

Digitizing Grey Literature from the Antarctic Bibliography Collection

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Abstract

In 1962 the National Science Foundation (NSF) created a clearinghouse for Antarctic information intended to foster the global, free exchange of data and publications between scientists and researchers. With funding from NSF, the Library of Congress began assembling the Antarctic Bibliography in 1963, and full-text of the items listed in the bibliography was later captured on microfiche for preservation. The Antarctic Bibliography primarily consists of journal articles, monographs, technical reports and conference proceedings collected by the Library of Congress; however, other polar libraries contributed a generous amount of grey literature material to the bibliography as well. Only a few copies of the microfiche collection were created and distributed, so the full-text version is a rare resource preserved in an increasingly less accessible format. The goal of the Polar Digitization project at the National Science Foundation Library is to make the full-text grey literature materials from the Antarctic Bibliography microfiche collection, including unpublished works, materials from conferences that are not readily available and rare government reports, available to the public electronically on the web through digitization and cataloging. This paper addresses the challenges and importance of making the full text of grey matter from the Antarctic Bibliography accessible in digital form.

Introduction

The U.S. National Science Foundation (NSF) is a government grant agency which funds research and education in most fields of science and engineering. NSF's Office of Polar Programs (OPP) manages and funds the United States Antarctic Program (USAP)¹. In 1962, USAP established a clearinghouse for Antarctic Information at the NSF. The Antarctic Bibliography was a product of this initiative. From 1963 to 1998, the Library of Congress prepared the *Antarctic Bibliography*, a multi-volume set of citations and abstracts encompassing the world's scientific literature regarding Antarctica and the Southern Ocean². The bibliography coverage spans from 1951 to 1998, includes Antarctic biology, geology, engineering, medicine, meteorology, oceanography, atmospheric physics, geophysics, and political and social science. The bibliography contains two sets of information: 1) bibliographic records with very brief abstracts of the world's Antarctic research literature from 1962 to 1998 in all of the scientific disciplines relevant to Antarctica (approximately 65,000 titles) and 2) bibliographic records without abstracts of the world's Antarctic research literature from 1951 to 1961 in all of the scientific disciplines relevant to Antarctica (approximately 5,000 titles)². All material included in the printed bibliography was indexed by a team of subject specialists in the Science and Technology Division of the Library of Congress.

In addition to the printed volumes, microform copies of the full text of most of the cited items in the bibliography were produced by the Library of Congress as part of the funded project. These microfiche contain scientific articles, conference proceedings, technical reports, official memoranda, policy documents and other relevant publications. NSF has microfiche sets of the full texts of Antarctic items for on-site use only at the NSF building in Virginia, its three research stations in Antarctica, and the University of Canterbury in New Zealand (for NSF's Antarctic facility in Christchurch)³. The American Geophysical Institute (AGI) also has a set of the fiche at their headquarters in Alexandria, Virginia.

The National Science Foundation Library is an information and reference resource supporting the USAP and the NSF OPP. As custodians of one of the rare archival sets of microfiche of full-text materials collected from the *Antarctic Bibliography*, we have become increasingly aware of the need to make the grey literature information contained on this fairly inaccessible microfiche collection more readily available to the scientific community. The bibliography holds a wealth of historical information related to scientific data, climate studies, environmental changes, policy, and historical events. The technical reports alone cover topics such as snow road construction, seismic wave dispersion, studies of ice cores, geodetic surveys, chemical profiles of ice shelves, marine biological studies, and cartography. Many of these technical reports and government-funded studies are not accessible and are no longer available as monographs. In addition, the microfiche version of the bibliography captured proceedings from societal conferences held all over the world.

The *Antarctic Bibliography* is currently maintained and updated online by the American Geophysical Institute (AGI)⁴. AGI distributes the bibliography free on the web through the Cold