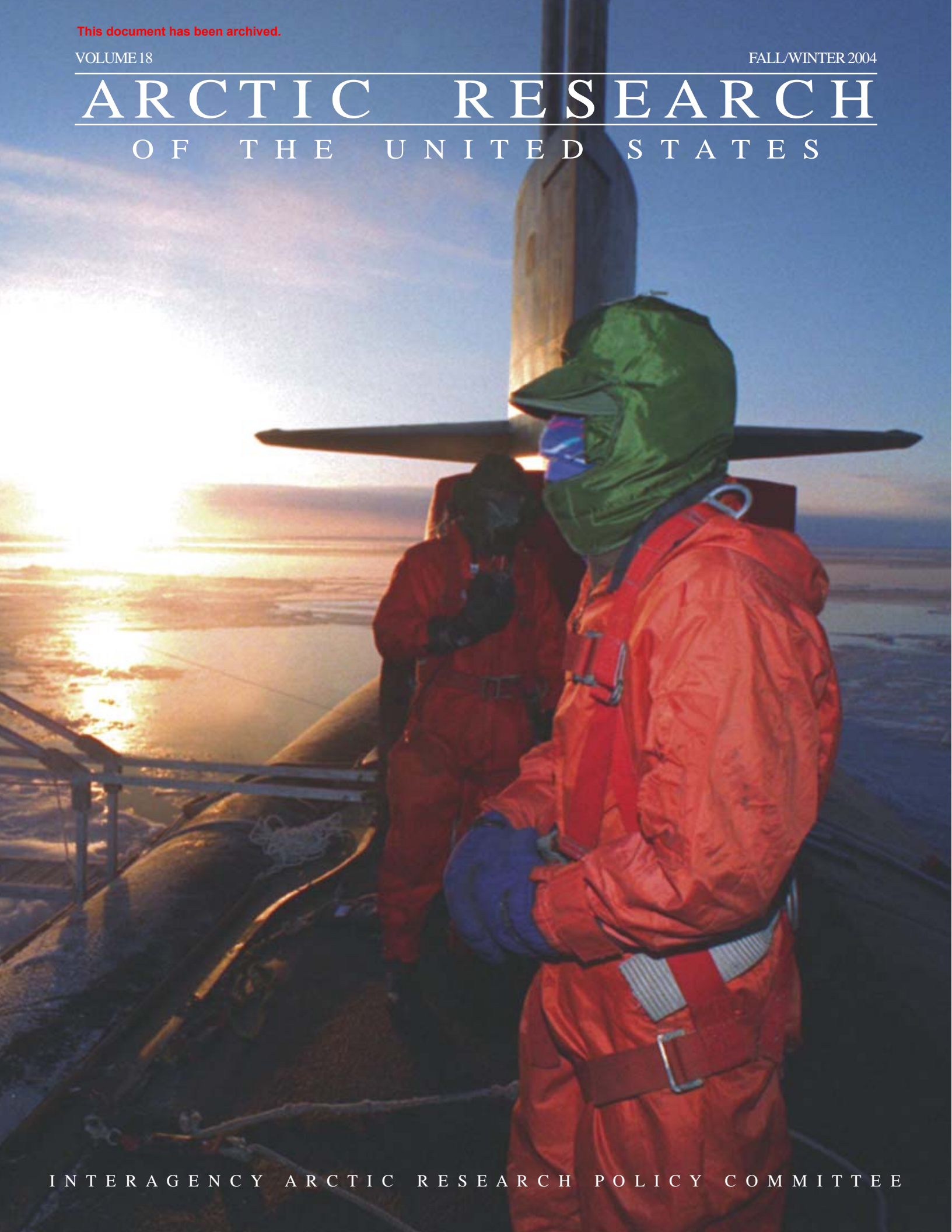


ARCTIC RESEARCH

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.

Front Cover

During an Arctic sunrise on board the U.S. Navy's attack submarine USS Pogy, Navy Lieutenant Junior Grade Mark Cronley stands watch as a safety observer during a water collection procedure. The Pogy returned to Hawaii, on November 12, 2000, after a 45-day research mission to the North Pole. The second of five planned deployments through the year 2000, Pogy embarked with a team of researchers led by Ray Sambrotto of Columbia University. During the several-thousand-mile trek, the submarine collected data on the chemical, biological, and physical properties of the Arctic Ocean and conducted experiments in geophysics, ice mechanics, pollution detection, and other areas. For the purposes of this voyage, a portion of the submarine's torpedo room was converted into laboratory space. However, at no time was the ship removed from front-line warship status.

ARCTIC RESEARCH

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 EditorEditing and production: Cold Regions Research and
Engineering Laboratory, Hanover, New Hampshire

The Office of Naval Research in the Arctic: History, People, Accomplishments, Legacy

The ONR High Latitude Dynamics Program 2

The ONR Chair in Arctic Marine Science
at the Naval Postgraduate School 6Recent Evolution of Techniques for Studying
the Physical Oceanography and Sea Ice of the
Arctic Ocean 8The SCICEX Program—Arctic Ocean Investigations
from a U.S. Navy Nuclear-Powered Submarine 14The International Arctic Buoy Programme—
Monitoring the Arctic Ocean for Forecasting
and Research 21A Personal View of ONR High Latitude
Upper Ocean Physics Programs 26

Interagency Arctic Research Policy Committee Staff ... 36