

## AID TO RESEARCH

# A Guide to Locating Wilderness Area Literature

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*The natural resource description, designation, administration, and use of wilderness and similar protected areas have become major topics of environmental education and research. This article, written from a librarian's perspective to assist in this inquiry, identifies and discusses useful handbooks, maps, and internet websites consolidating wilderness descriptions and data. Although Canada and the U.S. are emphasized, several Australian, New Zealand, and globally inclusive sources are noted and discussed. In addition, guidance for identifying wilderness oriented monographic and journal literature is provided along with an annotated list of pertinent indexes and databases.*

## Introduction

Students, researchers, and land resource managers often require literature pertaining to wilderness and other protected areas. The purpose of this article is to provide guidance in systematically identifying and extracting wilderness literature especially as it pertains to Canada and the U.S. Since this article is written from a librarian's perspective, its emphasis is on efficient and effective use of modern reference and indexing systems available in most research oriented libraries in North America. However, it is not intended to be comprehensive or definitive. Instead, it identifies major sources

commonly available that yield significant and up to date results.

It should be noted at the onset that vagueness in terms and varying definitions or conceptions of wilderness can affect the literature search process and results. The term "wilderness" without qualification has many meanings and connotations including those of a purely philosophical, emotional, spiritual, literary, or even fictional sense. Randomly entering "wilderness" into literature databases or library oriented searches often leads to a large number of unwanted items and can be counter-productive. Using "Wilderness Areas", "Wilderness Parks" or approximate equivalents focuses the search toward literature concerning specific places that have experienced minimal human modification and influences. But at the same time this does not address or differentiate at least two major concepts regarding wilderness areas. Viewed narrowly, wilderness areas are those designated through a specified formal political process and managed in accordance with strict guidelines and rules. This is the meaning most often employed in the United States indicating areas given protection under the *Wilderness Act* and subsequent related legislation. But in a broader sense, wilderness includes other biologically intact areas, with or without specific boundaries, which are protected in some official manner. Viewed in this way, as it is in most countries including Canada, wilderness concerns the character of the land more than strictly defined and uniformly applied management. Increasingly, continued indigenous and historical non-industrial human activities are construed to be part of wilderness ecosystems. According to a leading reference/textbook, there are three categories of national wilderness management systems: those with statutory or legal protection and written management plans (exemplified by Canada, the United States, and Australia); those that include wilderness in administrative zoning (exemplified by New Zealand and Italy); and those that include wilderness recognition in broad spectrum conservation activities (exemplified by Namibia and the Philippines) (Martin and Watson, 2002, 2009). A recent reference book (Kormos, 2008) provides additional global perspectives of the legal and administrative expression of wilderness concepts.

## **World Database on Protected Areas**

Almost thirty years of cooperation between the United Nations Environment Programme (UNEP) and the International Union for Conservation of Nature (IUCN) has resulted in several printed

publications and a major database classifying protected areas, specifying their location and accommodating varying management concepts and systems. Their *World Database on Protected Areas* (WDPA) (<http://www.wdpa.org>) is the most definitive and comprehensive international database on both terrestrial and marine protected areas including designated wilderness. It includes UNESCO World Heritage Sites, other areas of international recognition, and sites that have official national or provincial/state level status. Compiled from numerous sources, the WDPA includes key data such as name, designation, international convention or sanction, legal status, spatial boundaries, and cartographic visualization via *Google Earth*. Of particular concern to wilderness researchers are the IUCN Protected Area Management Categories Ia (Strict nature preserve, managed mainly for science) and Ib (Wilderness area, managed mainly for wilderness protection). In a sense these two subcategories can be used as proxies for designated wilderness areas in the absence of more formal systems.

## Monographic Literature

A high volume of wilderness literature has been issued in book, technical report, government document, or other monographic form. Libraries have been collecting this material for decades so their catalogs are effective ways of identifying this literature. Recent developments in on-line public access catalogs (OPACs) include some paragraph length publisher's descriptions, searchable table of contents, many direct links to web-base resources, the listings of multiple libraries, and increasingly the ability to cross-search multiple catalogs or databases simultaneously.

A quick and efficient way of reviewing large quantities of monographic literature is to search OCLC's *WorldCat* database. This is one of the world's largest monographic oriented catalogs with millions of records contributed by member libraries (although many are multiple listings of the same title). OCLC is a major library vendor, and their products, including *WorldCat* are widely available. A *WorldCat* search using "Wilderness Areas" as unrestricted keywords yields over 15,000 entries. Redoing the search using "Wilderness Areas" as a controlled subject heading in accordance with *WorldCat's* usage of Library of Congress terminology, eliminates many unwanted items and reduces the list to about 11,900 English language records. Appendix A lists additional Library of Congress

subject headings and recommended call number classifications useful in identifying relevant monographic literature.

## **Journal Literature**

Selecting indexes appropriate in identifying journal articles is often more difficult than using them. Realistically, it is impossible to provide a complete listing of subscription indexes and databases useful for wilderness related topics. To produce a reasonably comprehensive list, the 190 or so electronic indexes and databases currently subscribed to by the University of Alaska Fairbanks Library were briefly examined. This campus is strong in areas of Geoscience, Natural Resource Management, policy oriented Social Science, and interdisciplinary studies. Therefore its current subscriptions are sufficient for purposes of this article. By entering the keywords "Wilderness Areas" about 50 literature databases were determined to be particularly useful for identifying and in some cases linking to full text articles pertaining to wilderness topics. An annotated list of these databases is presented in Appendix B.

The Library of Congress subject headings listed in Appendix A are designed for book oriented cataloging. They may also be useful but are not necessarily sufficient when searching the databases listed in Appendix B. *The World Database on Protected Areas* lists approximately 800 "designations" which are mostly specialized categories of preserves. These may form the basis for keyword searches when the Library of Congress headings are inadequate or not used. Even with a specialized list of this nature it is impossible to provide definitive vocabulary for searching databases of varying origins and composition. Many databases provide their own on-line thesaurus which should be consulted for further guidance.

## **Globally Oriented Reference Guides**

Supplementing WorldCat with non-traditional indexes such as Google, it is possible to identify a number of useful wilderness reference guides and other material worthy of special mention. Some are published monographs, others are internet websites. Most are specific to a given country, but some are world wide in scope. A recent book published in cooperation with UNEP (Chape, Spalding and Jenkins, 2008) provides an excellent summary of protected area

networks throughout the world and the current issues concerning the management of these areas. Three somewhat related and overlapping sources are (*Protected areas of the world, 1991-1992*); (*United Nations list of protected areas, 2003*) and *World Heritage and protected areas* (Badman and Bomhard, 2008). Dated but still useful, *International handbook of national parks and nature reserves*, (Allin, 1990) compares selected reserves and representative management systems.

Particular mention should be made regarding the proceedings of the World Wilderness Congress. The Congress is the largest and best known scientific and professional wilderness forum. It has convened eight times since 1977, often drawing between 1,000 and 3,000 participants from 20 or more countries. Proceedings have been published for each of these meetings. Often several hundred pages in length, they are invaluable source material for wilderness oriented research. The most recent Congress was held in Anchorage, Alaska in 2005 and its proceedings are printed as a U.S. Forest Service publication and available online (*Science and stewardship, 2007*). The Ninth Congress was held in Merida, Mexico, 6-13 November 2009.

The *International Journal of Wilderness* published since 1995, is one of the more important sources of internationally oriented peer reviewed wilderness research and feature articles. The website for the Wild Foundation (<http://www.wild.org>) a U.S. based organization promoting international wilderness protection, consolidates these and several other useful resources. Details regarding the World Wilderness Congresses, linkages to the full text of the Congress proceedings, and archive copies of the *International Journal of Wilderness* are found at this site.

## Canada

Numerous journal articles and books explain the nature and evolution of the Canadian environmental movements and wild land management systems. The third edition of *Parks and protected areas in Canada* (Dearden and Rollins, 2008) is one of the more recent and important sources. Earlier editions of this work retain relevance and value. Also significant are: "International wilderness" (Martin and Watson, 2002, 2009) "Wilderness and the nature conservation ideal" (Henderson, 1992); *Working together: Parks and protected areas in Canada* (Federal/Provincial Parks Council, 2000), and *Endangered*

spaces (Hummel, 1989). Even though significantly dated, *Wilderness areas of North America* (Sutton and Sutton, 1974) does have enough Canadian content and lasting value to mention in passing. Unfortunately, some descriptive compilations of Canadian wilderness and protected areas are disappointing with inadequate coverage, sketchy text and an emphasis on oversized photographs.

The Canadian Council on Ecological Areas, a non-profit NGO, has constructed an on-line standardized national system for reporting and mapping all Canadian protected areas. The *Conservation Areas Reporting and Tracking System* (CARTS) ([http://ccea.org/en\\_carts.html](http://ccea.org/en_carts.html)) replaces the *Canadian Conservation Areas Database* which is no longer maintained. CARTS standardizes data from the federal, provincial and territorial governments, and provides summary reports, tables, and cartographic visualization of the protected areas via *Google Earth*. It is similar to, yet extends and elaborates upon the Canadian portion of the WDPA. CARTS subdivides the protected areas by province or administrative body. But neither database gives a quick and simple way of isolating, listing, and visualizing all Ib (or other IUCN category), by province.

Canadian wilderness designation includes zoning systems in national and some provincial parks. Some provinces also designate ecologically representative areas as wilderness parks, in effect considering them a special category of provincial parks. The *Parks Canada guide to management planning* (Parks Canada, 2008) outlines the zoning options and guidelines for national parks. Provincial ministry websites often have explanations of their land and park classification systems including wilderness criteria. The Appendix in *Parks and protected areas in Canada*, 3<sup>rd</sup> edition lists many Canadian websites of interest to wilderness research (Dearden and Rollins, 2008, p 487-488). Three useful ones not on this list are:

*BC Spaces for Nature* (<http://www.spacesfornature.org>)

*Canadian Heritage Rivers System (CHRS)* (<http://www.chrs.ca>)

*Western Canada Wilderness Committee*  
(<http://www.wildernesscommittee.org>)

## United States

The United States has a stricter and more legalistic interpretation of wilderness than other countries. Most of the U.S. lands protected as such are part of their National Wilderness Preservation System

(initial legislation: *Wilderness Act*, Pub. L. 88-577, 78 Stat. 890 (1964), U.S.C. 16 Sec. 1131 *et seq.*). The most recent wilderness legislation, the *Omnibus Public Lands Management Act* (Pub. L. 111-11) added nearly 2.1 million acres in nine states, and was signed into law March 30, 2009 by President Obama. Four federal level agencies (Forest Service, National Park Service, Bureau of Land Management (BLM), and the Fish and Wildlife Service) administer these areas. The BLM wilderness areas are also part of the National Landscape Conservation System (NLCS). The NLCS is intended to enhance protection of selected scenic ecologically and culturally significant areas, and to reorient the BLM so it will be more concerned with scientific ecosystem management. The NLCS was administratively established in 2000 and given statutory status with the signing of Public Law 111-11.

Rosenberg (1994) provides a sourcebook of history and issues concerning U.S. wilderness preservation including biographical sketches of influential people. More detailed narrative histories of the National Wilderness Preservation System, Wild and Scenic Rivers Systems, and their administering agencies are provided by *These American lands* (Zaslowky and Watkins, 1994). The previously mentioned *Wilderness areas of North America* (Sutton and Sutton, 1974) is one of the earlier compilations of wilderness data, descriptions and location maps. Brief listings of designated U.S. wilderness areas are also provided by *The wilderness directory* (Schneider, 1998). *Habitats and ecosystems* (Crawford, 1999) describes specific reserves protecting special habitats.

Of particular note are three interesting and readable compilations written in the 1990s. *The big outside* (Foreman and Wolke, 1992) includes *de facto* as well as designated wilderness. *America's wilderness* (Tilton, 1996) features similar multi-paragraph descriptions for each designated wilderness. *America's secret recreation areas* (Hodgson, 1995) predates the National Landscape Conservation System but describes these areas in addition to other BLM managed lands.

Many internet websites complement and extend these printed reference guides and handbooks. The four U.S. federal agencies that administer wilderness areas have websites that include significant data, textual material, and images of wilderness areas under their jurisdiction. (Bureau of Land Management: <http://www.blm.gov>; Fish and Wildlife Service: <http://www.fws.gov>; Forest Service: <http://www.fs.fed.us>; National Park Service: <http://www.nps.gov>) While all of these are helpful, none are truly inclusive, internally consistent in their content, presentation, linkages and other navigational



features. The user must expect detailed and useful material about some wilderness units, and sketchy or non-existing material about others.

Most of the U.S. wilderness area descriptions, data, legal and policy documents have been consolidated into one internet site, *Wilderness.net* (<http://www.wilderness.net>). This is an officially recognized national inter-agency database. It is maintained through a collaborative partnership between the University of Montana, the Arthur Carhart National Wilderness Training Center, and the Aldo Leopold Wilderness Research Institute. The Carhart Center functions primarily as a wilderness management training institute. The Leopold Institute is an interdisciplinary research center operating under a memorandum of understanding between the four management agencies plus the U.S. Geological Survey.

*Wilderness.net* resolves some of the inconsistencies of the agency databases, presents historical and legal material in a more readable fashion, and includes material regarding state and tribal wilderness that is often difficult to find. It also provides GIS visualizations based on *Google Earth*. The Carhart portion of the website (<http://carhart.wilderness.net>) includes educational material such as K-12 curriculum guides. The Leopold portion of the website (<http://leopold.wilderness.net>) includes research publications, in-house studies and workshop schedules.

With such an inclusive and well designed website, why search the agency websites? As with almost any consolidation making uniform entries, *Wilderness.net* drops some of the creative elements and interesting writing style of the individual wilderness managers. Therefore there is value in going back and forth between these sources.

Handbooks such as the *Conservation directory: The guide to worldwide environmental organizations* and non-traditional indexes such as *Google* are helpful in identifying advocacy organizations likely to provide different material or viewpoints. Especially helpful are organizations such as The Wilderness Society (<http://www.wilderness.org>) that writes their own reports and The Nature Conservancy (<http://www.nature.org>) that is noted for land acquisition, conservation easements, and privately owned wilderness areas.

Clearly it is not possible to provide extensive reviews of the literature and websites for every identifiable wilderness preservation system. However it is helpful to outline the systems of two other countries to illustrate their diversity and global scope. Roughly 140 pages of *The world's protected areas* (Chape, Spalding and



Jenkins, 2008) is devoted to comparative international assessment of protected area networks. This is a good starting point for information regarding other national systems.

## Australia

The Australian federal government, states and territories operate their own systems of protected areas. Regardless of jurisdiction, the terrestrial areas are grouped together under the National Reserve System (NRS) and the marine areas under the National Representative System of Marine Protected Areas (NRSMPA). The Australian Department of Environment maintains websites for both systems: NRS (<http://www.environment.gov.au/parks/nrs>); NRSMPA: (<http://www.environment.gov.au/coasts/mpa/nrsmpa>). In addition they compile and maintain relevant data on the *Collaborative Australian Protected Area Database (CAPAD)* (<http://www.environment.gov.au/parks/nrs/science/capad.html>).

## New Zealand

Most of New Zealand's protected areas are managed by their Department of Conservation. Their website (<http://www.doc.govt.nz>) is informative but could be better organized for extraction of protected area material. Nonetheless it includes a pdf of a helpful stand-alone publication *The state of wilderness in New Zealand* (Cessford, 2001).

## Maps

Many of the above noted sources include rudimentary cartographic representations. The WDPA displays world-wide site location by IUCN category. The national level databases and reference handbooks often provide more specific locational and boundary visualizations. However most are sketchy and only semi-satisfactory. The *Google Earth* displays even though helpful, are inadequate substitutes for official national topographic systems.

Particularly useful are national/provincial/state maps at a scale large enough to show protected areas in relation to each other and major reference points thus bridging a wide gap between sketch

maps and topographic quadrangles. Some examples include: (*The National atlas of the United States of America. National wilderness preservation system*, 2004); (*Alberta's parks and protected areas*, 2009); and (*State of California wilderness status map*, 2008). The WorldCat database lists a few for Australia, but most appear to be tourist oriented. The Wild Foundation's website (<http://www.wild.org>) has some additional examples from several different countries.

Also useful are large scale maps of individual units that are based upon but independent of the quadrangle systems. The U.S. Forest Service and to a lesser extent the U.S. Bureau of Land Management prints many maps of the wilderness areas under their jurisdiction. Also important are the U.S. Bureau of Land Management's 1:100,000 Surface Management Status maps. This series depicts ownership and administrative responsibilities for the areas (mostly in the west) that have large amounts of public lands.

A significant trend in map publishing is the private sector enhancement of government mapping or geographic data sets. Many commercial companies will change the scale, suture adjacent maps, emphasize or deemphasize certain features and correct mistakes. The popular national park series by Trails Illustrated (now owned by National Geographic), the paperbound state topographic atlases from the Delorme and Benchmark companies and the Backroad Mapbooks and related series for Canada produced by Mussio Ventures Ltd. are examples of this kind of cartography. *The Canoe atlas of the little north* (Berger and Terry, 2007) is another example. Based on five decades of the authors' experience in the region, this is a unique and valuable overview of the natural and cultural history and canoe routes of northern Ontario and Manitoba depicted on replications of the 1:250,000 National Topographic System.

## Discussion

Modern library systems aid greatly in the identification and retrieval of wilderness oriented material. Books that are long out of print but still relevant can be identified by computer based catalogs and borrowed via interlibrary loan. Research oriented libraries subscribe at great cost to a wide variety of journal indexes. This cost is usually justified by the depth and range of the indexes and their software's ability to extract with precision. Internet websites extend and supplement but do not replace traditional literature. However on-line cartographic referencing and representation remains

somewhat of a disappointment and is in need of improvement. This inadequacy can be seen in the Australian CAPAD system. The site shows two potentially useful maps, one for protected area locations, and the other for protected areas by IUCN category. However they show only the polygons with no means of correlating them with a name, data, or reference to a printed topographic map. The site explains that spatial data is available but only with a license agreement. Even with Google Earth references, neither the WDPA nor Canadian CARTS system has a good way to select from an uncluttered visual overview. The American *Wilderness.net* is the only one of the four with a high resolution static map for an overview, sophisticated menu options, and clear and easy to use GIS software. None of these databases provide references to the relevant national topographic quadrangle sheets. Adding references to at least the 1:250,000 scale quadrangles would help users in many cases, and software improvements to the other systems so they would approximate the features and operational ease of *Wilderness.net* would be most useful.

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## Appendix A

### Library of Congress Subject Headings and Recommended Call Numbers

(Derived from *Library of Congress Subject Headings* 29th edition, 2006)

Aquatic parks and reserves [QH 90.75]	Protected areas [S 944.5 .P78]
Biosphere reserves [QH 75-QH 77]	Research natural areas [QH 75-QH 76.5]
Ecological reserves [QH 75-QH 77]	Transfrontier conservation areas
Estuarine reserves	Wild and scenic rivers
Forest reserves [SD 426-SD 428]	Wilderness area users
Landscape protection [QH 75-QH 77]	Wilderness areas
Marine parks and reserves [QH 91.75]	Wilderness areas in art
National environmental study areas	Wilderness areas in literature
National parks and reserves [SB 481-SB 484]	Wilderness lodges
National protected areas systems [S 944.5 .P78]	Wildlife management areas [SK 351- SK 359]
Natural areas [QH 75-QH 77]	Wildlife refuges [QL 81.5-QL 84.7]
Natural monuments [QH 75-QH 77]	World Heritage Areas
Natural resources management areas	

*(Many headings subdivide geographically and/or topically. The most common topical subheadings are: Environmental aspects; Fire management; Law and legislation; Management; Recreational use.  
E.g.: Wilderness areas – Environmental aspects)*

## Appendix B

### Journal Indexes and Related Databases

**Academic Search Premier:** An intermediate level index for scholarly journals in the humanities, social sciences, and sciences. Includes links to the full text. Often recommended as a starting point.

**Agricola:** Indexes materials to all aspects of agriculture including forestry. Includes some U.S. Forest Service publications, and recent Congressional Research Service reports.

**Alternative Press Index:** Indexes journals covering and often promoting cultural, economic, political and social change. Many fringe publications and points of view are represented. This makes for interesting browsing.

**America: History and Life:** A leading index to academic journals in all aspects of U.S. and Canadian History. A good source for environmental history.

**Anthropological Literature:** Citations to anthropology articles in journals and edited collections. The field of anthropology has relatively few computerized indexes and other resources.

**Applied Science and Technology Abstracts:** An intermediate level index to physical sciences and engineering. A good source for topics like aircraft noise and visibility in the wilderness. Also for engineering and mining perspectives.

**Aquatic Sciences and Fisheries Abstracts:** The premier technical level index in the fields of aquatic resources including limnology, fisheries resources, and fresh water wilderness environments.

**Arctic and Antarctic Regions:** Citations and abstracts to polar and cold regions research regardless of academic discipline. Also a good source for foreign research or international perspectives.

**Article 1st:** Citations and some full text to journal articles extracted from the table of content pages (therefore limited subject and descriptor terms). Contains a mix of popular and academic journals.



**Bibliography of Native North Americans:** A bibliographic database covering all aspects of native North American culture and history. Covers a wide range of source material including mainstream journals and fringe publications.

**Biological and Agricultural Index:** An intermediate level index to publications in agriculture, biology, forestry, and ecology.

**Biological Sciences (CSA):** Abstracts and some full text linkage to over 6,000 journals covering a wide range of the biological sciences.

**Canadian Research Index:** Index to research oriented publications of Canadian federal, provincial, and territorial governments.

**Conference Papers Index:** Citations to papers and poster sessions presented at major scientific meetings. Environmental science is one of their subject emphases.

**CSA Illustrata:** Indexes illustrations, tables, graphs, charts, photographs, and maps from peer reviewed articles. Provides complete citations for the published articles. This is a relatively new database supplied by CSA (which was recently bought by ProQuest), and one of the more creative and original indexes to appear in recent years.

**Dissertation Abstracts:** Abstracts of doctoral dissertations and theses from institutions in North America and Europe. Some master's theses are included.

**EconLit:** Citations for journals, books and working papers in economics. Probably the most comprehensive index for environmental economics topics.

**Electronic Collections Online:** Full text of scholarly journals in a variety of areas.

**Environment Abstracts:** Formerly part of the discontinued Lexis/Nexis Environmental. ProQuest, the vendor as of July 2009, now includes Environment Abstracts as a sub-file of their Environmental Sciences and Pollution Management. The sub-files can be searched separately or together.

**Environmental Sciences and Pollution Management:** Citations, abstracts, and some full text linkage to over 6,000 serials including scientific journals, conference proceedings, monographs and government publications.

**ERIC:** The leading index in the field of Education. Covers journals, books, theses, and conference papers. A good source for writings on wilderness education.

**Fish and Fisheries Worldwide:** Index to the literature on fish and fisheries.

**Forest Science Database:** The leading bibliographic database for forestry, including forest ecology and management. As many U.S. Forest Service publications are not distributed to Government Printing Office (GPO) depository libraries and indexed accordingly, this is a useful complement to government databases.

**Geobase:** Worldwide literature on geography, geology, and other geosciences.

**GeoRef:** The most comprehensive index for the geosciences with an emphasis on geology. Indexes journal articles, conference papers, books, maps, and theses.

**GeoScience World:** An extended and enhanced version of GeoRef with some full text journals.

**GPO Monthly Catalog:** An index to publications issued by the U.S. Government Printing Office and distributed through its depository library program. Includes full text linkage to most recent items.

**Historical Abstracts:** Abstracts of articles covering world history excluding North America. A good source for comparative environmental history.

**Index to Legal Periodicals and Books:** Indexes legal journals, yearbooks, law review, and bar association publications.

**LexisNexis Congressional:** A comprehensive index to Congressional hearings, reports, committee prints, the Serial Set, and other Congressional material. A recently added module includes the full text Congressional Research Service reports.

**LexisNexis Government Periodicals Index:** An index to U.S. federal government journals. Includes many links to the agency web pages and full text.

**LexisNexis Statistical:** The most comprehensive index to government compiled and tabulated statistics. The emphasis is on the U.S. federal level, but it does include statistics compiled by state and foreign governments. Provides some links to the actual tables of data.

**Meteorological and Geostrophysical Abstracts:** An index to international literature on meteorology, climatology, and related subjects.

**NTIS:** Produced by the National Technical Information Service, this is the principal index for identifying technical reports generated from U.S. government sponsored research. Includes many wilderness management plans, habitat and impact studies.

**Nursing and Allied Health Source:** Includes full text journals in nursing and allied health. A good source for wilderness medicine and therapy.

**PAIS International:** One of the better known and heavily used indexes for literature concerning political studies, public affairs, and international relations.

**PapersFirst:** Index of papers presented at conferences worldwide.

**Project Muse:** Full text articles for scholarly journals in the humanities and social sciences.

**Psychology and Behavioral Sciences Collection:** A full text database of major psychology journals. A useful source for wilderness perceptions and experiences.

**PsychINFO:** The most comprehensive index available for psychology literature. Recent entries include citation links.

**PubMed:** Developed and maintained by the National Library of Medicine (NLM), this is the leading index to basic human biological research and clinical medicine. The related PubMed Central is a free digital archive of biomedical and life sciences journal literature. These are good sources for wilderness medicine.

**Religion and Philosophy Collection:** One of the few indexes focusing on philosophy and related fields. Includes some full text linkage to journals. A good source for wilderness philosophy and ethics.

**Social Science Abstracts:** A good intermediate level index to the social science fields. Includes some full text linkage.

**Sociological Abstracts:** Abstracts and some full text linkage to over 1800 journal titles and conference proceedings in sociology.

**Springer Link:** Full text journals, primarily in the sciences and social sciences.

**Water Resources Abstracts:** The most comprehensive database for literature on water related topics such as groundwater, watershed protection, and management of water resources. Now included as a sub-file of Environmental Sciences and Pollution Management.

**Web of Science:** Subject and citation indexing for over 10,000 of the highest impact journals in numerous science, social science and humanities fields.

**Westlaw:** Includes primary legal material and American Law Reports (ALR), a publication containing attorney written articles summarizing and analyzing case law on specific legal issues.

**Wildlife and Ecology Studies Worldwide:** The leading index to literature on wildlife and wildlife management.

**Wilson Business Abstracts:** An index to the leading business periodicals. Useful for business and industry oriented perspectives.

**Zoological Record Plus:** Provides world-wide coverage of zoological literature and is noted for its comprehensive and thorough nature. An unofficial register for taxonomy and systematics. Online archive versions index literature from 1864 forward