

# MOUNTAIN: Study seeks balance between hikers, protection

Continued from Page 1A

UVM graduate student Carena van Riper asked them to study nine sets of paired photographs, each set showing a mix of crowd size, fencing, vegetation loss and off-trail hikers.

Grayson looked doubtfully from picture to picture in a paired set. Around him, wisps of cloud whipped by, as though the mountain were flying through the sky. A few pellets of snow or hail peppered shivering hikers.

"Remember what you said on your way up here," Jane Grayson prompted. "You said, 'I love this mountain — I always see people here.'"

"But look at them, the people are not staying on the trail," he responded. Flowers and grass-like sedges on high mountain summits are easily killed by the tramp of hiking boots, an impact he worries about.

Grayson's eyes went back to the photographs. He would not like to see access to Camels Hump restricted. More people, not fewer, should enjoy Vermont's peaks, he said.

"I guess I'll choose B," he said, referring to the photo peopled by hikers. "I think most people treat these summits great."

## No 'yellow brick road'

Nearby, van Riper and fellow graduate student Kelly Goonan had donned UVM fleece tops and incongruous white UVM baseball caps. About 15 hikers were scattered across the lumpy summit, huddled in jackets and admiring the limited view.

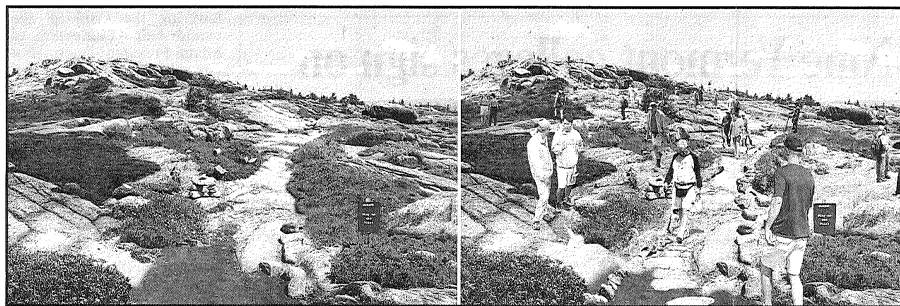
Summit stewards log in more than 15,000 hikers a year on the undeveloped top of Camels Hump, the state's third-highest mountain. The peak's distinctive, bumpy profile has made it a Vermont icon; its network of challenging trails makes it a favorite of hikers.

The mountain shows wear and tear from all these visitors. Trails have widened where hikers go off-path to avoid muddy spots. Half-buried tissue paper dots the woods around a clearing below the summit.

On the summit, one of only two alpine plant communities in Vermont, tundra plants like Bigelow's sedge, alpine bilberry and mountain sandwort survive severe weather and scanty soil but are easily killed by careless walkers.

"Hey, stay off the grass!" Grayson yelled at one point, looking up from the survey forms, as he spotted a young hiker walking across a nearby patch of sedge.

To protect the sedges and



A UVM study asks hikers on Camels Hump to examine sets of paired photographs like these, and to indicate which mountaintop conditions they prefer. The mountain is a composite, not real. The purpose is to learn if there is a pattern of responses that indicates what variables — crowd size, environmental impact or trail marking — matter most.

Photo illustration courtesy of Robert Manning

other plants, land managers try a variety of methods to keep people on the trail, including prominent trail blazes, signs, low rock walls, rope fences. On other mountains, including Cadillac in Maine's Acadia National Park, some paths even are paved.

These signs of civilization, though, can diminish a hiker's sense of getting away from it all and enjoying untrammeled nature.

"People don't want to follow the yellow brick road to the top of Camels Hump," state Forestry Division Director Steve Sinclair put it. But, he added, "As we get more and more of the public using these very sensitive areas, we will have more and more conflicts develop."

## Three mountaintops

How to balance these trade-offs? That's the research specialty of UVM natural resources professor Robert Manning, who has done a series of studies of hiker perceptions and carrying capacity at national parks.

He is collaborating with a Utah researcher on a two-year, \$85,000 study of hiker preferences on three peaks in the northern forest, Camels Hump, Cadillac Mountain and Cascade Mountain in the Adirondacks.

Cadillac is heavily used — there's a road to the top — while Cascade is remote and lightly visited. Camels Hump represents the middle case of moderate use, he said.

In addition to surveying 1,200 hikers, his graduate students are documenting the current state of vegeta-

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Steve Sinclair,  
Forestry Division director

tion on the three peaks, mapping unauthorized "social trails" and measuring the size of each vegetation patch.

For the hiker survey, Manning created a photograph of a fake mountain, a composite that resembles a New England mountain summit. Then he manipulated the photo into many versions to show different conditions.

"We're trying to find out, if agencies want to create a situation that is acceptable to visitors and provides a high-quality experience, which variables do they need to pay the most attention to?" Manning said.

Some hikers are asked to take the survey Grayson filled out, choosing between two photographs. Others take a simpler "standards and indicators" test, looking at sets of five photographs of escalating crowd levels or habitat loss. They are asked to rate each photo on a scale from "very acceptable" to

"very unacceptable."  
"This is unacceptable"

Despite Sunday's chill, most hikers agreed to take the 15-minute survey when they were approached by the researchers. The visitors flipped quickly through the pictures, perhaps because of the cold, and appeared to miss some of the subtle differences between paved and unpaved paths, grassed and less grassy landscapes.

That's OK, van Riper said. The researchers aren't necessarily looking for careful analysis. "We're looking for what people's gut reaction is."

The hiking groups on Camels Hump on Sunday appeared to share some basic reactions: Don't limit access to the mountain. Tolerate a fairly large crowd — but keep them on the trail and away from sensitive vegetation.

Dustin Sigler of Essex flipped through the standards-and-indicators photos as he sat looking northeast, where clouds scudded over I-89 and Bolton Mountain.

"Oh this is bad. This is unacceptable," he said, looking at a series of photos that showed less and less vegetation. "I'm seeing more and more soil erosion. It gets worse and worse. If people would stay on the trail, it wouldn't get that bad."

Peter Lebenbaum had climbed to the summit with his granddaughter, Maria Santiago, and a friend, Bryan Parks. At first, the three looked at the photos carefully, comparing one to another.

Then Lebenbaum seemed

scape. He quickly rated each photograph depending on how much green he could see.

"But there's a ton of people there!" Santiago exclaimed at one point. But Lebenbaum shook his head. He chose photograph with more people and many plants over the photo with no people but less vegetation.

Then he fanned through the photos one last time. Dark clouds were thickening overhead.

"I like all these pictures," he joked. "There's blue sky in them."

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to make a decision: What he values most is an intact land-