DEPARTMENT OF FISH AND WILDLIFE SCIENCES

Janet Rachlow, Dept. Head (105B CNR Bldg. 83844-1136; phone 208-885-6434**;** fws@uidaho.edu**).**

Fish and wildlife science professionals apply the principles of biology and ecology to understand how fish and wildlife populations interact with each other and with their environment. We help students develop a solid foundation in fish and wildlife biology and ecology, a strong scientific and quantitative background, appropriate technical expertise, and an appreciation for fish and wildlife as a public trust resource. Our degrees emphasize critical thinking through coursework and hands-on field and laboratory experiences, and our graduates are equipped to be successful natural resource managers and scientists in a rapidly changing world. There are four areas of emphasis within the department: aquaculture, fisheries ecology and management, wildlife ecology and management, and conservation biology. Bachelor of Science degrees are offered in Fisheries Science, Wildlife Sciences, and Conservation Biology.

Fishery professionals conduct research or apply management principles to aquatic ecosystems. They may become involved with managing recreationally and commercially important fish populations, biological monitoring, environmental impact assessment, conservation of endangered fish, hatchery operation, commercial fish farming, control and prevention of fish diseases, or management of stream or lake ecosystems.

Wildlife professionals are involved in the conservation and management of game and nongame wildlife species. This includes studying wildlife and their habitat to provide a biological basis for management programs. Wildlife professionals often coordinate wildlife management programs with other natural resource activities such as forest management, range management, and land use planning.

Conservation biology professionals use the tools and basic principles of ecology (such as population dynamics and genetics) in combination with social science principles to solve critical issues related to conserving species and ecosystems. They write species recovery plans, manage parks and protected areas, and advise policy makers and land-use planners.

Professions in Fish and Wildlife Sciences and Conservation Biology also include opportunities in law enforcement, environmental education, and public relations.

In the Fisheries Science degree, students may design a program that emphasizes fisheries management, fisheries ecology, aquatic ecology, or aquaculture. In the Wildlife Sciences degree, the program emphasizes the principles of wildlife ecology, population dynamics, and management. Elective courses in all programs provide an opportunity to gain additional knowledge in a special area of interest or to broaden into other fields. To ensure that students gains practical experience, Fisheries Science and Wildlife Sciences students are required to complete an internship, whereas Conservation Biology students are required to complete a senior thesis or project.

Our graduates find employment with numerous federal and state agencies, educational institutions, and the private sector. These include the U.S. Fish and Wildlife Service, the Bureau of Land Management, the U.S. Forest Service, the National Marine Fisheries Service, the U.S. Army Corps of Engineers, Department of Environmental Quality, state fish and game or conservation departments, tribal agencies, and private organizations such as power companies, commercial fish growers, consulting agencies, and non-profit organizations. Recent surveys have shown that baccalaureate graduates from the department obtain employment at a rate considerably above the national average.

The graduate program is offered to meet the needs of students who are interested in either specialized or generalized advanced study. Because specific requirements for each degree are determined by the student's supervisory committee, individual study plans allow for differences in preparation while providing all students with a comparable background by the time the graduate program is completed.

In addition to the admission requirements of the College of Graduate Studies, the prospective student should have maintained a cumulative grade-point average of at least 3.00 (on a 4.00 scale) during the undergraduate program. Acceptance of students who do not have this minimum grade-point average or other stated requirements is possible, subject to recommendation by the department head and approval of the College of Graduate Studies. At least one summer's experience with a natural resource agency or research group is strongly recommended.

The graduate program in fishery sciences is oriented toward the applied and basic aspects of fishery management, aquatic ecology, and fish health management. The fishery management area includes a focus on fish population dynamics and analysis, management systems, and environmental stresses; the aquatic ecology area includes limnology and habitat management; and the fish health management area includes finfish culture (cold water and warm water), fish disease diagnostics and epidemiology, and fish physiology. The USGS Cooperative Fish and Wildlife Research Unit and the Aquaculture Research Institute also provide important opportunities for graduate studies in fishery resources and aquaculture.

Students planning to begin graduate studies in fishery sciences should have a broad background in the life sciences with specific emphasis on courses in the fishery sciences. They should also have a background in quantitative data processing and professional communication, both oral and written.

Admission to the graduate program in wildlife sciences requires an undergraduate degree with a major in wildlife resources or a closely related field emphasizing the principles of wildlife ecology, population dynamics, and management. Students with differing backgrounds are also admitted if they have substantial preparation in the biological and physical sciences. Candidates must fulfill entrance requirements of the Graduate College and of the Department of Fish and Wildlife Sciences.

Graduate work in wildlife sciences offers students the opportunity to do research in one of several areas including wildlife ecology and behavior, predator ecology, population dynamics, wildlife habitat relationships, conservation biology, conservation genetics as well as management of game and nongame species. Students are encouraged to select topics that will benefit wildlife conservation and management at the state, national, or international level. Graduate projects in wildlife resources may be developed in cooperation with the USGS Cooperative Fish and Wildlife Research Unit, an active participant in the department and research program of the college.

In addition to the requirements listed above, graduate admission is based on the compatibility of the student's research interests with the areas of concentration in the department and the availability of research faculty.

Our research mission is to conduct novel research that helps our partners manage fish and wildlife populations and their ecosystems in complex and continually changing biological, social, economic, and political landscapes. We support economic enhancement through research and development of methods and approaches for improved and sustainable resource use. We provide natural resource professionals and the general public with current scientific information relevant to policy and management.

For additional information, please call the department at 208-885-6434 or visit the website at http://www.uidaho.edu/cnr/departments/fish-and-wildlife-sciences (http://www.uidaho.edu/cnr/departments/fish-and-wildlife-sciences/).

Majors

- Fisheries Science (B.S.) (https://catalog.uidaho.edu/colleges-related-units/natural-resources/fish-wildlife-sciences/fishery-resources-bsfishres/)
- Conservation Biology (B.S.) (https://catalog.uidaho.edu/colleges-related-units/natural-resources/fish-wildlife-sciences/ecology-conservation-biology-bsecolconsbiol/)
- Wildlife Sciences (B.S.) (https://catalog.uidaho.edu/colleges-related-units/natural-resources/fish-wildlife-sciences/wildlife-sciences-bs/)

Minors

- Aquaculture Minor (https://catalog.uidaho.edu/colleges-related-units/natural-resources/fish-wildlife-sciences/aquaculture-minor/)
- Fishery Sciences Minor (https://catalog.uidaho.edu/colleges-related-units/natural-resources/fish-wildlife-sciences/fishery-resources-minor/)
- Wildlife Sciences Minor (https://catalog.uidaho.edu/colleges-related-units/natural-resources/fish-wildlife-sciences/wildlife-resources-minor/)

Certificates

- Tribal Natural Resources Stewardship Undergraduate Certificate (https://catalog.uidaho.edu/colleges-related-units/natural-resources/fish-wildlife-sciences/tribal-natural-resources-stewardship-undergraduate-certificate/)

Fish and Wildlife Sciences Graduate Program

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Fish and Wildlife Sciences. See the College of Graduate Studies (https://catalog.uidaho.edu/colleges-related-units/graduate-studies/) section for the general requirements applicable to each degree.

- Fish and Wildlife Science (M.S.) (https://catalog.uidaho.edu/colleges-related-units/natural-resources/fish-wildlife-sciences/fish-wildlife-science-ms/)
- Natural Resources (Ph.D.) (https://catalog.uidaho.edu/colleges-related-units/natural-resources/natural-resources/natural-resources-phd/)