

# NOAA COASTAL OCEAN PROGRAM

## Project NEWS Update



### Project News Update to Facilitate Information Exchange

This is the first issue of the *Project News Update*. The newsletter's purpose is to provide an information exchange among COP projects, state and federal coastal managers, the academic research community, nongovernmental environmental groups, business organizations, and other environmentally aware constituent groups that COP serves.

The message from Don Scavia (p. 2) describes the relation of some of these projects to our goals. We welcome your comments on the newsletter. You may contact Don directly ([dscavia@cop.noaa.gov](mailto:dscavia@cop.noaa.gov)) or forward your ideas in any of the ways listed on the back cover.



### U.S. GLOBEC Northwest Atlantic Program Enters Phase 2

Selection of proposals for Phase 2 of the Northwest Atlantic Global Ocean Ecosystems Dynamics (GLOBEC) program on Georges Bank have been completed. The program, jointly funded by the Division of Ocean Sciences of the National Science Foundation (NSF), the Coastal Ocean Program, and the National Marine Fisheries Service (NMFS), supports research to understand how climate variability affects the distribution, abundance, production, and population dynamics of marine animals, with a focus on those animals that spend all or some of their lives as plankton.

Pilot studies began on Georges Bank in 1992 with the first major field effort beginning in January 1995. The Georges Bank field program is structured to have alternate years of intensive study (1995, 1997, 1999). Broad-scale surveys of the Bank are conducted every year to provide continuity of observations through the entire program. The focus for the intensive study years includes: 1995 — vertical mixing and stratification processes; 1997 — processes controlling sources, sinks, and retention of water and organisms on the Bank; and 1999 — frontal exchange processes.

The selected proposals focus on key elements of the planktonic assemblages on Georges Bank and surrounding regions. These include the pelagic eggs, larvae, and juvenile stages of cod (*Gadus morhua*) and haddock (*Melanogrammus aeglefinus*) and the copepods *Calanus finmarchicus* and *Pseudocalanus* spp. The research of 74 investigators from 21 institutions will be directed at 4 major activities: a broad-scale field survey, process-oriented studies, modeling, and retrospective studies. These activities are designed to test hypotheses concerning the linkages between the population dynamics of the target species and the physical processes controlling sources, sinks, and retention of water and animals on the Bank. The NW Atlantic GLOBEC Program is integrated with the COP Georges

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## From the Director's Desk. . .

Since its inception in 1988, the COP has focused on improving the ability to understand and predict the relationships among natural and anthropogenic stresses; physical, biogeochemical, and ecological processes; and the valued goods and services derived from the Nation's bays and estuaries, coastal ocean, and Great Lakes. While the need for data and information to address the myriad of today's problems will always be pressing, COP is also focusing on the challenge of developing information required for longer-range management and policy decisions at larger and more complex scales than are traditional. Today's research solves, and hopefully in some cases, prevents tomorrow's problems.

To meet this challenge, COP has developed and refined operating principles that enable the necessary collaboration and integration among NOAA's line organizations, the academic community, and coastal and fisheries resource managers. This approach also demands increased cooperation among federal programs that support coastal research. To build such partnerships, COP has been participating in a series of interagency, interdisciplinary research initiatives in support of the goals outlined in the 1995 report of the National Science and Technology Council, *Setting a New Course for U.S. Coastal Ocean Science*. Some of them are highlighted in this newsletter. The GLOBEC Northwest Atlantic and Northeast Pacific projects are joint endeavors with the National Science Foundation (NSF). Our partnership efforts on the ecology and oceanography of harmful algal blooms (ECOHAB) involve NSF, EPA, and the Office of Naval Research.

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*COP's vision is the highest quality science delivered in time for important coastal policy decisions.*

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As a final note, while we do focus our research on building the capacity to deal effectively with issues on the horizon, COP also addresses the needs of today's managers and policy makers. Through efforts to involve users of information generated by our projects early in project design and implementation, information flow and technical assistance support current coastal decision making. In addition, our Decision Analysis Series (DAS) synthesizes existing information on topics identified by coastal resource managers in a technically sound, user-friendly format. The most recent DAS report is described in this issue.

To continue to enhance communication among COP's projects and with our partners, we have inaugurated this newsletter. I look forward to receiving and responding to your comments on its content and utility.



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## GLOBEC

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Bank Predation Study. The former examines the natural variability of the Georges Bank ecosystem. The latter focuses on higher trophic levels to develop multispecies models of the synergistic effects of predation and exploitation on fish community dynamics and to evaluate the consequences of alternative harvesting strategies on yield, productivity, and community structure. Together, these studies explore both natural and anthropogenic sources of variability in Georges Bank fish populations and will assess fishery ecosystem recovery times.

A major customer for the GLOBEC/Georges Bank Predation Study data and information is the Northeast Fisheries Management Council and other coastal resource managers. To provide better information, it is hoped we can develop an ability to predict fishery ecosystem yields, pollutant impacts, and the effects of global climate change through a better understanding of individuals, populations, and their interactions with their physical and biological environment.

Information on the GLOBEC NW Atlantic Program is available from Peter Wiebe, the Chair of the Executive Committee [(508) 548-1400, ext. 2313; [pwiebe@whoi.edu](mailto:pwiebe@whoi.edu)]. The program maintains an electronic homepage (<http://globec.whoi.edu/globec.html>) which contains the database for Georges Bank. COP's coordinator for this project is Judy Gray ([jgray@cop.noaa.gov](mailto:jgray@cop.noaa.gov)) and she is profiled in this issue.

### Visit the COP Homepage

For news about COP, announcements of opportunity, new publications, links to project websites, and more, you will find us at <http://hpcc.noaa.gov/cop/>.



## COP Project Coordinator Profile



Judy Gray coordinates two projects for NOAA's Coastal Ocean Program: U.S. GLOBEC and Coastal Forecasting. The diversity of these two programs, one in fisheries oceanography and the other in meteorology and physical oceanography, mirrors

Judy's unique professional history. Judy is a meteorologist trained at Penn State and the University of Washington. She spent ten years (1981-1990) at the Pacific Marine Environmental Laboratory in Seattle, Washington where she researched winds along the mountainous coastlines of Alaska and mesoscale atmospheric variability over the North Pacific Ocean. In 1983, at the inception of the program, Judy became the Coordinator of Fisheries Oceanography Coordinated Investigations (FOCI) in the Gulf of Alaska and Bering Sea which connected her work on winds and air-sea interaction to recruitment variability in the Alaska pollock fishery.

She began her tenure in Washington, D.C., gaining both line and program management experience as an advocate of NOAA research for the Office of Oceanic and Atmospheric Research and as the Acting Executive Director (1/93-9/94) and Acting Deputy Director (9/94-2/95) of NOAA's eleven Environmental Research Laboratories. In 1995 Judy accepted a detail to COP to focus on the development and management of NOAA's Coastal Forecast System. In March 1996 she joined the COP staff where she is continuing to pursue her professional interests in fisheries and coastal forecasting.

## NE Pacific GLOBEC Underway

On the West Coast, COP has joined NSF in funding Northeast Pacific GLOBEC which is coordinating with the NSF-sponsored Coastal Ocean Processes (CoOP) program in Phase 1 of a joint project. CoOP will concentrate on the California Current System while GLOBEC will be concerned with that region and the Gulf of Alaska. This study will involve three components: modeling, a pilot program of monitoring, and retrospective analysis. A particular focus of the study will involve the at-sea survival of salmon which are particularly susceptible to interactions with both prey and predators. The joint study is expected to coordinate its findings with the COP's Pacific Northwest Coastal Ecosystem Regional Study (PNCERS) which is considering natural and anthropogenic stresses on the survival of salmon in the nearshore and estuarine environments. A joint announcement of opportunity for the NE Pacific GLOBEC study has been issued which will close on February 15, 1997 (see Calendar of Upcoming Events).

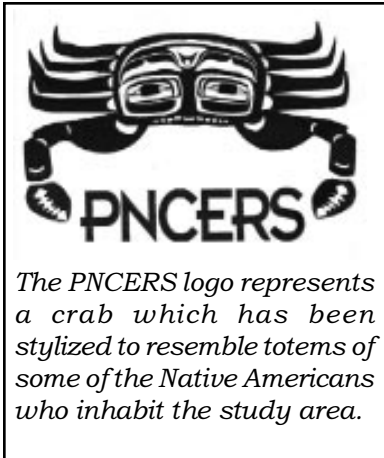
## Long Island Brown Tide Studies Funded

The Coastal Ocean Program, in cooperation with New York Sea Grant and a local management committee consisting of representatives from the Peconic Estuary Program, the South Shore Estuary Reserve, the State of New York, and county and town resource managers and citizens, has launched a Brown Tide Research Initiative (BTRI). Awards have been made to researchers for the study of the recurring brown tide algal bloom problem in the Peconic Estuary and other shallow embayments along Long Island's coast. The team of investigators includes nationally recognized experts in the fields of algal physiology and culture, biological oceanography, and biogeochemistry. This effort is focused on research to understand and manage Long Island's brown tides which have devastated the scallop industry and caused other problems. Although primarily addressing a local issue, the BTRI should also provide useful information leading to a better understanding of brown tide occurrences in other regions of the U.S. and of other harmful algal blooms which are a problem of increasing concern nationwide.

A portion of the funded research will be focused on developing multiple bacteria-free cultures of the brown tide organism. Other investigators will address the role of iron,

organic nutrients, and interactions with other planktonic organisms which consume the brown tide, all factors which have been already identified as important to bloom initiation and persistence. One project will perform a retrospective analysis on a three-year data set from Narragansett Bay during a brown tide event to determine the possibility of correlating the recurrences of these tides with distinctive climatic or anthropogenic factors.

An important component of the BTRI effort will be a series of field manipulations aimed at actually causing contained blooms under controlled conditions. Unlike past research efforts where individual investigators worked alone to address these problems, scientists funded under the BTRI will mount a coordinated effort, sharing samples and working jointly on field analyses and manipulations in an attempt to pin down what factors or combinations of factors allow blooms to occur. Research results will then be used to determine what management actions might be initiated to minimize or eliminate brown tide blooms. [Contact: Cornelia Schlenk, Acting Director, NY Sea Grant Office; (516) 632-6905: cschlenk@ccmail.sunysb.edu; or Sue Banahan, COP BTRI coordinator: sbanahan@cop.noaa.gov.]



*The PNCERS logo represents a crab which has been stylized to resemble totems of some of the Native Americans who inhabit the study area.*

## PNCERS Begins Proposal Process

COP's Pacific Northwest Coastal Ecosystem Regional Study (PNCERS)

released an announcement of opportunity for pre-proposals for research on November 15, 1996 with a closing date of January 23, 1997. The focus of research pre-proposals solicited is based in part on results of a workshop held on August 13-14, 1996 in Troutdale, Oregon, which was attended by academic and government researchers, resource managers, and representatives from the private sector.

The focus of the PNCERS study will be in developing a more accurate understanding of how natural and anthropogenic changes in the coastal ecosystem impact resources such as salmon. The research program is based on coastal management issues and needs and is formulating its science questions up front by interactions with management such as were achieved in this workshop. The program is underpinned by a simple conceptual model that separates natural from anthropogenic sources of variability and incorporates ecosystem, socioeconomic, and management/policy submodels. PNCERS will coordinate closely with other scientific programs in the region, which focus on factors affecting the estuarine survival of salmon. Robert J. Bailey, Coastal Program Administrator for the Oregon Department of Land Conservation and Development, heads the PNCERS project management team.

PNCERS maintains an electronic homepage (<http://seagrant.orst.edu/~pncers>). The PNCERS program coordinator is Greg McMurray [(503)229-6978; [gregory.mcmurray@state.or.us](mailto:gregory.mcmurray@state.or.us)]. Sue Banahan is the project coordinator for COP ([sbanahan@cop.noaa.gov](mailto:sbanahan@cop.noaa.gov)).

## Working with Our Partners

### Gore Challenges Monitoring Workshop to Develop "Report Card" on Ecosystem Health

In a statement read to the participants at the National Environmental Monitoring and Research Workshop at the Smithsonian Institution Ripley Center on September 25-27, 1996, in Washington, D.C., Vice President Al Gore called environmental monitoring "the foundation for the scientific information necessary to make wise decisions key to meeting the twin goals of continued vigorous economic growth and preservation of our magnificent natural heritage for generations to come." He urged the assembled participants to begin the process of developing an environmental report card which would establish baseline information that could guide public and private decision making.

Don Scavia, Director of COP, who serves as co-chairman of the Committee on Environment and Natural Resources' (CENR) Ecosystem Working Group and the Environmental Monitoring Team, was one of the prime organizers of the meeting. This national workshop drew together dozens of scientists from all branches of the federal government, regional and state environmental agencies, academia, and nongovernmental organizations in order to design a strategy to coordinate current government environmental monitoring efforts and research programs. A proposed framework for a national environmental monitoring program designed to be a collaborative effort building on existing networks and programs was presented for consideration by attendees.

As a follow-on, COP is working with the Office of Science and Technology Policy to deliver a report on the health of the Nation's ecosystems. For more information on the workshop and ongoing efforts in national environmental monitoring and research, contact either Michael Murphy ([mmurphy@cop.noaa.gov](mailto:mmurphy@cop.noaa.gov)) or Don Scavia ([dscavia@cop.noaa.gov](mailto:dscavia@cop.noaa.gov)).

## COP Tackles Harmful Algal Blooms from Two Directions

The Coastal Ocean Program is working with its interagency partners to address the growing problem of harmful algal blooms (HABs) by both developing a scientific research program called ECOHAB (Ecology and Oceanography of Harmful Algal Blooms) and by gathering information to develop a mitigation/control program through co-sponsorship of regional workshops with the National Fish and Wildlife Foundation (NFWF).

ECOHAB is a joint effort of COP, the Office of Naval Research, the Environmental Protection Agency, and the National Science Foundation to design regional research programs to deal with the problem of with HABs. This interagency research effort is focused on developing a predictive understanding of the ecology and oceanography of harmful algal blooms. An announcement of opportunity has been issued and will close March 14, 1997 (see Calendar of Upcoming Events).

In the area of bloom mitigation, COP and NFWF have co-sponsored three HAB Management and Mitigation Workshops. The first workshop was held last August in Port Aransas, Texas; the second in Seattle, Washington, in September; and the third took place in Sarasota, Florida, in November 1996. Each workshop dealt specifically with high-priority regional HAB problems which are also national in occurrence. The Texas workshop focused primarily on brown tides, the Seattle workshop on a variety human health issues from HABs including domoic acid outbreaks, and the Florida workshop addressed red tides. The workshops brought together a panel of nationally recognized scientific experts who gathered information from regional scientists, resource managers, and members of the local community affected by HABs. Dr. Donald Boesch, a coastal ecologist from the University of Maryland, chairs the scientific panel. Because of the growing concern about the increasing incidences and persistence of HABs and their impacts, a good deal of media attention was received.

What was apparent during the workshops is that scientists, managers, and local representatives are seeking innovative approaches to mitigation and control. However, it is clear that this will require long-term scientific inquiry that establishes causes, predictive capabilities, and suggested management measures. A report of the findings is due in January 1997. For more information about the workshops and the developing interagency research effort on HABs, contact Kevin Sellner ([ksellner@cop.noaa.gov](mailto:ksellner@cop.noaa.gov)) or Don Scavia ([dscavia@cop.noaa.gov](mailto:dscavia@cop.noaa.gov)).

## COP Participating in New Ocean Partnership Effort

The newly authorized and funded National Ocean Partnership Program (NOPP) creates an Ocean Research Leadership Council, with NOAA Administrator Dr. D. James Baker as Vice-Chair, to coordinate and strengthen oceanographic efforts by identifying and carrying out partnerships among federal agencies, academia, industry, and other members of the ocean science community in the areas of data resources, education, and communication. Don Scavia is a member of the Interagency Working Group for this effort. A program announcement soliciting pre-proposals on topics including data management and assimilation; coastal ocean prediction; algal blooms; cross-shelf transport; transport, fate, and effects of Arctic Ocean and coastal ocean atmospheric contaminants; effects of sound on marine mammals; and observation technology development has been released. For more information on the program, visit the Office of Naval Research homepage: [http://www.onr.navy.mil/sci\\_tech/ocean/info/nopp/](http://www.onr.navy.mil/sci_tech/ocean/info/nopp/); or contact Steve Ramberg of the Office of Naval Research ([noppbaa@onr.navy.mil](mailto:noppbaa@onr.navy.mil)) or Don Scavia ([dscavia@cop.noaa.gov](mailto:dscavia@cop.noaa.gov)).



## Decision Analysis Series

### Atmospheric Deposition of Nutrients Is the Subject of #9

*Atmospheric Nutrient Input to Coastal Areas--Reducing the Uncertainties* by Richard A. Valigura, Winston T. Luke, Richard S. Artz, and Bruce B. Hicks of the NOAA Air Resources Laboratory, No. 9 in the Coastal Ocean Program's Decision Analysis Series (DAS), has recently been published and is available. The DAS is a group of publications which draw together existing information on high-priority coastal ocean topics and present this material in a format that is well organized and easy to use. This document on atmospheric deposition is the result of COP's funding of the NOAA Air Resources Laboratory to undertake the Atmospheric Nutrient Input to Coastal Areas (ANICA) project beginning in 1991.

### OTHER DECISION ANALYSIS SERIES TITLES

An abbreviated titles listing of other publications available in the DAS with document numbers includes (to order see back cover): 1. Summer Flounder Habitat Parameters; 2. *Spartina alterniflora* Marsh Restoration; 3. Bibliography of Synthesis Documents on Selected Coastal Ocean Topics; 4. Marine Eutrophication Review; 5. Economic Valuation Handbook; 6. Management of Cumulative Coastal Environmental Impacts; 7. Forestry Impacts on Freshwater Habitat of Anadromous Salmonids; and 8. California Watershed Restoration Guide. Isobel Sheifer is COP coordinator of the Decision Analysis Series (isheifer@cop.noaa.gov).

## CALENDAR OF UPCOMING EVENTS

January 1997. Publication of report from COP-NFWF management and mitigation workshops (see story, p. 6).

February 10-14, 1997. American Society of Limnology and Oceanography (ASLO) Meeting, Sante Fe, NM. COP researchers will be involved in these special sessions:

SABRE (South Atlantic Bight Recruitment Experiment): "Recruitment Dynamics of Estuary-Dependent Fishes"

Breitburg, Denise, Sybil Seitzinger and James Sanders (Patuxent River Cumulative Effects Study): "Effects of Multiple Stressors on Freshwater and Marine Ecosystems"

February 15, 1997. Closing date for proposals in response to an announcement of opportunity for Phase 1 of the U.S. Global Ocean Ecosystems Dynamics and the Coastal Ocean Processes Northeast Pacific Study (see box on p. 4). The announcement may be viewed on the GLOBEC website (<http://www.usglobec.berkeley.edu/usglobec/>) or on the COP homepage.

March 14, 1997. Closing date for proposals under announcement of opportunity (NSF97-38) for multidisciplinary, collaborative research projects in the Great Lakes sponsored by the National Science Foundation's Division of Ocean Sciences and the NOAA Coastal Ocean Program.

March 14, 1997. Closing date for ECOHAB proposals in response to announcement of opportunity (see story, p. 6). The announcement may be viewed on COP's homepage.

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## For More Information

Contacts about specific COP projects should be made to the person(s) listed in each news item. General inquiries, comments on the newsletter, information on the COP, and requests for copies of publications may be directed to the *Update* Editor, Isobel Sheifer, in any of the following ways: Telephone (301) 713-3338; Fax (301) 713-4044; E-mail; [isheifer@cop.noaa.gov](mailto:isheifer@cop.noaa.gov); or by mail to NOAA Coastal Ocean Program (NCOP), 1315 East-West Highway, SSMC 3, Silver Spring, MD 20910.

Additionally, updated program information and links to COP-related projects may be accessed at our website: <http://hpcc.noaa.gov/cop/>.