

**The Historical Records
of the
Office of Naval Research
A Guide for Researchers**
(Updated April 2022)

Compiled by Colin E. Babb
ONR Historian
(Contractor: STOPSO)



Office of Naval Research
Arlington, VA

Contents

| | |
|-------------------------------------|---|
| Introduction | 3 |
| The Office of Naval Research | 3 |
| The ONR Historian | 4 |
| Historical Records | 5 |
| Secondary Sources | 5 |
| Dissertations | 7 |
| Archives and Libraries | 9 |

INTRODUCTION

The Office of Naval Research was established by act of Congress, Public Law 588, in August 1946 as the U.S. government's first permanent military agency devoted to funding civilian scientific research during peacetime. This guide is meant as an introduction for researchers seeking public documents and records about ONR, its activities, and the science and technology research that it funds and manages.

THE OFFICE OF NAVAL RESEARCH

ONR manages and funds basic and applied science and advanced technology development through the use of grants and contracts with an array of partners in academia, industry, and government in the United States and around the world. The U.S. Naval Research Laboratory in Washington, DC, is a subordinate command. ONR also works in close cooperation with the Navy's systems commands and their warfare centers located across the United States, as well as with the other services. As a major supporter of scientific research since World War II, ONR has had a role in fostering scientific and technological innovations in a wide range of fields, as well as in maintaining the basic scientific research infrastructure that makes these breakthroughs possible.

Consequently, historical research on ONR can illuminate discourses in the history of public and science policy, the relationship between government and academia, naval technology, and the military-industrial complex, as well as of individual disciplines such as oceanography, biology, robotics, physics, and numerous other fields.

Born in the aftermath of World War II, ONR was established by congressional legislation in 1946 to maintain the successful partnership of government, academia, and industry that had produced a series of technological innovations during the war. This template originated with ONR's immediate predecessor, the Navy's Office of Research and Inventions, created by order of the Secretary of the Navy in May 1945, and more broadly with the Office of Scientific Research and Development, a national wartime agency. Originally focused on basic science research using contracts, grants were added as a funding tool in 1959. Funding for applied research began in 1980 with the establishment of the Office of Naval Technology, an organization also headed by the Chief of Naval Research. In 1990, the Office of Advanced Technology was established to focus on advanced technology development. All three organizations were formally joined together as a single entity in 1993.

Originally located in Washington, DC, in the old Navy Department buildings on the National Mall, ONR is now located in the Ballston neighborhood of Arlington, VA. The Office of Naval Research is managed by the Chief of Naval Research, a naval flag officer; the Vice Chief of Naval Research, a marine general officer; and the Executive Director, a

Senior Executive Service civilian. The research activities of ONR, as well as the organizational structures put in place to manage them, have varied greatly over the agency's lifetime. In general, however, ONR's portfolio of research investments has been divided into a series of science and technology programs overseen and managed by program officers. In addition, over the years ONR also has been responsible for managing a number of significant tasks for the Department of the Navy, including the Navy's patent office, the Navy's Small Business Innovation Research office, and the Navy's Science, Technology, Engineering, and Mathematics (STEM) education outreach office. Besides the Naval Research Laboratory, ONR's other major partner laboratories have included the Special Devices Center (created in World War II and later a component of Naval Air Warfare Center Training Systems Division) until the early 1960s, and the Naval Arctic Research Laboratory, from 1947-1980.

Other components of ONR include ONR Global, which has offices in Santiago, Chile; São Paulo, Brazil; London, United Kingdom; Prague, Czech Republic; Singapore; and Tokyo, Japan. Founded in 1946 with a single office in London, ONR Global's personnel interact with the international science and technology community and overseas operational commands to foster cooperation in areas of mutual interest.

The Naval Research Advisory Committee, also established by Public Law 588, was an independent civilian scientific advisory group dedicated to providing objective analyses in the areas of science, research, and development. The committee was the senior scientific advisory group to the Secretary of the Navy, the Chief of Naval Operations, Commandant of the Marine Corps, and the Chief of Naval Research. It produced one or more reports a year on topics of interest to the Navy and Marine Corps. In its early days, the committee's purview was quite broad, dealing with early atomic energy policy for instance. The committee was disestablished in 2019.

THE ONR HISTORIAN

The current office of the historian was created in 2013. The historian provides the command with professional guidance in the field of history and historic preservation, and the public with an extensive program of outreach that includes oral history, research, publications, and multimedia materials. For help with research requests, please contact the historian at onrpublicaffairs@navy.mil or call 703-696-5031.

HISTORICAL RECORDS

The list below of secondary sources, dissertations, and primary sources contained in archives and libraries related to ONR should not be considered comprehensive and cannot attempt to document the voluminous amounts of scientific and technological research supported by ONR. It emphasizes resources that document the history of ONR as an organization and its major supported projects, and is intended to provide an overview of the kinds of resources available to researchers and others seeking to find publicly accessible documents and information about the Office of Naval Research, its research activities, and its relationship with the development of science and technology in the United States and the world since World War II.

SECONDARY SOURCES

1. Albion, Robert G. "The Administration of the Navy, 1816-1947," *Public Administration Review* 5 (1945): 293-302.
2. Althoff, William F. *Arctic Mission: 90 North by Airship and Submarine*. Annapolis, MD: Naval Institute Press, 2011.
3. Beyer, Kurt W. *Grace Hopper and the Invention of the Information Age*. Cambridge, MA: MIT Press, 2009.
4. Bowen, Harold G. *Ships, Machinery and Mossbacks: The Autobiography of a Naval Engineer*. Princeton, NJ: Princeton University Press, 1954.
5. Buderer, Robert. *Naval Innovation for the 21st Century: The Office of Naval Research since the End of the Cold War*. Annapolis, MD: Naval Institute Press, 2013.
6. Davis, Vincent. *Postwar Defense Policy and the U.S. Navy, 1943-1946*. Chapel Hill, NC: University of North Carolina Press, 1966.
7. Dupree, A. Hunter. *Science in the Federal Government: A History of Politics and Activities to 1940*. Cambridge, MA: Harvard University Press, 1957.
8. Furer, J. A. *Administration of the Navy Department in World War II*. Washington, DC: Department of the Navy, 1959.
9. _____. "Narrative History of the Office of the Coordinator of Research and Development." [s.l. : s. n., 1946].

10. _____. "Naval Research and Development in World War II," *Journal of the American Society of Naval Engineers* 62 (1950): 21-53.
11. _____. "Research in the Navy," *Journal of Applied Physics* 15 (March 1944): 209-13.
12. Hellwarth, Ben. *Sealab: America's Forgotten Quest to Live and Work on the Ocean Floor*. New York: Simon & Schuster, 2012.
13. Jackson, Donald, and Louise Herring. "Administrative History: Office of Research and Inventions, 1 July – 31 December 1945," [s.l. : s. n., 1948].
14. Kaharl, Victoria A. *Water Baby: The Story of Alvin*. New York: Oxford University Press, 1990.
15. Kevles, Daniel J. *The Physicists: The History of a Scientific Community in Modern America*. Cambridge, MA: Harvard University Press, 1971.
16. Leary, William N., and Leonard A. LeSchack. *Project COLDFEET: Secret Mission to a Soviet Ice Station*. Annapolis, MD: Naval Institute Press, 1996.
17. Mendelsohn, Everett, Merritt Roe Smith, and Peter Weingart, eds. *Science, Technology and the Military*. Boston: Kluwer Academic Publishers, 1988.
18. Old, Bruce S. ("The Bird Dogs"). "The Evolution of the Office of Naval Research," *Physics Today* 14 (August 1961): 30-35.
19. Office of Naval Research. *A Decade of Basic and Applied Science in the Navy*. Washington, DC: Government Printing Office, 1957.
20. _____. *Fifty Years of Excellence in Support of Naval Science: A Symposium in Celebration of the Fiftieth Anniversary of the Office of Naval Research*. Washington, DC: National Academy of Sciences, 1996.
21. _____. *Office of Naval Research: Forty Years of Excellence in Support of Naval Science*. Arlington, VA: Office of Naval Research, 1986.
22. _____. *Office of Naval Research: Investing in the Future, 1946-1996*. Arlington, VA: Office of Naval Research, 1996.

23. _____. *Science and the Future Navy: A Symposium*. Washington, DC: National Academy of Sciences, 1977.
24. Piccard, Jacques, and Robert Dietz. *Seven Miles Down*. New York: G.P. Putnam's Sons, 1961.
25. Pittsburgh University Historical Staff. "The History of United States Naval Research and Development in World War II." [s.l. : s. n., 1949?].
26. Roland, Alex. "Science and War." *Osiris*, 2nd series, Vol. 1 (1985): 247-72.
27. Salkovitz, Edward L., ed. *Science, Technology, and the Modern Navy: Thirtieth Anniversary, 1946-76*. Arlington, VA: Office of Naval Research, 1976.
28. Sapolsky, Harvey M. *Science and the Navy: The History of the Office of Naval Research*. Princeton, NJ: Princeton University Press, 1990.
29. Stewart, Irwin. *Organizing Scientific Research for War: The Administrative History of the Office of Scientific Research and Development*. Boston: Little, Brown & Co., 1948.
30. U.S. Congress. *A History of Science Policy in the United States, 1940-1985*. Report Prepared for the Task Force on Science Policy, Committee on Science and Technology, House of Representatives, 99th Congress, 2nd Sess. Washington, DC: Government Printing Office, 1986.
31. Weir, Gary E. *An Ocean in Common: American Naval Officers, Scientists, and the Ocean Environment*. College Station, TX: Texas A&M University Press, 2001.
32. Weyl, F. Joachim, ed. *Research in the Service of National Purpose: Proceedings of the Office of Naval Research Vicennial Convocation*. Washington, DC: Government Printing Office, 1966.

DISSERTATIONS

1. Bazow, Steve. "The Effectiveness of the Small Business Innovation Research Program within the Navy." Ph.D. diss., George Washington University, 2010.

2. Damms, Richard V. "Scientists and Statesmen: President Eisenhower's Science Advisors and National Security Policy, 1953-1961." Ph.D. diss., Ohio State University, 1993.
3. Dawson, Paul L. "Luis de Florez and the Special Devices Division." Ph.D. diss., George Washington University, 2005.
4. Di Mento, John M. "Beyond the Water's Edge: United States National Security and the Ocean Environment." Ph.D. diss., Fletcher School of Law and Diplomacy, 2006.
5. Garner-Williams, Elizabeth. "The Office of Naval Research Support of Underrepresented Ethnic Groups Mentoring Model Redirecting Science Education: An 'Investigative' Case Study." Ph.D. diss., Florida State University, 2000.
6. Hamblin, Jacob D. "Oceanography and International Cooperation during the Early Cold War." Ph.D. diss., University of California Santa Barbara, 2001.
7. Harper, Kristine C. "Boundaries of Research: Civilian Leadership, Military Funding, and the International Network Surrounding the Development of Numerical Weather Prediction in the United States." Ph.D. diss., Oregon State University, 2003.
8. Matsushita, Marimi. "A Woman Mathematician and Her Contributions: Mina Spiegel Rees." Ph.D. diss., Columbia University, 1998.
9. Moore, Kelly. "Doing Good while Doing Science: The Origins and Consequences of Public Interest Science Organizations in America, 1945-1990." Ph.D. diss., University of Arizona, 1993.
10. O'Donnell, Timothy. "Vannevar Bush, the Endless Frontier, and the Rhetoric of American Science Policy." Ph.D. diss., University of Pittsburgh, 2000.
11. Rowan, Milton. "Politics and Pure Research: The Origins of the National Science Foundation, 1942-1954." Ph.D. diss., Miami University, 1985.
12. Shell, Amy Elizabeth. "In Service to Mathematics: The Life and Work of Mina Rees." Ph.D. diss., University of Illinois, 2000.
13. Sherry, Michael S. "Preparing for the Next War: American Plans for Postwar Defense, 1941-1945." Ph.D. diss., Yale University, 1975.

14. Wang, Zuoyue. "American Science and the Cold War: The Rise of the U.S. President's Science Advisory Committee." Ph.D. diss., University of California Santa Barbara, 1994.

15. Westwick, Peter J. "The National Laboratory System in the U.S., 1947-1962." Ph.D. diss., University of California Berkeley, 1999.

ARCHIVES AND LIBRARIES

City University of New York

New York, NY

www.cuny.edu

Mina Rees Papers

Columbia University

New York, NY

www.columbia.edu

Documents related to Bruce Heezen and Marie Tharp

Harvard University

Cambridge, MA

www.harvard.edu

Harvard Cyclotron Laboratory Collection

Johns Hopkins University

Baltimore, MD

www.jhu.edu

Library of Congress

Washington, DC

www.loc.gov

Geography and Map Division

Heezen-Tharp Collection

Manuscript Division

Alan Tower Waterman Papers

American Folklife Center

Herndon III, Edward Beverly Herndon III Oral History

Paul A. Vohs Jr. Oral History

Sharon Elaine Jentzer Oral History

Massachusetts Institute of Technology

Cambridge, MA

libraries.mit.edu

Institute Archives and Special Collections

The special collections at MIT include personal papers and manuscript collections associated with various ONR-supported individuals and projects. In particular, there are numerous records for Project Whirlwind, one of the first digital computers, built at MIT in the late 1940s and early 1950s.

MIT Museum

The museum, located at Kendall Square near the campus, has a substantial number of artifacts and records related to Project Whirlwind.

National Archives

Washington, DC

www.nara.gov

National Archives II at College Park, MD

Most of the primary source material available concerning ONR is contained at the National Archives II facility in College Park, Md. Accessioned documents are found mainly in Record Group 298. Catalogued material in this group consists mostly of documents dealing with ONR's predecessor organization during World War II, the Navy's Office of the Coordinator of Research and Development. The National Archives also possesses significant unaccessioned records within RG 298, the bulk of which date

from the late 1940s to the 1980s, that are not fully catalogued. These materials are contained in federal records center boxes whose contents are listed only by broad topic.

There are also extensive records associated with ONR's many international offices, the first of which was established in London in 1946, that may be found in Department of State record groups as well as in RG 298. Records of the Naval Research Advisory Committee can also be found in RG 298.

Other record groups at College Park that may contain material pertinent to ONR, its components, and the Navy are:

- Record Group 19: Bureau of Ships
- Record Group 38: Office of the Chief of Naval Operations
- Record Group 52: Bureau of Medicine and Surgery
- Record Group 59: General Records of the Department of State
- Record Group 72: Bureau of Aeronautics
- Record Group 74: Bureau of Ordnance
- Record Group 80: General Records of the Department of the Navy, 1798-1947
- Record Group 84: Records of the Foreign Service Posts of the Department of State
- Record Group 181: Records of Naval Districts and Shore Establishments
- Record Group 227: Office of Scientific Research and Development
- Record Group 343: Naval Air Systems Command
- Record Group 344: Naval Ship Systems Command
- Record Group 345: Naval Electronic Systems Command
- Record Group 346: Naval Ordnance Systems Command
- Record Group 402: Bureau of Naval Weapons
- Record Group 428: General Records of the Department of the Navy, 1947-

Washington National Records Center, Suitland, MD

ONR records from the past several decades are kept at this facility. Of particular note, there are many records at Suitland associated with NRAC, because of the committee's early association and cooperation with the Atomic Energy Commission in the 1940s. Records kept at federal records centers remain in the legal possession of the original submitting agency, so all requests to view ONR records kept here must go through the Office of Naval Research. The records center keeps records officially for 30 years, but because of space considerations there are also other, older records kept here as well that have not been transferred to the National Archives facilities in downtown

Washington, DC, or College Park, MD. Many of the documents that have been transferred to College Park remain in uncatalogued boxes from the federal records center.

Naval History and Heritage Command

Washington, DC

www.history.navy.mil

Archives Branch

Vice Admiral Albert J. Baciocco Papers

Navy Department Library

This library contains a number of unpublished administrative histories relating to the management of naval science and technology research and development during World War II and to ONR's predecessor, the Office of the Coordinator of Research and Development (see Secondary Sources above, nos. 9, 12, and 23).

National Museum of American History

Washington, DC

americanhistory.si.edu

Grace Murray Hopper Collection

Naval Research Laboratory

Washington, DC

library.nrl.navy.mil

The Naval Research Laboratory's research library is the depository for all ONR technical reports, which detail the progress or results of ONR-funded projects and contracts. Among these also are European Scientific Notes, a yearly publication produced by ONR's London office that detailed developments in European science. Many documents and books that once were in the possession of the old ONR library are now deposited at NRL.

NRL also has an extensive collection of oral histories, some of which deal with former ONR personnel as well as ONR-sponsored research.

Pennsylvania State University

University Park, PA
www.psu.edu

Samuel King Allison Papers

Alan Tower Waterman Papers

Princeton University

Princeton, NJ
www.princeton.edu

Charles Phelps Smyth Papers

Smithsonian Institution

Washington, DC
www.si.edu

Bruce C. Heezen Papers

Malcolm D. Ross Papers

Stanford University

Stanford, CA
www.stanford.edu

Felix Bloch Papers

United States Naval Academy

Annapolis, MD
www.usna.edu

Robert Dexter Conrad Papers

**University of California San Diego and
Scripps Institution of Oceanography**

La Jolla, CA
www.ucsd.edu
www.scripps.ucsd.edu

Special Collections and Archives

The library at the University of California San Diego has extensive collections of material—including a large number of oral histories—relating to the history of oceanography, much of which was supported by ONR, as well as the archives of the Scripps Institution of Oceanography.

Roger Revelle Papers

Walter Munk Papers

University of Chicago

Chicago, IL

www.uchicago.edu

Marcel Schein Papers

University of Hawaii at Manoa

Honolulu, HI

www.manoa.hawaii.edu

University of Texas at Austin

Austin, TX

www.utexas.edu

Joseph B. Kruskal Papers

University of Washington

Seattle, WA

www.uw.edu

Woods Hole Oceanographic Institution

Woods Hole, MA

www.whoi.edu

Marine Biological Laboratory Library

The WHOI Data Library and Archives contain extensive archives, manuscript collections, and oral histories of projects and individuals associated with Woods Hole Oceanographic Institution supported by ONR. Highlights include records of the search

for RMS *Titanic*, records relating to the discovery of hydrothermal vents in the Pacific in the 1970s, and material on Project Nobska, an important research conference that shaped nuclear policy and submarine design in the 1950s.

Yale University

New Haven, CT

www.yale.edu

Henry Margenau Papers

Records of the Office of Naval Research, Yale University, 1945-1947