**Bibliography on the History of Arctic Marine Science of the 20th Century**

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**Introduction**

This is a bibliography on the history of marine science in the Arctic for the 20/21st century. It was prepared to aid historians interested in marine science research in the Arctic. This is a very small and specialized slice of the much larger literature on polar exploration and discovery.

During the last ten years, the number of websites related to the polar science has proliferated, and the number of online catalogs to libraries with strength in polar research has greatly increased. The literature of the Arctic includes citations in more than a dozen languages. The web makes a lot of citations available that were once difficult to find in libraries. Librarians in Canada, Germany and other countries have made Russian literature on the Arctic more accessible by translating some works. Despite these improvements, it continues to be difficult to access specific works in the original language. So I have listed several important websites that include bibliographies or online library catalogs rich in Arctic sources.

This bibliography includes citations that document oceanographic expeditions in the Arctic. This includes expeditions by ship that took soundings, dredged, collected specimens and did other oceanographic work. A lot of oceanographic data was and is taken on routine expeditions of icebreakers and military vessels. I excluded purely military operations in the Arctic, one-man endurance trips on sledges, land-based expeditions to Arctic islands and scientific expeditions with objectives that were exclusively related to ethnography and anthropology. This bibliography includes very little information on Arctic whales and whaling, which has an enormous literature of its own. It excludes the growing literature on polar physiology, medicine, pharmacology and the outfitting and nutrition on polar voyages. I have included just a few items on medical issues related to Arctic expeditions, but the literature on the physiology of cold regions is much larger. This bibliography includes very few citations documenting petroleum exploration in the far north. Even with this very narrow definition of Arctic marine science expeditions, it is very difficult to compile a comprehensive list of expeditions to the Arctic. Tore Frängsmyr estimates that there were 35 Swedish expeditions to the Arctic before 1910. Ira Wiggins recalls that beginning in 1947 10 to 80 scientists worked in the Arctic Research Laboratory in Barrow every summer. A lot of these researchers were working on marine topics.

It becomes harder, not easier, to identify Arctic marine science expeditions as one moves from 1900 to the current period, because oceanography has itself changed greatly in
recent decades. For the first half of the twentieth century oceanography was done by ship, although there were important polar flights, some of which had scientific objectives or were related to ship-based operations. A great deal of oceanography since 1960 has been done with data collected by remote sensing, drogues and other instruments, and some contributors to the marine science of the Arctic haven’t even visited the Arctic.

This bibliography includes material by scientists, historians, biographers, and other scholars. It focuses on oceanography, and does not include the history of cartography for the Arctic regions; marine architecture related to icebreakers, or history of technology. It includes a few items related to meteorology and glaciology, but the literatures of these fields abound in polar material.

Some of the citations in this bibliography are from the scientific literature. During the early 1900’s oceanographers and other scientists included historical summaries in the narrative scientific reports of their own expeditions, and this material can be quite valuable to historians. It used to be traditional to include a history as the introduction in the texts for field sciences, but this practice has been discontinued. The reviewers for The Oceans, the Sverdrup, Johnson and Fleming 1942 textbook in oceanography actually criticized the authors for not mentioning Matthew Fontaine Maury in their book.

This bibliography does not list manuscripts, expedition films, televised histories, or recorded interviews with scientists, although these sources are numerous and rich. The bibliography does include some biographies and autobiographies of Arctic marine scientists, and some obituaries of scientists, ship captains, and expedition participants. This is just a sample of the much larger literature of biographies of Arctic explorers. Even brief obituaries can be extraordinarily helpful to historians interested in Arctic science. Some obituaries cite speeches, memoirs and reminiscences, hidden in the gray literature. These sources describe the personal challenges of working in the Arctic and differ from research results reported formally in the scientific literature.

**Bibliographies**

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Arctic information and data: A guide to selected resources, compiled and edited by Martha Andrews and members of the U.S. Polar Information Working Group; supported

Arctic Science and Technology Information System. APOA bibliography. Calgary: Arctic Institute of North America, University of Calgary, 1980, 83 pages. [Bibliography reflecting the work of the Arctic Petroleum Operator’s Association (APOA).]


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Cold Regions Bibliography, http://www.coldregions.org/coldinfo.html
[Created by American Geological Institute (AGI) with support from the National Science Foundation, requires a subscription to use. This bibliography is strong in cold physiology, polar diving, military applications, but less strong in marine sciences.]

Cumulative Bibliography on the History of Oceanography http://scilib.ucsd.edu/sio/indexes/cbho.html
[Created by the Commission of Oceanography of the International Union of the History and Philosophy of Science, Division of History of Science, this bibliography covers the period 1923 to the present. It is updated annually in the History of Oceanography newsletter edited by Eric L. Mills.]


History of Oceanography Newsletter [A current bibliography on the history of oceanography is included in this newsletter of the Commission of Oceanography of the International Union of the History and Philosophy of Science, edited by the President, Eric L. Mills. Recent issues are available in digital format at http://www.ijnhonline.org/]


McAllister, Don E. Bibliography of the Marine Fishes of Arctic Canada. University of British Columbia Institute of Fisheries Museum, Contributions No. 8, 1966.


Websites:

Alfred Wegener Institute website has only a short history of German polar research, but its Library site http://www.awi-bremerhaven.de/Library/index.html
Is accessible online

Danish Polar Center [http://www.dpc.dk/PolarLibrary/Start.html](http://www.dpc.dk/PolarLibrary/Start.html)

And its Danish Arctic Institute host a library, archives and photo collection documenting Danish Arctic research.

is guide to Internet resources dealing with the lands and waters surrounding the North Pole and the South Pole. Polar Web is a collaborative project of the Polar Libraries Colloquy and the Arctic Center

The National Oceanic and Atmospheric Administration (NOAA) has an ocean exploration site that provides access to library, photographic and historical sources, including current research in the Arctic [http://oceanexplorer.noaa.gov/history/history.html](http://oceanexplorer.noaa.gov/history/history.html)


Posts papers from the VII International Congress on the History of Oceanography, including many papers on marine science of the far north, especially valuable documentation of Russian contributions.

The Norwegian Polar Institute [http://npiweb.npolar.no/](http://npiweb.npolar.no/)

Website includes information on books, exhibits, and historical photographs on Norwegian research in polar regions.

Scott Polar Research Institute, University of Cambridge [http://www.spri.cam.ac.uk/library/](http://www.spri.cam.ac.uk/library/)

This library database includes connections to the archives, photograph collection and special databases such as SPRILIB Russian North. Scott Polar Research Institute website also includes a descriptive list of museums with collections relating to the Arctic and Antarctic.

U.S. Coast Guard webpage on the history of icebreakers [http://www.uscg.mil/hq/g-cp/history/Icebreakers.html](http://www.uscg.mil/hq/g-cp/history/Icebreakers.html)


Includes a history of the Ice Patrol and biographies of important figures in its history.

The UK Archives Hub [http://www.archiveshub.ac.uk/](http://www.archiveshub.ac.uk/)

provides access to descriptions of archives held in UK libraries, including a lot of arctic expedition published sources, manuscript sources and even digitized photographs. Like a lot of websites, they do web exhibits of photographs and are currently featuring an exhibit entitled Cold Comfort which features the search for the Franklin Expedition.

Woods Hole Oceanographic Institution Beaufort Gyre Exploration Project [http://www.whoi.edu/beaufortgyre/history.html](http://www.whoi.edu/beaufortgyre/history.html)

has a website that includes a history of
geographic and scientific exploration of the Arctic, including a list of expeditions from the 19th to 21st centuries.

**Monographs and Journal Articles**


The academic research fleet: A report to the Assistant Director for Geosciences by the Fleet Review Committee. Arlington, Virginia: National Science Foundation, 1999 1 volume. [Description of the American academic oceanographic fleet.]


Ahlmann, Hans W:son. Scientific results of the Norwegian-Swedish Expedition in the summer of 1931. Geografiska annaler 15 (1933), Häft 1-2. [This includes Ahlmann’s general outline of the expedition.]


Al'banov, Valerian Ivanovich. Podvig shturmana. Moscow, 1953. [Description of the 1913 Gregory Brusilov St. Anna expedition by the navigator]

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The Andrée diaries, being the diaries and records of S. A. Andrée, Nils Strindberg and Knut Frænkel written during their balloon expedition to the North pole in 1897 and discovered on White island in 1930, together with a complete record of the expedition and discovery; authorized translation from the official Swedish ed. By Edward Adams-Ray. London, J. Lane, 1931, 471 pages. [First published in Swedish under the title, Med Örnen mot pollen.]


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The patchwork of protected areas in the Arctic coastal region was shaped by history. Long-term planning and analysis of the challenges of preserving biological diversity played no significant role in its formation. Rather, protected areas were. Many parts of the Arctic were already settled by the Eskimos and other peoples of Mongolic stock when the first European explorers, the Norsemen or Vikings, appeared in the region. Much later the search for the Northwest Passage and the Northeast. Meanwhile, in the Eurasian Arctic, Franz Josef Land was discovered and Novaya Zemlya explored. The Northeast Passage was finally navigated in 1879 by Nils A. E. Nordenskjöld. Roald Amundsen, who went through the Northwest Passage (1903–6), also went through the Northeast Passage (1918–20). Greenland was also explored. Robert E. Peary reportedly won the race to be the first at the North Pole in 1909, but this claim is disputed.