

Name of Principal Investigator: Marielle Abalo

Institutional Affiliation: Davidson College, Davidson, NC and Wild South Non-profit

Project Title: The Southern Appalachian Ethno-habitat: *Cryptobranchus alleganiensis* and Cherokee Cultural Factors as Healthy Ecosystem Indicators.

Salamander Species: Eastern Hellbender (*Cryptobranchus alleganiensis*)



Project Overview: While previous studies have found that Hellbenders prefer cool, clear, fast-flowing streams and anthropogenic activities such as urban development have reduced their habitats, no specific research has been done to compare areas with a history of indigenous human presence with areas with little to no past human indigenous presence. My research project focuses on the Cherokee culture and explores the lasting impacts of the current and past presence of Cherokee presence on Hellbender population numbers and presence within the context of the ethno-habitat of the Southern Appalachian Mountains.

In order to determine the effects of cultural history, identity and artifacts on the Southern Appalachian ethno-habitat, I will spend 10 weeks conducting a survey of Hellbenders (*Cryptobranchus alleganiensis*), Cherokee artifacts, accounts and ethnobotany (flora with documented use and significance within the Cherokee culture). The caudata.org grant will go towards purchasing research sampling materials (pit tags ...etc) and covering living expenses in Asheville, NC while the research is being conducted. Due to their preference to clear, clean water and sensitivity to pollution, the presence of and numbers of Hellbenders found through surveys will help identify healthy, functional ecosystems. These “healthy” areas will then be compared to other aquatic areas where Hellbenders were neither found nor captured. Comparison will occur across various factors: documented presence of cultural artifacts within the surroundings, presence of flora with documented Cherokee cultural significance and use and measurement of water quality.

Budget:

Transportation: (Bus Monthly Passes, 500 miles by car for research commutes)	\$295.00
Living Allowance (10 weeks with \$300/week)	\$3000.00
Publication Expenses (Access to research databases and repeated mailing expenses)	\$20.00
Expendable materials/supplies (Background literature, Research Materials-Boots/Waders, Diving Materials)	\$200.00
TOTAL BUDGET	\$3515.00
Amount Requested from Other Sources (Robert T. Stone Fund, Abernethy Grant, Bonner Scholars Stipend)	\$2220.00

Timeline of Work and Dissemination of Results:

*June 1- June 3:* Literature Research and Planning

*June 8- August 1:* Active field research (simultaneous Hellbender surveys and Cherokee Indian ethnographic study; Archives and Records Study)

*August 19- December 18:* Data Analysis and Write up, Oral Presentation and Poster Presentation of Research results (Davidson College Summer Research Symposium, Association of Southeastern Biologists Conference, Southern Anthropological Society Conference or other potential venues).