

Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: An evaluation of the Vegetation Ecology Program at Craters of the Moon National Monument and Preserve, Arco, ID, focusing on the efficacy of historic and ongoing invasive plant management activities within four Research Natural Area kipukas and at other areas

Discipline: Interdisciplinary
Type of Project: Technical Assistance/Research
Funding Agency: National Park Service
Other Partners/Cooperators: University of Montana
Student Participation: No
Effective Dates: 5/29/2016 - 12/31/2018
Funding Amount: \$19,364

Investigators and Agency Representative:

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Project Abstract: Craters of the Moon National Monument and Preserve encompasses over 700,000 acres of recent lava flows and sagebrush steppe at the intersection of the Snake River Plain and Sawtooth Mountain Range in south-central Idaho. Within this rugged landscape are several vegetation "islands" or Kipukas - a Hawaiian term - which describes pockets of older, more vegetated lava surrounded by younger lava flows. More than 500 kipukas are contained in the monument and preserve, creating an archipelago of sagebrush and grass amid rock. These ecological oases harbor entire plant communities as well as notable individual plant species including some of the oldest-known juniper trees in Idaho. Importantly, four of these kipukas are nationally recognized Research Natural Areas. However, the biological and ecological integrity of these island communities of vegetation are threatened by climate change, invasive species, changing land use patterns, and recreational impacts. Even further, the Integrated Resource Management Division at Craters of the Moon National Monument and Preserve has not systematically and holistically evaluated the efficacy of previous and ongoing invasive plant management activities within these Research Natural Area-designated kipukas to ascertain the overall effectiveness of the park's approaches to invasive species management.

This project has a clear public purpose and benefit. This project would further the public purposes of these Research Natural Area-designated kipukas and other vegetated areas within the monument and preserve by systematically evaluating the efficacy of previous and ongoing invasive weed treatment efforts as a means to enhance the effectiveness of future management actions. This project will also substantially contribute to the general public's understanding of the ecology of Craters of the Moon and the Northern Plains/Rocky Mountains (Sawtooth sub-range) through the sharing of findings and will significantly advance the park's knowledge of the effectiveness of its ongoing vegetation management-related activities in order to maximize out-year expenditures for vegetation management related projects.

Keywords: Vegetation Ecology Program, invasive plants, kiupukas, Craters of the Moon National Monument, University of Montana