

Careers in wildlife conservation

If you care about wildlife and wilderness and find science exciting, a career in wildlife conservation could be rewarding.

There is still a great deal to be learned about our environment and its ecosystems — those complex interrelationships between plants, animals, and their environment. Here lies a major challenge: to study the effects of people on those ecosystems and provide the basic knowledge to conserve them. Human survival depends on how people learn to apply this knowledge.

Education: key to a career

Hobbies and other spare-time activities such as hunting, fishing, bird watching, nature photography, and insect collecting are good career preparation, and they will help you develop useful skills. A formal education is more important, however, and high school is the place to begin planning your educational program.

Courses in biology, chemistry, geography, mathematics, computers, and physics give you the basic background necessary for scientific conservation work. Whether you want to become a wildlife manager, biologist, research scientist, or technical assistant, you need these courses as prerequisites for most jobs and for further studies at university or technical school. A broad scientific base will also help you understand the part that other specialists such as hydrologists, pathologists, chemists, and geologists play in wildlife research and management. The environment has, after all, many facets, and not all problems are biological ones. Because you cannot isolate the biological world from technology and society, your education should also include courses that will help you to understand the social, economic, and political aspects of problems facing wild animals and plants and their habitats.

An ability to communicate well is important. Wildlife managers and scientists depend on reports, other publications, and the Internet to inform people about how their decisions affect the environment. Sometimes they are asked to discuss hunting regulations and conservation programs at public meetings. Technical assistants often prepare scientific reports on their work. Computer graphics

courses, debating and journalism clubs, and school newspapers are good places to learn to communicate information clearly.

Employers look for applicants who have previous experience in wildlife conservation work or who demonstrate in some other way an active interest in the field. A limited number of summer jobs with federal and provincial government conservation and resource management agencies are posted with the Public Service Commission's (PSC) Federal Student Work Experience Program. Various government agencies do operate volunteer programs for summer students. Human Resources Centres for Students (Web site is <http://youth.hrdc-drhc.gc.ca/ythprg/summer.shtml>) and school counselling offices can usually provide information on government job openings in your area. Recent graduates may wish to consult the Job Bank at <http://jb-ge.hrdc-drhc.gc.ca>.

If you leave school before graduation, you seriously restrict your ability to get a job in wildlife conservation. Advanced science and technology are used in wildlife study and management, so most wildlife biology positions require university or technical school training. Wildlife biologists and research scientists are university graduates, wildlife technicians are technical school graduates, and enforcement officers are usually university or community college graduates. Human Resources Centres located across Canada can advise you on wildlife conservation work available for the untrained worker.

Employment opportunities . . .

In Canada, the principal employers of wildlife specialists are those federal and provincial agencies responsible for wildlife or renewable resources management, private environmental consulting firms, schools and universities, and national nongovernmental conservation organizations.

. . . in government departments and agencies

Employment opportunities with government departments and agencies with responsibilities for wildlife exist for the following:

- ⇒research scientists with university graduate school training (MSc, PhD) in fields such as ornithology, toxicology, mammalogy, plant and animal ecology, economics, and environmental science;
- ⇒university graduates with general training in biology, chemistry, ecology, statistics, or other related environmental disciplines;
- ⇒wildlife technicians who have gained a certificate from an institute of technology in wildlife biology, management, or enforcement;
- ⇒seasonal employees, such as summer students, with basic qualifications for research or clerical duties;
- ⇒secretaries, writers, computer technicians, clerks, laboratory technicians, and others needed to carry out the organization's mandate.

Employment in federal government departments that deal with renewable natural resources is administered by the Public Service Commission (PSC). Jobs are posted on the PSC Web site at <http://www.psc-cfp.gc.ca>. Job seekers may apply on the Web site or obtain applications at PSC regional offices. For information on opportunities in provincial government departments, contact the provincial Civil Service Commissions.

. . . in consulting firms

Government agencies or corporations that are planning a large resource project, such as a hydroelectric dam or a pipeline, are increasingly being required to prepare an analysis of the project's impact on the wildlife and the landscape of the area. Engineering and resource management consultants usually prepare this report, and they often hire wildlife biologists to study the wildlife aspect.

... in educational institutions

Universities offer combined teaching and research careers. (Many of Canada's concern's for wildlife conservation developed from university research findings.) Because of the research orientation, career opportunities here are primarily for the highly qualified research scientists and technicians. Community colleges and institutes of technology offer teaching careers in wildlife biology, management, and enforcement.

There is a growing need for secondary and elementary school teachers with general ecological and wildlife biological training — to develop and teach outdoor and environmental courses.

Federal and provincial parks authorities, as well as many school boards, are beginning to establish nature interpretation centres with natural history programs. Experienced teachers with a knowledge of wildlife management and nature interpretation are needed for those centres. Seasonal employment for university students specializing in natural science programs is available with Parks Canada of the Department of Canadian Heritage and with many of the provincial parks authorities.

... in national nongovernmental conservation organizations

A growing number of nongovernmental environmental organizations have budgets large enough to hire environmental biologists. Knowledge of these organizations can be gained by doing volunteer work for local environment groups or by consulting directories on the Internet or at your local public or school library.

... in other organizations

We have already mentioned the major Canadian employers interested in students of wildlife biology. Other opportunities do, however, exist. Some industries employ wildlife research scientists and technicians. Chemical manufacturers need biologists and chemists to determine the effects of herbicides and pesticides on ecosystems. Forest industries require biologists and wildlife biologists to help manage their forestry operations in ways that consider wildlife survival. In the North, mineral and oil exploration companies are employing wildlife biologists to help them find ways to extract the Earth's resources without upsetting the fragile northern environment.

An education in renewable natural resource management

For a comprehensive list of all the programs offered at Canadian universities consult *The directory of Canadian universities*, published each year by the Association of Universities and Colleges of Canada in Ottawa, Ontario. It is available in print and as a searchable database on the Internet at <http://www.aucc.ca>.

The following list, based on the more comprehensive Web database, is offered for the convenience of those who do not have access to the Web.

Canadian universities that offer bachelor degrees in biology (or botany, zoology, ecology)

Ontario

Brock University	St. Catherines
Carleton University	Ottawa
Lakehead University	Thunder Bay
Laurentian University	Sudbury
McMaster University	Hamilton
Nipissing University	North Bay
Queen's University	Kingston
Redeemer College	Ancaster
Royal Military College of Canada	Kingston
Ryerson Polytechnic University	Toronto
Trent University	Peterborough
University of Guelph	Guelph
University of Ottawa	Ottawa

University of Toronto	Toronto
University of Waterloo	Waterloo
University of Western Ontario	London
University of Windsor	Windsor
Wilfred Laurier University	Waterloo
York University	North York

Quebec

Bishop's University	Lennoxville
Concordia University	Montreal
McGill University	Montreal
Université Laval	Quebec
Université de Montréal	Montreal
Université de Québec	(Chicoutimi)
	(Montreal)
	(Rimouski)
	(Trois-Rivières)
Université de Sherbrooke	Sherbrooke

New Brunswick

Mount Allison University	Sackville
Université de Moncton	Moncton
University of New Brunswick	Fredericton

Nova Scotia

Acadia University	Wolfville
Dalhousie University	Halifax
Mount St. Vincent University	Halifax
Nova Scotia Agricultural College	Truro
St. Francis Xavier University	Antigonish
St. Mary's University	Halifax
University College of Cape Breton	Sydney
University of King's College	Halifax

Prince Edward Island and Newfoundland

Memorial University	St. John's, Nfld.
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University of Prince Edward Island

Charlottetown, P.E.I.

Manitoba

Brandon University
University of Mainitoba
University of Winnipeg
Collège Universitaire de Saint-Boniface

Brandon
Winnipeg
Winnipeg
Saint-Boniface

Saskatchewan

Campion College
Luther College
University of Saskatchewan
University of Regina

Regina
Regina
Saskatoon
Regina

Alberta

Augustana University College
Concordia University of Alberta
King's University College
University of Alberta
University of Calgary
University of Lethbridge

Camrose
Edmonton
Edmonton
Edmonton
Calgary
Lethbridge

British Columbia

Okanagan University College
Simon Fraser University
Trinity Western University
University of British Columbia
University College of the Cariboo
University College of the Fraser Valley
University of Northern British Columbia
University of Victoria

Kelowna
Burnaby
Langley
Vancouver
Kamloops
Abbotsford
Prince George
Victoria

The Canadian Wildlife Service

The Canadian Wildlife Service (CWS) handles wildlife matters that are the responsibility of the Canadian government. These include protection and management of migratory birds as well as nationally significant wildlife habitat. Other responsibilities are endangered species, control of international trade in endangered species, and research on wildlife issues of national importance. The service cooperates with the provinces, territories, Parks Canada, and other federal agencies in wildlife research and management.

CWS summarizes some of its work in the pamphlet *Focus on the Canadian Wildlife Service*, which is on the CWS Web site at <http://www.cws-scf.ec.gc.ca/focus.html> or from

Publications

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