

Conservation of Mountaintop Islands

Conservation Issues in the Asheville Field Office



The Southern Appalachians are home to 39 of the 40 highest peaks in the Eastern United States, all higher than 6,000 feet. Many of these are home to some of the rarest natural communities in the country, which in turn are home to some of our rarest plant and animal species, many found nowhere else in the world. Examples include federally threatened or endangered plants--spreading avens, Roan Mountain bluet, and Blue Ridge goldenrod--as well as the endangered rock gnome lichen. Protected animals here include the Carolina northern flying squirrel and the spruce-fir moss spider. Because these peaks are so high and are separated from areas of similar climate

and habitat by hundreds of miles, some refer to them as mountaintop islands.

Partnership is fundamental to managing these areas, as they're owned by several different organizations, including the USDA Forest Service, National Park Service, North Carolina State Parks, and Southern Appalachian Highlands Conservancy. The presence of numerous rare and imperiled species engages the U.S. Fish and Wildlife Service (Service) and the North Carolina Natural Heritage Program, Plant Conservation Program,

future management in these areas. It was the first time biologists had convened on this topic in over a decade, and they walked away with a clearer understanding of the roles, concerns, and potential contributions of each of the represented organizations. Specific topics included more efficient use of the Internet and the National Biological Information Infrastructure to improve data sharing and coordination and the development of a prioritized list of activities partners could collaboratively work on to improve the conservation of these areas.



On the ground, the Service was involved in establishing a uniform monitoring protocol for rare plants in these areas and is part of a large-scale push to establish monitoring at as many spreading avens sites as possible. Spreading avens is restricted to a handful of cliffs and rocky outcrops on some of the highest mountains in the Southern Appalachians. It was listed by the federal government as endangered in 1990, with one of its biggest



and Wildlife Resources Commission. Managing these lands also entails a significant recreational component; they are often popular destinations, and the Appalachian Trail crosses many of these peaks, engaging the Appalachian Trail Conservancy.

Though most, but not all, of these areas are in conservation ownership, they suffer from problems that frequently challenge public land managers--recreational impacts, invasive species, woody species encroachment, air quality, and climate change.

In the fall of 2007, biologists from state and federal agencies, nonprofits, and academia gathered in Johnson City, Tennessee, at the "Summit on the Summits"-- a 3-day workshop organized in part by the Service. The intent was to examine recent research and coordinate

threats being inadvertent trampling and associated erosion from hikers and climbers. It has also suffered from over-collection, and some botanists suspect the encroachment of competing shrubs may pose a threat. The monitoring data collected will be used to conduct population viability analyses for the plant,





which in turn will provide insight into the long-term viability of the species' populations and barriers to its recovery.

The Service has also worked with the Atlanta Botanical Garden, Blue Ridge Parkway, Grandfather Mountain, Mount Mitchell State Park, and other similar institutions to support the augmentation of spreading avens, Roan Mountain bluet, Blue Ridge goldenrod, and Heller's blazing star populations in these high-elevation areas.

We're an active member of the Roan Mountain Stewardship Committee – a team of organizations collectively supporting the management of the Roan Mountain area on the North Carolina/Tennessee state line – perhaps the premier example of a mountain top island.

