

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Preliminary evaluation of environmental DNA for monitoring amphibians in Yellowstone National Park

Discipline: Natural
Type of Project: Research
Funding Agency: National Park Service
Other Partners/Cooperators: University of Idaho
Effective Dates: 6/3/2013 - 3/31/2015
Funding Amount: \$8,813

Investigators and Agency Representative:

NPS Contact: Cathie Jean, National Park Service, Greater Yellowstone Network, 2327 University Way, Suite 2, Bozeman, MT 59715; 406-994-7530; 406-994-4160; cathie_jean@nps.gov

Investigator: Caren Goldberg, University of Idaho, Dept. of Fish and Wildlife Sciences, 875 Perimeter Drive MS 1136, Moscow, ID 83844-1136; 208-885-4121; cgoldberg@vandals.uidaho.edu

Lisette Waits, University of Idaho, Dept. of Fish and Wildlife Sciences, CNR 103D, Moscow, ID 83844-1136; 208-885-7823; lwaits@uidaho.edu

Project Abstract: Amphibian monitoring in long-term catchments of Yellowstone National Park has been carried out each year since 2005 using traditional visual detection approaches. Modern molecular techniques now allow detection of species using environmental DNA (eDNA) identified from water samples. In 2013, Greater Yellowstone Network (GRYN) will collaborate with Dr. Caren Goldberg and Dr. Lisette Waits at UI to develop and validate species-specific molecular markers for four species of native amphibians in Yellowstone and begin evaluating the potential use of eDNA to detect the presence and abundance of native amphibians in a long term monitoring program.

Outcomes with Completion Dates: March 31, 2015

Keywords: University of Idaho, Yellowstone National Park, amphibian, monitoring, eDNA