

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Travel Expenses for 2014 Aquatic Invertebrate Monitoring at Agate Fossil Beds National Monument

Discipline: Natural Resources
Type of Project: Technical Assistance
Funding Agency: National Park Service
Other Partners/Cooperators: University of Wyoming
Effective Dates: 6/30/2014 - 9/30/2015
Funding Amount: \$1,869

Investigators and Agency Representative:

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Project Abstract: In 1996, Agate Fossil Beds National Monument (AGFO) was part of the original Prairie Cluster Prototype Long-term Ecological Monitoring Program which then became part of the Heartland Inventory and Monitoring Network (HTLN). HTLN continued with the land birds, macroinvertebrates, and vegetation monitoring responsibilities. However, given that AGFO fits best ecologically within the Northern Great Plains, the continued monitoring of these 3 vital signs was transferred to the Northern Great Plains Inventory and Monitoring Network (NGPN) in 2010.

For the macroinvertebrate monitoring, sporadic sampling was conducted at AGFO between 1989 and 1995. In 1996, with the formation of the Prairie Cluster Prototype a more concerted effort to monitor aquatic invertebrates on an annual basis began at AGFO utilizing Hester-Dendy sampling plates (Peitz and Cribbs 2005). Recently the HTLN staff completed a review of their invertebrate sampling protocol and found that they needed to revise the original protocol to allow for the collection of statistically robust data (Bowles et al. 2008). Mack (2003) also determined that "Hester-Dendy artificial substrate samplers were ineffective for sampling most wetland macroinvertebrates, except oligochaetes, Chironomidae, and Mollusca".

Thus, the NGPN set up an agreement with Dr. Tronstad to compare two sampling methods (Hester-Dendy Sampler and Hess Sampler) in 2010 and provide monitoring recommendations for the Network. At the end of the field season it was determined that another 4 years of data collection using the Hester-Dendy sampling plates and the Hess Sampler would provide a more robust comparison of these two methods.

The original NPS person designated to assist with invertebrate data collection at AGFO in the 2014 field season took a position with another I&M Network. The objective of this agreement is to provide salary and travel expenses for Dr. Tronstad so that she can assist with the collection of field data in the 2014 field season.

Outcomes with Completion Dates: September 30, 2015

Keywords: invertebrates, monitoring, Northern Great Plains I&M Network, University of Wyoming, Wyoming Natural Diversity Database