



Dr. Willard's Alpine Tundra Research Plots



Bettie Willard sets toothpicks to count plants in her plots, June 1961.



Bettie Willard and fellow CEQ members provide Richard Nixon with an annual environmental report.

The Question: Could Beatrice Willard's alpine tundra research plots be designated an historic site?

Dr. Beatrice Willard (1925-2003) was a beloved and respected tundra ecologist. In 1959 she established research exclosures (a fence used to keep something out of an area) along Trail Ridge Road at Rock Cut and Forest Canyon Overlook. Both areas showed great signs of human impact: vegetation was destroyed, lichen removed from rocks, and paths worn into sensitive tundra soils. Dr. Willard's dissertation and subsequent scientific journal articles about alpine tundra recovery after human trampling have been cited extensively by scientists. In 1972, Dr. Willard co-authored the seminal book on alpine tundra: *The Land Above the Trees*. At Rocky Mountain National Park, Willard influenced how the park manages its alpine tundra by implementing several of Willard's recommendations from her 40 years of research. Because of her influence in the park, managers wondered if her plots could be designated an historic site.

The Project: Write the story of Dr. Willard's plots and life in their historic context.

Park Ranger Chase Davies and Historian-Ranger Cheri Yost used a variety of sources to analyze Willard's contributions to park history. The pair reviewed copies of Willard's obituaries, speeches, notes from her journals, newspaper articles from around the country, scientific journals, and other primary sources. They also reviewed the notes and photos that Willard donated to the park. Secondary sources ranged from magazine articles and books about women scientists, the history of American ecology, and research in the National Park Service. They also studied research plots in other parks and universities around the country. They constructed a history that placed the plots and Willard's scientific contributions in a local, state, and national context.

The Results: Dr. Willard's plots are important to both our park's and our nation's history. They are listed in the National Register of Historic Places.

Dr. Willard's work at the plots and the subsequent influence she had over national environmental policy is of great importance to our nation's history. According to ecologist David Cooper, the plots "represent one of the first U.S.

efforts incorporating science into long-term land management and planning. These are among the oldest study plots in alpine tundra or mountain environments in the world." They are most likely the oldest permanent alpine tundra plots in the National Park System and have demonstrated the need for careful management of alpine tundra.

Dr. Willard's work at the research plots prepared her for public life. She was an important Colorado environmental leader, directing the Thorne Institute near Aspen, counseling Colorado governors, establishing the Colorado School of Mines environmental sciences program, protecting Florissant Fossil Beds National Monument, and convincing Bill Coors to create a recyclable aluminum can. She influenced federal environmental policy as well, working to get the oil and mining industries and environmentalists to work together. She was a key advisor to Presidents Nixon and Ford, the first woman to serve on the President's Council for Environmental Quality (CEQ). During her tenure at the White House, she consulted on the design and installation of the Alaska Pipeline. Historian Janet Robertson notes Willard was a "remarkable woman...a writer, a teacher, a researcher, a superb organizer, and a catalyst for sweeping national and international changes."

This summary is based on published, peer-reviewed and/or unpublished reports available at the time of writing. It is not intended as a statement of park policy or as a definitive account of research results.

For more information on the park's research program, see www.nps.gov/romo

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