

**The New England Botanical Club  
Graduate Student Research Awards  
2017 AWARD WINNER**

**Jenifer Dickinson**

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**Defining the habitat characteristics of four rare alpine plant species in  
the Presidential Mountain Range, New Hampshire USA**

The alpine plant communities of the Presidential Range in the White Mountains of New Hampshire are fragile systems that support a wide diversity of species including several that are rare and endemic. Owing to the fragility of these systems, defining the current ecology of the environments in which these rare plants exist will establish baseline information required to inform conservation strategies in the face of climate change. I will study four different rare alpine plant species: alpine bearberry (*Arctous alpine* Nied.), snow-bed willow (*Salix herbacea* L.), moss plant (*Harrimanella hypnoides* Coville), and mountain avens (*Geum peckii* Pursh) across the high peaks of northern NH, defining the ecology and habitats of each species. At each location where these species are found data will be collected on 1) topographic variables including aspect, slope, slope position, and elevation, 2) soil characteristics including pH and depth, and 3) plant communities, including the number of individuals of each species, the percent cover of surrounding plants, and the type of habitat and plant community. These known locations will be photo-documented for future monitoring to help determine if the population size of each species is changing over time. A better understanding of the ecology and habitats in which these rare plants live and any population change over time will lead to the best land management policies to preserve these rare species.

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The New England Botanical Club offers each year up to \$3,000 total in support of botanical research to be conducted by graduate students. The awards are made to stimulate and encourage botanical research on the New England flora, and to make possible visits to the New England region by those who would not otherwise be able to do so. It is anticipated that two awards will be given, although the actual number and amount of awards will depend on the proposals received. The awards are given to the graduate student(s) submitting the best research proposal dealing with systematic botany, biosystematics, plant ecology, or plant conservation biology.