

Adirondack Alpine Ecology

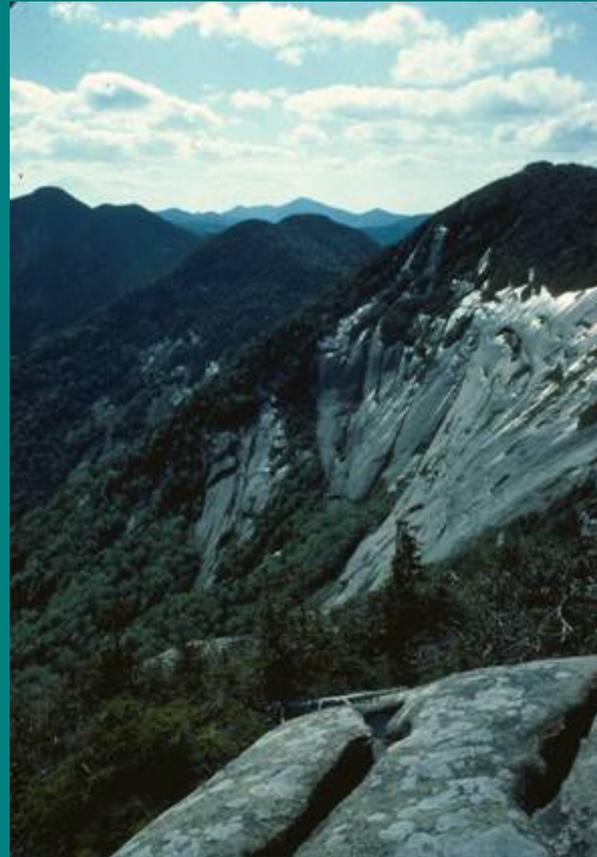


February 2011

Adirondack Alpine Ecology

aka High Elevation Boreal

- 46 Peaks above 4,000 feet
- ca. 21 summits have some
 - alpine vegetation
- Alpine vegetation is mostly
 - located on 7 summits
- Approximately 34
 - rare/threatened/endangered species
 - (including some globally rare)



Adirondack Alpine Ecology



- Highly adapted to their environment
 - Regular frost
 - High winds
 - Very high exposure to sun, other elements
 - Nutrient poor soils
- Very restricted in local and global range

Alpine Krummholz



Alpine Krummholz



- G3G4 S2
- ca. 20 occurrences in NY, above 3,300 ft.
- Restricted to the High Peaks in NY, VT, NH, & ME

Alpine Meadow



Alpine Meadow

- G3S1
- Under 200 acres in NY State, above timberline (3,500 ft.)
- Restricted to High Peaks in NY, VT, NH, & ME



Alpine Sliding Fen



Alpine Sliding Fen



- G3 S1
- Less than 10 occurrences in NY, totaling 30 acres
- Found above timberline (4,068ft. – 4330 ft.)
- Restricted to High Peaks in NY, VT, NH, & ME

Among these unique natural communities are some of New York's rarest plants including:



*Rhododendron
lapponicum*
(Lapland rosebay)



Diapensia lapponica
(Pin cushion plant)



Salix herbacea
(Dwarf willow)

Alpine Species



Trichophorum cespitosum
(Deer's Hair Sedge)



Empetrum eamesii
(Purple Crowberry)



Empetrum nigrum
(Black Crowberry)

Alpine Species



Salix Uva-ursi
(Bearberry Willow)



Vaccinium boreale
(High-mountain Blueberry)

Alpine Species



Huperzia appressa
(Mountain Fir-clubmoss)



Minuartia groenlandica
(Alpine Sandwort)

Globally rare and endangered species are also found here, such as:

Prenanthes Boottii

commonly known as

“Boot’s Rattlesnake Root”



Many of these tiny plants thrive in high altitude “blanket bogs,” even though they are more typical of low lying wetland areas. For example:



Ledum groenlandicum

(Labrador tea)



Kalmia polifolia

(Pale laurel)

Threats

- Recreational Overuse
- Atmospheric deposition
- Climate Change

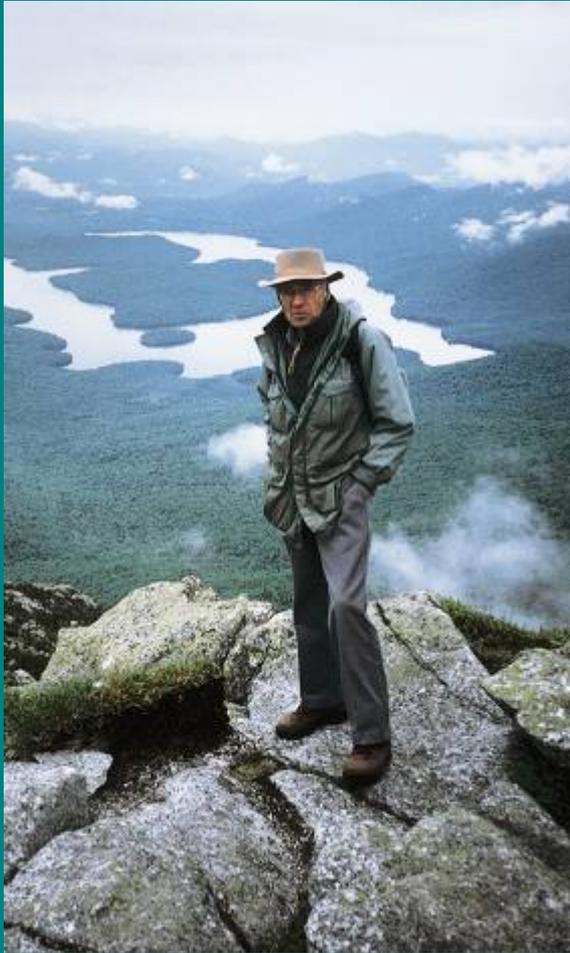


Management Considerations

- Limit activities to those outlined in the High Peaks UMP
 - Summit Stewardship Program
 - Seasonal voluntary trail closures
 - Prohibit camping & fires over 4,000 ft.
 - No cutting for scenic vista management
- Restoration efforts
 - Use native species

Recreational Overuse





Over four decades ago, Dr. Edwin Ketchledge, known to most as “Ketch,” noticed the damage caused by hiker impact.

As both an avid hiker and ardent ecologist, Ketch pioneered alpine conservation in the Adirondacks.

In 1968, Ketch experimented with a restoration project. He treated exposed and damaged soils with fertilizer and grass seed, which stabilized the ground for native species to again take hold.



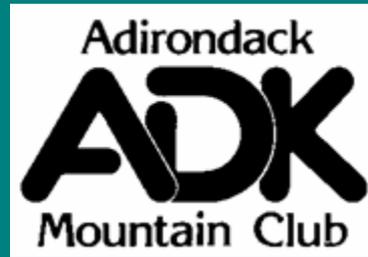


Ketch and volunteers from the Adirondack 46ers reclaimed damaged areas on various summits over many years.

However, their success was limited without redirecting hikers and improving trail delineation.



With Ketch's guidance and expertise, The Nature Conservancy, Adirondack Mountain Club, and New York Department of Environmental Conservation established a landmark partnership to establish the Summit Stewardship Program.





The Summit
Stewardship Program
mitigates threats to New
York's alpine habitat.

The program is effective and efficient. The on-site stewards increase visitors' awareness of alpine habitat and teach a responsible hiking ethic.



Entering Alpine Zone
Entrée de la zone Alpine

Walk only on the trails or hard rock surface	Veillez vous tenir sur les sentiers ou sur la roche nue
Please leash your pet	Veillez tenir vos chiens sur laisse
No Camping	Camping interdit

Thank-you!
Merci!

Hikers are eager to protect the mountains they love and enjoy having a naturalist available to answer questions.

The Summit Stewardship Program provides full-time seasonal coverage on Marcy and Algonquin and intermittent coverage on additional summits, such as Colden and Wright.



Years of active stewardship are making a noticeable difference in the health of rare and fragile alpine communities.



Since 1990, the stewards have reached more than 287,000 hikers.

Education alone is not enough.



Educational programs need to be supplemented by restoration and trail work.

Restoration

Examples of Re-vegetation work:



Algonquin Peak
re-vegetation work 1971



Algonquin Peak
July 1999

Additional re-vegetation work...



Algonquin herd path 1970's



Algonquin herd path 1999

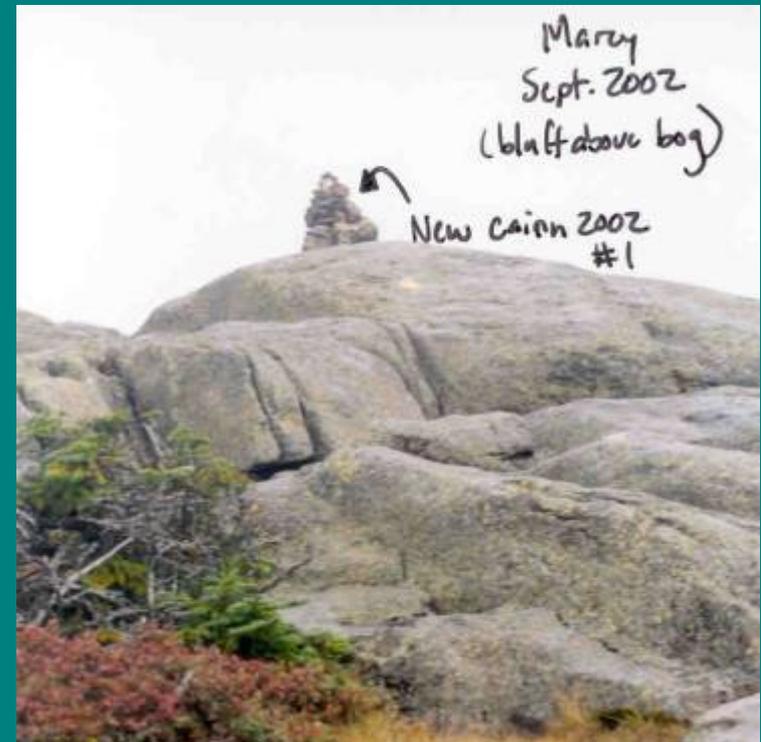
Trail Work:

Cairns & Trail Delineation



Algonquin 2002

Marcy 2002



Trail Work:

Scree walls



Marcy 1992



Marcy 1999

Trail Work:

Examples of rock stabilization work:



Marcy 1992



Marcy 1999

APA/DEC Alpine Management Issues

- Unit Management Plans
 - Wilderness Plans address issues
 - Intensive Use UMP not written for Toll Road
 - ORDA must have DEC approve new uses

The Issue: New Structures



Summer 2010

The Solution:



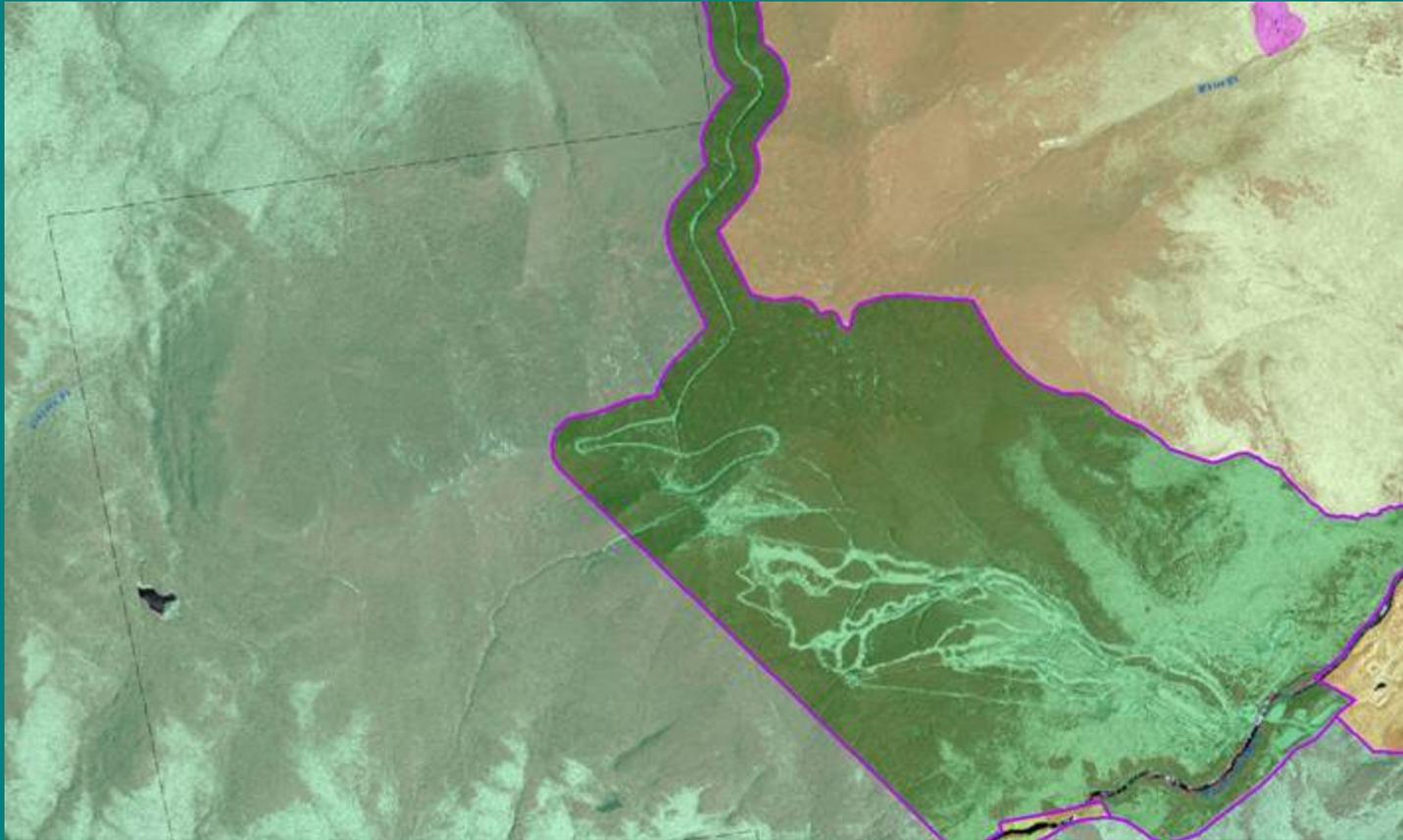
Fort Drum Helicopter Training



Fort Drum Helicopter Training



Eliminate Summit Landing





Protecting our Islands in the Sky