

## **Project Summary**

### **Rocky Mountains Cooperative Ecosystem Studies Unit**

**Project Title:** Statistical Consulting for Environmental Monitoring Projects

**Discipline:** Natural  
**Type of Project:** Technical Assistance  
**Funding Agency:** National Park Service  
**Other Partners/Cooperators:** University of Wyoming  
**Effective Dates:** 7/1/2011 - 12/31/2012  
**Funding Amount:** \$12,830 [FY12: \$6720; FY11: \$6,110]

**Investigators and Agency Representative:**

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**Investigator:** Timothy J. Robinson, Department of Statistics, University of Wyoming, Department 3332, Laramie, WY 82071-3332; tjrobin@uwyo.edu, 307 766 5108

**Project Abstract:** The National Park Service, Appalachian Highlands Inventory and Monitoring Network, is beginning a series of long-term ecological monitoring projects in the Network parks. A list, with the order of priority and affected parks follows:

- 1) Rare fish (spotfin chub and tuxedo darter) - Big South Fork National River and Recreation Area (Kentucky and Tennessee) and Obed Wild and Scenic River (Tennessee)
- 2) Cobble bar vegetation - Big South Fork National River and Recreation Area (Kentucky and Tennessee) and Obed Wild and Scenic River (Tennessee)
- 3) Exploited plants of rich cove habitats - Blue Ridge Parkway (North Carolina and Virginia)
- 4) Exploited plants of non-rich habitats (galax) - Blue Ridge Parkway (North Carolina and Virginia)
- 5) Freshwater mussels - Big South Fork National River and Recreation Area (Kentucky and Tennessee) and Obed Wild and Scenic River (Tennessee)

Funds will be used specifically to support technical guidance during sampling design for these projects through analysis of data collected during pilot sampling, as well as recommendations for analysis of future data to detect significant changes in the park resources being monitored. The technical guidance and support provided by the University of Wyoming (UW) will take the form of statistical consultation by Dr. Timothy Robinson, associate professor of statistics and faculty affiliate with UW's Wyoming Survey & Analysis Center.

**Outcomes with Completion Dates:**

Updated lists delivered by December 31, 2013

**Keywords:** ecological monitoring, statistical analysis, sampling design, Appalachian Highlands I&M Network, University of Wyoming, Department of Statistics