

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Survey of native mussels in the Belle Fourche River at Devils Tower National Monument and in the Laramie River at Fort Laramie National Historic Site

Discipline: Natural Resources
Type of Project: Technical Assistance
Funding Agency: National Park Service
Other Partners/Cooperators: University of Wyoming
Effective Dates: 1/30/2013 - 12/31/2015
Funding Amount: \$10,000

Investigators and Agency Representative:

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Project Abstract: To survey the mussel population in the Belle Fourche River at Devils Tower National Monument and the Laramie River at Fort Laramie National Historic Site, PI will use two standard surveying techniques: snorkeling and viewing tubes. These are the same methods used by the Wyoming Game and Fish to survey for mussels in western and central Wyoming rivers (Phil Mathias, personal communication). First, PI will divide rivers into six 600 m reaches (Belle Fourche River; ~3.6 km of river flows through or borders the Monument) and ten 600 m reaches (Laramie River; ~6 km of river flows through the Park). Each reach will be further divided into ten 60 m sections marked with flags. Starting at the downstream section, PI will search for mussels in a zigzag pattern. The first 100 live mussels will be identified to species, measured for maximum length, and carefully replaced to their original location and orientation. At each transect (marked by a flag), we will record stream width, greenline width (width between perennial vegetation), greenline depth (distance from level tape to substrate at 5 position; left bank, left center, center, right center, right bank), substrate composition (at same 5 positions as previous), and locations with a GPS unit. Thus, the study will report on the species of mussels that live in the rivers, their abundance, size classes, and status.

Outcomes with Completion Dates: Final Report by March 31, 2015

Keywords: native mussel survey, Belle Fourche River at Devils Tower National Monument, Laramie River at Fort Laramie National Historic Site, University of Wyoming