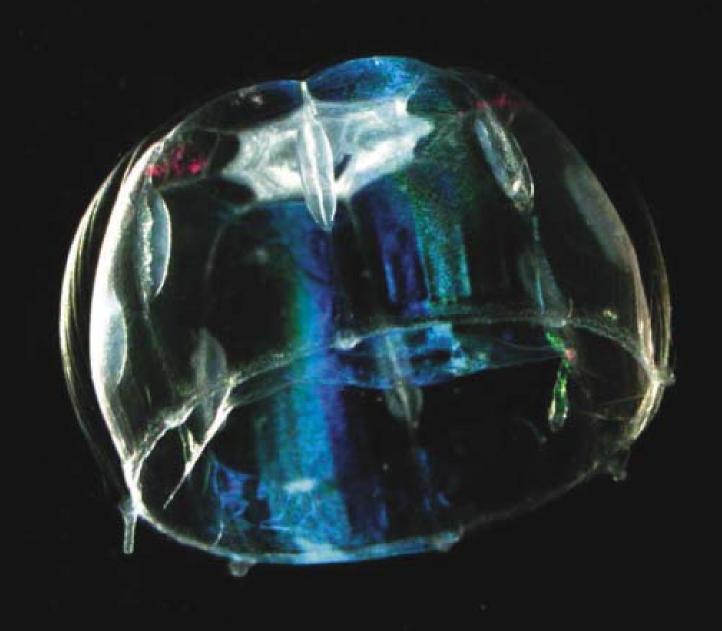
VOLUME 19 SPRING/SUMMER 2005

ARCTIC RESEARCH OF THE UNITED STATES



About the Journal

The journal Arctic Research of the United States is for people and organizations interested in learning about U.S. Government-financed Arctic research activities. It is published semi-annually (spring and fall) by the National Science Foundation on behalf of the Interagency Arctic Research Policy Committee (IARPC). The Interagency Committee was authorized under the Arctic Research and Policy Act (ARPA) of 1984 (PL 98-373) and established by Executive Order 12501 (January 28, 1985). Publication of the journal has been approved by the Office of Management and Budget.

Arctic Research contains

- Reports on current and planned U.S. Government-sponsored research in the Arctic;
- Reports of IARPC meetings; and
- Summaries of other current and planned Arctic research, including that of the State of Alaska, local governments, the private sector, and other nations.

Arctic Research is aimed at national and international audiences of government officials, scientists, engineers, educators, private and public groups, and residents of the Arctic. The emphasis is on summary and survey articles covering U.S. Government-sponsored or -funded research rather than on technical reports, and the articles are intended to be comprehensible to a nontechnical audience. Although the articles go through the normal editorial process, manuscripts are not

refereed for scientific content or merit since the journal is not intended as a means of reporting scientific research. Articles are generally invited and are reviewed by agency staffs and others as appropriate.

As indicated in the U.S. Arctic Research Plan, research is defined differently by different agencies. It may include basic and applied research, monitoring efforts, and other information-gathering activities. The definition of Arctic according to the ARPA is "all United States and foreign territory north of the Arctic Circle and all United States territory north and west of the boundary formed by the Porcupine, Yukon, and Kuskokwim Rivers; all contiguous seas, including the Arctic Ocean and the Beaufort, Bering, and Chukchi Seas; and the Aleutian chain." Areas outside of the boundary are discussed in the journal when considered relevant to the broader scope of Arctic research.

Issues of the journal will report on Arctic topics and activities. Included will be reports of conferences and workshops, university-based research and activities of state and local governments and public, private and resident organizations. Unsolicited nontechnical reports on research and related activities are welcome.

Address correspondence to Editor, *Arctic Research*, Arctic Research and Policy Staff, Office of Polar Programs, National Science Foundation, 4201 Wilson Boulevard, Arlington, VA 22230.



The medusa Sminthia arctica, the most common species identified by video in the transition between the Pacific and Atlantic water layers of the Canada Basin, measured during an expedition to the Arctic Ocean in 2002. This gelatinous species is less than a millimeter in width.

VOLUME 19 SPRING/SUMMER 2005

A R C T I C R E S E A R C H OF THE UNITED STATES

INTERAGENCY ARCTIC RESEARCH POLICY COMMITTEE

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
Department of Energy
DEPARTMENT OF HEALTH AND HUMAN SERVICES
DEPARTMENT OF HOMELAND SECURITY
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF STATE
DEPARTMENT OF TRANSPORTATION
Environmental Protection Agency
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
NATIONAL SCIENCE FOUNDATION
Smithsonian Institution
OFFICE OF MANAGEMENT AND BUDGET
OFFICE OF SCIENCE AND TECHNOLOGY POLICY
Managing Editorial Committee
Charles E. Myers, National Science Foundation—Editor
John Haugh, Bureau of Land Management—Associate Editor
David W. Cate, Cold Regions Research and Engineering Laboratory—Consulting Editor
Editing and production: Cold Regions Research and

Engineering Laboratory, Hanover, New Hampshire

SPECIAL ISSUE ON THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION'S RESEARCH IN THE ARCTIC

Administration in the Arctic Region	. 2
NOAA's Arctic Ocean Exploration Program	3
Arctic Sea Ice and Ocean Observations	11
Correlated Declines in Pacific Arctic Snow and Sea Ice Cover	18
Acidifying Pollutants, Arctic Haze, and Acidification in the Arctic	26
The Barrow Atmospheric Baseline Observatory	34
NOAA and the Alaska Ocean Observing System	41
Marine Mammals in the Bering/Chukchi Sea	50
Ocean Climate Changes and the Steller Sea Lion Decline	54
Status of Alaska Groundfish Stocks	64
Status of Alaska's Salmon Fisheries	66
Russian–American Long-term Census of the Arctic	73
On the Creation of Environmental Data Sets for the Arctic Region	77
Interagency Arctic Research Policy Committee Staff	93