
Bering Sea and North Pacific Ocean Theme Page

(<http://www.pmel.noaa.gov/bering/>)

Providing Internet-based information to scientists, managers, and educators for six years

S. Allen Macklin
Pacific Marine Environmental Laboratory
NOAA/OAR
7600 Sand Point Way NE,
Seattle, WA 98115-6349, U.S.A.
E-mail: Allen.Macklin@noaa.gov



Allen Macklin, director of the Bering Sea and North Pacific Ocean Theme Page, is a meteorologist with NOAA's Pacific Marine Environmental Laboratory in Seattle, Washington, U.S.A.. Presently the coordinator for Fisheries-Oceanography Coordinated Investigations (FOCI) and Southeast Bering Sea Carrying Capacity (SEBSCC), he has over 25 years experience studying Alaskan coastal meteorology and its relationship to the physical and biological oceanography of the region. Allen also co-directs the Bering Sea Ecosystem Biophysical Metadatabase, a project designed to advance understanding of the structure and function of the Bering Sea ecosystem through development of a collaborative research tool for fisheries oceanography and ecosystem investigations.

In 1995, NOAA's Pacific Marine Environmental Laboratory (PMEL) established a scientific theme page (Fig. 1) on the Worldwide Web (<http://www.pmel.noaa.gov/bering/>) devoted to the Bering Sea and North Pacific Ocean. The site is a clearinghouse for information pertaining to those regions and additionally serves as a resource base for the scientific investigation of the biology, oceanography, meteorology and ecology of the area. The theme page provides a forum for presenting and discussing new ideas, plans and research results.

Elements of the theme page include geography and history of the Bering Sea and North Pacific Ocean, physical and biological sciences, monitoring and research institutions and programs, education, news, guidelines for using the resource, a site search engine, a chat room, and a news subscription service.

The physical and biological sciences element contains sections on atmospheric science, environmental chemistry, atmosphere and ocean interactions, physical oceanography, biophysical interactions, marine biology, and an environmental atlas. Components include a dynamic listing of institutions and organizations performing research in the region. This is followed by a dynamic list of research programs, active and historical. Other links provide access to information on workshops, conferences and proceedings, traditional knowledge and Native American studies, and more.

During the late 1990s, this site was designated the communication vehicle for U.S. interagency research for the Bering Sea. Agency operations schedules, science plans, proceedings of meetings, and research results are all contained in a section called Interagency Information Exchange.

Environmental data can be located through the theme page's real-time weather and ocean information links (e.g., Fig. 2), as well as on-line data and metadatabases. Prominent among holdings is the Bering Sea Ecosystem Biophysical Metadatabase with over 1500 references to data, reports, and proposals contributed by fourteen nations. The theme page's data element also includes links to the Japan Oceanographic Data Center, Comprehensive Ocean-Atmosphere Data Set (COADS), Primary Productivity of the Bering Sea (PROBES), Fisheries-

Worldwide Web theme pages bring together data and information associated with a broad, thematic concept, allowing the viewer to do some initial investigation by reading about the broad topic, and ultimately directing the viewer toward a specific information item or data set. A theme page presents a complete, layered approach to understanding the subject area and typically includes several of the following:

- *Topic identification*
- *Data displays, forecasts, photos*
- *Background information for students and the general public*
- *In-depth information and analyses for researchers*
- *Access to analysis software*
- *Access to on-line data*
- *Perspectives, publications*
- *Live gateways to services and directories*

Oceanography Coordinated Investigations (FOCI), and Bering and Chukchi Sea Ecosystem databases.

Educational links span the ecosystem from physical oceanographic and meteorological forcing to the science of chemistry and nutrients and proceed up the food chain from phytoplankton to apex predators such as seabirds and marine mammals. Descriptors include fish, crustaceans, weather and ocean processes, and sea ice. WebStudy recognized the theme page in 1999 as one of the best educational sites on the Worldwide Web.

News of upcoming events such as meetings, conferences, announcements of opportunity and preprints of research results are posted to the theme page as received. Periodic messages announcing the latest news items are distributed to an electronic mailing list. To subscribe to this service, visit the theme page, or send your request with your e-mail address to bering@pmel.noaa.gov.

(cont. on page 34)

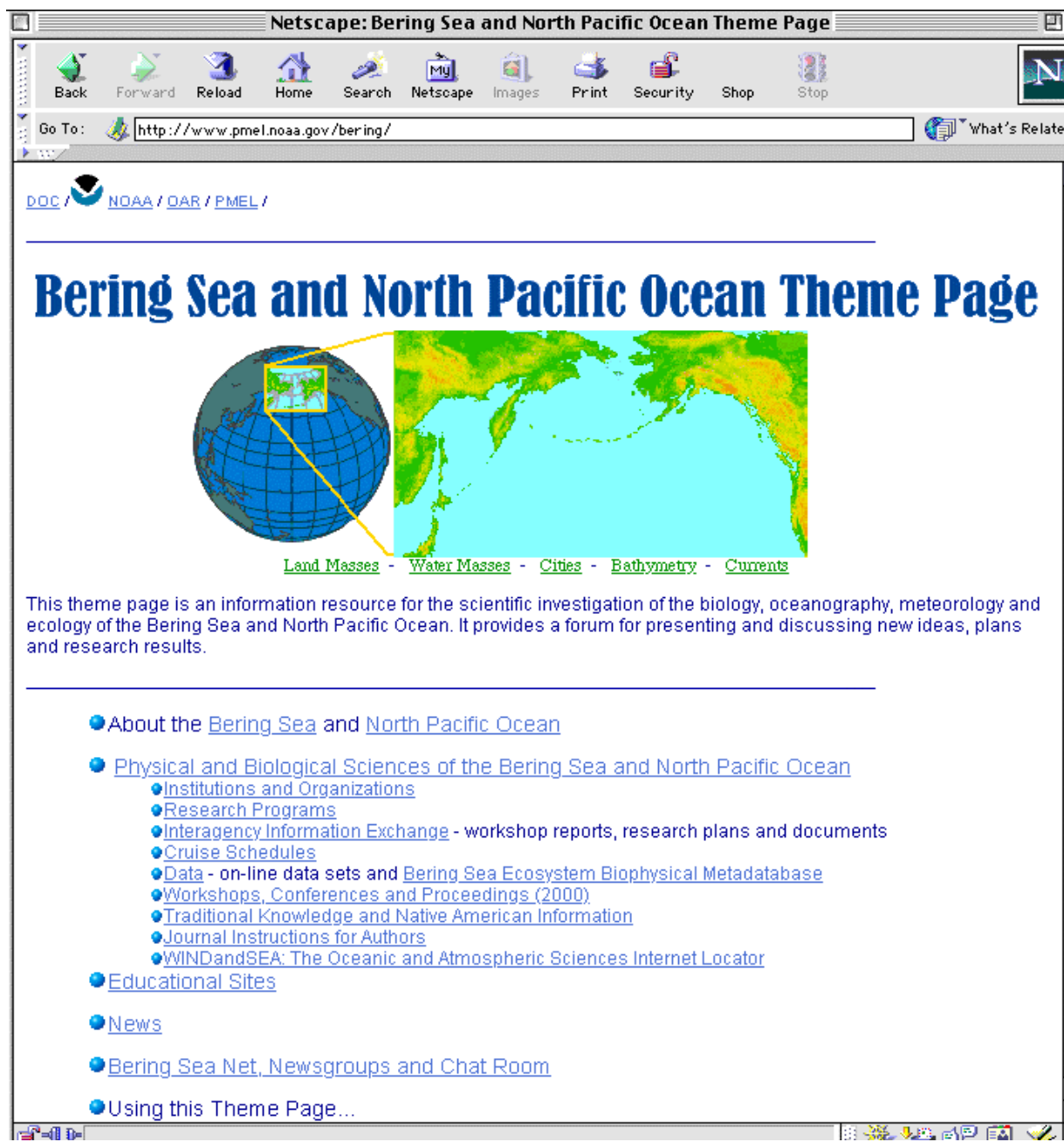


Fig. 1 The home page of the Bering Sea and North Pacific Ocean Theme Page contains links to major elements of the web site, provides basic information on geography, bathymetry and currents, gives access to regional communication, and suggests additional ways to use the theme page.

Coming back to the initial idea of the cruise, of bringing more and new people to the PICES meeting, we can say that it was successful. Most of the research group contributed to the PICES symposia and discussions. One of the researchers on board, Dr. Anatoliy Salyuk, received the Best Presentation Award for his talk at the topic session (Fig. 6). It was also good to relax in Hakodate in the middle of the cruise. We greatly appreciate the warm hospitality and kind arrangements of the Mayor of Hakodate City, all the staff of the Local Organizing Committee, and Dr. Yasunori Sakurai.

Thanks to Anatoliy Aleksanin for the satellite images, Sergei Sagalaev for the cruise scheme, Anatoliy Salyuk for the hydrographic sections, Pavel Tishchenko, Vladimir Ponomarev, Anatoliy Obzhirov, Yuri Zuenko, Lynne Talley, Steve Riser, Mikhail Danchenkov and Alexandr Nikitin for collaboration, inspiration and support in the organization of the cruise. Special thanks to Alexander Bychkov and Pat Livingston for support from PICES. Photos by V. Lobanov.



Fig. 6 Dr. Anatoliy Salyuk (right) reporting at the seminar on the ship after he received the PICES Best Presentation Award for the POC Committee.

(cont. from page 30)

Because PMEL's focus of research has been on the Bering Sea ecosystem during the past ten years, those portions of the theme page that deal with the Bering Sea are particularly well developed. Starting in the twenty-first century, the research focus is expected to shift to the North Pacific Ocean, and the theme page will see

consequent development for that region. Presently the theme page averages about 80,000 "hits" each month. This number will increase as the larger North Pacific research community begins accessing the site.

To contribute information or to request subscription service to news postings, notify the site director at: bering@pmel.noaa.gov.

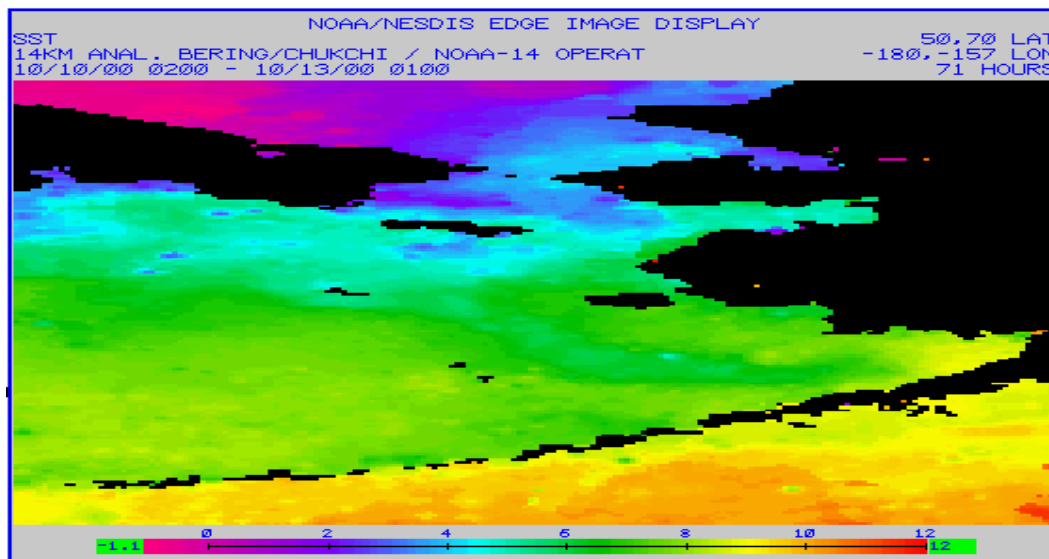


Fig. 2 Satellite-derived, sea-surface-temperature images such as this NOAA/NESDIS image from October 13 2000, are available for the Bering Sea and North Pacific Ocean from the theme page.