

There are no CoML Cruises underway at this time.

All Program Meeting

The All Program meeting will take place Friday-Saturday, 4-5 November 2005 in Frankfurt, Germany. It will be held in conjunction with a EuroCoML symposium (similar to the Washington DC symposium, October 2003) on Thursday, 3 November. Graham Shimmield (EuroCoML) is leading the planning committee for the symposium, which will likely focus on EuroDeep, the polar projects, and plankton. For an outline of the scheduled events, visit: <http://www.coreocean.org/Dev2Go.web?id=263697>. At its April meeting, the SSC will review a draft of the All Program agenda, which, once approved, will be circulated widely.

Scientific Steering Committee (SSC)

The SSC would like to welcome Dr. Myriam Sibuet of Ifremer (France) as its newest member. Myriam is the Director of Ifremer's "Deep Sea Environment" department, a position she's held since 1998. Since 2005, she has also served as the Science and Technology adviser to the President of Ifremer. Her scientific interests include biodiversity and functioning of deep-sea ecosystems, ecology of sediment and cold seep communities, deep-sea echinoderm biology, ecology, and taxonomy. Myriam is also a leader in the development of the new CoML project Continental Margin Ecosystems on a Worldwide Scale (CoMargE). She will begin her service on the SSC at the August 2005 meeting.

SSC Vice Chairman, Victor Gallardo, is on sabbatical in Washington, DC until the end of August 2005. He is splitting his time between the CoML International Secretariat at CORE and the Smithsonian National Museum of Natural History. Victor's time at CORE will be primarily spent serving as a coordinator for the diverse national and regional efforts, as well as advancing the project globalization concept encouraged by the SSC.

The SSC will next meet on 26-27 April 2005 at Scripps Institution of Oceanography in La Jolla, CA, immediately following the *Future* Known-Unknown-Unknowable Conference. Future SSC meetings will take place on 26-27 August 2005, in conjunction with the Dynamic Planet Conference in Cairns, Australia and 6 November 2005 in Frankfurt, Germany.

SSC member, D. Chandramohan, has retired from his position at the National Institute of Oceanography in Goa and has relocated to the east coast of India in Chennai.

Education and Outreach

"What Lies Beneath," a short article about CoML, appeared in the April issue of *Popular Mechanics* with a full 2-page spread in its Technology Talk section (p. 18-19). The article made note of the ROV Victor 6000 and the work of the ChEss project. Thanks to the URI team for facilitating this article.

The Education and Outreach Liaison Network plans to hold its next workshop on 2 November 2005 in Frankfurt, Germany in conjunction with the EuroCoML symposium and All Program Meeting.

Ocean Biogeographic Information System (OBIS)

OBIS welcomes Ms. Deepal Shah to its Portal development team. Ms. Shah was a developer at IBM Global Services before joining OBIS and has extensive experience in Java-based Web development.

Congratulations to Dr. Mark Costello, Chair of the OBIS International Committee, on his election to the Global Biodiversity Information Facility (GBIF) Review Response Team, representing the Associate Participant Organizations in the review of the GBIF 3rd Year Review.

The Technical Resources Section of the OBIS Portal was updated on 11 April with two new items – the Regional OBIS Node (RON) Template and the Plone Template Installation Instructions. These items may be downloaded from <http://www.iobis.org/tech/portal>. The RON template will be used by nodes and other data providers to develop regional portal websites with customized access to global OBIS data.

EurOBIS, the European Regional OBIS Node (led by Edward Vanden Berghe, VLIZ, Belgium), has recently made available on the OBIS Portal more than 200,000 new data records from eight data collections:

- Tisbe: Taxonomic Information System for the Belgian coastal area
- Benthic fauna in the Pechora Sea
- Temporal coverage of N3, a benthic fauna station in central Kiel Bay
- MedOBIS: benthic fauna of the Mediterranean and Black seas
- Biogeography of the Scheldt Estuary
- BioMar: benthic fauna and flora of Ireland
- Macrobelt: Long term trends in the macrobenthos of the Belgian Continental Shelf
- SandbanksBCS: Meiobenthos of subtidal sandbanks on the Belgian Continental Shelf

Mark Costello, Fred Grassle, Yunqing Phoebe Zhang, Karen Stocks and Edward Vanden Berghe published an article on OBIS in the Spring 2005 MARBEF Newsletter (p.20). In the same issue, Edward Vander Berghe and Mark Costello published the report of the November 2004 International Conference on Marine Biodiversity Data Management (p.16). MARBEF is an EU funded research network that includes EurOBIS. Read the article at:

http://www.marbef.org/documents/newsletter/NwsNo2_Feb05.pdf.

More information on EurOBIS can be found at <http://www.marbef.org/data/eurobis.php>.

OBIS and The National Center for Biotechnology Information (NCBI) in the U.S. have recently become "link-out" partners. A user visiting the OBIS Portal can now get linked out to NCBI's nucleotide, protein, publication, and other databases through the Entrez interface. Meanwhile, Entrez users will get dynamic linkage to OBIS while searching the NCBI databases.

OBIS has established dynamic linkage to Google Scholar from OBIS Portal Search Result pages.

The OBIS project, an Associate Participant in the Global Biodiversity Information Facility, has established individual entries in the GBIF registry and is now serving 44 data collections to GBIF. These 44 data collections represent the entire suite of data available through the Portal.

History of Marine Animal Populations (HMAP)

The HMAP Open Science Conference, *Oceans Past - Multidisciplinary Perspectives on the History of Marine Animal Populations*, will be held 24-27 October 2005 at Hotel Comwell in Kolding, Denmark. *Oceans Past* is a global conference dedicated to the history of the oceans and marine life. It will be an open science forum where researchers from both from the natural sciences and the humanities are welcome. The call for papers has closed. HMAP was impressed

by the breadth of the papers received. They received about 75 proposals for papers, with abstracts covering almost the entire globe. A preliminary program will be available shortly. The Gulf of Maine HMAP team – Andy Rosenberg, Jeffrey Bolster, Karen Alexander, Bill Leavenworth, Andrew Cooper, and Matthew McKenzie – published “The History of Ocean Resources: Modeling Cod Biomass Using Historical Records,” in *Frontiers in Ecology and the Environment* 2005; 3(2): 78-84. This paper estimated cod biomass for the Scotian Shelf in 1852 and showed that this once abundant fish species has declined by over 96%, and produced powerful comparisons between the 19th-century fishery and today’s moribund counterpart. With outstanding work from the Census Outreach team, HMAP received extensive press coverage for this publication. For links to some of the news articles or to download the 1 March press release, visit: www.coml.org.

Data and results from the HMAP Caribbean study contributed significantly to “Are U.S. Coral Reefs on the Slippery Slope to Slime?,” which appeared in the 18 March issue of *Science*. The HMAP Caribbean project – Jordi Bascompte and Carlos Melián (Estación Biológica de Doñana, Consejo Superior de Investigaciones Científicas, Spain) and Enric Sala (Scripps) – also released its own findings on the overfishing of sharks as a key factor in coral reef decline. Read the press release from Scripps at: http://scrippsnews.ucsd.edu/article_detail.cfm?article_num=670.

Poul Holm, Tim Smith, RAM Myers, and Stephen Palumbi will participate in “Lives of the Sea: A symposium on the history of marine life” at Princeton University on 29 April. Talks include:

- “Fish out of water: History meets marine science” (Holm)
- “Industrial exploitation of the ocean: Less than one-tenth of the large fish are left” (Myers)
- “How many whales before whaling? Genetics and the history of populations” (Palumbi)
- “How much whaling was there and who cares?” (Smith)

Ocean Realm Field Projects

Mid-Atlantic Ridge: MAR-ECO

MAR-ECO researchers Andrey Gebruk (Russia) and Mike Vecchione (USA) were among the authors who described a new family, genus and species in the 17 March 2005 issue of *Nature* (Vol. 434, pp. 374-376). In 2003, during their dives in the MIR submersibles to the Charlie Gibbs Fracture Zone (Mid-Atlantic Ridge), Gebruk and Vecchione collected specimen photographs of what was then referred to as the “purple orchid animal.” The photographs support the dispute of the previous hypothesis of the organism (lophenteropneust), leading to the new identification of *Torquarator bullocki*. The photos of MAR-ECO’s specimen were first revealed at the October 2003 Ocean Life Symposium at the National Museum of Natural History. (www.nature.com)

The MAR-ECO website features a progress report regarding the analysis of the samples collected during the 2004 *G.O. Sars* cruise. Check it out at: http://www.mar-eco.no/mareco_news/news_analysis_phase2005/treasure_hunt_in_mareco_material.

MAR-ECO will hold its field phase workshop in Lisbon on 3-4 June. The MAR-ECO Steering Group will meet on 2 and 5 June. For the workshop, MAR-ECO has received about 45 scientific contributions (titles and abstracts), primarily preliminary reports from the 2003-2004 field efforts. Approximately 65 people will attend.

Beginning 30 April, a MAR-ECO traveling exhibit will be shown in conjunction with the exhibition of Oernulf Opdahl's artwork at the Nordic House in Reykjavik.

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

Gulf of Maine: GoMA

A new partner project to GoMA received funding through the U.S. National Oceanographic Partnership Program (NOPP). On and around Georges Bank, the project, led by Dr. Nicholas Makris (Massachusetts Institute of Technology), will apply a new lower frequency acoustic method to (1) instantaneously detect, image and spatially chart fish populations over continental-shelf scales and (2) continuously monitor the areal densities and behavior of fish populations over time. Read the full project abstract at:

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

In July 2005, GoMA will sponsor a cruise aimed at the high priority question of the Program's Large Vertebrates Working Group: what drives the patterns of utilization by birds and mammals of offshore banks and submarine ridges? For years it has been observed that offshore banks are at times rich in birds and mammals, but at other times are barren of them. Is this pattern being driven by underlying oceanography, by prey fields and the effects of predation, or something else? The study will examine the intersection of foraging with the underlying biology and oceanography. The study site will be Platt's Bank and Three Dory Ridge, about 30 nautical miles off southwestern Maine's shore. The study will combine aerial and vessel surveys to obtain frequent, synoptic, and larger scale views of the area. The PIs are Lewis Incze, Scott Kraus, and Peter Stevick.

Chemosynthetic Ecosystems: ChEss

The ChEss project has been awarded two years of renewal funding. This new funding brings ChEss into its second phase – the start of the field programme phase. In parallel, ChEss will continue to work with the OBIS Team for the integration of ChEssBase with OBIS during 2005, and with the Outreach & Education team for the development of a number of educational projects.

There is a major addition to the ChEss team. Dr. Maria Baker will be the new coordinator of ChEss at Southampton Oceanography Centre, sharing the coordination tasks with Eva Ramirez-Llodra, who will move to Barcelona (Spain) in May to work at the Institute of Marine Sciences (CMIMA-CSIC). Maria will also be the new Outreach Liaison.

ChEss members have recently participated in three hydrothermal vent cruises:

South Mid-Atlantic Ridge: Chris German (SOC, UK) was the PI of an exploratory cruise (17 Feb-18 March) organized to find and investigate the first vent site on the MAR south of the Equator. This was a successful multidisciplinary cruise co-organized by SOC and WHOI (Tim Shank and ABE Team). Activities ranged from making a brand new map of previously unexamined seafloor between 3°S and 7°S to diving on and investigating brand new hydrothermal vent sites – all in less than 3 weeks of science operations aboard the RRS *Charles Darwin*.

DE-Ridge: Following hot on the *Darwin's* Heels, a follow-up cruise led by Dr. Karsten Haase aboard RV *Meteor* has already begun diving with an ROV and sampling at these just-found South MAR vents – within less than a month of their discovery! This is a perfect example of international collaboration and data sharing being promoted and supported by ChEss.

Easter Island Microplate: Bob Vrijenhoek (MBARI, USA) was the PI of this cruise (12 March-6 April), which investigated the molecular and community biology of vent fauna on the Easter microplate.

During the first South MAR and the Easter Island Cruises, the ChEss outreach team kept cruise web diaries (links on the ChEss home page: <http://www.soc.soton.ac.uk/chess/>) with daily reports and images of work at sea. During the South MAR cruise, in particular, ChEss crews had the chance to invite two geology classrooms from a UK High School (St. Swithuns School) to send questions to the scientists on board and participate virtually in our discoveries and experiences. The students even sent their own photographs to the ship to be uploaded to the at-sea website! During the Easter Island microplate cruise, ChEss web diaries were translated into 4 languages: English, Spanish, Portuguese and French.

In May, a Franco-Russian cruise planned by EXOMAR will visit TAG, Lost City, and Rainbow hydrothermal fields on the Mid-Atlantic Ridge, while another cruise will visit the Lau Basin hydrothermal vents in the Pacific. In June, the cruise (BOA 1) on board the IRD ship ALIS will head to New Caledonia for the study of sunken wood and its associated fauna.

ChEss members have been and will be involved the following workshops and symposia:

- InterRidge workshop on 'Tectonic and Oceanic Processes Along the Indian Ocean Ridge System' (19-21 January 2005, Goa, India)
- MoMAR workshop (6 to 9 April 2005, Lisboa, Portugal)
- EGU General Assembly (April 2005, Vienna, Austria)
- International Ocean Research Conference (6-10 June, Paris, France)
- ChEss Steering Committee Meeting (10-11 September, Scripps, USA)
- 3rd Hydrothermal Vent and Cold Seep Symposium (12-16 Sept., Scripps, USA)

Tagging of Pacific Pelagics: TOPP

Spring 2005 finds TOPP making considerable strides forward in its ambitious efforts to collect and integrate high quality oceanographic and behavioral data from its array of animal "oceanographers."

Marine Mammals: The focus of the marine mammal team is upon tracking tagged animals currently at liberty, including elephant seals, California sea lions and one blue whale, which has been tracked now for nearly eight months. Most of the 19 elephant seals tagged earlier this year seem to be on the return leg of their 3-month foraging migrations, and we expect them to return to the beach over the next one-to-two months. Eight of these animals were equipped with stomach temperature sensors, which will allow us to identify when and where successful foraging events occur. Four tags deployed on California sea lions in 2004 continued to transmit data through February and March, making these the longest data records ever compiled for this species. Two of these animals unexpectedly ventured several hundred miles from shore – a behavior not previously observed.

Sharks: The shark team is busy tracking four species of sharks (blue, mako, white, and salmon sharks) and preparing for additional deployments in May. From February thorough April we were still receiving transmissions from 15 salmon sharks, 11 blue sharks, 12 mako sharks. Over the same period, 15 PAT tags have reported from blue, mako, salmon, and white sharks. An additional 12 PAT tags on the same four species are due to pop up over the next few months. We are amassing enough data for the different shark species to begin identifying niche separation. For example, while there is considerable geographic overlap between the blue and mako sharks, directed, southerly migrations were more common among the blue sharks--and most of the four-to-ten month tracks from the mako sharks were off the Coast of Baja, Mexico and California. Because the blue shark is the only ectothermic member, comparing it to the other species in the shark group is of particular interest.

Fish: In March 2005, several members of the TOPP tuna team traveled to the tuna pens near Ensenada, Mexico to deploy 47 electronic tags on bluefin tuna. Based on the TOPP archival tag data, the area where these fish were released is close to popular winter bluefin foraging grounds. With this effort, the total number of electronic tag deployments on tuna now exceeds 500. There are plans to deploy an additional 300 tags on the three species of tuna (albacore, bluefin and yellowfin) over the coming months. During November 2004, 6 PAT tags were deployed by harpoon fishermen on swordfish off southern California. Two of these tags recently popped up after approximately three to five months. While one swordfish took the expected path towards Hawaii, the second fish traveled southeast. In February, 2005 when the tag released, the swordfish was off mainland Mexico, just south of the Revillagigido Islands.

Sea Turtles: Over the last couple of months, the sea turtle team has been tracking leatherback sea turtles tagged in both 2004 and 2005. Of the eight turtles tagged this year, one is still near the coast while the others are traveling southwest along the same general path taken by turtles in 2004. The 13 turtles tagged last winter are currently all south of 20 degrees south latitude, off the coast of Peru and Chile. All tags still transmitting from last year's deployments are the Sea Mammal Research Unit SRDL (Satellite Relay Data Loggers).

Seabirds: Michelle Antolos and Scott Seganti (working with Scott Shaffer of UCSC) deployed a total of 57 satellite tags on albatrosses at Tern Island, Hawaii; 30 on Laysan and 27 on black-footed. Bill Henry, also of UCSC, deployed 39 additional tags on Laysan albatrosses at Guadalupe Island, Mexico, and recovered 17 from the May, 2004 deployment. Scott Shaffer, Darren Scott, and Riki Mules (both from the University of Otago, New Zealand) deployed a total of 25 tags on sooty shearwaters in Whenua Hou Island to study their migration to the North Pacific. Peter Hodum (University of Washington) and Kirsten Lindquist (Point Reyes Bird Observatory) tagged 14 pink-footed shearwaters on Juan Fernandez Islands, Chile. Like the sooty shearwaters, these birds will make a trans-equatorial migration to the North Pacific.

Education and Outreach: The TOPP E&O team completed development of the new TOPP web site, and was wrapping up production as the quarter ended. The new site features a news-style design and is scheduled to launch in late April.

The TOPP project recently received 3-years of funding from the U.S. National Oceanographic Partnership Program (NOPP). Read the proposal abstract at:
<http://www.nopp.org/Dev2Go.web?id=267257#costa>.

Salmon/Coastal Tracking: POST

The 2005 field season is underway. Field teams started tagging Coldwater Chinook at Spius Creek the week of April 4th. By early June they would have tagged 2000 - 3000 fish in 14 different locations along the BC and Washington State coasts. The 2005 acoustic tracking array is being deployed in the same locations as in the last field season to confirm the initial findings. There will be slight adjustments to the SE Alaska and Grays Harbor lines. The ones in the Salish Sea region will remain unchanged. The performance of the next generation of receivers, equipped with acoustic modems, will be tested in Howe Sound in preparation for the deployment of the first permanent lines by September.

Latitudinal/Longitudinal Gradients in Near-Shore Biodiversity: NaGISA.

Collection in the Western Pacific started in April at Seto when the Tanabe Commercial High School Biology Club and the comedy team Ojin Ozuborn teamed up with Kyoto University students to sample the intertidal part of 'Minami Hama' near the Seto Marine Biological Laboratory. A TV crew from ABC (Asahi Broadcasting Cooperation) was on location and the

resulting program will be aired at the end of April (possibly on Marine Day in Japan). The percent cover and the macroalgal data collected have been compiled and will be one of the first things to be uploaded on the NaGISA database, which is scheduled to debut at the end of May.

The call for Illustrated Abstracts has been extended to May 31, 2005. The NaGISA Project is compiling a handbook for Sampling Coastal Seagrass and Macroalgae Community Biodiversity. The handbook will be used during NaGISA training workshops, as a text for university ecology field courses and as a reference manual for researchers and interested parties. The handbook will be a concise (85 pages) reference for conducting biodiversity sampling in seagrass and macroalgal communities. Submissions are welcome from students (of any level!), researchers, professors and technicians. See detailed instructions at: <http://www.nagisa.coml.org/downloads/sideboxes.pdf>.

Yoshihisa Shirayama has published an updated report on the NaGISA project in the 20 March 2005 Ship and Ocean Newsletter (Japanese) <http://www.nagisa.coml.org/publications.htm>.

The Echinodermata Taxonomy Workshop was held 1-3 March 2005. Fifteen students from 10 countries attended the basic training workshop for the taxonomic study and field identification of echinoderms held at the Seto Marine Biological Laboratory, Kyoto University in Shirahama, Japan. The goal of the workshop was to train and transfer basic knowledge and techniques of echinoderm taxonomy to young scientists. The course was supervised by Dr. Toshihiko Fujita, Masaki Saba, and Tohru Imaoka, and was one of the most successful NaGISA has had to date. See the resulting newspaper article 'Researchers from 10 countries gather to learn from the NaGISA project' (in Japanese) at <http://www.nagisa.coml.org/media.htm>.

The next NaGISA workshop – *Quantitative Marine Ecology* – will be held 17-27 May 2005 at the Department of Marine Science, Keaserate University, Bangkok, Thailand. Prof. Underwood and Dr. Chapman, authors of *Experiments in ecology: their logical design and interpretation using analysis of variance* and *Coastal Marine Ecology of Temperate Australia*, will lead the workshop. The course has been built around the statistics needs of Marine Ecologists, and participants are encouraged to bring and discuss their own data with the instructors. For more information please see the announcement, tentative schedule and registration form on the NaGISA website (<http://www.nagisa.coml.org>) or contact : Dr. Chittima ARYUTHAKA, e-mail: ffiscta@ku.ac.th, Fax : 66-2-5614287.

Abyssal Sediments: CeDAMar

The DIVA-2 expedition aboard the Research Vessel *Meteor* reached Mindelo Harbour in the Island Sao Vicente (Cape Verde) early in the morning on March 30. This was the last day of a very successful cruise that began on 25 February in Cape Town. The research group was composed of German, Spanish and Canadian scientists who retrieved deep-sea (5000m) samples from three different basins – the Cape Basin, the Angola Basin and the Guinea Basin. These samples, together with the samples of the ANDEEP cruises, will contribute to understanding diversity patterns in the deep South Atlantic Ocean.

The ANDEEP III expedition on board the *Polarstern* began on 21 January in Cape Town, South Africa, and ended on 6 April in Punta Arenas, Chile. Participants included about 50 scientists from more than 10 nations and about as many crew. Due to very favorable weather conditions and excellent collaboration between the two main scientific groups of biologists and physical oceanographers, as well as with the ship's crew, the cruise was exceptionally successful. Biological stations were sampled in the Cape and Agulhas Basins, the Weddell Sea Abyssal Plain, along downslope transects off Kapp Norvegia and in the Powell Basin, and in the Bellingshausen Sea off Anvers Island. The gear used included epibenthic sledge and Agassiz

trawl on the one hand and box corer and multicorer on the other, plus a camera system providing still photographs of both the sediment surface and sediment profiles up to 20cm deep, as well as video footage of the surface.

Day by day experiences of both expeditions could be followed through the CeDAMAr cruise-log at www.deepsea-research.org. This site was visited by about 25,000 visitors, both scientists and by the greater public.

Upcoming CeDAMAr meetings include:

- Nodinaut meeting (Brest, France): One year after the Nodinaut cruise, scientists will meet at Ifremer in Brest on 20-21 July to compile and discuss preliminary results. The meeting is organized by Joelle Galeron.
- CeDAMAr Steering group meeting, Ifremer, Brest, France, 22-23 July 2005.

Ice Oceans – Arctic: ArcOD

As announced in the last CoML newsletter, ArcOD researchers will receive funding from NOAA's Office of Ocean Exploration for an expedition to the high Arctic Canada Basin this summer. Preparations for this cruise are in full swing and a planning meeting with the investigators, NOAA Ocean Exploration and US Coast Guard representatives took place in Fairbanks, Alaska on 4-5 April 2005. ArcOD office members Rolf Gradinger and Russ Hopcroft will serve as Chief Scientist and ROV Coordinator, respectively, for the cruise. Gradinger met with decision-makers in Barrow (port of call – although there is no port) regarding this summer's cruise. Keeping the rural native communities informed about the science that happens in their waters is critical, especially for those of us working in the area on a regular basis.

The North Pacific Research Board has recently announced their funding of the proposal "Arctic Ocean synthesis: Analysis of Climate Change impacts in the Chukchi and Beaufort Seas with strategies for future research." In their proposal abstract, a team of six UAF faculty members with extensive Arctic experience summarized the objective of their proposed effort: "The environmental conditions in the Arctic Ocean are changing, with the likelihood of profound impacts on the organisms living there, and the peoples dependent on them. There is an urgency to integrate and synthesize the present state of knowledge of the biology and oceanography of this region as required baseline information to observe and understand ongoing changes. The multidisciplinary team assembled at the University of Alaska Fairbanks, including core members of the Census of Marine Life's Arctic Ocean Diversity project, is uniquely qualified and appropriately connected to undertake such an activity. We propose to synthesize past, present and future research programs in the Chukchi and Beaufort Seas and to hold an interdisciplinary workshop in late 2005 to bring together experts from the United States, Russia, Canada, Japan and China. We aim at publishing the results in a special issue of a peer-reviewed journal."

ArcOD recently brought Falk Huettman, faculty at the Institute of Arctic Biology, UAF, onboard to help set up the ArcOD database. He will be working with Alexei Pinchuk and other Russian colleagues. Falk has many years of experience with large biological databases and data sets in Canada and elsewhere. The first test data sets are currently being prepared for OBIS.

In May 2005, ArcOD will present a conceptual poster about 'Arctic Ocean Diversity' at the "Climate Variability and Sub-Arctic Marine Ecosystems Symposium" in Victoria, Canada. Initial results of last year's Russian-American Long-term Census of the Arctic (RUSALCA) will be presented at this summer's ASLO Meeting in Spain.

Ice Oceans – Antarctic: CAML

CAML welcomes Dr. Victoria Wadley as its new Project Manager. Vicki works at the Australian Antarctic Division in Hobart, Tasmania, and is a marine biologist with a background in the biological oceanography of micronekton in mesoscale warm-core eddies. She previously worked as a research scientist at the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and at Australia's National Ocean's Office. Some of Vicki's first tasks will be to develop the CAML website and brochures. You can contact Vicki at Victoria.Wadley@aad.gov.au.

The CAML Steering Group will meet on 27-31 May 2005 in Brussels, Belgium, in conjunction with the first implementation workshop of the SCAR-Marine Biodiversity Information Network (SCAR-MarBIN) (25-26 May). The Steering Group will be augmented with 20+ specialists who will assist with the development of a detailed science plan. The Project Administrator intends to discuss this plan with the Council of Managers of National Antarctic Programs in July, as CAML develops its logistics plan.

Seamounts: CenSeam

The CenSeam Steering Group will hold its first meeting on 16 May in Horta, Azores, Portugal.

Microbes: ICoMM

ICoMM is planning an Open Ocean and Coastal Systems meeting for 10-11 May with the help of the David Karl, who is chairing this working group.

The L.A. Times featured an article on Craig Venter's microbial genomics work. See: <http://www.latimes.com/news/nationworld/nation/la-na-venter17apr17,1,5342074.story?coll=la-headlines-nation&ctrack=1&cset=true>

Zooplankton: CMarZ

A new Continuous Plankton Recorder (CPR) route is being planned as a CMarZ cooperating project by Chris Reid, Anthony Richardson (both of Sir Alister Hardy Foundation for Ocean Research, SAHFOS, Plymouth UK) and Hans Verheye (South Africa). Dr. Verheye visited Plymouth from March 28th to April 4th to discuss plans for the new Atlantic Eastern Margin Transect (AEMT) CPR program. A CMarZ trial tow from Durban, SA to Luanda, Angola is planned for 2005. This pilot effort will help launch the new CPR program to be operated out of South Africa.

A new CMarZ cooperating project has come online in India. Dr. Vijayalakshmi R. Nair (National Institute of Oceanography, India) will lead an effort to computerize the data from zooplankton collections made during the International Indian Ocean Expedition (IIOE 1960-65). IIOE samples are the largest and most important collections from the Indian Ocean in the world today, resulting from 1,548 standard hauls over the entire Indian Ocean to the Subtropical Convergence. Dr. Nair, a new member of the CMarZ Steering Group, is also at work on a project dealing with biodiversity of plankton from Andaman Seas.

Nancy Copley (Woods Hole Oceanographic Institution) participated in the GBIF Workshop, "Building SpeciesBanks: How Shall We Shape the Future?," which was held in Amsterdam, in early March of this year. Ms. Copley, an expert calanoid copepod taxonomist, will use her newly gained perspective to guide the development of CMarZ Species Pages, a collection of dynamic summary presentations of taxonomic, morphological, ecological, biogeographical, and molecular information for selected zooplankton species.

Russ Hopcroft (University of Alaska, USA) will be chief scientist for a cruise along the Seward Line on the Gulf of Alaska shelf during May 2005, to determine the physical-chemical structure, primary production, and the distribution and abundance of zooplankton. The cruise is a joint CMarZ-ArcOD venture and represents a continuation of the 1998-2004 NE Pacific GLOBEC program.

CMarZ launched a new website at the beginning of March. New sections and information continue to be added. Visit it at: <http://www.CMarZ.org>.

The first CMarZ Steering Group meeting will be held 29 June-1 July in Bremerhaven, Germany. The meeting will be hosted by CMarZ co-P.I., Sigrid Schiel, of the Alfred Wegener Institute for Polar and Marine Research.

Coral Reefs: GCCRE

Primary investigators Nancy Knowlton (Scripps, USA), Rusty Brainard (NOAA Pacific Islands Fisheries Science Center, USA) and Julian Caley (AIMS, Australia) have received two years of funding to initiate a new CoML ocean realm field project on coral reef ecosystems. Steering group members currently include Daphne Fautin (USA), Stephen Palumbi (USA), Yossi Loya (Israel), Ernesto Weil (Puerto Rico), Jorge Cortes (Costa Rica), and Ove Hoegh-Guldberg (Australia). A workshop on "New Molecular Approaches for Characterizing and Understanding the Diversity of Coral Reef Ecosystems" will contribute to the project by formulating common research approaches and proposal development. The workshop itself will be held at the Smithsonian Tropical Research Institute (Panama) on 26-29 September 2005.

Biodiversity Research Priorities for Coral Reef Ecosystems, the final report of the U.S. Coral Reef workshop that contributed to the development of the international project, is now available as a PDF at: www.coml.us (under News/Announcements at the bottom of the page) or www.comlsecretariat.org (under Reports & Documents from National and Regional CoML Activities). Hardcopies are available upon request.

Margins: CoMarge

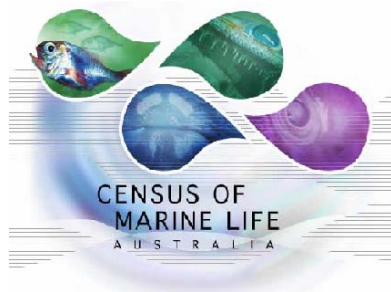
The CoML Continental Margins research team has been awarded funding for 16-months to advance a new ocean realm field project on continental margin ecosystems. The project team includes Myriam Sibuet (Ifremer, France), David Billett (SOC, UK), Robert Carney (Louisiana State University, USA), Lisa Levin (Scripps, USA), Helena Passeri Lavrado (Federal University of Rio de Janeiro, Brazil), and Gilbert Rowe (Texas A&M, USA). The steering group will hold its first meeting on 3-4 June 2005 at the Bermuda Biological Station for Research.

National and Regional Activities

Australia

The newly appointed head of Australia's National Oceans Office has taken on the role of Chair of the Australian Census of Marine Life Committee. Ian Cresswell replaces former Oceans Office head, Max Kitchell, who has moved into a position as head of the Marine Division of the Department of the Environment and Heritage (DEH), of which the Oceans Office is part. Mr. Cresswell, who was previously the Assistant Secretary of the Wildlife Trade and Fisheries Assessment Branch within DEH, began with the Oceans Office in February this year. He has more than 20 years experience as a professional manager and scientist working both nationally and internationally. He previously held the position of Director of the Australian Biological Resources Study (ABRS), which is tasked with the discovery and documentation of all Australian species. During the 1990s he took a lead role in the development of several major

environmental planning frameworks for Australia including the Interim Biogeographic Regionalisation for Australia (IBRA), the Interim Marine and Coastal Regionalisation for Australia (IMCRA) and the National Vegetation Information System (NVIS). He has also worked for the United Nations Convention on Biological Diversity and played an active part in the formulation of the Global Biodiversity Information Facility (GBIF), a global project to link the world's biodiversity databases to help improve decision-making. One of Mr. Cresswell's first CoML duties will be to chair a national workshop, held to coincide with the national conference of the Australian Marine Science Association in July.



A one-day workshop at the forthcoming Australian Marine Sciences Association (AMSA) annual conference will highlight Australia's work on the Census of Marine Life. Australia's involvement in the Census will complement other international commitments to sustainable development. Australia is uniquely placed to contribute to the Census. It has strong credentials in marine science and information management and occupies a vast ocean territory with a high level of unique species amid the relatively unexplored Southern Hemisphere oceans. The

Australian CoML Committee will sponsor and host a national Census workshop at the Australian Marine Science Association conference in July, which will be open to all conference participants. The workshop will focus on potential national contributions to the global Census. It aims to identify research activities that can help improve our collective understanding of Australia's marine biodiversity and how Australia can contribute this knowledge to the global CoML program. The workshop will also discuss the establishment of a regional node for the Ocean Biogeographic Information System (OBIS), and explore with participants how Australian data providers can both contribute to this network and make use of it.

The Australian CoML Committee has recently launched its website at <http://www.coml.org.au:8080/>. Information about the activities of CoML Australia, including future updates on the workshop, is available on this website.

Canada

An article – in French – appeared in the 15 April 2005 issue of the Canadian magazine *L'actualité*, highlighting the discoveries of new species both on land and in the ocean. The article, entitled "Si Noé voyait ça!" (p. 26-32), highlighted the work of the Census of Marine Life, noting specifically Paul Hebert (Guelph, Canada) and Daniel Desbruyères (Ifremer, France).

Caribbean

Two members of the Caribbean Committee, Jorge Cortés (Universidad de Costa Rica) and Ernesto Weil (University of Puerto Rico), are participating as advisors in the new CoML Coral Reef field project.

The HMAP Center at the University of Southern Denmark's Centre for Maritime and Regional Studies, has granted Dr. Andrzej Anctczak the amount of \$6,000 to coordinate the project *Early Human Impact on Megamolluscs* through its pilot stage. This will include identifying the main research questions and the state of present knowledge on the subject of the proposed project, and developing a time frame and a methodology for undertaking comparative studies of completed and ongoing megamollusc excavations around the world. A workshop is being planned for 2005 in Venezuela to develop a research plan and methodology for a full HMAP case study. The project secretariat, responsible for organizing the academic and logistic activities of the project,

will be established at the Unit of Archaeological Research, Centre for Regional and Urban Studies, Simón Bolívar University (Caracas, Venezuela, coordinated by Caribbean Committee Chair Patricia Miloslavich). The report on this work will be presented at the HMAP Oceans Past conference in October 2005 and the research will be summarized in a specialized paper to be submitted for publication in a peer-reviewed journal.

DesTech Publications will publish the proceedings of the June 2004 workshop in May 2005.

Europe

The EuroCoML program will host, with the Senckenberg Museum, a symposium and reception on 3 November 2005 at the museum in Frankfurt, Germany. This will immediately precede the CoML 2nd All Program meeting in the same venue on 4-5 November. All Program participants are welcome to attend the EuroCoML events.

The EuroCoML Executive Committee will next meet on 11 July 2005 in Paris, France.

Indian Ocean

The special issue of the Indian Journal of Marine Sciences, featuring papers from the December 2004 Goa workshop on Coastal and Marine Biodiversity of the Indian Ocean, is now published (March 2005). Mohideen Wafar, Committee Chair, is the guest editor of the issue. The abstracts are available online at:

http://www.niscom.res.in/ScienceCommunication/ResearchJournals/rejour/ijms/ijms2k5/ijms_mar05.asp.

South America

In March, Victor Gallardo visited Mr. Jaime Rovira, Head of the Department of Protection of Natural Resources in Chile, which is planning a conservation area around Easter Island. Mr. Rovira expressed interest in the CoML, particularly in the sea turtle research of TOPP, and wishes to learn more about the program. He will be attending the Future KUU Conference in La Jolla to meet with Ron O'Dor and several SSC members.

In May, Chile will host two major marine science conferences: the XXV Congress of Marine Science (<http://www.xxvcongreso2005.ucv.cl/>) and the XI Latin-American Congress of Marine Sciences (<http://www.colacmar.cl>). TOPP turtle researcher, George Schillinger, will attend these meetings with the goal of developing a leatherback turtle-tagging project on Easter Island to compliment TOPP's GEF funded project in Costa Rica.

Sub-Saharan Africa

New taxonomic finds roll in from South Africa. One of the joys of working in the relatively unexplored seas around Africa is the high probability of encountering new and un-described species. Committee Chair, Charles Griffiths has in fact concluded that less than half, and perhaps as few as a quarter, of marine species in the region *are* described! (2005, *Indian Journal of Marine science*, 34:35-41) The past few months have seen a rash of new discoveries of relatively large, conspicuous species. An interesting aspect of these finds is that they all originate from specimens collected or photographed by recreational divers and originate from the Cape Peninsula, South Africa – without doubt the best researched site in the region. Clearly there is still plenty to be discovered, even in this intensively worked area. The first unusual find was a 10cm cerianthid or burrowing anemone photographed at a popular dive site right in Cape Town. When researchers at the University were asked to identify the specimen they were unable to find any cerianthid records from this region, where the species is now proven common but undescribed. A few weeks later, divers photographed a commensal prawn living on crinoids at

the same dive site and this appears to be another new species. Also visible in their photographs were smaller yellow and black striped organisms clinging to the crinoid arms – dubbed ‘oval thingies’ by puzzled researchers. These have turned out to be representatives of the enigmatic group Myzostomida, once thought to be aberrant group of annelids, but now considered an independent phylum. This is the first record of this phylum from southern Africa and very probably new. The latest find, an extraordinary cnidarian consisting of a white central cone surrounded by curled red tentacles (see photo right) has local researchers baffled. If any reader recognizes this animal, please contact Charles Griffiths (clgriff@pop.uct.ac.za).



A brief article on CoML appeared in the February 2005 issue of *Africa Geographic* in its “World Watch” section (p. 11).

USA

The CoML U.S. National Committee (USNC) met 4-5 April 2005 at the National Geographic Society headquarters. Along with invited guests from eight Federal offices, academic institutions, non-governmental organizations, and other programs managed by the Consortium for Oceanographic Research and Education (CORE), the participants met with three primary goals: 1) to review progress implementing the program, 2) to improve mechanisms that engage a broader research audience in CoML, and 3) to initiate a long-term planning for the program beyond 2007. In addition, the USNC released its most recent workshop report, *Biodiversity Research Priorities for Coral Reef Ecosystems*. The USNC is currently planning another workshop for early 2006 on the subject of defining the role of biodiversity in ecosystem function and maintaining ecosystems services.

Adding to the extensive outreach already underway within the U.S., the USNC has reached agreement with organizers to highlight Census activities at the June 2005 Capitol Hill Oceans Week. There, researchers will present Census activities to members and staff of the U.S. Congress and federal agencies.

The next meeting of the CoML U.S. National Committee is scheduled for 18-19 August 2005, tentatively at the Alaska Sealife Center in Seward, Alaska.

Crosscutting and Other Related Activities

SCOR Panel on New Technologies

SCOR panel members will be attending meetings of new CoML projects to learn about the projects and offer suggestions for technologies that could be used to make them more successful. The Panel will also seek to assist the CoML in implementing molecular techniques, specifically to help projects adopt “Barcode of Life” approaches.

DNA Barcoding

Ann Bucklin and other “marines” at the London meeting suggested organizing a workshop within the next year bringing together barcoding researchers from throughout CoML. At its April meeting, the SSC will discuss ways to implement this suggestion.

Marine Life in the North Pacific

Marine Life in the North Pacific: the Known, Unknown and Unknowable, the joint report from the North Pacific Marine Science Organization (PICES) and CoML, is available at the PICES website (<http://www.pices.int/>) under Special Publications. A limited number of hardcopies will be available through the CoML Secretariat.

General News

National Geographic's Strange Days

Produced by Sea Studios Foundation, National Geographic's *Strange Days on Planet Earth* is constructed as a 4-part series of high-tech detective stories, presented through a combination of science, natural history and graphics., Episode 4, "Troubled Waters," features Tierney Thys' work with the Census of Marine Life TOPP project to track open ocean animals. *Strange Days* will premier on PBS stations in the U.S. on Wednesday, 20 April (Episodes 1-2) and Wednesday, 27 April (Episodes 3-4). See http://www.pbs.org/strangedays/index_flash.html for more information about the series and for local PBS listings.

Dynamic Planet 2005

Dynamic Planet 2005, a joint assembly of the International Association of Geodesy (IAG), International Association for Physical Sciences of the Oceans (IAPSO) and the International Association for Biological Oceanography (IABO), will be held 22-26 August 2005 in Cairns, Australia. Mark Costello, Ron O'Dor, and Ian Poiner have outlined an IABO session that will focus on CoML. There are also many other sessions of relevance to CoML work, including an IABO session on Pelagic Biogeography, organized by Chris Reid, Annelies Pierrot-Bults and Graham Hosie. Look for an email from Ron, soliciting abstracts from CoML projects. The closing date for abstract submission is 6 May (online). Early-bird conference registration is open until 30 May, but registration will be accepted online until 18 August. For more information, see: <http://www.dynamicplanet2005.com/>

DIVERSITAS

DIVERSITAS will hold its first Open Science Conference, *Integrating biodiversity science for human well-being*, on 9-12 November 2005 in Oaxaca, Mexico. CoML is organizing a session focusing on the DIVERSITAS Theme of BioDiscovery. Abstracts are being accepted at: <http://www.diversitas-osc1.org/>.

RV DeepOcean Quest and Deep Rover Submersibles available for CoML projects

Deep Ocean Quest S.A. has expressed interest in providing research vessel and manned submersible support for Census of Marine Life field projects. They hope to be able to form collaborations with CoML-affiliated researchers with deep-sea sampling requirements and to, ideally, liaise with them during the development phase of proposals for future cruises that may potentially include research vessel and submersible support. Deep Ocean Quest is well placed to pursue additional sources of funding that may, in effect, subsidize some CoML cruises. For more information, contact Ron O'Dor (rodor@coreocean.org).

Funding Announcements

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

<http://www.coreocean.org/Dev2Go.web?id=205630>

Calendar of Upcoming Events

April

- 22-25:** Known, Unknown, Unknowable (KUU) Conference on *Future* Marine Biodiversity, La Jolla, CA
- 23-24:** OBIS Management Committee meeting, Ostend, Belgium
- 26-27:** CoML SSC Meeting, La Jolla, CA
- 27:** National Geographic's Strange Days, Troubled Waters episode featuring CoML work

May

- 10-11:** ICOMM Open and Coastal Systems working group meeting
- 16:** CenSeam Steering Group meeting, Horta, Azores, Portugal
- 17-27:** NaGISA workshop on Quantitative Marine Ecology, Bangkok, Thailand
- 27-31:** Meeting of the CAML scientific steering group, Brussels, Belgium (in conjunction with the first implementation workshop of the SCAR-Marine Biodiversity Information Network (SCAR-MarBIN) on 25-26 May)

June

- 2-3:** MAR-ECO Steering Group meeting and field phase workshop, Lisbon, Portugal
- 3-4:** CoMarge Steering Group meeting, St. George's, Bermuda
- 6-8:** Barcode of Life workshop to establish a network to assemble DNA barcodes of all marine fish species, Guelph, Ontario (dates tentative)
- 6-10:** TOS/IOC: International Ocean Research Conference, Paris, France (CoML participating)
- 27:** ArcOD expedition (Ocean Exploration) to the high Arctic Canada Basin
- 29-1 Jul:** CMarZ Steering Group meeting, Bremerhaven, Germany

July

- 11:** EuroCoML Executive Committee meeting, Paris, France
- 13:** The Known, Unknown & Unknowable of Australia's Marine Fauna, Darwin, Australia
- 20-21:** Nodinaut cruise results meeting, Brest, France (CeDAMar)
- 22-23:** CeDAMar Steering group meeting, Brest, France

August

- 18-19:** U.S. National Committee meeting, Seward, AK, USA
- 22-26:** IABO/IAPSO/IAG Dynamic Planet Conference, Cairns, Australia (CoML Session)
- 26-28:** CoML SSC Meeting, Cairns, Australia

September

- 10-11:** ChEss Steering Group meeting, La Jolla, CA, USA
- 12-16:** 3rd Hydrothermal Vent and Cold Seep Symposium, La Jolla, CA, USA (ChEss co-organizing)
- 19-23:** MTS/IEEE Oceans 2005, Washington, DC, USA (USNC co-sponsoring a session)
- 26-29:** Workshop on "New Molecular Approaches for Characterizing and Understanding the Diversity of Coral Reef Ecosystems," Bocas del Toro, Panama

October

- 24-27:** HMAP Open Science Conference: "Oceans Past – Multidisciplinary Perspectives on the History of Marine Animal Populations", Kolding, Denmark

November

- 3:** EuroCoML Symposium, Frankfurt, Germany
- 4-5:** 2nd CoML All Program Meeting, Frankfurt, Germany
- 6:** CoML SSC Meeting, Frankfurt, Germany
- 9-12:** First DIVERSITAS International Conference on Biodiversity, Oaxaca, Mexico (CoML Session)