

## **CATHERINE MCINTYRE**

Montana Natural Heritage Program  
1515 East Sixth Avenue  
Helena, MT 59620-1800  
(406) 444-5381

### **EDUCATION**

#### **Graduate**

University of Montana, Environmental Studies Program, Missoula, MT 2006-2011  
M.S.: Environmental Studies  
Thesis Title: Predicting Amphibian Occurrence Based  
On Wetland and Landscape Level Factors in Montana

#### **Undergraduate**

Hampshire College, Amherst, MA  
B.A.: Aquatic Ecology, Environmental Chemistry 1997-2000  
Thesis Title: A Comparison of Heavy Metals in Two New Jersey  
Diamondback Terrapin Populations

Boston University, Boston, MA 1994-1995

### **FIELD EXPERIENCE**

Wetland Assessments, amphibian surveys, EPA Environmental Monitoring & Assessment Protocol (EMAP), Rosgen Level II stream classification, wetland delineation, plant identification, wildlife habitat evaluations, land use planning, water sampling, sediment cores, vernal pool certification, mark and recapture surveys, fish identification, wetland restoration/mitigation.

### **LAB EXPERIENCE**

GIS mapping and spatial analysis, Inductively Coupled Plasma – Mass Spectrometer, Fourier Transform Infrared, Lead Isotope Ratio Analysis, High Pressure Asher, PCR, microwave digestion, preparation of standards, dissection, data analysis.

### **RESEARCH GRANTS**

Howard Hughes Medical Institute, September 1999  
Threshold Grant, Hampshire College, September 1999  
University of Montana Environmental Studies Scientific Research Grant, September 2007

### **ACADEMIC/WORK EXPERIENCE**

**Wetland Ecologist/Project Manager**, MONTANA NATURAL HERITAGE PROGRAM – November 2007 to present.

Employer: Linda Vance, Montana State Library, 1515 East Sixth Ave., Helena, MT 59620-1800  
Phone: (406) 444-3380

- Help develop, manage and conduct ecological assessments for wetlands and riparian areas throughout Montana.
- Oversee field crews and wetland mapping projects.
- Conduct quality control/quality assurance on NWI mapping.
- Classify wetlands with Cowardin, NVC, and Natureserve/ReGAp ecological systems.
- Use GIS to evaluate landscape-level factors that affect wetland quality and amphibian site occupancy, and to create informative wetland habitat maps that can be used for conservation management.

- Organize field data into NHP databases and develop reports summarizing gathered information.
- Analyze data using both statistical and spatial analysis tools.
- Participate and present at conferences, seminars and professional meetings to distribute information learned through research at the MTNHP.
- Build partnerships by being involved in the Wetland Council and sit on the Education Outreach and Professional Training committee.

**Independent Consultant, OREGON NATURAL HERITAGE INFORMATION CENTER-** October 2007  
 Contact: John Christy, Oregon Natural Heritage Information Center, Institute for Natural Resources, Oregon State University, 1322 SE Morrison St., Portland, OR 97214-2423

- Conducted a site visit for the National Fish and Wildlife Foundation (NFWF) 5-Star program review. The Oregon Natural Heritage Information Center contracted with NFWF to review their grant program and sample a subset of projects across the country. I was contracted to verify that on-the-ground riparian restoration work had been completed as part of a 5-Star funded project in Missoula, MT conducted by the Montana Natural History Center.
- Tasks included determining if the riparian restoration area (1) still exists, (2) had some lasting ecological benefit, and (3) is functioning more or less as intended in the proposal. A final report with my findings was submitted to the Oregon Natural Heritage Information Center.

**Teaching Assistant, UNIVERSITY OF MONTANA –** Fall Semester 2006 and Spring Semester 2007

- Assisted Dr. Vicki Watson with a 360 level Applied Ecology class. This class was project oriented, where students conducted their own field and lab research. The duties I was responsible for were organizing and teaching labs, leading field trips, grading exams and field reports.
- Assisted Dr. Dan Spencer with a freshman level class titled *Nature and Society*. The duties I was responsible for were to lead a discussion class every week, grade assignments and prepare and deliver one lecture.

**Field Technician, MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY-** June 2006 to September 2006.

Employer: Mike Suplee, 1520 E. Sixth Ave., P.O. Box 200901, Helena, MT 59620-0901

- Conducted field sampling for MT DEQ's Wadeable Stream Reference Study. Streams were sampled in both western and eastern Montana in order to select reference streams to assist in the development of nutrient water quality standards in Montana. Tasks included conducting EMAP Western Pilot physical habitat assessments, NRCS riparian and stream assessments, Rosgen Level II stream classification, collection of water quality samples (water and sediment metals) and sampling of phytoplankton, periphyton and aquatic macro-invertebrates.

**Wetland Consultant, RIMMER ENVIRONMENTAL CONSULTING –** May 2001 to June 2005.

Employer: Mary Rimmer, 30 Green Street, Newburyport, MA 01950 Phone: (978)463-9226

- Served as project manager and wetland scientist, responsible for coordinating all aspects of environmental permitting for a wide range of projects.
- Performed wetland delineations, prepared local, state and federal environmental permit and license applications and conducted environmental impact assessments and wildlife habitat evaluations.

Typical projects included site design review and land management planning, wetland restoration and replication design and construction monitoring for both public and private projects.

- The following are specific examples of projects worked on while at Rimmer Environmental Consulting:
  1. Designed and led a water quality sampling program for a local golf course to evaluate potential nutrient loading from fertilizer application in the nearby Miles River.
  2. Designed and led a habitat enhancement project requiring the use of aquatic herbicides (Accord TM) to eradicate *Phragmites australis* from an approximately 2-acre bog within sensitive spotted turtle (*Clemmys guttata*) habitat in Massachusetts. Researched methods and corresponded with other scientists to design a program most suitable for this site. Implemented and monitored the projects success for two years following initial treatment.
  3. Conducted vegetation mapping and an assessment of spotted turtle habitat within a 120-acre site in southeastern Massachusetts as part of the permitting process associated with a mixed-use residential and commercial development. Assisted with trapping and radio telemetry of spotted turtles on this site.
  4. Developed planting plans for wetland restoration and mitigation sites throughout Massachusetts to be compatible with designed hydrologic regimes. Monitored the construction of the wetland mitigation and restoration sites and conducted site visits up to two years following construction to assess the sites success.
  5. Worked as a consultant for several towns in Massachusetts to review permit applications, make recommendations to local conservation boards on permit compliance, peer review wetland delineations, and conduct site visits to determine permit compliance.

**Research Assistant, HARVARD MEDICAL SCHOOL** – October 2000 to May 2001.

Employer: Dr. S. Allen Counter, Harvard University, 4 University Hall, Cambridge, MA 02138

- Assisted Dr. S. Allen Counter, a neurologist at the Harvard Medical School, in research that investigated the effects of high blood levels of lead and mercury in Andean children.
- Research tasks included interpretation and statistical analysis of data, literature research, and preparation of scientific papers for publication.

**Intern, The WETLANDS INSTITUTE, Stone Harbor, NJ** – May-August 1999.

Director: Dr. Roger Wood, 1075 Stone Harbor Blvd., Stone Harbor, NJ 08247-1424

- Served as a research intern for a summer at an education and research center that focuses on wetland ecology.
- Work included collecting diamondback terrapin (*Malaclemys terrapin terrapin*) roadkill, eggs, and injured turtles along the New Jersey coast. The research conducted at the Wetlands Institute evolved into an undergraduate thesis titled “A Comparison of Heavy Metals in Two New Jersey Diamondback Terrapin Populations”. This project involved trapping turtle and other estuarine biota specimens as well as collecting sediment and water samples from the Hackensack Meadowlands outside of New York City and estuaries off of Cape May, New Jersey and analyzing for trace metals.
- Presented undergraduate thesis research at the Northeast Turtle Conference held at the Patuxant Wildlife Research Center in Maryland, October 1999.