of the emerging committee, and the potential members for the committee are being contacted now. The main objective of the committee will be to help coordination amongst existing and new European-led CoML projects, to facilitate the use of platforms and equipment (i.e. ships, ROVS, etc) and to work to help secure funding opportunities.

The European-based deep-sea projects (ChEss, CeDAMar and MAR-ECO) are currently planning a proposal to the European Science Foundation to develop a EUROCORES programme (for more information see: [www.esf.org](http://www.esf.org)) on Ecology and Systematics of Deep-Sea Organisms, focusing on variations in biodiversity in deep-sea habitats. The proposal is based on the CoML projects, however, if successful, this programme would extend to the European deep-sea community as a whole.

The tri-annual meeting of the MARS institutes will take place in Amsterdam on 25-26 November. The Census has been offered a 20-minute presentation.

- **Indian Ocean.** A workshop to examine the known, unknown and unknowable about marine biodiversity in the Indian Ocean is scheduled for 12-15 December 2003. This workshop, co-sponsored by the Partnership for Observation in the Global Oceans, is organized by Mohideen Wafar (National Institute of Oceanography, India) and Shubha Sathyendranath (POGO). For more information, please contact Mohideen Wafar at [wafar@darya.nio.org](mailto:wafar@darya.nio.org).
- **New Zealand.** CoML is a major host of the Deep Sea 2003 Conference in Queenstown, New Zealand (1-5 December) (<http://www.deepsea.govt.nz/>). CoML will be the sponsor of Day 1/Theme 1 on “Environment, ecosystem biology, habitat and diversity, oceanography.” This will be an excellent opportunity to engage the South Pacific community as well as share the results and next steps of August’s deep-sea workshops (Sediments, Seamounts and Canyons). In addition to presentations on Conference Day 1, CoML will hold its own informational session on one evening of during the conference (date TBD). CoML participants will include: Odd Aksel Bergstad and Mike Vecchione (Mar-Eco); Karen Stocks (Seamounts/OBIS); Amy Baco-Taylor, Ashley Rowden and Craig Smith (ChEss); Andy Rosenberg (HMAP/FMAP) and Kristen Yarincik (Secretariat). Members of the New Zealand and Australian CoML communities will also attend.
- **Russia.** During the 15-19 September SCOR Executive Committee meeting in Moscow, a special CoML session focused on deepening Russian participation in CoML. Speakers included Daniel Alexandrov (HMAP), Vladimir Kasyanov (NaGISA), Andrey Gebruk (Mar-Eco, ChEss, CeDAMar), Annelies Pierrot-Bults (University of Amsterdam) and Ulf Lie (Chair, Euro-CoML committee). The Russian community expressed strong interest in CoML, and Andrey Gebruk has

agreed to lead an effort to organize the Russian scientific community on behalf of the Census.

- **South America.** In October, several representatives of the South American committee met with Craig Venter at the Institute for Biological Energy Alternatives. The purpose of this small workshop was to inform key members of the South American oceanographic research community about a global microbial biodiversity study (sampling approximately every 200 miles around the world) and to explore opportunities for consultation and collaboration on research in the waters around South America (Chile, Argentina, and in Brazil, south of the Amazon).

The next meeting of the South American committee will take place 28-29 November in Brazil.

- **Sub-Saharan Africa.** The Sub-Saharan African regional workshop, led by Charles Griffiths, was held 24-26 September 2003 in Cape Town, South Africa. Attendees at the workshop included delegates from 15 African countries as well as from the major institutions in South Africa and several pan-African programs. The country presentations on marine biodiversity Known and Unknown as well as those on other programs went very well and will be included in a Proceedings document that the organizing committee is hoping to release by the end of the year. The workshop and proceedings will provide a comprehensive statement on the state of marine biodiversity knowledge for much of the continent. There is a very strong support among the delegates for cooperative work on marine biodiversity research under the aegis of the Census of Marine Life, and there is consensus to organize a Steering Committee for African Marine Biodiversity. Members will be representatives from major areas of Africa (West Africa, Southwest Africa, Southern Africa, East Africa, Indian Ocean Islands and eventually, if appropriate, Atlantic Ocean Islands) as well as an expert on databases (Edward Vanden Berghe for MASDEA and ODINAfrica). Importantly, there was also agreement on and dedication to the development of an OBIS node for Africa. The organizing committee is currently circulating a Draft Resolution for approval by all of the delegates.
- **USA.** The plan for implementation of the U.S. Census program has been released. The plan, which draws on the results of the 21-23 July workshop in Salem, Massachusetts, highlights the major necessity and timeline for a U.S. Census program. Major research elements will focus on: (1) dynamic access to biological data; (2) integrated regional studies to support ecosystem-based management; (3) improved biological sensors for ocean observing systems; (4) investment in exploration and taxonomy; (5) studies of earlier changes in marine populations; and (6) improving predictive capabilities. An electronic copy of the plan can be found at <http://www.coml.us/>.

The U.S. National Committee met on 21-22 October in Washington DC. While in town, the group held briefings with congressional staff and VADM Conrad

Lautenbacher, Administrator of the National Oceanic and Atmospheric Administration.

Also in October, the Harte Research Institute for Gulf of Mexico Studies (<http://www.hri.tamucc.edu/>) launched its The Gulf of Mexico – Past, Present, and Future initiative with a “state of knowledge workshop”. HRI Director Wes Tunnell presented this initiative at the U.S. workshop in Salem (July), where it was strongly endorsed by the U.S. committee as an affiliated regional ecosystem survey under the U.S. Census program.

## **Cross-cutting and Other Related Activities**

- **SCOR Working Group 118 on New Technologies.** The SCOR WG118 met in October in Washington DC in conjunction with the outreach event and All-Program meeting. The focus of the meeting was to take a ten-year look ahead to determine what may be the most important biological issues and resolve which technologies will be most useful for addressing these issues.
- **Deep-Sea Sediments.** A global workshop on “The Biodiversity of Deep-Sea Sediments: The Known, Unknown and Unknowable” took place 21-24 August in Newport, Oregon. David Billett (Southampton Oceanography Centre) and George Boehlert (Oregon State University) organized and led the workshop. A PowerPoint presentation summarizing the workshop results can be found at <http://ftp.hmsc.oregonstate.edu/ftp/CoML/SedimentsSummary.htm>. The workshop participants organized themselves into “ocean margins” and “abyssal plains” groups. The abyssal plains group will be an extension of the CeDAMar project.
- **Seamounts.** The report from the 21-24 August workshop on the Biogeography of Seamounts and Submarine Canyons is now available (see the workshop website under “What’s New” at <http://seamounts.sdsc.edu/>). For more information on the emerging seamount initiative, contact Karen Stocks of the San Diego Supercomputer Center ([kstocks@sdsc.edu](mailto:kstocks@sdsc.edu)) or George Boehlert of Oregon State University ([george.boehlert@hmsc.orst.edu](mailto:george.boehlert@hmsc.orst.edu)). A recent article on seamounts published in New Scientist Karen and refers to the August workshop (see <http://www.newscientist.com/news/news.jsp?id=ns99994097>
- **Continental Margins.** Formerly linked to seamounts as unique habitats, the canyons group determined it would be more appropriately linked with the continental margins group that emerged out of the Deep-Sea Sediments Workshop. In addition to submarine canyons, the biodiversity studies of continental margins would include trenches and river mouths. Myriam Sibuet of IFREMER has agreed to lead development of this effort. Though well organized, this group is not yet moving forward with an official proposal to conduct a field project under CoML.



- **Microbes.** A global workshop on marine microbes will be held 19-21 November at the Monterey Bay Aquarium Research Institute on the known, unknown and unknowable about diversity of microbial species in globally distributed marine environments. This international workshop will outline key scientific questions about the diversity and activities of microbes in ocean environments, specify the kinds of data required to address these questions, and identify gaps in our analytical frameworks that must be bridged to successfully interpret a census of marine microbes. Other workshop objectives include the identification of synergies between a microbial census and established CoML field projects. Mitch Sogin of Marine Biological Laboratory in Woods Hole leads this effort.
- **Plankton.** Ann Bucklin (OBIS-ZooGene) is leading an effort to organize a workshop to determine appropriate scope – both taxonomic and geographic – for a global census of plankton, as well as to develop proposals to perform plankton biodiversity surveys and produce accurate and complete information on species diversity, biomass, biogeographic distribution, and other individual and aggregate characters. The workshop will take place 17-22 March in New Hampshire, USA.
- **Coral Communities.** The consensus among several groups is that a global coral project is an important component to a census of marine life. Therefore, CoML is currently working to coordinate several emerging coral initiatives from Australia (Terry Hughes), the U.S. (Jo-Ann Leong, Nancy Knowlton), and Japan (a NaGISA protocol). Any plans will also be strongly linked to the HMAP historical case study and evolving CoML workshop/committee in the Caribbean. One option for a workshop or other activity is to hold it in conjunction with the 10th International Coral Reef Symposium to be held in Japan in July 2004. Plans are in the early stages of development.
- **Polar: Arctic and Antarctic.** CoML is currently working to coordinate several polar initiatives from the Australian Antarctic Division (Michael Stoddard), the British Antarctic Survey (John Croxall) and the University of Alaska Fairbanks (Arctic – Brenda Konar and Russ Hopcroft) with the goal of creating an overall rationale for a CoML polar biodiversity field program.
- **Museums and Specimens.** A workshop to discuss and recommend protocols for specimen collection associated with all CoML field projects was held 5-7 September 2003 in Philadelphia. A summary report is currently available. Please contact Gary Rosenberg at the Academy of Natural Sciences ([rosenberg@acnatsci.org](mailto:rosenberg@acnatsci.org)).
- **DNA Barcodes.** The DNA Barcoding Protocol, developed by Mark Stoeckle (Weill Medical College of Cornell University), Ann Bucklin (University of New Hampshire), Nancy Knowlton (Scripps Institution of Oceanography), and Paul Hebert (University of Guelph) is still available at the CoML website (<http://www.comlsecretariat.org/Dev2Go.web?id=255158>) for comment. A follow up workshop to the March 2003 “Taxonomy and DNA” conference was held 10-

12 September 2003 at Cold Spring Harbor Laboratory. For more information on DNA Barcoding, visit: <http://phe.rockefeller.edu/BarcodeConference>

- **Study to Assess the Economic Benefits of CoML.** James Sanchirico of Resources for the Future, one of the world's top centers for environmental economics, has been funded to assess social and economic benefits of CoML. Dr. Sanchirico will interview several of the CoML PIs during the course of his study, which should be completed by the end of December 2003.
- **PICES Ecosystem Report.** PICES/CoML final workshop contributing to the report on "Marine life in the North Pacific: the known, unknown, and unknowable" will take place on 17-19 November in Sidney, BC, Canada. For more information, please contact Skip McKinnell of the PICES Secretariat ([mckinnell@pices.int](mailto:mckinnell@pices.int)).

## General News

- **Foreign Affairs article.** The September/October 2003 issue of the quarterly magazine Foreign Affairs features an article entitled "What Future for the Oceans?" by John Temple Swing, which includes a nice paragraph referring to the Census of Marine Life (p. 149). A PDF copy of this article is available on the "News Archives" section of the CoML Secretariat homepage (<http://www.comlsecretariat.org/>)
- **IGBP/SCOR.** Last January, several CoML representatives participated in the OCEANS conference in Paris, which resulted in the development of a new IGBP/SCOR program on Integrated Marine Biogeochemistry and Ecosystem Research (IMBER). A draft of the IMBER Science Plan/Implementation Strategy is now posted on the web at <http://www.igbp.kva.se/obe/recentupdates.html>, and comments from the scientific community are welcome. Please send any comments (referring to line numbers) to [c.hamilton@niwa.co.nz](mailto:c.hamilton@niwa.co.nz) **before 25 November 2003**. The IMBER Transition Team (listed at above link) will be meeting in early December to finalize the Science Plan/Implementation Strategy, with the aid of your comments. The plan will be submitted to IGBP and SCOR before the end of 2003 for review and presented to IGBP and SCOR for approval during the first quarter of 2004. After approval, IGBP and SCOR will form an IMBER International Scientific Steering Committee to guide the implementation of IMBER.